‘I declare that had read this work and in my opinion which the project was adequate from the scope and quality for the award of the Degree of the Bachelor of Technology Management (Innovation Technology) with Honours’

Signature : .....

Supervisor’s Name : PROF DR. KHAIRUL BAHAREIN MOHD NOOR

Date : 27 JUNE 2013

A STUDY OF TQM IMPLEMENTQTION IN MINIMIZING PRODUCTS REJECTION.THE CASE OF BI TECHNOLOGIES SDN BHD

NOOR ASHIKIN BT YUSOF @YUSOH

Submitted in Partial Fulfillment of the Requirement for the
Bachelor of Technology Management (Innovation Technology) with Honours

Faculty of Technology Management and Technopreneurship

JUNE 2013

DECLARATION

I hereby declare that the work in this academic exercise is my own ideas for the Citation and summaries that I have quoted their sources.

Signature : _____

Name : NOOR ASHIKIN BINTI YUSOF @ YUSOH

Date : _____

DEDICATION

..Special for mother and father...

A lot of love and sacrifice that has been poured out will I remember to the end of life

..Special for my sisters and brothers...

Thank you for always supporting this brother struggle

..Special for my friends …

I will never forget your support..

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Bismillah Hir Rahman Nir Rahim

Alhamdulilah , I am thankful to Allah Al Might for blessing me with his barakah and good health. I am grateful with his blessing I was able to complete my research, even though at time .I was made to feels that my patient and perseverance was being tested to the limit.

First of all, I would like to record my endless appreciation to my supervisor Professor Khairul Baharein for him valuable guidance and advice in order to complete this research. Also thank to Mr podzi bin Mahmud as a Manager plant at Bi technologies because corporation to give the information about the research.

Last but not least, I would like to record my deep sincere appreciation especially to my lovely parents and siblings for their understanding and support extended to me during this time, and not forget the friends who have helped in the completion of this project They are such a wonderful being that I will cherish today that I breath my last. May Allah all Mighty bless all of you endlessly with his barakah . I really appreciated all these.

ABSTAK

Penolakan produk adalah salah satu masalah terbesar yang dihadapi oleh syarikat, kes ini kerana ia berkaitan dengan kualiti produk yang dihasilkan. Sistem pengurusan kualiti adalah berdasarkan kepada sumber manusia bertujuan untuk meningkatkan kepuasan pelanggan melalui pengurangan kos secara berterusan. Pendekatan kualiti menyeluruh adalah satu sistem yang menyeluruh yang merupakan sebahagian daripada strategi bagi melibatkan semua jabatan-jabatan, pekerja bawahan, dan termasuk pembekal dan pelanggan . Tujuan penyelidikan adalah untuk menentukan keberkesanan Pengurusan Kualiti Menyeluruh (TQM) untuk meminimumkan penolakan produk. Dalam kes, syarikat BI Technologies telah menerima banyak aduan daripada pelanggan disebabkan penolakan produk. Penyelidik menggunakan komponen TQM untuk mengenal pasti punca-punca masalah ini berlaku dan keberkesanan komponen untuk mengurangkan masalah ini. Penyelidikan ini dijalankan dengan pengumpulan data melalui kaedah kualitatif dan memberi cadangan untuk menyelesaikan masalah tersebut. Daripada hasil kajian mendapati keberkesanaan yang paling tinggi dalam mengurangkan penolakkan produk yang menggunakan komponen TQM adalah Fokus Pelanggan, diikuti oleh Pengurusan Kepimpinan. Akhir sekali, cadangan untuk penambahbaikan telah dicadangkan hasil daripada menganalisis semua data yang dikumpulkan.

Kata kunci :*Penolakkan produk, Pengurusan Keseluruhan Kualiti,*

ABSTRACT

The products rejection is one of the biggest problems faced by having company, this case as it relates to the quality of products produced. Total quality management system is based on human capital aims to continuously improve customer satisfaction through continuous real cost reduction. Total quality approach is a comprehensive system that is integral part of high-level strategy it involves all functions and departments, involves all employees, from the top to bottom, and including network providers and network customers . The research aim to determine the effectiveness Total Quality Management (TQM) to minimizing products rejection .In case, BI Technologies Company received many the complaint from customers this is causes product rejection. The researcher using the components of TQM to identify the causes of these problem occur and effectiveness of the component to minimizing the problem. The implementation is carried out through the data collection analysed qualitative analysis and resolving the problem. From the result, the researcher found the majority TQM component that affect products rejection in organization, by Customer Focus, followed by Management Leadership. Thus, the conceptual of TQM has shown its effectiveness in minimizing products.

Keyword: Products Rejection, Total Quality Management, Minimizing

TABLE OF CONTENT

CHAPTER	CONTENT	PAGES
	DECLARATION	**ii**
	DEDICATION	**iii**
	ACKNOWLEDGMENT	**iv**
	ABSTRAK	**v**
	ABSTRACT	**vi**
	CONTENT	**vii**
	LIST OF TABLES	**x**
	LIST OF FIGURES	**xi**
	LIST OF ABBREVIATIONS	**xii**
	LIST OF APPENDICES	**xiii**
1	**INTRODUCTION**	**1**
	1.1 Background of the study	**1**
	1.2 Problem Statement	**2**
	1.3 Research objectives	**4**
	1.4 Research questions	**4**
	1.5 Scope of study	**5**
	1.6 Limitation of study	**5**
	1.7 Importance of the Study	**6**
	1.8 Summary	**6**
2	**LITERATURE REVIEW**	**7**
	2.1 Introduction	**7**
	2.2 Product Rejection	**9**

	2.3 Customer Focus	**10**
	2.4 Management Leadership and Commitment	**11**
	2.5 Total Involvements	**13**
	2.6 Continuous improvement	**15**
	2.7 Supplier Smart Partnership and Training Development	**16**
	2.8 Previous Study	**19**
3	**RESEARCH METHODOLOGY**	**21**
	3.1 Introduction	**21**
	3.2 Research design	**21**
	3.3 Target population	**22**
	3.4 Sampling size	**22**
	3.5 Sampling frame	**22**
	3.6 Data collection	**23**
	3.6.1 Primary Data	**23**
	3.6.1.1 Questionnaire	**23**
	3.6.2 Secondary Data	**24**
	3.7 Reliability	**25**
4	**RESULT AND DATA ANALYSIS**	**27**
	4.1 Introduction	**27**
	4.2 Frequency Analysis	**28**
	4.2.1 Gender	**28**
	4.2.2 Respondent's Age	**29**
	4.2.3 Education Level	**30**
	4.2.4 Working Experience	**32**
	4.3 Alertness employees	**33**
	4.4 Correlation Analysis	**34**

5	**DISCUSSION, CONCLUSION AND RECOMMENDATION**	**39**
	5.1 Introduction	**39**
	5.2 Summary of The Research Findings	**39**
	5.2.1 Research Objective 1	**39**
	5.2.2 Research Objective 2	**41**
	5.2.2.1 Customer Focus	**41**
	5.2.2.2 Management Leadership and Commitment	**42**
	5.2.2.3 Total Involvement	**43**
	5.2.2.4 Supplier Smart Partnership and Training Development	**43**
	5.3 Conclusion	**44**
	5.4 Recommendation	**45**
	5.4.1 Strengthen Teamwork	**45**
	5.4.2 Suggestion from Employees Time to Time	**45**
	5.4.3 Give More Training	**45**
	BIBLIOGRAPHY	**46**
	APENDICES	**50**

LIST OF TABLE

NO	TITLE	PAGES
2.1	The Dimension of Quality	8
3.1	Cronbach ‘s Alpha Value for Variables (TQM)	25
4.1	Respondent’s Gender	28
4.2	Respondent’s Age	29
4.3	Education Level	30
4.4	Working Experience	31
4.5	Alertness of Employees	32
4.6	Correlation between Customer Focus and Product Rejection	33
4.7	Correlation between Management Leadership and Product Rejection	34
4.8	Correlation between Total involvement and Product Rejection	35
4.9	Correlation between Continue improvement and Product Rejection	36
4.10	Correlation between Supplier Smart Partnership and Training Development and Product Rejection	36

LIST OF FIGURE

NO	TITLE	PAGES
1.1	Total Number Of Rejection	3
2.1	Framework of TQM Implementation to Minimizing Products Rejection	18
4.1	Composition of Gender	28
4.1	Respondent's Age	29
4.2	Education Level of Respondents	30
4.3	Working Experience	31

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LIST OF ABBREVIATIONS

TQM	**=**	**Total Quality Management**
PDCA	**=**	**Plan, Do, Check, Act**
CIP	**=**	**Continuous Improvements Process**
SME	**=**	**Small and Medium Enterprise**
SPSS	**=**	**Statistical Package for Social Science**

LIST OF APPENDICES

NO	TITLE	PAGES
A	Questionnaire	50

CHAPTER 1

INTRODUCTION

1.1 Background of Study

Quality is important to both producers and customers in the global marketplace today. Many organizations realized that its survival in the business world depend on producing high quality products and services. (Ismah et.al, 2009). Therefore, quality is dependent on the requirements of different customers on the product or service they desired. The quality assurance needs to enhance workmanship and quality of product. Different products also require different resource requirements. In addition, the rejection in each product is different. This could be seen as less consumption of resources, and cost and the number of rejection that the result can be seen through quality improvement because of the quality concept effectiveness and efficiency.

The quality factor is very important in every industry due to high competitiveness. This is because each industry wants to produce good quality of product to fulfil customer needs. Besides that, quality is important because customers nowadays are more educated. The customers prefer to buy high quality of product. They also can evaluate whether the product is better and safer to use rather than poor quality product. The industry must focus on the quality of the goods produced. The benefit of good quality helps to eliminate a waste costs and reject on the product. Process efficiency will lead to improves profit per product or service. In additional, the industry will have a regular customer because good quality products can attract customer's trust.

The concept of Total Quality Management (TQM) focuses on identifying sources that causes quality problems and the solutions. Definition of the TQM processes focuses on fulfil and exceeding customer's expectations and reducing costs resulting from poor quality. TQM is a philosophy aimed at achieving business excellence through the use and application of tools and techniques, as well as the management of soft aspects, such as human motivation in work (Juran and Gryna, 1980).The development of ISO 9000 in 1980's has produced the standard in quality which are as a platform for total quality performance through the life cycle of a product and service in term of management and quality assurance. Total quality management has few concepts which are continued improvement, six sigma, benchmarking, just-in-time, Taguchi concept, and knowledge of TQM concept.

The quality management principles are a fundamental rule for leading and operating an organization. Their aim is to improve performance and satisfying customer needs. Therefore BI Technologies use Total Quality Management concept to helps its management in improving the process and mean creation for beneficial change. This problem is an important issue in the BI Technologies factory because they gave impacts to company profits.

1.2 Problem Statement

The products rejections become critical issue in manufacturing industry. BI Technologies factory received the complaints about the product rejection. In this case, the company has used the Total Quality Management for minimizing the problem. The TQM is one way to identify the problems occur. The purpose of this research is to know the effectiveness of TQM implementation in minimizing product rejection .This is because the problem gives a negative impact to the company. Time production had extended from the original planning because the production schedule needs to make adjustments on products rejection. It also gives the impact to deliver the product on time to the customer because the industries need to reproduce the order once they find out the product rejection. The problem caused time waste,

materials, and many more. The image and product brand of company will be influenced. Possibility the company can loss many orders from their customers.

Figure 1.1 below shows the product defect according to types of damages. All of the defects occur within January 2012 until September 2012. The data showed the types of product rejection through the chart. The highest for damage comes from other scrap. In conclusion, the researcher will determine the cause of the problem .To identify the cause of this problem occurs the researcher has used quality tool. The quality tool is cause and effect diagrams which constructed in a brainstorming atmosphere. (Evans & Lindsay, 2005) For solving the problem everyone can get involved and feel they are an important part. Small groups were drawn from operation areas or management work with trained and experienced facilitators. A group can often be more effective by thinking about of the problem broadly and considering environmental factors and employees' issues.

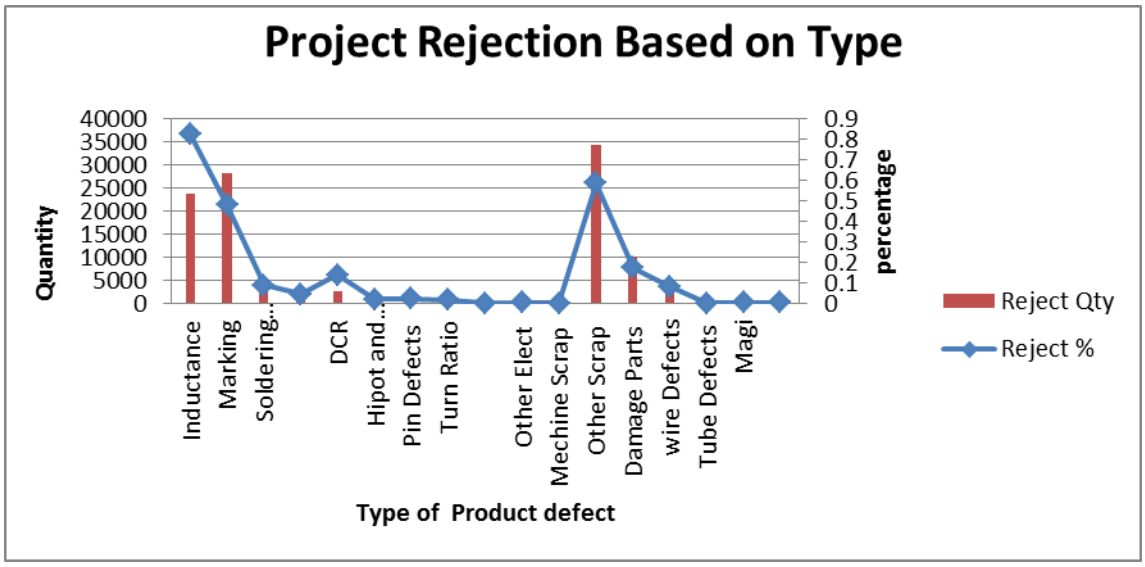

Figure 1.1: Total Number of Rejection

(Source: BI Technologies Company report (Jan 2012-Sept 2012).

1.3 Research Objectives

This study aim is to achieve the effectiveness of Total Quality Management (TQM) implementation in minimizing products rejection. The research objectives are:

a) To identify key components for effective TQM implementation for organization improvement.
b) To find out to what extent the implementation of TQM contribution in minimizing products rejection in the organization.
c) To propose recommendations for successfully TQM implementation in improving quality of products.

1.4 Research Questions

The researcher attempts to answer the questions and get the information about the problem.

a) How the implementations of TQM help in minimizing products rejection?
b) What are the key components for effective TQM implementation in minimizing products rejection?
c) What need to be in order to implement TQM successfully and enhancing the quality of products?

1.5 Scope of Study

This research focused on product rejection issue at BI Technologies Sdn. Bhd. Product rejection is the critical issue in the manufacturing industry and need to improve the performance of the production to enhance the effectiveness. Total Quality Management useful as an improvement work process or system in the organization with the purpose for discusses problem solving process. The researcher will distribute questionnaires to respondent for identifying the effectiveness of TQM implementation and to minimizing product rejection. The researcher focuses on top managers in the organization to get the information through interview. This is because top managers know more about the products rejection problem. Questionnaire will distribute to employee that involves in quality improvement program. The location of this research is in the BI Technologies and not involves other company.

1.6 Limitation of Study

The researcher has only 4 months to complete this research. It is hard for the researcher to complete this research within a specified period, because it takes time to gather enough data and information. For the research to identify product rejection problem, the focus is only on the industry. The researcher also distributes questionnaire only to employees in BI Technologies.

1.7 Importance of the Study

Products rejection is the most outstanding problem in this company because it is related to customer demand and when they produced poor quality product to customer demand. This research will be the reference regarding Total Quality Management element implementation, and as academic reference. In addition the company can make this research as a reference to improve its existing performance.

1.8 Summary

Quality improvement is important to solve the product rejection. This is because the TQM approach helps to solve the problems, a company can identify the causes occurrence of product rejection, and they can get to produce good quality of products. This can attract more customers to purchase their products. The researcher can identify the effectiveness of Total Quality Management element implication to resolving the products rejection.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter discusses about theories of previous research. The researcher use variety of references such as a book, journal, article, thesis and other printed resource. With these resources, it helps researcher to understand and internalize the research. Besides that, the researcher will describe the approach and findings of previous research. The literature will discuss about total quality management, definition of quality and the concept of quality improvement by using these references. This is because anybody has their own opinion about the quality definition. In addition, it also includes the principles of quality improvement and a few elements that will help to solve the problem of products rejection that causes of poor quality product. Therefore, the researcher uses Total Quality Improvement implementation to identify effectiveness to reduce product rejection.

According to (N. Golder et al. 2012), quality is perhaps the most important and complex component of business strategy. Firm competes on quality, customers search for quality and markets are transformed by quality. (House, 1996) defined quality as customer satisfaction, market and value, planning and control are required from organizations that produce products and services. Currently, competitiveness is the cause of the performance and profitability of the company and the customer also plays an important role in determining whether the company is successful or not. (Tunk, 1992) Implemented of quality improvement process has several advantages including enhancing the image and reputation of the organization, improve customer

satisfaction, increase employee morale, increase customer confidence, improve profitability and increase in productivity.

Table 2.1: The dimension of Quality

Dimension	Meaning and example
Performance	Primary product characteristic, such as the brightness of the picture
Features	Secondary characteristic, added features, such as remote control
Conformance	Meeting specifications or industry standards, workmanship
Reliability	Consistency of performance over time, average time for the unit to Fail
Durability	Useful life, includes repair
Service	Resolution of problems and complaints, ease of repair
Response	Human-to- human interface, such as the courtesy of the dealer
Aesthetics	Sensory characteristics, such as exterior finish
Reputation	Past performance and other intangibles, such as being ranked first

(Source: System Design, Implementation and Project Management)

(Deming 1982; Powell 1995) It is a key force leading to delighted customers, firm profitability, and the economic growth of nations. In business practice, views of quality have evolved over the past 30 years through programs such as Total Quality Management, The Baldrige Awards and Six Sigma, all of which have helped firms improve quality particularly in manufactured goods.

For the implementation of Total Quality Management (TQM) requires four (Fuch, 1993) or five (Besterfield et al, 1995) basics of the continued involvement of management which are performance measurement of key processes, constantly making improvements on production processes, employee involvement as a whole and focus on customer demand. Through statistical analysis, employee involvement and continuous improvement are the factors that lead to effective TQM program. This shows the ability of workers to master the techniques and tools led to the success of TQM programs because without proper disclosure, the employee is not able to carry out work and make a significant contribution as required.

2.2 Products Rejection

The product defect is defined as failure to meet customer requirements in terms of function, design, or use. In pursuit of perfect products, designers and manufacturers launch a constant battle with variability in raw materials, processes and work environments. According to Jarrell and Peltzman (1985), stated that negative returns are a hindrance to the manager to produce quality products. When products are taken off the market there will be bad publicity and a reduction of future revenues because of lost sales.

There are two different sources of defects which is a process change and error. Defects caused process change because there are natural variability changes in the manufacturing process, while errors arise due to rare events. They also consider the defects caused by other sources. Each of these sources of defect requires a different control mechanism. From the perspective of quality products assurance and control, any technology, will ensure quality and defects products in factory inevitable, ensure 'the design right the first time', reduce the trial and error, help to cut product development cost and short time to enter the market. There is no company wants to see the products they produced have defects, especially if the defect can be avoided during the manufacturing phase. Companies should take some measures to reduce the number of defects as this involves profit and reputation of the company.

Total Quality Management (TQM) is a method of management and employees may be involved in the increased production of goods and services continued. In research, TQM provides a few elements to higher the level of quality, among them are focused on continuous improvement, customer focus, management leadership and commitment, total involvement, supplier smart partnership, and training. In the research, the researcher will use the element above because relevant to organization.

2.3 Customer Focus

Customer focus is a technique to identify the customer, product, quality, features, and performance measures which are most important to your business unit. The customers are important in evaluating products and managers often take it for granted that all employees are working towards the same goal oriented customers.

Several "voice of the customer" techniques have been developed for learning from our customers. Analog Devices' methods include benchmarking, customer visits, user surveys, company-wide metrics, focus group meetings, on-site time at the customer's location, product beta tests, and field failure analysis. The customers can help to improve and make improvements on user needs, as well as the customer can also give an idea to the company for the future

According to Scholtes, R.P (1992) only once you understand what processes and customers are willing you able to appreciate what quality means in the new business world. If customers are people who receive your work, only they can determine what quality is, only they can tell you what they want and how they want it.

There are six step strategies to identify customer needs. This is speculated about result where the company has to write down what the thing customer will say because the company can make comparison of expectations with is actually saying. The purpose is to help representatives of the organization ensure that the company is in the range of customer demands. The second purpose is to develop an information gathering plan. The company can get information with a few ways through face to face interviews, telephone, written surveys and others. After that, the company can conduct a smaller pilot test before implementing the entire information gathering plan. This will help to identify problem through the information. The third purpose is to analyze the results. The company should analyze clearly and carefully and match up the speculated result with a first step, such as what the problem did customers identify, the number of customers complained of the same problem and others. Next step is to check the validity of conclusions. The company needs to select a few customers for conclusion assessment and get the feedback. Adjust the conclusion if