CHAPTER ONE

INTRODUCTION

This chapter introduces the research topic, presents the research objectives and research questions. The Malaysian Army Royal Signal Regiment (RSR), concept development and significance of the study is discussed next. Finally an outline of the organization of the report is provided.

1.1 Background of Study

The application of information technology (IT) has become the most frequent and hot subject of discussion in the twenty first century. Technology is changing the way we live and work. For example, Japanese employees, managers, housewife and teen use wireless interactive web phone to send e-mail, surf the web, swap photos, and play computer games. At DreamWork Animation, a sophisticated videoconferencing system allows animators in three different locations to edit films collaboratively. Nearly 8,000 employees at Ford Motor stopped using their landlines and now use cell phones exclusively. On campuses – the 'world' you're most familiar with, now students are downloading professor's lectures to their – iPods and MP3 player. Laptop in classrooms is now a common sight. R. Breeden (2005) survey of employee showed that 93 percent of those polled use the Internet at work. Organization today must be able to learn and respond quickly.

Managers are challenged to have their organization functioning smoothly while continually improving work operation and staying competitive even though in both the organization and the environment, such technology are changing rapidly.

The government of Malaysia has introduced initiatives and policies to encourage its application and to influence commercial involvement in IT since early 1990. In fact Malaysia has chosen IT as a vehicle towards achieving the nation's 2020 vision of being a developed nation. This included the set up of The National Information Council (NITC) as the think-tank and adviser in planning and management of IT as Malaysia strategic tool to achieve this vision. Today, the development of IT infrastructures and facilities in Malaysia has undergone a massive transformation. The impacts of IT on individuals as well as other private and public organizations are very great. It is difficult to imagine the survival of life without IT especially in the financial world, production control systems, commercial sector etc.

Information technology (IT) has brought many changes to the Military area. It has revolutionized the way commander communicate with his subordinate commander and how Command Operation Centre (COC) command the operation theatres. Indeed, the permeation of IT into COC has created the opportunities for commander to be active learners and allowed subordinate commander in each operation to be facilitated. While advances in technology continue with rapidity, the use of these upcoming technologies has fallen below

expectations (Ndubisi, Gupta & Massoud, 2003; Johansen & Swigart, 1996; Wiener, 1993; Moore, 1991) and has been identified as one of the plausible explanations for the productivity paradox (Sichel, 1997; Landauer, 1995). A number of studies have shown that successful investment in technology can reap immense benefits for the adopting individuals and organizations. On the basis of these benefits, the Malaysian government is taking steps to inculcate and motivate their people to take advantage of the benefits of these technological advances.

The development of IT project in the Malaysia Armed Forces (MAF) started way back in late 1970. Due to the development and importance of IT toward MAF, the Malaysia Army IT Centre (PUSTEKMA TD) was established on 1990 to spear head the Army IT requirements and IT development programmed. The roles of PUSTEKMA are to tackle and handle various IT development projects for the Malaysian Army and also conduct IT courses to train army personnel to operate and manage computer technology. However, despite these significant technological advances and increase of military investments in promoting technological adoption at individual and organizational levels, it is still unclear to what extent is the level of IT adoption among Malaysian, particularly among the MAF personnel in the determinants of usage, awareness, attitudes and beliefs towards the system.

1.2 Purpose of Study

Gender differences have attracted attention in today's educational research and practice. Over the last two decades, computer technology has been changing in many aspects of higher education including administration, recruitment, and the way of teaching and learning. The study of effect and exposure toward IT and the differing ideas among gender with regard to their interest in and reaction to technology has received increasing attention among educators and scholars. For instance, American Demographics reported that while female users of office personal computers (PCs) believe computers are fun, men buy the machines (Kaplan, 1994). Men, on the other hand, are reportedly more interested in mastering computer commands and want computers with voice recognition and features that extend their senses. Women want to be able to use the machines; men want to command the machines. This difference in attitude about information technology based on gender has been explained by some individuals as an outcome of the socialization process. Society views computers as highly technical and part of a male domain (Campbell & McCabe, 1984; Lowe & Krahn, 1980).

Chen (1986) had conducted a study on gender differences in attitudes toward computers and instructional technology; he examined the gender differences in computer attitudes and experience of adolescents. He found that males were more interested in and more confident with computers than females. He also

suggested a difference in the use of computers, finding that males had greater exposure to computers both in formal instructional settings and informal settings. On these aspects, Salameh (1993) found the similar pattern that male students scored higher in positive attitudes than females.

Nelson and Watson (1995) in their research reviewed studies on gender differences in computer-based education and concluded that significant gender differences existed in regard to the equality of access and performance outcomes, and this disparity appeared to start as early as preschool where males consistently spent more time in computing activities than their female peers. Matthew (1997) supported the idea that gender plays an important role when it comes to use of technology in the classroom. He found that male students are more likely than female to have a positive perception of classroom technology and taking Internet courses. Christiansen (1999) argued that in a world of increased competition, students and parents expect the extensive use of technology in education. According to Christiansen, familiarity with technology can be a major factor in employment after graduation. Technology use in the classroom is necessary to prepare students to face their future, particularly in work places.

Although earlier studies had shown that females have been seen as being less receptive to technology than males, recent experiential evidence and the intensive increased computer use in public and private sector in Malaysia

environment particularly in Malaysia Armed Forces (MAF) suggest that this condition may no longer exist. As we are aware that, women are well accepted in MAF today, and this is shown by the increase of the number of female personnel joining the MAF. To focus on gender study on IT in MAF, the author suggested that the Malaysian Army Royal Signal Regiment (RSR) as the case study because most RSC personnel have been exposed with various IT courses and programs when they attended their career or functional courses at Army Institute of Communication and Electronic (IKED). Furthermore, RSR compared to other corps/ regiments have a higher holding of female military personnel in Malaysian Army. To support the author's justification, Inderjit (1999) survey studies showed that the awareness among military personnel among all Corps in Malaysian Army, RSR have the largest numbers of computer literature personnel compared with other corps in Malaysian Army. And also the RSR as compared to other corps had the most exposure in various MAF IT projects. As an ex-director of Training Wing for IKED from year 2004 to 2006, it's important for me to investigate the attitudes and beliefs of RSC personnel on IT because MAF had invested considerably in these aspects.

1.3 Malaysia Army Royal Signal Regiment (RSR)

1.3.1 Overview

Malaysian Army consists of 15 different corps with various functions. RSR is the fourth largest corps in the Malaysian Army. The RSR was established in 1952 and became one of the combat support arms of the Malaysian Army. It is responsible for installing, maintaining and operating all types of telecommunication equipment and information systems, providing command support to commanders and their headquarters, and conducting electronic warfare against enemy communications. The director of RSR which held his office at Army HQ is the adviser to Army Chief in IT.

Royal Signals officers and other ranks receive specialist communications training at the Army Institute of Communication and Electronic (IKED), Sungai Besi Camp, Kuala Lumpur. There are currently three different trades available to other ranks, each of which is open to both men and women:

(1) Operator Communication Information Systems (OCIS) - an expert in military radio and trunk communications systems.

(2) Telecommunication Technician in Communication Information System (JTK CIS) - an expert in maintaining and repairing the communications equipment and computer networks.

(3) Combat Signaler - a signaler train in multi skills with expertise in maintaining and providing electrical power; an expert in driving, laying line and installing cabling; an expert in installing and repairing telephone systems; an expert in maintain and managing store; and an expert in general duty.

Other specialist in RSC for those Staff Sergeants and Warrant Officers work in supervisory rosters:

(1) Yeoman of Signals - experts in the planning and deployment of military tactical/strategic communications networks;

(2) Foreman of Signals - experts in the installation, maintenance, repair and interoperability of military tactical/strategic communications assets.

Besides providing training for all officers and other ranks of RSC in specialist communications and IT, IKED also train Regiment Signal Officer (RSO), Regiment Signal Instructor (RSI) and Infantry Regiment Radio Operator in communications expertise. IKED has become the Army IT Excellence Centre in

1994 and provided the main support to Malaysia Army in developing and producing IT experts. IKED conducted more than 40 series of various types of courses every year and with more than 1,000 trainees. As of today, IKED has been facilitated with various advanced communications and computer labs which is on par as other local university. IKED had also established Memorandum of Agreement (MoA) with local university such as University Technology Malaysia (UTM) in the conduct of technical module; and Open University Malaysia (OUM) in conducting a Diploma of Information Communication and Technology (ICT) Course for Yeomen and Foreman Courses.

1.3.2 Signaler

A **signaler** is a soldier responsible for military communication and related tasks. Most signalers are employed in the operation of radio equipment and antenna (other than personal radios), but other signalers may be responsible for the construction and maintenance of telephone line and switchboards for field telephone systems, information technology infrastructure, or electronic warfare. Presently, signalers work with modern equipment using satellites, computers, and electronics to monitor and maintain division-sized networks. In the Malaysian Army **signalers** may refer to a member of the **Royal Signal Regiment** or a trained signals specialist in other areas of the army such as the infantry or other corps.

1.4 Research Objectives

The aim of this research is to contribute to a better understanding of the current status of male and female RSC personnel in Malaysian Army in their attitudes and beliefs toward IT. The main objective is to conduct exploratory and descriptive research to determine the gender perspective of attitudes and beliefs on IT in the Malaysian Army. This study is designed to:

(1) To analyze the gender perspective of attitudes among RSR personnel on IT.

(2) To analyze the gender perspective of beliefs among RSR personnel on IT.

(3) To examine whether other demographic factor and personality background affect the attitude and belief among RSR personnel on IT.

1.5 Concept Development

Fishbein and Ajzen's Theory of Reasoned Action (Fishbein, 1963; Fishbein, 1967; Fishbein and Ajzen, 1974; Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1980; Ajzen, 1985; Ajzen and Madden, 1986) has had broad application in explaining behavior and has been used in prior Information System (IS) research

(Davis, 1986; Davis, 1989; Davis, Bagozzi et al. 1989; Davis, 1989; Davis, 1993). The theory proposes that an individual's behavior is ultimately determined by the beliefs of that individual. This theory was used to guide an empirical study that was conducted to identify the beliefs and attitudes that undergraduate business students possess towards IT. It is an assumption of this research that these beliefs and attitudes would influence the Malaysian Army particularly RSR personnel's behaviors and ultimately their performance in duty that require computer-related assignments and their behavior in choosing whether to take additional courses in IT. Presently, a short overview of the Theory of Reasoned Action is given as the conceptual foundation for the study. The Theory of Reasoned Action is built using five constructs: beliefs; attitudes; intentions; subjective norms; and behaviors. The theory uses the following definitions for these constructs (Ajzen and Fishbein, 1980). Beliefs represent the information an individual has about an object. A belief links an attribute to an object. Attitude refers to a person's degree of evaluative affect toward a target behavior.

Intention is the subjective probability that an individual will perform a specified behavior, it is considered a type of belief where the target is always the individual and the attribute is always some behavior. Subjective norm is a person's perception of the social pressures applied to perform or not perform the behavior in question by important referents. Behaviors are specific observable acts of the subject. Behaviors may be defined with respect to the action performed, a specific target, the context, and the timeframe of interest. Although not directly

salient to an army personnel's intention to use a computer or become a computer major, it is likely that an individual's beliefs and attitude toward IT would have an influence on these types of behaviors. Therefore, a study was conducted to identify Malaysian Army signaler beliefs and attitudes toward IT. Differences in these beliefs and attitudes may explain why some soldiers choose to take more courses in IT while others avoid them. To investigate these differences the beliefs and attitudes of RSC signaler in computer majors and all other business majors were identified and compared.

1.5 Research Questions

Five research questions were identified for this study of gender attitude and belief about IT among Malaysia Army RSC personnel as follows:

RQ1. Does gender differ in their perceptions regarding the value of IT in making users more productive?

RQ2. Does gender differ in their attitudes toward the impact of IT on people and their work environments?

RQ3. Does gender differ in their relative comfort when using computers?

RQ4. Does other demographic factor and personality influence attitudes and beliefs toward IT?

RQ5. Do Malaysian Army RSR personnel have positive attitudes toward IT?

1.6 Significance of Study

1.6.1 Contribution to Knowledge

This study is important as it measures the attitudes and usage of IT among military personnel in the MAF organization. The Government of Malaysia particularly MAF has invested millions of dollars in developing, enhancing and encouraging their personnel in the usage of IT in daily function for the past two decades. The usage of IT in the military modern warfare such as cyber warfare, information warfare and electronic warfare cannot be overlook. It is hoped that the finding of this paper will contribute toward further understanding for the top management of Malaysia Army on the current status of Army personnel particularly the RSR's attitudes, beliefs and expectation on IT.

1.6.1 Contribution to Practice

It's important to highlight the current status of attitudes and beliefs among Malaysian Army RSC personnel on IT in order to assist the top management of RSC particularly the directors of RSC, decision and recommendations to higher authority regarding the development of course, program, and career selection in the future. Popular assumptions about the lack of interest in technology by women may cause educators to steer women away from technical courses and careers. Knowledge about current conditions may also influence trainers' and managers' recommendations to employees regarding the training and employee development activities that they pursue. Female employees may be bypassed in the selection process for employee development programs that involve technology.

1.7 Organization of the Study

Chapter One comprises an executive summary of the thesis and provides the rationale for choosing the research topic. The first chapter also clarifies the aim of the research and identified the main questions and objectives of the research.

Chapter Two begins with definitions and terminologies used within the framework of the study, and then discuss the previous studies in this area.

Chapter Three in general provides Research Methodology and will cover conceptual model and research methodology.

Chapter Four discuss data analysis and the research findings.

Chapter Five concludes the study and highlights possible problems that may arise from the new proposal and also suggests measures to address the problems.