KOLEJ UNIVERSITI TEKNIKAL KEBANGSAAN MALAYSIA

Implementation of ISO 9001:2000 in Higher Education Institutions (KUTKM)

Thesis submitted in accordance with the requirements of Kolej Universiti Teknikal Kebangsaan Malaysia for Bachelor of Manufacturing Engineering (Honours) (Manufacturing Process)

By

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Faculty of Manufacturing Engineering

May 2006

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DECLARATION

I hereby, declare this thesis entitled "Implementation of ISO 9001:2000 in Higher Education Institutions (KUTKM)" is the results of my own research except as cited in the reference.

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APPROVAL

This thesis submitted to the senate of KUTKM and has been accepted as fulfillment of the requirement for the degree of Bachelor of Manufacturing Engineering (Honours) Manufacturing (Process). The members of the supervisory committee are as follows:

.....

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DEDICATION

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ABSTRACT

MS ISO 9001:2000 is an important Standard that always used in the industrial sector. Nowadays, other sectors besides industrial sectors are also implementing MS ISO 9001:2000 in their organization including educational sectors. One of the educational sectors implementing MS ISO 9001:2000 in their organization is Kolej Universiti Teknikal Kebangsaan Malaysia, KUTKM. In this research, the benefits that the institution gains by implementing this Standard have been discussed and analyzed in detail. The research has been made to realize whether the institution gains the benefits of implementing the Standards or not. The data for Teaching and Learning Activities available in KUTKM have been collected and been discussed in detail. The data of customer's satisfactions have been gathered to determine the effectiveness and the smoothness of the implementation of MS ISO 900:2000 in KUTKM. Besides that, the staff's satisfactions also have been gathered to see the level of the staff's satisfactions in the organization. The satisfaction level from the students and the staffs are very important in order to get a clear view of the successful of the management systems and the effectiveness of MS ISO 9001:2000 in the organization. Before the entire task been conducted, the information about MS ISO 9001:2000 also has been gathered in this research to make it easier to understand and easier implementation of the research.

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ABSTRAK

MS ISO 9001:2000 merupakan satu piawaian yang sangat penting dan selalunya digunakan dalam kebanyakan sektor-sektor industri. Pada masa sekarang, sektor-sektor lain seperti bidang pendidikan juga turut mengaplikasikan MS ISO 9001:2000 dalam organisasi mereka. Salah satu contoh bidang pendidikan yang mengaplikasikan MS ISO 9001:2000 dalam organisasi mereka adalah Kolej Universiti Teknikal Kebangsaan Malaysia. Dalam kajian ini, faedah dan manfaat yg diperolehi daripada pengaplikasian MS ISO 9001:2000 akan dianalisa dan dibincangkan dengan lebih terperinci. Kajian ini dijalankan bagi mengenalpasti samada institusi ini mendapat manfaat atau sebaliknya daripada pengaplikasian MS ISO 9001:2000. Data-data berkaitan Pengajaran dan Pembelajaran dikumpul dan dikaji secara terperinci. Data-data mengenai kepuasan pelanggan juga turut dikumpul bagi mengenalpasti keberkesanan dan kelancaran proses yang dijalankan di KUTKM. Selain daripada itu, data-data mengenai kepuasan kakitangan juga turut dikumpul dan dikaji di dalam kajian ini. Tahap kepuasan pelajar dan kakitangan sangat penting dalam kajian ini bagi menentukan keberkesanan dan kejayaan dalam pengaplikasian MS ISO 9001:2000. Sebelum keseluruhan kajian dilakukan, perkara yang paling penting adalah mendapatkan seberapa banyak maklumat mengenai MS ISO 9001:2000 untuk memudahkan proses keseluruhan kajian berlangsung.

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"Imagination is more important than knowledge, for knowledge is limited while imagination embraces the entire world."
~Albert Einstein

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LIST OF ABBREVIATIONS, SYMBOLS AND SPECIALLIZED NOMENCLATURE

KUTKM	-	Kolej Universiti Teknikal Kebangsaan Malaysia
ISO	-	International Standards Organization
FKM	-	Faculty of Mechanical Engineering
FTMK	-	Faculty of Information and Communication Technology
FKE	-	Faculty of Electrical Engineering
FKEKK	-	Faculty of Electronics and Computer Engineering
FKP	-	Faculty of Manufacturing Engineering
BITS	-	Bachelor of Computer Science (Software Development)
CGPA	-	Cumulative Grade Point Average

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CHAPTER ONE

INTRODUCTION

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CHAPTER ONE
INTRODUCTION

1.1 GENERAL RESEARCH

ISO 9001:2000 is a very important method used in the industrial sectors nowadays. ISO 9001:2000 is the current version of the Standard. It was revised in the year 2000. Past versions of ISO 9000:2000 included ISO 9002:2000 and ISO 9003:2000, but those are no longer in use. Companies are now only registered to MS ISO 9001:2000. There are two main aspect that determines why most of the industries are implementing MS ISO 9001:2000 in their organizations. The first main aspect is because of the market pressure and the second aspect is because of the internal effectiveness and productivity benefits.

As most of the industries needed MS ISO 9001:2000 to their improvement and effectiveness process, there are also others sectors can implement it in their organization. Although MS ISO 9001:2000 is originally intended for manufacturing industry, is has attracted interest in others sectors of service industries, including education. To date, a small number of educational institutions in Malaysia have registered to the standard, including Kolej Universiti Teknikal Kebangsaan Malaysia (KUTKM).

The main purpose of the project is to make a research of educational sectors implementing MS ISO 9001:2000 in their organizations. Then, the research will be documented in this project report on some aspects. The way

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how to conduct the research will also been identified in the other chapter in this project.

In order to conduct the research, some task should be done. The information has been taken from the Quality Assurance and Accreditation Center, Academic Management Office and other resources such as reference books, internet sources and from the journals available before the research been conducted. By gathering all the resources, we can collect the data of the research that related to the project.

The research of MS ISO 9001:2000 will be done in Kolej Universiti Teknikal Kebangsaan Malaysia (KUTKM). The reason of why the university has been chosen is because the university has already implemented the ISO 9001:2000 in their organization. In this project, the benefit that the organization could gains will be discussed. The use of MS ISO 9001:2000 will be studied according to implementation in the higher institutions and the design of the experiment that will be handled after will be done to investigate the effectiveness of the standard.

Besides that, in this research, the relationship between the major keyword in the company and in the higher institutions must be determined in order to get better understanding of implementing the ISO 9001:2000. The examples of the major keywords in the companies are such as product, customers, managers, workers etc. So the meaningful of all the keyword should be related with the meaningful of the keywords available in the higher institutions sectors.

In this project also, the criteria of implementing MS ISO 9001:2000 also had been determined. The criteria that have been recognized are:

- Setting the quality goals
- Ensure customer requirements are understood and met

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- Training of the employees of the organization about ISO 9001:2000
- Controlled the process involved in the organization
- Correcting problems that occurred and make sure the problems won't happens again

The benefits of implementing MS ISO 9001:2000 have been recognized and the benefits have been discussed. The research will be made in order to determine the effectiveness of implementing MS ISO 9001:2000 in the organization.

1.2 RESEARCH SCOPE

The scope of the research is in the higher institutions such as universities. So, the research of the project is applied in KUTKM. Quality Management System in KUTKM has been implemented and will be improved from time to time to get the MS ISO 9001:2000 acknowledgement. Sequences and the relationship of Teaching and Learning Process are the main process and have been supported by other supported processes and it will be upgraded through the Quality Management Process.

KUTKM has created, documented and nursing continuously improved the effectiveness of the Quality Management System by identifying the process involved. The processes involved are:

a. The main processes are Strategic Planning Process, Curriculum Formation, Course Offer, Course Registration, Student Record Management, Learning Activities, Examination, Teaching Evaluation, Counseling and Graduation.
b. Supporting processes have been categorized to Human Resource Management, Physical Infrastructure Management, Financial Management, Library and Hostel.

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