

TECHNOLOGY IMPACT PERFORMANCE OF EMPLOYEE IN MANUFACTURING  
INDUSTRY

BY

NURULASHIKIN BINTI YAHAYA

I hereby acknowledge that this project paper has been accepted as part fulfillment for the  
degree of Bachelor of Technopreneurship

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Universiti Teknikal Malaysia Melaka

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I hereby acknowledgement that I have read this and in my opinion this work sufficient in  
terms of scope and quality for the award of Bachelor Degree in  
Technopreneurship

Signature :

Supervisor name : En. Hasan Bin Saleh

Date :

Signature :

Panel name : Dr. Mohd Syaiful Rizal Bin Abdul Hamid

Date :

## DECLARATION

“I declare that this project is the result of my own research except as cited in the references. The research project has not been for any degree and is not concurrently submitted in candidature of any other degree.”

Signature:

Name : Nurulashikin Binti Yahaya

Date :

## **DEDICATION**

This research paper is lovingly dedicated to my parents, En. Yahaya Bin Ibrahim and Puan Hasnah Binti Nayan, who have been my constant source of inspiration, they have given unconditional support with my studies. I am honored to have their as my parents. Thank you for giving me a chance to prove and improve myself through all my walk of life. To all my family thank you for believing me for allowing me to further my studies. Lastly to my best friend, Azwin Binti Kamarularifin, thank for your full support during the report completion from the beginning till the end.

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## ABSTRACT

This study was undertaken to examine the technology impact performance of employee in manufacturing industry. Technology is essential in every field from education institution to automotive, banking to civil aviation, telecommunication to textile, there is momentous influence of technology in every field. The problem indicated by technology is when employees are not ready to adapt new technology. Technology becomes essential and valuable tools for manufacturing industry. Access to this technology has increased employee's productivity and company profitability. Technology advancement can give advantage and non-advantage to employee performance in manufacturing industry. This research project which aimed to determine the relationship between technology and employee performance. Besides that, this research investigate the most factor of the technology that can be impact employee performance and identify strategies for employee's acceptant on new technology in workplace. This study will use quantitative method and the researcher will be distributed questionnaire among the employee manufacturing industry at Sungai Petani Kedah. Therefore, this study will be analyzing using Statistical Package Social. The data gathered were analyzed using multiple regression analysis. The finding sees that there is a significant relationship between (employee performance) and skill development and training program (independent variable). But, there are two factors that insignificant which is knowledge management and motivation that has no impact with the adoption of technology.

**Keywords:** Technology, impact, employee performance

## ABSTRAK

*Kajian ini dijalankan untuk mengkaji kesan teknologi kepada prestasi pekerja dalam industri pembuatan. Teknologi adalah element yang penting dalam setiap bidang daripada institusi pendidikan kepada automotif, perbankan kepada penerbangan awam, telekomunikasi kepada tekstil, terdapat pengaruh bersejarah teknologi dalam setiap bidang.. Masalah yang ditunjukkan oleh teknologi adalah apabila pekerja tidak bersedia untuk menyesuaikan diri dengan teknologi baru. Teknologi menjadi alat penting dan berharga untuk industri pembuatan. Akses kepada teknologi ini telah meningkatkan produktiviti pekerja dan keuntungan syarikat. Kemajuan teknologi boleh memberi kesan positif dan negatif kepada prestasi pekerja dalam industri pembuatan. Projek penyelidikan ini bertujuan untuk menentukan hubungan antara teknologi dan prestasi pekerja. Selain itu, kajian ini mengkaji faktor teknologi yang boleh mempengaruhi prestasi pekerja dan mengenalpasti strategi baru untuk pekerja menerima teknologi baru di tempat kerja. Kajian ini juga akan menggunakan kaedah kuantitatif dan soal selidik akan diedarkan di kalangan pekerja industri pembuatan di Sungai Petani Kedah. Oleh itu, kajian ini akan menganalisis data dengan menggunakan Statistical Package Social Science (SPSS 22.0). Data yang dikumpul dianalisis dengan menggunakan analisis regresi berganda. Dapatan melihat bahawa terdapat hubungan yang signifikan di antara (prestasi pekerja) dan pembangunan kemahiran dan program traning (pembolehubah bebas). Tetapi, terdapat dua faktor yang tidak penting yang merupakan pengurusan pengetahuan dan motivasi yang tidak memberi kesan dengan penggunaan teknologi.*

**Kata Kunci :** *Teknologi, mempengaruhi, prestasi pekerja*

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## **CHAPTER 1**

### **INTRODUCTION**

The first chapter describes the background of the study on what the study is all about, the research questions and research objective. It also addresses the scope and limitation of the study as well as the significant of the study. Topic of this study is about technology impact performance of employee in manufacturing industry. Basically technology can give advantage and non-advantage impact to employee performance. The major scope of this study is to determine the relationship between technology impact and employee performance. In addition, this study to determine most factor of the technology that can be impact employee performance. There is several factors give impact to employee performance such as training and motivation of employee. From the study result, researcher will give suggestion to the organization about strategies for employees acceptant on new technology in workplace. This study will focus to employee on manufacturing industry.



## 1.1. Background of the study

Technology is defined as the application of scientific knowledge for practical purposes, especially in industry. Technological change the organizational policies and strategies (Hampel and Martinsons, 2009). Most of the industry involved employee in management, working for technological advancement implementation.

Technology is essential in every field from education institution to automotive industry banking to civil aviation, telecommunication to textile, there is momentous influence of technology in every field. Technology has changed the way we work and it has brought some fan at work, it reduces on human errors which can be caused by too much work or stress. Organizations purchase the new technological tool for improving the employee's performance, facilitated job-tasks, improved communication, increased efficiencies, and higher-levels of effectiveness in work management. Firms also invest on employees training to improve the employee knowledge and skills and development of employees prior to the introduction of new technology.

Usually, new technology is not only essential for company or government, it is also important for nation. Companies cannot run with absolute technologies. Technology increase human performance when human or employees use technology for the benefits of the organization and use with ethical values. Individual person cannot adopt technology easily and on the other side group of people can adopt technology easily. Computer is a greatest invention; it is useful only in case when employees use it for their work. New technology can be used for both purposes for break or for make purpose. Employee work load reduce through technological advancement. Number of employees to perform one task is also reduced. Companies require not much more employees to perform one job. Human effort is also reduced through technological advancement. Single employee can perform its job without any hurdle.

## 1.2. Problem Statement

This study is about technology impact performance of employees in workplace at manufacturing industry. Technology can give positive and negative impact to employees and also to company. The problem indicated by technology is when employees are not ready to adapt new technology. Technology becomes essential and valuable tools for manufacturing industry. Access to this technology has increased employee's productivity and company profitability. However, when employees are still hesitant to adapt with new technology it can give negative impact to employee performance.

Therefore, employee needs to adapt and adopt with new technology to increase organization productivity. Yet, organization also need to ensure that technology provided by the company is used properly because it will impact performance of employee and also affect profit of company.

## 1.3. Research Question

The purpose of this study is to evaluate how technology impact employee performance.

This study attempts to answer the following questions:

- ❖ RQ1: What is relationship between technology and employee performance?
- ❖ RQ2: What is the most factor of technology impact to employee performance?
- ❖ RQ3: What should a company do to avoid employee hesitant to adapt a new technology in workplace?

#### **1.4. Research Objective**

The general objectives of this study are outlined below:-

- ❖ RO1: To determine the relationship between technology and employee performance
- ❖ RO2: To determine the most factor of the technology that can be impact employee performance.
- ❖ RO 3: To identify strategies for employee acceptant on new technology in workplace.

#### **1.5. Scope and limitation of Study**

The scope of this study is to know the relationship between technology and employee's performance. This study will be conducted in Sungai Petani Industry Park in Kedah. There are some unavoidable limitations to conduct this study. First, because of the time limit, this study is conduct only on small size population. Second, researchers are difficult to get cooperation among respondent because some respondent do not understanding about the study. Lastly, cost also one of limitation in this study because researcher needs to spend their own money for this study.

## **1.6 Significance of the Study**

The significance of this study is to analyze the technology impact employee performance in manufacturing industry. This study will determine the relationship between technology and employee performance. From this study, it will help the top management to find out the advantage and non-advantage of technology to employee performance.

The results from this study will be valuable for the employers to come out with even better benefits and policies that will help to increase employee productivity in workplace. Furthermore, it could also provide knowledge on benefit of technology to employee performance.

## **1.7 Summary**

Overall, this chapter covers all aspects of an introduction for the start of the study. In fact, this chapter states clearly any study implemented by the statement of the problem, objectives and scope of the study.

## **CHAPTER 2**

### **LITERATURE REVIEW**

This chapter discusses the perception and findings of the topic from previous researchers and authors. This study has stated the overall view of technology in manufacturing industry, employee performance and the relation between technology and employee performance. The literature review is helpful to researcher in constructing the questionnaire related to the topic. Moreover, the prediction of study which is the hypothesis also present in this chapter. The theoretical framework also attach in this chapter.

## 2.1 Technology in manufacturing

Technology can be defined as new and better way of achieving economics end that contribute to economic development (Stewart and Nihei, 1987). Defining technology is paramount because it helps to identify phenomena related to technology transfer. According to Khalil (2000), technology can be defined as all the knowledge, tools, processes, products, methods, and systems employed in producing product and services. In simple terms, technology is the ways we do thing. It is means by which we accomplish objectives.

According to Choi et. Al (2009), many scholars have attempted to understand the real meaning of technology using different underlying philosophies .The meanings of technology these authors proposed were unique, according to their context, philosophy, economy, or other variables (Choi 2002). Most of contemporary discussions think the change of economic growth and productivity increases because of technology change (Gee, 1981). Technologies were typically real assets that could be uniquely identified as to purpose and function (Flannery and Dietrich, 2000).

Technology in most organization provided the required forces via many forms by which products and services were produced. According to Dauda (2009) may be in forms of machine equipment information and communication made up of knowledge, tools, method and system directed to work in specific manner. Technology comprising the hardware, the software and the brain ware. The hardware is the physical structure and logical of equipment, the software is knowledge and method used for production or output from the hardware and the brain ware is the reason for using the technology in a particular way. All these depend on a particular way. Whereas, technology is result of man's learned and acquired knowledge or his technical skills regarding how to do things well (Khalil 2000).

While, manufacturing is process of converting raw materials, components, or parts into finished goods that meet a customer's expectations or specifications, (businessdictionary.com). Manufacturing is complex activity drawing upon many disciplines and technologies, reflecting management attitudes and philosophies, organization structures, and influenced by the customer for manufacturing product and the suppliers of many of the components used to produces the product. Most efforts to develop a discipline of manufacturing have concentrated on understanding and improving the performance of unit operation and activities, in the belief that maximizing the effectiveness of the separate parts would result on optimized system (Joseph A Heim and W. Dale Compton, 1992).

Therefore, technology is important for manufacturing industry because technology provides the productive tools that force a growing, stable economy and an increasing standard of living. This tool creates the means to provide an effective national defense. They make possible modern communications, affordable agricultural products, efficient transportation, innovative medical procedures, space the exploration and the everyday conveniences for granted.

The production tools in manufacturing include machine tools and other related equipment and their accessories and tooling. Machine tools are non-portable, power-driven manufacturing machinery and systems used to implementing certain operations on man-made materials to produce durable goods or components. Related technologies include Computer Aided Design (CAD) and Computer Aided Manufacturing (CAM) as well as assembly and test systems to create a final product or subassembly (Dr. McLean, 2015).

Indeed, manufacturing entails rapid transfer of science and technology into manufacturing product and process (Helmi A. Youseef, Hassan A. El-Hofy and

Mahmoud H. Ahmad, 2015). Manufacturing industry work better by deploying technology, this can be classified as basic, intermediate, or advanced. The level of technology in any manufacturing has an important influence on its activities. Simpler technologies are often less expensive to deploy than sophisticated technologies. This is why the nature of technology present in an organization can have implications on operating costs, quality of output, as well as the quantity and the time needed to accomplish organizational tasks.

The extent to which technological change will succeed in an organization depends on the employee readiness to adapt to the new technology (Dayal and Aggarwal, 1995). Few would argue against the proposition that technological knowledge is an important source of firm performance. A host of studies in strategic management and industrial organization economics to be considered that expected positive relationship between technological knowledge and measures of sales or profitability (Ernst, 2001 and Wang, 2008).

Although, there are lot of advantage on technology for the day to day running of business organizations as a departure from the conventional or traditional mode, empirical findings show that many employees find it difficult to change to the use of technology in their various tasks while some of them have not integrated technologies into their daily activity (Gagnon and Dragon, 1998). According to Maguire (2005) it was found out that despite the benefits technology offers, many employees are still hesitant to adapt to the use of technology. Whereas it may be conclude from Allen and Seaman (2007) that a major problem on the use and success of the technology located on resistance of workers to develop the ability to use new technologies. Therefore, the inability of employees to adapt to new technology will affect the employee performances.