DETERMINANTS OF E-LEARNING ACCEPTANCE AMONG INTEL'S EMPLOYEES

CHYE MUI SUNG

UNIVERSITI UTARA MALAYSIA

2011

KOLEJ PERNIAGAAN
(College of Business)
Universiti Utara Malaysia
PERAKUAN KERJA KERTAS PROJEK
(Certification of Project Paper)

Saya, mengaku bertandatangan, memperakukan bahawa
(I, the undersigned, certified that)
CHYE MUI SUNG (802409)

Calon untuk Ijazah Sarjana
(Candidate for the degree of) **MASTER OF HUMAN RESOURCE MANAGEMENT**

telah mengemukakan kertas projek yang bertajuk
(has presented his/her project paper of the following title)

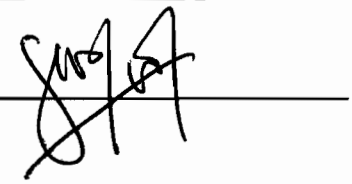
DETERMINANTS OF E-LEARNING ACCEPTANCE AMONG INTEL'S EMPLOYEES

Seperti yang tercatat di muka surat tajuk dan kulit kertas project
(as it appears on the title page and front cover of the project paper)

Bahawa kertas projek tersebut boleh diterima dari segi bentuk serta kandungan dan meliputi bidang ilmu dengan memuaskan.
(that the project paper acceptable in the form and content and that a satisfactory knowledge of the field is covered by the project paper).

Nama Penyelia UUM : **DR. SITI ZUBAIDAH BINTI OTHMAN**
(Name of Supervisor)

Tandatangan :
(Signature)



Tarikh : **10 JANUARY 2011**
(Date)

Permission to Use

In permission this project paper in partial fulfillment of the requirement for Post Graduate degree from the Universiti Utara Malaysia (UUM), I agree that the Library of this university may make it freely available for inspection. I further agree that permission for copyright this project paper in any manner, in whole or part, for scholarly purposes may be granted by my supervisor or in their absence, by the Assistant Vice Chancellor of the College of Business where I did my project paper. It is understood that any coping or publication or use of this project paper or parts of it for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to Universiti Utara Malaysia (UUM) in any scholarly use which may be made of any material in my project paper.

Request for permission to copy or to make other user of materials in this project paper in whole or part should be addressed to:

Dean
Othman Yeop Abdullah Graduate School
College of Business
Universiti Utara Malaysia (UUM)
06010 Sintok
Kedah Darul Aman

Disclaimer

The author is responsible for the accuracy of all opinion, technical comment, factual report, data figures, illustrations and photographs in this dissertation. The author bears full responsibility for the checking whether material submitted is subject to copyright or ownership right. Universiti Utara Malaysia (UUM) does not accept any liability for the accuracy of such comment, report and other technical and factual information and the copyright or ownership rights claims.

The author declares that this dissertation is original and his own expect those literatures, quotations, explanations and summarization which are duly identified and recognized. The author hereby granted the copyright of this dissertation to College of Business, Universiti Utara Malaysia (UUM) for publishing if necessary.

Student Signature:

Date:

Abstract

This study examines factors that influence e-learning acceptance among Intel's users. The study was a cross sectional study where respondents' perception was measured at one point in time. 97 respondents participated in this study. In this study, three factors were tested to understand the level of acceptance among e-learning users.

Correlation analyses were conducted to test the relationship between individual factors, system factors and organizational factors and e-learning acceptance, whereas descriptive analysis was conducted to analyze demographic characteristics of participants. To test which factor has the significant contribution towards e-learning acceptance, regression analysis was conducted.

The results show that there was an association between all the three factors (individual, system and organizational) and e-learning acceptance. The findings indicated that all these three factors are important that can influence users' acceptance towards e-learning system. Though all the three factors indicate significant positive relationship with e-learning acceptance, system factor made the strongest contribution to the e-learning acceptance.

Acknowledgements

I would like to acknowledge and extend my heartfelt gratitude to the following persons who have made the completion of this project paper possible:

My supervisor, Dr Siti Zubaidah, for her vital encouragement and support, for her understanding and assistance, for the constant reminders and much needed motivation.

A special word of thanks goes to my husband, Khairul for the willingness help and inspiration he extended, for assisting in the collection of the topics for the chapters. I have appreciated his humor and support throughout.

Lastly, I offer my regards and blessings to all of those who supported me in any respect during the completion of the project.

And to God, who made all things possible.

Table of Contents

CHAPTER 3

METHOD

CHAPTER 4

RESULTS

CHAPTER 5

DISCUSSION, CONCLUSSION AND RECOMMENDATIONS

List of Tables

List of Figures

CHAPTER 1

INTRODUCTION

1.0 Background of the Study

E-learning is the unifying term to describe the fields of online learning, web-based training, and technology-delivered instruction. E-learning is beneficial to education, corporations and to all types of learners. It is affordable, saves time, and produces measurable results. E-learning is more cost effective than traditional learning because less time and money is spent. Since e-learning can be done in any geographic location and there are no travel expenses, this type of learning is much less costly than doing learning at a traditional institute.

Flexibility is a major benefit of e-learning. E-learning has the advantage of taking class at anytime anywhere. Learners can fit e-learning into their busy schedule. Education is available when and where it is needed. E-learning also has measurable assessments which can be created for both the instructors and students such as what the students have learn, when they've completed courses, and how they have performed.

Now e-learning has evolved. There is a trend to move towards blended learning services, where computer-based activities are integrated with practical or classroom-based situations and learners can accommodates it in different types of learning styles. With widespread of internet technologies, it has created a great opportunity for e-learning users and has become flexible new method for learners to gain essential knowledge.

1.1 Problem Statement

At Intel, the Intel® Learning Network (ILN) was introduced as a technology leading enterprise Learning Management System (LMS) that brings a variety of training support products to Intel. It was initially developed and driven by Sales and Marketing group (SMG) at

Intel in 2001. But, it has been used regularly for years, by over 30 business groups across Intel in a form of online learning, offline downloadable learning for on-the-go employees, face-to-face learning that include all business unit meeting (BUM) scheduling, employee development planning and more. In 2005 ILN built a comprehensive, integrated Event Management System (EMT) for managing attendee headcount, online registration, meeting space management, a classroom attendance tracking system to eliminate headaches, integrated online evaluations, email communications, and more for small to large face-to-face events. Key events have run very successfully on the tool with average evaluation ratings ~4.5 (out of 5.0). Staying current and adopting new advancement in technology, Intel is continue to embrace the change and swift some of classroom trainings into web based training (ILN- Intel learning Network).

Despite the benefits of using the Internet in the classroom, the current understanding of the adoption diffusion of this technology is still limited at Intel. As compared to web-based learning, the instructor led face to face training still is the most popular and common way of learning and has been accepted well among the Intel employees. Currently, Intel Malaysia has a total of 1000 instructor led courses with a total of 29,554 employees enrolled in the classroom.

Reasons for the low acceptance of e-learning at Intel are still not clear. However, in the literature there are several factors that can explain the acceptance of e-learning. According to the studies such as Poon et al. (2004), Folorunso, Ogunseye, and Sharma (2006), Selim (2005) and Volery and Lord (2000), students' characteristics such as their satisfactions with time and place flexibility of the system; students' involvement and participation; students' cognitive engagement; students' level of self confidence; students' technology self-efficacy; students' initiative and motivation and students' anxiety could influence acceptance of e-learning among students. Apart from that, some researchers believed that the technology used in e-learning could

contribute to the acceptance of the system. Volery and Lord (2000) for example have identified three critical success factors of e-learning that related to technology which is the ease of access and navigation, interface design and level of interaction. Top management support is another factor that has been discussed in the literature that could contribute to the e-learning acceptance. Neumann (1998) for instance believed that management support is critical to e-learning implementation. Like Neumann, Macpherson et al. (2004) also agreed that top management's consistency and vocal support is the key to success. Masie (2001, p.4) notes that "the role of the manager as an overt champion of the learner's development must be extended to e-learning offerings." Developing organizational culture that encourages e-learning use is one of Masie's recommendations

From the above discussion, it is clear that factors such as individual, system and organizational factors may have related to the e-learning acceptance. Thus, this study is conducted to examine these three factors that may contribute to e-learning acceptance among Intel employees.

1.3 Research Questions

Based on problems discussed above, the central question of this study would be "*what factors influence the acceptance of e-learning?* Specifically,

a. Do e-learning acceptance related with individual factors?
b. Do e-learning acceptance related with system factors?
c. Do e-learning acceptance related with organizational factors?
d. Which one of these factors has the strongest relationship with e-learning acceptance?

f. If yes, which organizational factor strongly related with e-learning acceptance?

1.4 Research Objectives

Generally, this study aims to examine factors that influence e-learning acceptance among Intel Malaysia employees. Therefore, to answer the research questions posted above, the following research objectives were formulated:

1. To investigate the relationship between individual factors and e-learning acceptance;
2. To examine the relationship between system factors and e-learning acceptance;
3. To examine the relationship between organizational factors and e-learning; and
4. To determine which of the three factors (organizational, individual and technology) have the strongest relationship with e-learning acceptance.

1.5 Significance of the Study

The main aim of this study is to investigate factors that may influence the e-learning acceptance. With this outcome of study, it can be used by ILN (Intel Learning Network) to analyze the factors of influence e-learning acceptance and continue to improve the system capabilities and support model.

Thus, this research can make an effective contribution to our understanding of the best way to increase the usage of e-learning in organization. This is a broader contribution that extends beyond the Intel Malaysia context. This study should benefit both scholars and practitioners regarding ways to increase the usage of e-learning in the organization and should also apply beyond e-learning context to other kind of systems generally.

1.6 Organization Chapters

This is the first of five chapters in this project paper. Chapter 2 reviews the literature on e-learning, explaining their definition and purpose, potential benefits and limitations and factors that influence the acceptance of e-learning.

Chapter 3 describes the research method for the study. The chapter reports the research design and procedure, the selection of respondents, sample types and size, the development of the questionnaire for the research, the survey process and data collection procedure. Chapter 3 ends with a brief description of the strategies and procedures that were used to analyze data collected from the survey.

Chapter 4 reports the results for the study. There are reports of the descriptive statistical analysis, bivariate correlation analysis, and regression analysis. The results are summarized in a number of tables to facilitate interpretation.

Chapter 5, the final chapter, discusses the interpretation of the research findings for the study. The findings are compared to those found in the past research reviewed in Chapter 2. New findings are also discussed. Chapter 5 concludes with a discussion on limitations of the study, the implications for both researchers and practitioners and suggestions for future research.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

This chapter discusses issues related to e-learning acceptance as presented and discussed in the management literatures. The chapter begins by describing the meaning and purpose of e-learning. Then, the benefits and limitations of e-learning are discussed. The chapter then reviews findings from past studies on the factors that influence the acceptance of e-learning. The chapter concludes by highlighting areas of research to be addressed.

2.1 Definition and Purpose of E-Learning

E-learning has been viewed as synonymous with web-based learning (WBL), Internet-based training (IBT), advanced distributed learning (ADL), web-based instruction (WBI), online learning (OL) and open/flexible learning (OFL) (Khan, 2001). It has the potential to revolutionize the basic tenets of learning by making learning individual-based rather than institution-based. E-learning is training that capitalizes upon the wide variety of new training technologies such as web-based training and CD-ROM. Although any form of e-learning may be useful for geographically-dispersed training audiences, e-learning can also take place on-site, in a self-paced fashion.

E-learning is the delivery of a learning, training or education program by electronic means. According to Stockley (2003), e-learning involves the use of computer or electronic device (e.g. computer, laptop) in some way to provide training, educational or learning material. E-learning has pedagogical potential beyond traditional methods related to the principles of

learning discussed. For instance, multimedia capabilities can be used with learning exercises that allow learners to apply concepts realistically. Also, animation can help demonstrate concepts and events that difficult to portray in traditional classes, which in turn, can facilitate a more accurate communication of important ideas. E-learning can deliver "new" information not contained in traditional sources, effectively reinforcing other course information through offering examples, explanations, assessments, and exercises. In this way, online instruction can potentially enhance learning compared to what can be accomplished using a classroom only approach (McEwen, 1997). However, e-learning is a part of the classroom environment. Continuous research and development in E-learning technology and the ability to develop virtual classrooms and a virtual learning environment (VLE) are also an important part of the history of e-learning and it has evolved.

In the history of e-learning it is important to note that there is no single evolutionary tree, and no single agreed-upon definition of e-learning. Since the 1960s, e-learning has evolved in different ways in business, education, the training sector, and the military and currently means quite different things in different sectors. In the school sector, 'e-learning' refers to the use of both software-based and online learning, whereas in business, higher-education, and the military and training sectors, it refers solely to a range of on-line practices (Campbell, 2004).

E-learning began at just about the same time that a computer was developed that was practical for personal use. However, back in early 1990, e-learning is described as online web-based school/learning systems. E-learning became part of the classroom environment from the beginning. The early use of computers was geared to help the classroom instructor. Gradually, as more and more personal computers became available, the idea of online classes was explored by

some pioneering colleges and universities. The early attempts at distance education were hampered by resistance from traditionalist within the education field

Starts from 1997 onwards, the LMS learning management systems were born. E-learning was first called "Internet-based training" then "Web-based training". Early e-learning systems, based on computer-based learning/training often attempted to replicate autocratic teaching styles whereby the role of the e-learning system was assumed to be for transferring knowledge, as opposed to systems developed later based on computer supported collaborative learning (CSCL), which encouraged the shared development of knowledge. From the year 2000 to 2004, many new concepts were created and disseminated, with more and more need to integrate several separate systems like student record systems, library systems, LCMS (learning content management systems), VLE(virtual learning environment) (EF-ODL, 2008).

2.2 Potential benefits and limitation of E-Learning

As e-learning move forward, it is clearly motivated by the many benefits it offers. What is important is to know exactly what e-learning advantages and when these outweigh the limitations of the medium.

Like no other training form, e-learning offers individualized instruction, which print media cannot provide, and instructor-led courses allow clumsily and at great cost. Other unique opportunities created by the advent and development of e-learning are more efficient training of a globally dispersed audience; and reduced publishing and distribution costs as Web-based training becomes a standard. With assessing needs, e-learning can target specific needs. And by using learning style tests, e-learning can locate and target individual learning preferences.

Additionally, e-learning is self-paced. Advanced learners are allowed to speed through or bypass instruction that is redundant while novices slow their own progress through content,

eliminating frustration with themselves, their fellow learners, and the course. Below are some of the most outstanding advantages of e-learning.

- ***Reduced overall cost***. It is the single most influential factor in adopting e-learning. The elimination of costs associated with instructor's salaries, meeting room rentals, and student travel, lodging, and meals are directly quantifiable. The reduction of time spent away from the job by employees may be the most positive offshoot. According to Hicks (2000), companies can save up to 70 per cent of their training budget when instituting e-learning courses within their firms. Young (2002) interviewed 204 senior executives and found that those that already used e-learning expected to increase that usage by 40 per cent, and 78 per cent expected to be using it in the next year. Reasons given for adopting it included cost-effectiveness, the fact that it can be adopted across multiple sites taking the learning to the learner, its ability to be tailored to the organizations needs, and that it complements knowledge management approaches.
- ***Reduced learning time***. In his study, Hall (1997) found that on average, 40 to 60 percent learning time can be saved.
- ***Increased retention*** with an increase of 25 percent over traditional methods (Fletcher, 1991, pp.33-42)
- ***Consistent delivery*** of content is possible with asynchronous, self-paced e-learning.
- ***Expert knowledge*** is communicated, but more importantly captured, with good e-learning and knowledge management systems.
- ***Proof of completion and certification,*** essential elements of training initiatives, can be automated. An e-learning strategy may be motivated by recording and tracking learning

and assessment, e.g. by recording course attendance or test results or by tracking learner achievement against some other educational standard (Nisar, 2002)

Along with the increased retention, reduced learning time, and other benefits to students, particular advantages of e-learning include (Kruse, 2002):

- ***On-demand availability*** enables students to complete training conveniently at off-hours or from home.
- ***Self-pacing*** for slow or quick learners reduces stress and increases satisfaction.
- ***Interactivity*** engages users, pushing them rather than pulling them through training.
- ***Confidence*** that refresher or quick reference materials are available reduces burden of responsibility of mastery.

Disadvantages of e-learning is not, however, the be all and end all to everything training need. It does have limitations, and among them are:

- ***Up-front investment*** required of an e-learning solution is larger due to development costs. (Nisar, 2002). The organization also need to forecast the initial high costs of buying computer and multimedia package (Kruse, 2002)

- ***Technology issues*** that play a factor include whether the existing technology infrastructure can accomplish the training goals, whether additional tech expenditures can be justified, and whether compatibility of all software and hardware can be achieved (Kruse, 2002) The fear of technology is still apparent in many people, certainly for those over 40 years of age (Nisar, 2002)
- ***Inappropriate content*** for e-learning may exist according to some experts, though are limited in number. Even the acquisition of skills that involve complex physical/motor or

emotional components (for example, juggling or mediation) can be augmented with e-learning. The well structured e-learning may appear easy and can be devalued in the eyes of both the trainee and their colleagues who had to "learn the hard way'' (Nisar, 2002)

- ***Cultural acceptance*** is an issue in organizations where student demographics and psychographics may predispose them against using computers at all, let alone for e-learning. (Kruse, 2002)

The pro's and con's of e-learning vary depending on program goals, target audience and organizational infrastructure and culture. But it is unarguable that e-learning is rapidly growing as form of training delivery and most are finding that the clear benefits to e-learning will guarantee it a role in their overall learning strategy.

2.3 Empirical studies on E-learning Acceptance

2.3.1 Individual factors and e-learning acceptance

The need for education has changed because of an increased demand for a highly educated workforce who will be expected to learn continuously (Alavi & Leidner 2001). E-learning has become an increasingly important part of higher education. Thus, it is important to continue to study what are factors to determine the e-learning acceptance.

Although, e-learning is increasingly used in the organization, the question of how well learners accept e-learning as a learning medium has not been well-researched. Selim (2005) stated that the efficiency and effectiveness in delivering the e-learning based components of a course is one of the most critical factors to students' acceptance of e-learning and success in e-learning courses. Dillon and Morris (1996, p. 4), defined students acceptance as "the demonstrable willingness within a user group to employ information technology for the tasks it is designed to support". Hong, Lai and Holton (2003) investigated a web-based course and reported

that more than half of their participants had high level of acceptance with the web-based course. The students who had high level of acceptance indicated that the web-based course was convenient and flexible. Nonetheless, some students faced difficulties with the web-based learning environment. They found the web-based course to be a new learning experience and felt that they needed more guidance and time to adapt to the learning environment (Hong et al., 2003). Meanwhile, Poon et al. (2004) studied web-based learning environments in Malaysia and reported that their participants were not fully comfortable with e-learning. Likewise, Poon et al. (2004) posited one possible reason was that the students were unfamiliar with the e-learning medium. On the positive side, Hong et al. (2003) and Poon et al. (2004) reported that students generally agreed that e-learning helped in their studies. However, past research showed that a number of factors such as students' and instructors' characteristics (Hong et al., 2003; Ndubisi, 2004; Poon et al., 2004), technology support and system (Poon et al., 2004; Rafaeli & Sudweeks, 1997), institutional support (Passmore, 2000; Latifah & Ramli, 2005), course content and knowledge management (Selim, 2005; Rosenberg, 2001), and online tasks and discussion groups (McDonald, 2001; Webb, Nemer, Chizhik, & Surgue, 1998) could influence learners' acceptance of e-learning.

Numerous studies have demonstrated that a student's active involvement in the learning process enhances learning, a process often referred to as active learning (Benek-Rivera & Matthews, 2004; Sarason & Banbury, 2004). Simply stated, active learning involves "instructional activities involving students in doing things and thinking about what they are doing" (Bonwell & Eisen, 1991, p. 5). Interactive instruction or "learning by doing" has been found to result in positive learning outcomes (Picciano, 2002; Watkins, 2005). Because many new technologies and web based activities are interactive, online coursework has the potential to

create environments where students actively engage with material and learn by doing, refining their understanding as they build new knowledge (Johnston, Killion & Omomen, 2005; Pallof & Pratt, 2003). As Driscoll (2002) observe "when students become active participants in the knowledge construction the focus of learning shifts from covering the curriculum to working with ideas. And using technology tools 'to think with' facilitates working with ideas and learning from that process" (also see Scardamalia 2002). In addition to active involvement, students better understand and apply material when problems and situations are set in the context of real world issues and situations (Eble, 1988). Authentic situations and scenarios can provide a stimulus for learning, creating greater student motivation and excitement for learning, representing and simulating real-world problems and contexts, providing an important structure for student thinking (Quitadamo & Brown, 2001). Emphasizing authentic tasks in context rather than abstract out-of-context activities creates a greater likelihood of learning (Driscoll & Carliner, 2005).

Technology and online instruction can facilitate learning by providing real-life contexts to engage learners in solving complex problems (Duffy & Cunningham, 1996; Honebein, 1996). The use of real-world situations has the potential to promote deep learning through the development of critical thinking skills. Critical thinking involves the active and skillful analysis, synthesis, and application of information to unique situations (Scriven & Paul, 2004). Learning retention and performance improves as students are required to apply what they have learned and then reflect upon the learning (Bereiter & Scardamalia, 1989; Bransford, Brown, & Cocking, 2000). Again, online instruction has the potential to provide opportunities to promote reflective thought and deep learning through realistically integrating and applying principles learned. Online instruction, such as a simulation, thrusts learners into a learning experience, increasing

engagement and providing activities that actively engage learners to analyze, synthesize, and evaluate information while constructing knowledge (Driscoll & Carliner, 2005).

Poon et al. (2004), Folorunso, Ogunseye, and Sharma (2006), Selim (2005) and Volery and Lord (2000) reported that students' characteristics such as their satisfactions with time and place flexibility of the system; students' involvement and participation; students' cognitive engagement; students' level of self-confidence; students' technology self-efficacy; students' initiative and motivation and students' anxiety could influence acceptance of e-learning among students.

2.3.2 System factors and e-learning acceptance

Technology has inevitably become the most powerful tool in almost every aspect of human's daily life. Technology is regarded as a major revolution and this has a significant impact on education. The use of Information Technology (IT) and the Internet are the new paradigm of learning in 21st century. The online learning revealed that learners have a favorable opinion of the online course or online learning system which helps to equip students with the necessary reading and computer skills along with providing a fun, entertaining and flexible environment to learn (Thang & Bidmeshki, 2004; Paris, 2004; Sun, Tsai, Finger, Chen & Yeh, 2008).

The information systems literature suggests that acceptance is a prerequisite of intentions to use, and actual use of information systems (e.g. Davis 1989). In an educational context, acceptance of the e-learning environment is an important prerequisite of learning. In technology acceptance research on e-learning, common approaches are quantitative measurements of students' *acceptance*, *perceptions* or *attitude* to e-learning. These measures are frequently correlated to the core constructs of technology acceptance models or to individual background

variables to investigate whether there are significant relationships explaining students' reactions (Keller 2005).

According to Madhukar (2002), the Internet has positive influences on learning as it is a source of information, provides independent and individualized learning, gives in-depth understanding, and improves learners' motivation. However, he also pointed out a few negative influences of the Internet on learning, which includes interfering with student concentration, being time consuming, presenting questionable resources, and increasing student dependency on Internet rather than application of knowledge. By comparing the pros and cons of the Internet as a tool for learning, he has provided some guidelines to consider making Internet learning effective:

- monitor use of Internet in class;
- identify beforehand lessons and/or activities that will necessitate use of the internet;
- provide Internet search guidelines and skills at the beginning of the course and "bookmark" important sites for students;
- diversify instructional strategies with textbooks, group discussions, CDs and videos instead of focusing solely on the Internet; and
- discourage students from pirating on the Internet.

The infrastructure of technology and technical support of e-learning system plays an important role in the acceptance of e-learning (Folorunso et al., 2006; Poon et al., 2004; Selim, 2005). This is because it looks into the reliability and quality of the system. Apart from that, to create e-learning acceptance, the technology and the e-learning system must be well maintained and up-to-date (Folorunso et al., 2006; Poon et al., 2004; Selim, 2005). The system must have

minimal technical problem and support various platforms and applications. Rafaeli and Sudweeks (1997) reported that if the technology and communication technology used were reliable, students studied better in e-learning environment and had higher e-learning acceptance.

Other than the reliability and quality of the system, system design is crucial in influence the success indicator. Holsapple and Lee-Post's e-learning success model is adapted from DeLone and McLean's (2003). DeLone and McLean identified six dimensions of success factors: system quality, information quality, use, user satisfaction, individual impact, and organizational impact. These were incorporated into their original overall success model shown in Figure 2.1.

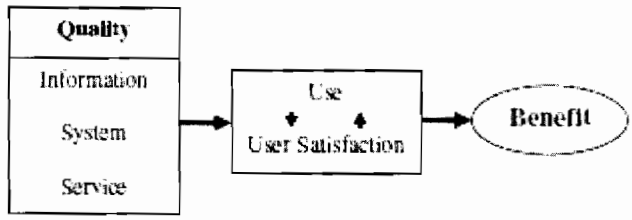


Figure 2.1 DeLone and McLean's information system success model

Holsapple and Lee-Post's e-learning Success Model makes the process approach explicit to measure and assess success. Their model also includes success metrics developed specifically for the e-learning context being investigated. They use the process approach to posit that the overall success of e-learning initiatives depends on the attainment of success at each of the three stages of e-learning systems development: design, delivery, and outcome analysis. Success of the design stage is evaluated along three success factor dimensions: system quality, information quality, and service quality.

In system design for each major factor some sub-factor is available that is mentioned in the Holsapple and Lee-Post (2006) model. Some sample factors of information quality: well-organized, effectively presented, of the right length, clearly written, useful and up-to-date. There are some available factors for system quality such as easy-to-use, user friendly, stable, secure, fast and responsive. Finally, there are some factors for system quality that are named by Holsapple and Lee-Post (2006) according to their model: prompt, responsive, fair, knowledgeable and available.

2.3.3 Organizational factors and e-learning acceptance

Management support is one of the most important factors reported. The top management support was mentioned as important due to the organization-wide change required. The direct management support importance is due to their ability to influence employees. Direct managers are more familiar with employees. They are able to guide and direct. They can assist employee in finding the right time to learn and by that support acceptance of the new technology and the process.

Developing organizational culture that encourages e-learning use is one of Masie's (2001) recommendations. The right organizational culture is necessary for several reasons:

- overcoming employees' resistance to using technology (Macpherson et a. 2004);
- overcoming a legacy of prior experience and old values and norms (Macpherson et al. 2004);
- making people understand how to 'e-learn';
- convincing managers to encourage and support employees to study rather than discourage them from doing so (Morison, 2003).

To improve e-learning adoption, institutional support should not be neglected (Latifah & Ramli, 2005). Educational institutions should provide better technology facilities, copyright

system, accreditation system and human and technical support (Poon et al., 2004). Passmore (2000) asserted that students' satisfactions and progress in e-learning depended on institutions providing adequate facilities and infrastructures of technology and support.

2.4 Conclusion

E- Learning is considered as an alternative learning environment to traditional face to face learning (Sun et al., 2008). It has been widely implemented in many higher institutions and organization around the world. In past research, a number of factors such as students' and instructors' characteristics (Hong et al., 2003; Ndubisi, 2004; Poon et al., 2004), technology support and system (Poon et al., 2004; Rafaeli & Sudweeks, 1997), institutional support (Passmore, 2000; Latifah & Ramli, 2005), course content and knowledge management (Selim, 2005; Rosenberg, 2001), and online tasks and discussion groups (McDonald, 2001; Webb, Nemer, Chizhik, & Surgue, 1998) have shown an influence on learners' acceptance of e-learning. Based on the above major's parts of delivery on each e-learning system, the research framework and also analysis of the data gather by the designed questionnaire will follow those three factors discussed.

CHAPTER 3

METHOD

3.0 Introduction

This chapter describes the research method for the study. In this chapter, the research design, the sources of data, the population frame, the sample and sampling techniques, the measurement, the collection and administration of data and the technique of data analysis are presented. A brief explanation on Intel Malaysia and Intel's e-learning system is also provided.

3.1 Research Framework

The research framework for this study is shown in Figure 3.1. Based on the literature, e-learning acceptance factors could be framed around three key factors: individual, system and organizational factors. For individual factors, e-learning acceptance can be examined by individual characteristics and individual perception. The individual characteristics highlighted in the literature are the skills and knowledge needed to develop and deliver online courses. On the other hand, aspects that are related to individual perception include the influence on colleagues, system relationship to quality of teaching, its relationship to face to face teaching and the effects of school culture for e-learning technologies.

For system factors, e-learning acceptance can be examined through the system characteristics. System characteristics refer system functionalities, flexibility, its usefulness, its user friendliness and reliability of ICT infrastructure

In terms of organizational factor, e-learning acceptance can be examined through management support. The management support factors include the training and support for content development, time allowances, incentives and rewarding mechanisms, IT training and helpdesk.

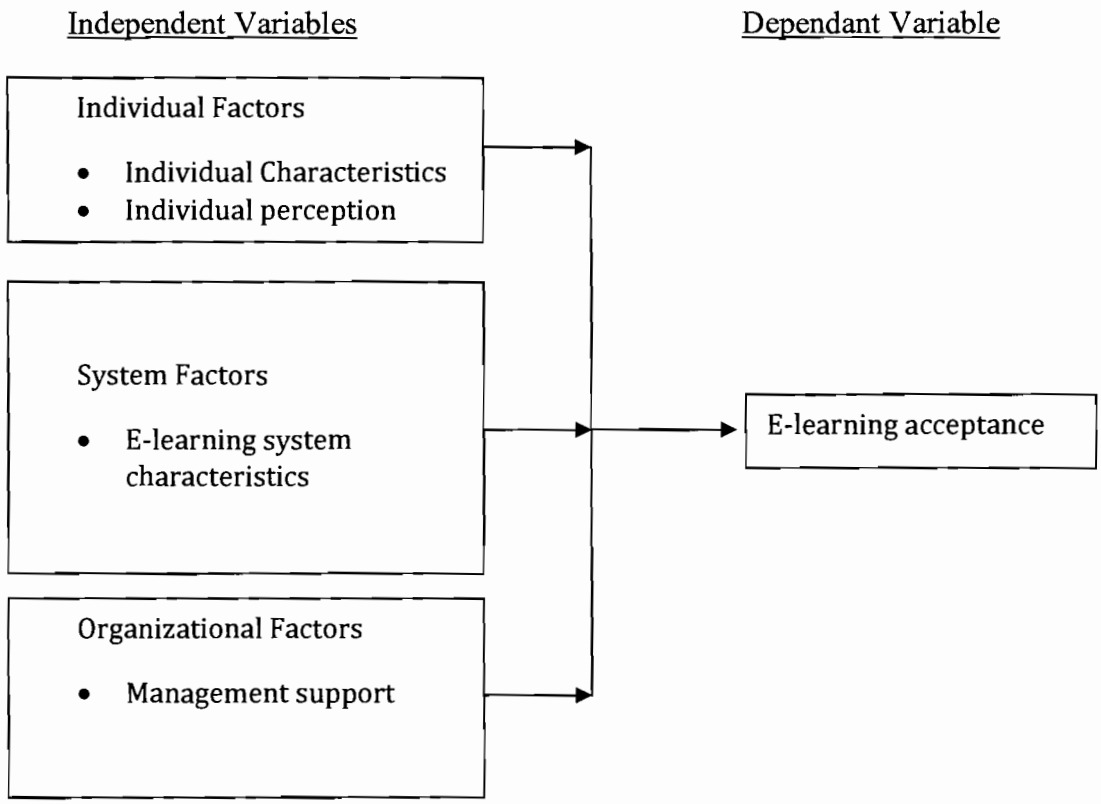


Figure 3.1. **Research framework for user acceptance towards e-learning**

3.2 Research Design

Quantitative research design was used to examine the relationship between organizational, individual and technology factors and users' acceptance toward e-learning. The study was cross-sectional. The study was conducted in the natural environment of the organization where the researcher interference is minimal.

3.3 Operational Definition and Measurement

Table 3.1 shows the operational definition of the variable and their measurement. All items in this study were adapted from Sorebo and Sorebo (2009), Yiong (2008), and Sam and Wah (2008), and Yarnall (1998). In this study, each of the adapted question asked how strongly the respondents agreed or disagreed with the statement given on a five-point scale whereby 1 = strongly disagree, and 5 = strongly agree.

Table 3.1
Operational definition and measurements

Variables (dependent and independent)	Operational definition	Items	Authors
e-learning acceptance	Users' satisfaction with e-learning	1. I do not feel that I am particular competent in using e-learning 2. My colleges tells me that I am competent in using e-learning 3. I have acquired new and interesting e-learning competence through my work 4. After most of the work days I have a feeling of achievement through e-learning 5. Using e-learning increases the quality of my work 6. Overall, e-learning is useful in performing my work	Sorebo and Sorebo (2009)
Individual factors	Referring to users' characteristic and perceptions towards the system	1. I am anxious in completing my training 2. I belief in my capability to interact with technology 3. I am cognitively engaged in doing the e-learning activities 4. I am willing to participate in e-learning activities 5. I have the initiative and motivation to	Yiong (2008) and Sam & Wah (2008)

		learn and use the system 6. I have high level of self-confidence in using the system 7. I am satisfied with time and place flexibility of the system	
System factors	Referring to system reliability and quality, and system support	1. The system allows easy access to information 2. The configuration color and background are clear and harmonious for the system 3. There is information credibility in the system 4. The guidance screen is clear and easy to use 5. The IT infrastructure is reliable and secure 6. The screen layout and design are appropriate 7. I am rarely disconnected during online tutorial 8. I am satisfied with the browsing speed 9. I do not experience problems while navigating	Yiong (2008) and Sam & Wah (2008)
Organizational factors	Referring to management support, and commitment	1. My Manager shows me how to improve my knowledge through e-learning 2. My Manager utilizes a variety of methods to assist me in e-learning 3. My Manager has the skills to coach me effectively on how to use e-learning 4. Senior management feels that e-learning is important 5. My manager views e-learning as an important learning tools in developing employee	Yarnall (1998)**

** Adapted the questionnaires from above authors for research paper: ''Line managers as career developers: rhetoric or reality? '' and make the changes according to this study.

3.4 Data Collection

3.4.1 Background of Organization

Intel was founded in 1968 by Gordon E. Moore and Robert Noyce. Intel Malaysia started its operations in 1972 and is Intel's first offshore site. Currently, it is the largest offshore site with more than 10,000 employees across two sites, Penang and Kulim. Intel Malaysia is one of the largest assembly and test facility supporting a broad product range such as microprocessors, chipsets, network processors, microcontrollers and motherboards. Today, Intel Malaysia has developed into a mature and most complex offshore site with multi-functions in manufacturing, design & development, and local & global support services.

3.4.2 Intel's E-learning System

The Intel® Learning Network (ILN) was originally built for the unique training needs of Intel's Sales & Marketing Group (SMG) over 9 years ago but ILN has been regularly used by more than 30 business groups across Intel. ILN is the only training system with both internal and an external infrastructure for supporting training no matter who or where the audience is.

3.4.3 Population and Sampling

The sampling frame for this study includes all users of Intel's e-learning system. However, due to reason of difficult access to locations, only users at Intel Penang were chosen. Currently, there are 5753 users of e-learning at Intel Penang. In choosing the respondents for this study, a simple random sampling technique was used. Out of 5753 e-learning' users, only 300 were randomly chosen.

3.4.4 Survey materials

The questionnaire was prepared in English. The four page questionnaire consisted of five sections. Section 1 asked about the characteristic of e-learning users and their perception towards e-learning. There are 7 items in this section. Section 2 which consists of 9 items asked about e-learning technology. In section 3 of the questionnaire, there were 5 items on organization factors that contribute the e-learning acceptance. Section 4 asked about the e-learning acceptance which consists of 6 items. The final section of the questionnaire, Section 5, sought the demographic characteristics of the participating staff and their respective organization.

3.4.5 Data collection procedure

The data collection was conducted from mid of Oct until end of Nov 2010. The process begins by obtaining permission from Intel to conduct the study and to identify targeted group of audience. A representative was assigned to help researcher in distributing and collecting the questionnaires.

3.5 Technique of data analysis

Out of the 300 questionnaires distributed, 97 were returned and are potentially available for analysis. To answer the study objectives, an analysis was conducted using descriptive statistics and the relationship of independent and dependent variables were tested using correlation analysis. Regression analysis was also conducted to test the ability of the three factors to predict the level of e-learning acceptance. The analysis was conducted using SPSS Program Version 12.0 for Windows.

3.6 Conclusion

In this chapter, the method and the analysis strategy for the study have been described, including the research framework, the sample of the study, and the selection of respondents, the development of questionnaire, the research materials and the survey procedure. This chapter also briefly explains the adoption of correlation analysis, and descriptive statistics. The results of these tests are reported in the next chapter, Chapter 4.

CHAPTER 4

RESULTS

4.0 Introduction

Chapter 4 reports results of the study. The chapter begins by reporting the demographic characteristics of the respondents. It then presents the bivariate relationship between the research variables. The chapter concludes with the regression analysis.

4.1 Demographic Characteristics of the Participants

Detailed descriptive statistics of the participants' demographic characteristics are presented in Table 4.1. It is noted that 54.6% of the 97 participants in this survey were female. The average age of respondents was 35 years old. Malays constitute 45.4% of the survey participants, followed by 29.9% Malaysian Indians, and 24.7% Malaysian Chinese. The majority of the participants in this survey (79.40%) had higher academic qualifications of either a tertiary or diploma, first or second degree. Engineer made up 21.6% of the total participants. The rest consisted of administrative and other technical staff.

On average, the participants had been in their present position for 6.35 years, and had served their organization for 9.69 years. Majority of the respondents (76.30%) were exempt employees. 61.90% of the participants claimed that they used e-learning once or twice in a month. Overall, participants appear to have high computer skill. Out of a 5 point scale (with 1 low computer skill and 5 high computer skill), on average majority of the participants (57.8%) rated between 3 and 4.

Table 4.1

Demographic characteristics of the participants

Description	Frequency	%	Mean	Std. Dev	Median	Min	Max
Gender							
Male	44	45.40					
Female	53	54.60					
Total	97	100.00					
Age							
Total response	97.00	100.00	34.67	5.917	35	24	46
Ethnicity							
Chinese	24	24.70					
Malay	44	45.40					
India	29	29.90					
Total	97	100.00					
Academic Qualification							
SPM	9	9.30					
STPM	2	2.10					
Certificate	6	6.20					
Diploma	14	14.40					
First Degree	47	48.50					
Master	16	16.50					
PhD	3	3.10					
Total	97	100.00					

Description	Frequency	%	Mean	Std. Dev	Median	Min	Max
Job Designation							
Administrative	6	6.20					
Business Group HR	9	9.30					
Buyer	1	1.00					
Engineer	21	21.60					
Finance Account Clerk	2	2.10					
Finance Analyst	1	1.00					
IT Specialist	2	2.10					
Learning &Dev Consultant	7	7.20					
Learning &Dev Manager	1	1.00					
Legal Consultant	2	2.10					
Manufacturing Specialist	13	13.40					
Operation Specialist	1	1.00					
Payroll Analyst	10	10.30					
Payroll proc agent	2	2.10					
Planning Analyst	1	1.00					
Program Manager	1	1.00					
Senior Buyer	1	1.00					
Shift Supervisor	2	2.10					
Staffing Consultant	4	4.10					
Staffing Manager	1	1.00					
Supervisor	1	1.00					
System Analyst	1	1.00					
Technical Supervisor	3	3.10					

Description	Frequency	%	Mean	Std. Dev	Median	Min	Max
Training Manager	1	1.00					
Transaction Specialist	3	3.10					
Total	97	100.00					
No. of yrs in present position							
Total response	97.00	100.00	6.35	4.818	5.00	1	21
Job level							
Non exempt	23	23.70					
Exempt	74	76.30					
Total	97	100.00					
No of yrs with present org							
Total response	97	100.00	9.69	5.374	9.00	1	25
Frequency of using e-learning (in a month)							
None	25	25.80					
1-2 times	60	61.90					
3-4 times	12	12.40					
Total	97	100.00					
Computer skills level							
1 (low)	10	10.30					
2	18	18.60					
3	25	25.80					
4	31	32.00					
5 (high)	13	13.40					
Total	97	100.00					

4.2 Correlation Analysis

Table 4.2 presents the means, standard deviations and Pearson correlations of variables for the 97 participants. The internal consistency reliabilities (Cronbach's alpha) of the research measures are reported in parenthesis along the diagonal of the correlation tables. As shown in Table 4.2, the Cronbach's alpha for individual factor was .95, for the system factor was .96, for organization was .94 and for e-learning acceptance was .82. The two sub-scales of the 7 item individual factor scale (individual characteristic and individual perception) also have satisfactory reliability values of .93 and .82 respectively. According to Nunnally and Bernstein (2004), coefficient alpha of .70 is considered good. In this case, the reliability levels were satisfactory and mostly exceeded the conventional acceptance level of the coefficient, i.e. 0.70.

Table 4.2
Descriptive statistics, scale reliabilities, and correlations of variables

Variables	N	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Gender	97	1.55	.50															
2. Age	97	34.67	5.92	.05														
3. Ethnic origin	97	2.05	.74	.15	-.10													
4. Education	97	4.53	1.47	-.21*	-.09	-.24*												
5. Tenure in present position	97	6.35	4.82	.04	.46**	-.10	-.62**											
6. Job level	97	1.76	.43	-.12	-.01	-.12	.68**	-.55**										
7. Tenure in present organization	97	9.69	5.37	.00	.76**	-.09	-.33**	.75**	-.29**									
8. E-learning usage	97	1.87	.61	.04	-.05	-.15	.51**	-.45**	.56**	-.25*								
9. Computer skill	97	3.20	1.20	-.13	.07	-.16	.57**	-.49**	.60**	-.17	.55**							
10. Individual factor- overall	97	3.59	.88	.08	.09	-.01	.28**	-.37**	.40**	-.20*	.42**	.50**	(.95)					
11. Individual characteristics	97	3.61	.94	.10	.10	-.01	.26*	-.36**	.38**	-.20	.41**	.48**	.99**	(.93)				
12. Individual perceptions	97	3.56	.84	.05	.08	.00	.30**	-.36**	.40**	-.20	.41**	.51**	.97**	.92**	(.82)			
13. System factor	97	3.956	.67	.10	-.05	-.07	.42**	-.52**	.41**	-.34**	.38**	.54**	.82**	.80**	.81**	(.96)		
14. Organizational factor	97	3.144	.94	.01	.06	-.02	.39**	-.40**	.38**	-.21*	.33**	.46**	.67**	.65**	(.94)	.63**	(.94)	
15. E-learning acceptance	97	3.43	.78	.00	-.17	-.03	.51**	-.64**	.49**	-.43**	.46**	.56**	.70**	.79**	.76**	.79**	.76**	(.82)

Note: Coefficient alpha reliability estimates are in parentheses on the diagonal of the correlation table
*Correlation is significant at $p < 0.05$ and **Correlation is significant at $p < 0.01$

4.2.1 Individual factors and e-learning acceptance

Overall, individual factor was significantly positively correlated with e-learning acceptance ($r = .70$, $p<.01$). Table 4.2 also revealed significant positive relationships between individual characteristics and e-learning acceptance ($r = .79$, $p<.01$) and between individual perception and e-learning acceptance ($r = 76$, $p<.001$). These results imply that the more positive characteristics and perceptions that users have, the more the e-learning will be accepted.

4.2.2 System factors and e-learning acceptance

Table 4.2 revealed significant positive relationship between system factors and e-learning acceptance ($r = .79$, $p<.01$). This result indicates that e-learning system that have good infrastructure have higher acceptance by the users.

4.2.3 Organizational factors and e-learning acceptance

Organizational factor was significantly positively correlated with e-learning acceptance ($r = .76$, $p<.01$). This result indicates that the more organization supports the usage of e-learning, the more the system was accepted by the users.

4.3 Regression Analysis

Multiple regression was used to assess the ability of three control measures (individual factor, system factor and organizational factor) to predict level of e-learning acceptance. Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity. The result shows in Table 4.3 indicates that 74.2% of the variance in e-learning acceptance had been significantly explained by the three factors. In the model, only two control measures were statistically significant, with system factor

recording a higher beta value (β = .546, p<.001) than organizational factor (β = .450, p<.001). This shows that system factor makes the strongest contribution to the e-learning acceptance.

Table 4.3
Regression Analysis

	Beta	Sig.
Individual factor	-.023	.815
System factor	.546	.000**
Organizational factor	.450	.000**

**p<.001

r^2 = .742 Nilai F = 88.93 Sig. F = .000

4.4 Conclusion

This chapter described the demographic characteristics of the 97 participants and the results of correlation and regression analyses. The results indicated that individual factor, system factor and organization factor have significant positive relationship with e-learning acceptance. Among these three factors, system factor makes the strongest contribution to explain the acceptance of e-learning. These research findings are discussed in the next chapter, Chapter 5.

CHAPTER 5

DISCUSSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter discusses the findings of the study in light of the literature reviewed in Chapter 2, and the objectives developed in Chapter 1. This study provides identification of factors that related to e-learning acceptance. The findings, as presented in Chapter 4, are discussed in the section below. The chapter ends with limitations of the study and recommendation for future research.

5.1 Individual Factors and E-learning Acceptance

In this study, individual factors such as individuals' characteristics and individuals' perceptions have been found to be related with e-learning acceptance. This finding is in accordance with previous research conducted by Poon et al. (2004). The findings imply that individual factors may be one of the important components that can influence the acceptance of e-learning. As pointed out by Woodrow (1991), it is important to be aware of the students' attitudes and behaviors towards e-learning as it is a critical criterion for e-learning readiness and acceptance

Individual behavior plays a bigger part in determine the level of students' involvement and participation; students' cognitive engagement; students' level of self- confidence; students' technology self-efficacy; students' initiative and motivation and students' anxiety. Negative attitude such as having less interest and negative impression will influence a learner's readiness to accept online learning. Students who have an aversion of online learning system will affect acceptance of online learning in their learning process. Therefore, to increase students'

acceptance is to make them understand the added value of e-learning. In other words, the values of e-learning program should be communicated. One way of doing this is by taking advantage of important events (for example, new product launching), and make it strong and clear connection to employees work.

5.2 System Factors and E-learning Acceptance

The study shows that system factors have high relation to e-learning acceptance. This finding is in accordance to Hong et al., (2003); Rafaeli and Sudweeks (1997); Folorunso et al., (2006); Poon et al., (2004) studies. The results suggest that technological aspect is one of the important factors that determine users' acceptance. Therefore, the administrator at Intel need to ensure that their e-learning system include attractive combination of colors with appropriate graphics and animations, provide convenient access to users, have good user interface such as ease of use, navigation, screen design and information presentation.

5.3 Organizational Factors and E-learning Acceptance

Apart from individual and system factor, organizational factor is also found to be related with e-learning acceptance. This finding support the arguments made by Neumann (1998), Morison (2003), and Masie (2004). This finding suggests that to improve e-learning acceptance, organizational should not be neglected. In other words, to increase users' acceptance towards e-learning, organization should provide better technology facilities, human and technical support and provide infrastructures of technology and support.

5.4 Factor with the strongest relationship with E-learning Acceptance

In this study, the result indicates that to increase users' acceptance towards e-learning, the organization need to focus more on the system factor. This is not surprising as the harmonious

configuration of colors and background enhanced students' interest to learn. Besides, having attractive combination of colors with appropriate graphics and animations in the e-learning system made the delivering of information more fun and user-friendly.

As argued by Liaw et al. (2007), online education with the multimedia elements can successfully attracted students' attention and made the learning process more interesting because colorful pictures and learning videos were provided in the online instruction. With a good and quality system, it automatically influences the students' behavior and more learners are willing to take an online course. Thus, the management of Intel need to ensure that the technology use for e-learning provide convenient access to users, the e-learning system should be well maintained and up-to-date, reliable with minimal technical problem and support various platforms and applications.

5.5 Study Limitations

There are limitations in the design of this study that might influence the interpretation and generalization of these findings. First, the study was conducted in one MNC organizational (Intel) and thus, the findings cannot be generalized to other company using e-learning mode of study or general population of learners' perception towards e-learning. Secondly, this study is a case study based questionnaire approach for the purpose of analysis. Thus, findings are limited to a specific set of sample of questionnaire. Lastly, the study is limited by the numbers of variables tested. In summary, while there are some limitations associated with the approach used here and given the exploratory nature of the study, the results of this research provide useful findings that should be of interest to both researchers and practitioners.

5.6 Recommendation for future research

Since the present study was exploratory in nature, given the small sample size, it would beneficial for future research to consider the following suggestions:

i) replicate the present study but with large and more diverse group of e-learning user that include other MNC companies;

ii) incorporate other method of data collection such as interview to gain more in-depth of the system;

iii) include other variables like environmental factor in the study in order to gain a more complete understanding the factors that influence e-learning acceptance.

5.7 Conclusion

The current chapter has discussed results of the study in light of the literature and limitations. The aim of this study was to examine the factors that influence e-learning acceptance. The results indicate that factors such as individual, system and organizational are contributed to e-learning acceptance. However, since the study was conducted at one organization only, the findings must be interpreted with cautious and cannot be generalized to represent other organizations that used e-learning. It is hoped that through the examination of the factors that contribute to the acceptance of e-learning, a more complete understanding of the kind of factors needed to enhance the usage e-learning will be achieved.

References

Abouchedid, K., & Eid, G.M. (2004). E-learning challenges in the Arab world: Revelations from a case study profile. *Quality Assurance in Education, 12*(1), 15-27.

Agarwal, R., & Prasad, J. (1997). The role of innovation characteristics and perceived voluntariness in the acceptance of information technologies. *Decision Sciences, 28*, 557-582.

Alavi, M.A., & Yoo, Y. (1997). Using information technology to add value to management education. *Academy of Management Journal, 6*(40), 1310-1333

Andrew Ettinger, Viki Holton, Eddie Blass, (2006) *E-learner experiences: what is the future for e-learning? Industrial and Commercial Training, 3*8(4), 208 – 212

Attwell, G. (2005). *E-learning and sustainability*. Retrieved 1 September 2006, from www.ossite.org/Members/GrahamAttwell/sustainibility/attach/sustainibility4.doc

Barriball, K. L., & While, A. (1994). Collecting data using semi-structured interviews: A discussion paper. *Journal of Advanced Nursing, 19*, 328-335.

Benigno, V., & Trentin, G. (2000). The evaluation of online courses. *Journal of Computer Assisted Learning, 16,* 259-270.

Bennet, A., & Bennet, D. (2008). e-Learning as energetic learning. *The journal of information and knowledge management systems, 38(2),* 206-220

Brown, S. A., Chervany, N. L., & Reinicke, B. A. (2007). What matters when introducing new information technology. *Communications of the ACM, 50*(9), 91-96.

Carlson, K.S., & Zhao, G.X.A. (2004). *Collaborative learning: Some issues and recommendations.* Paper presented at The Centre for the Development of Technological

Carter, L., & Bélanger, F.(2005). The utilization of e-government services: Citizen trust,innovation and acceptance factors. *Information Systems Journal, 15*(1), 5-25.

Chen, R. S., & Hsiang, C. H. (2007). A study on the critical success factors for corporations

embarking on knowledge community-based eLearning. *Information Sciences, 177*, 570–586.

Cech, P., & Bures, V. (2004). *E-learning implementation at university. Proceedings of the 3rd European Conference on e-Learning, Paris, France, 25-34*

Collis, B. (1995). Anticipating the impact of multimedia in education: Lessons from the literature. *Computers in Adult Education and Training, 2*(2), 136-149.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319-339

Dewhurst, D.G., Macleod, H.A., & Norris, T.A.M. (2000). Independent student learning aided by computers: An acceptable alternative to lectures? *Computers & Education, 35*, 223-41.

Dillon, A., & Morris, M.G. (1996). User acceptance of information technology: Theories and models. *Annual Review Of Information Science and Technology, 31*, 3-32.

Durling, D., Cross, N., & Johnson, J. (1996). *CAI with style.* Paper presented at the 18th Annual Design Conference-Computer-aided Design Education (University of Bristol, England, June 26-27, 1997). Retrieved November 3, 2005, from www.ub.es/5ead/PDF/7/Durling.pdf.

Ettinger, A., Holton, V., & Blass, E.(2006). E-learner experiences: What is the future for e-learning?*Industrial and Commercial Training, 38,* 208-212

Folorunso, O., Ogunseye, O.S., & Sharma, S.K. (2006). An exploratory study of the critical factors affecting the acceptability of e-learning in Nigerian universities. *Information Management and Computer Security, 14*(5), 496-505.

Gan, S.L. (1998). Online distance education program: Problems and issues. *Proceedings of the International Conference on Information Technology and Multimedia 1998, Selangor, Malaysia,* 25-29.

Govindasamy, T. (2002). Successful implementation of e-learning: Pedagogical considerations. *Internet and Higher Education, 4*(3-4), 287-299.

Guernsey, L., & Young, J. R. (1998). Who owns online courses? *The Chronicle of Higher Education, 39*, A21-23.

Hafizah Mohamad Hasbollah., & Kamil Md. Idris(2009). E-learning adoption: The role of relative advantages, trialability and academic specialisation. *Campus-Wide Information Systems, 26(1)*, 54-70

Hogarth, K., & Dawson, D. (2008). Implementing e-learning in organisations: What e-learning research can learn from instructional technology (IT) and organisational studies (OS) innovation studies. *International Journal on E-Learning, 7*(1), 87-105.

Hong, K.S., Lai, K.W., & Holton, D. (2003). Students' satisfaction and perceived learning with a Webbased course. *Journal of Educational Technology & Society 6*(1). Retrieved January 15, 2004, from http://ifets.ieee.org/periodical/vol_1_2003/v_1_2003.html.

Imamoglu, S. Z. (2007). An empirical analysis concerning the user acceptance of e-learning. *Journal of American Academy of Business, 11*(1), 132-137.

Jefferies, P., & Hussain, F. (1998). Using the Internet as a teaching resource. *Education & Training, 40* (8), 359-365.

Jara, M., & Mellar, H. (2009). Factors affecting quality enhancement procedures for e-learning courses. Quality Assurance in Education, *17*(3), 220-232

Kathawala, Y., & Wilgen A. (2004). E-learning: Evaluation from an organization's perspective. *Training & Management Development Methods, 18*(4), 1-13.

Kruse, K. (2002). *The benefits and drawbacks of e-learning.* Retrieved 2 October 2010, from http://e-learningguru.com

Latifah, A.L., & Ramli, B. (2005). *Priority-satisfaction survey: A tool in developing effective retention strategies.* Paper presented at the Conference on Research in Distance and Adult Learning in Asia. (Open University of Hong Kong, P.R. China, June 20-22, 2005). Retrieved February 9, 2006, from http://www.ouhk.edu.hk/cridal/cridala2005 /latif_ bahroom.pdf.

Lee, Y. (2006). An empirical investigation into factors influencing the adoption of an e-learning system. *Online Information Review*, *30*(5), 517-541.

Leidner, D., & Jarvenpaa, S. L. (1995). The use of information technology to enhance management school education: A theoretical view. *MIS Quarterly*, *19*(3), 265.

Leadership Conference (CDTL) (National University Singapore, Singapore, April 24-27, 2004). Retrieved January 23, 2006, from http://www.cdtl.nus.edu.sg/brief/V7n4 /sec3.htm

Lee, Y.C. (2006). An empirical investigation into factors influencing the adoption of an e-learning system. *Online Information Review,30,*517-541

MacDonald, J. (2001). Exploiting online interactivity to enhance assignment development and feedback in distance education. *Open Learning, 16*(2), 179-189.

Macgregor, G., & Turner, J.(2009). Revisiting e-learning effectiveness: Proposing a conceptual model. *Interactive Technology and Smart Education, 6*(3), 156- 172

Mahwah, NJ: Lawrence Erlbaum Associates. Retrieved September 2, 2005, from http://newmedia. colorado.edu/cscl/70.pdf.

Mason, R. (1998). Models of online courses. *ALN Magazine*, *2*(2). Retrieved November, 2005, from http://www.aln.org/alnweb/magazine/vol2_issue2/Masonfinal.htm.

McPherson, M., & Nunes, M. B. (2006). Organizational issues for e-learning: Critical success

factors as identified by HE practitioners. *The International Journal of Educational Management, 20*(7), 542-558.

Ndubisi, N.O. (2004). *Factors influencing e-learning adoption intention: Examining the determinant structure of the decomposed theory of planned behaviour constructs.* Paper presented at the HERDSA 2004 Conference. Retrieved January 2, 2004, from http://www.herdsa.org.au/conference2004/Contributions/RPap ers/P057-jt.pdf.

Ndubisi, N.O., & Chukwunonso, N.C. (2004). *On-line learning adoption intention: Comparing the predictive power of two competing models.* Paper presented at the HERDSA 2004 Conference. Retrieved January 2, 2004, from http://herdsa2004.curtin.edu.my/Contributions/RPapers/P058-jt.pdf

Netteland, G., Wasson, B., & Mørch, A.I. (2007). E-learning in a large organization. *Journal of Workplace Learning,19(6),* 392-411

Nisar, T.M (2002). Organizational determinants of e-learning. *Industrial and Commercial Training, 34*(7), 252-262

Poon, W.C., Low, L.T., & Yong, G. F. (2004). A study of Web-based learning (WBL) environment in Malaysia. *The International Journal of Educational Management, 18*(6), 374-385.

Matsui Siqueira, S.W., Baptista Braz, M.H.P & Melo, R.N., (2007).Modeling e-learning content. *International Journal of Web Information Systems, 3(1/2),*140-152

Simmons, D.E. (2002). The forum report: E-learning adoption rates and barriers. In A. Rossett (Ed), *The ASTD e-Learning Handbook: Best Practices, Strategies, and Case Studies for an Emerging Field* (pp.19-23). New York: McGraw-Hill

Tabatabaei, M., Schrottner, B., & Reichgelt, H. (2006). Target populations for online education. *International Journal on e-learning, 5*(3), 401-414

Tung, F., & Chang, S.C. (2008). An empirical investigation of students' behavioral intentions to use the online learning courses websites. *British Journal of Educational Technology, 39*(1), 71-83

Zhang, D., Zhao, L., Zhou, L., & Nunamaker, J. (2004). Can e-learning replace classroom learning? *Communication of the ACM, 47*(5), 75-79.

APPENDICES

APPENDIX A

SAMPLE OF THE SURVEY MATERIALS

This appendix contains copy of the survey materials provided to respondents, namely the cover letter and the questionnaire.

A STUDY ON E-LEARNING ACCEPTANCE

Dear Participant,

Thank you for agreeing to participate in this research.

I would appreciate it very much if you could answer the questions carefully as the information you provide will influence the accuracy and the success of this research. It will take no longer than 30 minutes to complete the questionnaire. All answers will be treated with strict confidence and will be used for the purpose of the study only.

If you have any questions regarding this research, you may address them to me at the contact details below.

Thank you for your cooperation and the time taken in answering this questionnaire.

Yours sincerely,

Chye Mui Sung
Master Candidate
College of Business
Universiti Utara Malaysia
Sintok, 06010 Kedah
Mobile phone:0124418078
Email: angela.mui.sung.chye@intel.com

Section 1: Using the following scale, please tick (√) the given box that represents your most appropriate answer

		Strongly Disagree				Strongly Agree
1	I am anxious in completing my training	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
2	I belief in my capability to interact with technology	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
3	I am cognitively engaged in doing the e-learning activities	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
4	I am willing to participate in e-learning activities	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
5	I have the initiative and motivation to learn and use the system	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
6	I have high level of self-confidence in using the system	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
7	I am satisfied with time and place flexibility of the system	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

Section 2: Using the following scale, please tick (√) the given box that represents your most appropriate answer.

		Strongly Disagree				Strongly Agree
1	The system allows easy access to information	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
2	The configuration colour and background are clear and harmonious for the system	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
3	There is information credibility in the system	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
4	The guidance screen is clear and easy to use	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
5	The IT infrastructure is reliable and secure	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
6	The screen layout and design are appropriate	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
7	I am rarely disconnected during online tutorial	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
8	I am satisfied with the browsing speed	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
9	I do not experience problems while navigating	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

Section 3: Using the following scale, please tick (√) the given box that represents your most appropriate answer.						
		Strongly Disagree				**Strongly Agree**
1	My Manager shows me how to improve my knowledge through e-learning	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
2	My Manager utilizes a variety of methods to assist me in e-learning	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
3	My Manager has the skills to coach me effectively on how to use e-learning	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
4	Senior management feels that e-learning is important	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
5	My manager views e-learning as an important learning tools in developing employee	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

Section 4: Using the following scale, please tick (√) the given box that represents your most appropriate answer.						
		Strongly Disagree				**Strongly Agree**
1	I do not feel that I am particular competent in using e-learning	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
2	My colleges tells me that I am competent in using e-learning	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
3	I have acquired new and interesting e-learning competence through my work	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
4	After most of the work days I have a feeling of achievement through e-learning	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
5	Using e-learning increases the quality of my work	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
6	Overall, e-learning is useful in performing my work	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

Section 5: Please tick (√) the given box or fill in the blank that represent your answer	
1	I am: ☐ Male ☐ Female
2	My age is _____ years
3	My ethnic origin is: ☐ Chinese ☐ Malay ☐ Indian
4	My highest education level: ☐ SPM ☐ STPM ☐ Certificate ☐ Diploma ☐ First Degree ☐ Master ☐ PhD
5	My position in this organization: _____
6	Number of years in present position: _____
7	Job Level: ☐ Non-exempt ☐ Exempt
8	Number of years with present organization: _____
9	Frequency of using e-learning system (in a month) None ☐ 1-2 times ☐ 3-4 times ☐ More than 5 times ☐
10	Your computer skills level (1 = low, and 5 = high)? 1☐ 2☐ 3☐ 4☐ 5☐

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS SURVEY

APPENDIX B

SPSS OUTPUT

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Gender	97	1	2	1.55	.500
Age	97	24	46	34.67	5.917
Ethnic origin	97	1	3	2.05	.741
Highest education level	97	1	7	4.53	1.466
Number of years in present position	97	1	21	6.35	4.818
Job level	97	1	2	1.76	.428
Number of years with present organization	97	1	25	9.69	5.374
Frequency of using e-learning system (in a month)	97	1	3	1.87	.606
Computer skills level (1=low and 5 = high)	97	1	5	3.20	1.196
Valid N (listwise)	97				

Frequencies

Statistics

		Gender	Age	Ethnic origin	Highest education level	position in this organization
N	Valid	97	97	97	97	97
	Missing	0	0	0	0	0
Mean		1.55	34.67	2.05	4.53	
Median		2.00	35.00	2.00	5.00	
Std. Deviation		.500	5.917	.741	1.466	
Minimum		1	24	1	1	
Maximum		2	46	3	7	

Statistics

		Number of years in present position	Job level	Number of years with present organization	Frequency of using e-learning system (in a month)	Computer skills level (1=low and 5 = high)
N	Valid	97	97	97	97	97
	Missing	0	0	0	0	0
Mean		6.35	1.76	9.69	1.87	3.20
Median		5.00	2.00	9.00	2.00	3.00
Std. Deviation		4.818	.428	5.374	.606	1.196
Minimum		1	1	1	1	1
Maximum		21	2	25	3	5

Frequency Table

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	44	45.4	45.4	45.4
	Female	53	54.6	54.6	100.0
	Total	97	100.0	100.0	

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	24	1	1.0	1.0	1.0
	25	3	3.1	3.1	4.1
	26	7	7.2	7.2	11.3
	27	3	3.1	3.1	14.4
	28	8	8.2	8.2	22.7
	29	1	1.0	1.0	23.7
	30	5	5.2	5.2	28.9
	31	3	3.1	3.1	32.0
	32	3	3.1	3.1	35.1
	33	6	6.2	6.2	41.2
	34	4	4.1	4.1	45.4
	35	7	7.2	7.2	52.6
	36	11	11.3	11.3	63.9
	37	3	3.1	3.1	67.0
	38	5	5.2	5.2	72.2
	39	5	5.2	5.2	77.3
	40	6	6.2	6.2	83.5
	41	2	2.1	2.1	85.6
	42	3	3.1	3.1	88.7
	43	3	3.1	3.1	91.8
	44	3	3.1	3.1	94.8
	45	1	1.0	1.0	95.9
	46	4	4.1	4.1	100.0
	Total	97	100.0	100.0	

Ethnic origin

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Chinese	24	24.7	24.7	24.7
	Malay	44	45.4	45.4	70.1
	India	29	29.9	29.9	100.0
	Total	97	100.0	100.0	

Highest education level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SPM	9	9.3	9.3	9.3
	STPM	2	2.1	2.1	11.3
	Certificate	6	6.2	6.2	17.5
	Diploma	14	14.4	14.4	32.0
	First Degree	47	48.5	48.5	80.4
	Master	16	16.5	16.5	96.9
	PhD	3	3.1	3.1	100.0
	Total	97	100.0	100.0	

position in this organization

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Admin	6	6.2	6.2	6.2
	BGHR	9	9.3	9.3	15.5
	Buyer	1	1.0	1.0	16.5
	Engineer	21	21.6	21.6	38.1
	Finance account clerk	2	2.1	2.1	40.2
	Finance Analyst	1	1.0	1.0	41.2
	IT specialist	2	2.1	2.1	43.3
	L&D Consultant	7	7.2	7.2	50.5
	L&D Mgr	1	1.0	1.0	51.5
	Legal Consultant	2	2.1	2.1	53.6
	Manufacturing Specialist	13	13.4	13.4	67.0
	Operation Specialist	1	1.0	1.0	68.0
	Payroll Analyst	10	10.3	10.3	78.4
	Payroll proc agent	2	2.1	2.1	80.4
	Planning Analyst	1	1.0	1.0	81.4
	Program mgr	1	1.0	1.0	82.5
	Senior buyer	1	1.0	1.0	83.5
	Shift supervisor	2	2.1	2.1	85.6
	Staffing consultant	4	4.1	4.1	89.7
	Staffing Mgr	1	1.0	1.0	90.7
	supervisor	1	1.0	1.0	91.8
	System Analyst	1	1.0	1.0	92.8
	technical supervisor	3	3.1	3.1	95.9
	Training Mgr	1	1.0	1.0	96.9
	Transaction Specialist	3	3.1	3.1	100.0
	Total	97	100.0	100.0	

Number of years in present position

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	12	12.4	12.4	12.4
	2	7	7.2	7.2	19.6
	3	14	14.4	14.4	34.0
	4	8	8.2	8.2	42.3
	5	15	15.5	15.5	57.7
	6	6	6.2	6.2	63.9
	7	4	4.1	4.1	68.0
	8	7	7.2	7.2	75.3
	9	2	2.1	2.1	77.3
	10	7	7.2	7.2	84.5
	12	3	3.1	3.1	87.6
	13	2	2.1	2.1	89.7
	15	5	5.2	5.2	94.8
	17	1	1.0	1.0	95.9
	18	1	1.0	1.0	96.9
	20	2	2.1	2.1	99.0
	21	1	1.0	1.0	100.0
	Total	97	100.0	100.0	

Job level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Non exempt	23	23.7	23.7	23.7
	Exempt	74	76.3	76.3	100.0
	Total	97	100.0	100.0	

Number of years with present organization

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	2	2.1	2.1	2.1
	2	5	5.2	5.2	7.2
	3	2	2.1	2.1	9.3
	4	5	5.2	5.2	14.4
	5	12	12.4	12.4	26.8
	6	4	4.1	4.1	30.9
	7	6	6.2	6.2	37.1
	8	7	7.2	7.2	44.3
	9	7	7.2	7.2	51.5
	10	16	16.5	16.5	68.0
	12	7	7.2	7.2	75.3
	13	4	4.1	4.1	79.4
	15	9	9.3	9.3	88.7
	17	1	1.0	1.0	89.7
	18	2	2.1	2.1	91.8
	20	3	3.1	3.1	94.8
	21	1	1.0	1.0	95.9
	22	2	2.1	2.1	97.9
	23	1	1.0	1.0	99.0
	25	1	1.0	1.0	100.0
	Total	97	100.0	100.0	

Frequency of using e-learning system (in a month)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	25	25.8	25.8	25.8
	1-2 times	60	61.9	61.9	87.6
	3-4 times	12	12.4	12.4	100.0
	Total	97	100.0	100.0	

Computer skills level (1=low and 5 = high)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	10	10.3	10.3	10.3
	2	18	18.6	18.6	28.9
	3	25	25.8	25.8	54.6
	4	31	32.0	32.0	86.6
	5	13	13.4	13.4	100.0
	Total	97	100.0	100.0	

Reliability

Warnings

The covariance matrix is calculated and used in the analysis.

Case Processing Summary

		N	%
Cases	Valid	97	100.0
	Excluded[a]	0	.0
	Total	97	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.947	.948	7

Item Statistics

	Mean	Std. Deviation	N
anxious in completing my training	3.64	1.218	97
capability to interact with technology	3.62	.883	97
congnitively engaged in doing the e-learning activities	3.64	1.072	97
wiling to participate in e-learning activities	3.44	.866	97
initiative and motivation to learn and use the system	3.60	1.017	97
high level of self confidence in using the system	3.45	1.041	97
satisfied with time and place flexibility of the system	3.72	.944	97

Inter-Item Correlation Matrix

	anxious in completing my training	capability to interact with technology	congnitively engaged in doing the e-learning activities	wiling to participate in e-learning activities	initiative and motivation to learn and use the system
anxious in completing my training	1.000	.578	.841	.756	.756
capability to interact with technology	.578	1.000	.623	.646	.465
congnitively engaged in doing the e-learning activities	.841	.623	1.000	.791	.868
wiling to participate in e-learning activities	.756	.646	.791	1.000	.761
initiative and motivation to learn and use the system	.756	.465	.868	.761	1.000
high level of self confidence in using the system	.763	.587	.727	.792	.745
satisfied with time and place flexibility of the system	.764	.546	.847	.739	.848

The covariance matrix is calculated and used in the analysis.

Inter-Item Correlation Matrix

	high level of self confidence in using the system	satisfied with time and place flexibility of the system
anxious in completing my training	.763	.764
capability to interact with technology	.587	.546
congnitively engaged in doing the e-learning activities	.727	.847
wiling to participate in e-learning activities	.792	.739
initiative and motivation to learn and use the system	.745	.848
high level of self confidence in using the system	1.000	.734
satisfied with time and place flexibility of the system	.734	1.000

The covariance matrix is calculated and used in the analysis.

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Correlations	.723	.465	.868	.403	1.867	.012	7

The covariance matrix is calculated and used in the analysis.

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
anxious in completing my training	21.47	26.002	.853	.759	.937
capability to interact with technology	21.49	31.065	.633	.520	.953
congnitively engaged in doing the e-learning activities	21.47	26.856	.907	.869	.931
wiling to participate in e-learning activities	21.67	29.307	.856	.749	.937
initiative and motivation to learn and use the system	21.52	27.898	.851	.833	.936
high level of self confidence in using the system	21.66	27.914	.826	.725	.938
satisfied with time and place flexibility of the system	21.39	28.532	.859	.782	.936

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
25.11	38.081	6.171	7

Reliability

Warnings

The covariance matrix is calculated and used in the analysis.

Case Processing Summary

		N	%
Cases	Valid	97	100.0
	Excluded[a]	0	.0
	Total	97	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.932	.938	4

Item Statistics

	Mean	Std. Deviation	N
anxious in completing my training	3.64	1.218	97
congnitively engaged in doing the e-learning activities	3.64	1.072	97
wiling to participate in e-learning activities	3.44	.866	97
satisfied with time and place flexibility of the system	3.72	.944	97

Inter-Item Correlation Matrix

	anxious in completing my training	congnitively engaged in doing the e-learning activities	wiling to participate in e-learning activities	satisfied with time and place flexibility of the system
anxious in completing my training	1.000	.841	.756	.764
congnitively engaged in doing the e-learning activities	.841	1.000	.791	.847
wiling to participate in e-learning activities	.756	.791	1.000	.739
satisfied with time and place flexibility of the system	.764	.847	.739	1.000

The covariance matrix is calculated and used in the analysis.

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Correlations	.790	.739	.847	.108	1.146	.002	4

The covariance matrix is calculated and used in the analysis.

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
anxious in completing my training	10.80	7.180	.850	.733	.917
congnitively engaged in doing the e-learning activities	10.80	7.680	.905	.823	.890
wiling to participate in e-learning activities	11.00	9.188	.814	.665	.925
satisfied with time and place flexibility of the system	10.72	8.640	.843	.734	.913

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
14.44	14.208	3.769	4

Reliability

Warnings

The covariance matrix is calculated and used in the analysis.

Case Processing Summary

		N	%
Cases	Valid	97	100.0
	Excluded[a]	0	.0
	Total	97	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.820	.817	3

Item Statistics

	Mean	Std. Deviation	N
capability to interact with technology	3.62	.883	97
initiative and motivation to learn and use the system	3.60	1.017	97
high level of self confidence in using the system	3.45	1.041	97

Inter-Item Correlation Matrix

	capability to interact with technology	initiative and motivation to learn and use the system	high level of self confidence in using the system
capability to interact with technology	1.000	.465	.587
initiative and motivation to learn and use the system	.465	1.000	.745
high level of self confidence in using the system	.587	.745	1.000

The covariance matrix is calculated and used in the analysis.

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Correlations	.599	.465	.745	.279	1.600	.016	3

The covariance matrix is calculated and used in the analysis.

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
capability to interact with technology	7.05	3.695	.564	.346	.853
initiative and motivation to learn and use the system	7.07	2.943	.691	.556	.733
high level of self confidence in using the system	7.22	2.651	.783	.628	.631

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
10.67	6.390	2.528	3

Reliability

Warnings

The covariance matrix is calculated and used in the analysis.

Case Processing Summary

		N	%
Cases	Valid	97	100.0
	Excluded[a]	0	.0
	Total	97	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.956	.957	9

Item Statistics

	Mean	Std. Deviation	N
system allows easy access to information	3.84	.717	97
configuration colour and background are clear and harmonious for the system	4.05	.834	97
information credibility in the system	3.87	.716	97
guidance screen is clear and easy to use	4.02	.750	97
IT infrastructure is reliable and secure	4.22	.819	97
screen layout and design are appropriate	4.01	.757	97
rarely disconnected during online tutorial	3.86	.866	97
satisfied with the browsing speed	4.05	.928	97
do not experience problems with while navigating	3.81	.795	97

Inter-Item Correlation Matrix

	system allows easy access to information	configuration colour and background are clear and harmonious for the system	information credibility in the system	guidance screen is clear and easy to use	IT infrastructure is reliable and secure
system allows easy access to information	1.000	.764	.829	.646	.717
configuration colour and background are clear and harmonious for the system	.764	1.000	.709	.848	.776
information credibility in the system	.829	.709	1.000	.626	.707
guidance screen is clear and easy to use	.646	.848	.626	1.000	.807
IT infrastructure is reliable and secure	.717	.776	.707	.807	1.000
screen layout and design are appropriate	.598	.742	.598	.899	.735
rarely disconnected during online tutorial	.716	.631	.724	.582	.735
satisfied with the browsing speed	.748	.764	.668	.762	.807
do not experience problems with while navigating	.768	.580	.706	.566	.686

The covariance matrix is calculated and used in the analysis.

Inter-Item Correlation Matrix

	screen layout and design are appropriate	rarely disconnected during online tutorial	satisfied with the browsing speed	do not experience problems with while navigating
system allows easy access to information	.598	.716	.748	.768
configuration colour and background are clear and harmonious for the system	.742	.631	.764	.580
information credibility in the system	.598	.724	.668	.706
guidance screen is clear and easy to use	.899	.582	.762	.566
IT infrastructure is reliable and secure	.735	.735	.807	.686
screen layout and design are appropriate	1.000	.575	.785	.627
rarely disconnected during online tutorial	.575	1.000	.696	.717
satisfied with the browsing speed	.785	.696	1.000	.832
do not experience problems with while navigating	.627	.717	.832	1.000

The covariance matrix is calculated and used in the analysis.

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Correlations	.713	.566	.899	.333	1.589	.007	9

The covariance matrix is calculated and used in the analysis.

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
system allows easy access to information	31.89	31.289	.837	.808	.951
configuration colour and background are clear and harmonious for the system	31.67	30.140	.839	.828	.950
information credibility in the system	31.86	31.562	.800	.746	.952
guidance screen is clear and easy to use	31.70	31.024	.830	.901	.951
IT infrastructure is reliable and secure	31.51	30.044	.868	.793	.949
screen layout and design are appropriate	31.71	31.166	.802	.851	.952
rarely disconnected during online tutorial	31.87	30.409	.770	.664	.954
satisfied with the browsing speed	31.67	28.848	.883	.856	.948
do not experience problems with while navigating	31.91	30.898	.791	.807	.953

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
35.72	38.515	6.206	9

Reliability

Warnings

The covariance matrix is calculated and used in the analysis.

Case Processing Summary

		N	%
Cases	Valid	97	100.0
	Excluded[a]	0	.0
	Total	97	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.935	.941	5

Item Statistics

	Mean	Std. Deviation	N
My Manager shows me to improve my knowlesge through e-learning	3.31	.928	97
My manager utilizes a variety of methods to assist me in e-learning	3.43	1.126	97
My manager has the skills to coach me effectively on how to use e-learning	3.28	.898	97
Senior management feels that e-learning is important	2.70	1.192	97
My manager views e-learning as an important learning tools in developing employees	3.00	1.099	97

Inter-Item Correlation Matrix

	My Manager shows me to improve my knowlesge through e-learning	My manager utilizes a variety of methods to assist me in e-learning	My manager has the skills to coach me effectively on how to use e-learning	Senior management feels that e-learning is important	My manager views e-learning as an important learning tools in developing employees
My Manager shows me to improve my knowlesge through e-learning	1.000	.847	.932	.706	.776
My manager utilizes a variety of methods to assist me in e-learning	.847	1.000	.827	.664	.749
My manager has the skills to coach me effectively on how to use e-learning	.932	.827	1.000	.721	.738
Senior management feels that e-learning is important	.706	.664	.721	1.000	.668
My manager views e-learning as an important learning tools in developing employees	.776	.749	.738	.668	1.000

The covariance matrix is calculated and used in the analysis.

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Correlations	.763	.664	.932	.269	1.404	.007	5

The covariance matrix is calculated and used in the analysis.

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
My Manager shows me to improve my knowlesge through e-learning	12.41	14.766	.907	.895	.909
My manager utilizes a variety of methods to assist me in e-learning	12.29	13.749	.848	.748	.917
My manager has the skills to coach me effectively on how to use e-learning	12.44	15.062	.893	.880	.912
Senior management feels that e-learning is important	13.02	14.041	.743	.563	.940
My manager views e-learning as an important learning tools in developing employees	12.72	14.245	.801	.652	.925

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
15.72	22.099	4.701	5

Reliability

Warnings

The covariance matrix is calculated and used in the analysis.

Case Processing Summary

		N	%
Cases	Valid	97	100.0
	Excluded[a]	0	.0
	Total	97	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.820	.807	6

Item Statistics

	Mean	Std. Deviation	N
do not feel that I am particular competent in using e-learning	3.27	.984	97
My colleges tells me that I am competent in using e-learning	3.18	.902	97
have acquired new and interesting e-learning competence through my work	3.60	1.007	97
have a feeling of achievement through e-learning	3.52	1.174	97
using e-learning increases the quality of my work	3.52	1.072	97
using e-learning is useful in performing my work	3.52	1.267	97

Inter-Item Correlation Matrix

	do not feel that I am particular competent in using e-learning	My colleges tells me that I am competent in using e-learning	have acquired new and interesting e-learning competence through my work	have a feeling of achievement through e-learning
do not feel that I am particular competent in using e-learning	1.000	-.288	-.363	-.184
My colleges tells me that I am competent in using e-learning	-.288	1.000	.698	.682
have acquired new and interesting e-learning competence through my work	-.363	.698	1.000	.821
have a feeling of achievement through e-learning	-.184	.682	.821	1.000
using e-learning increases the quality of my work	-.379	.703	.860	.822
using e-learning is useful in performing my work	-.379	.622	.842	.821

The covariance matrix is calculated and used in the analysis.

Inter-Item Correlation Matrix

	using e-learning increases the quality of my work	using e-learning is useful in performing my work
do not feel that I am particular competent in using e-learning	-.379	-.379
My colleges tells me that I am competent in using e-learning	.703	.622
have acquired new and interesting e-learning competence through my work	.860	.842
have a feeling of achievement through e-learning	.822	.821
using e-learning increases the quality of my work	1.000	.891
using e-learning is useful in performing my work	.891	1.000

The covariance matrix is calculated and used in the analysis.

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Correlations	.411	-.379	.891	1.271	-2.351	.283	6

The covariance matrix is calculated and used in the analysis.

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
do not feel that I am particular competent in using e-learning	17.32	24.324	-.350	.252	.944
My colleges tells me that I am competent in using e-learning	17.41	16.099	.688	.558	.775
have acquired new and interesting e-learning competence through my work	16.99	14.385	.850	.803	.736
have a feeling of achievement through e-learning	17.07	13.047	.881	.782	.718
using e-learning increases the quality of my work	17.07	13.838	.866	.854	.728
using e-learning is useful in performing my work	17.07	12.797	.826	.837	.730

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
20.59	21.891	4.679	6

Correlations

Descriptive Statistics

	Mean	Std. Deviation	N
Gender	1.55	.500	97
Age	34.67	5.917	97
Ethnic origin	2.05	.741	97
Highest education level	4.53	1.466	97
Number of years in present position	6.35	4.818	97
Job level	1.76	.428	97
Number of years with present organization	9.69	5.374	97
Frequency of using e-learning system (in a month)	1.87	.606	97
Computer skills level (1=low and 5 = high)	3.20	1.196	97
indfac	3.5876	.88157	97
Indchar	3.6108	.94233	97
Indperc	3.5567	.84262	97
orgfac	3.1443	.94019	97
sysfac	3.9691	.68956	97
eleacc	3.4313	.77979	97

Correlations

		Gender	Age	Ethnic origin	Highest education level
Gender	Pearson Correlation	1	.047	.148	-.211*
	Sig. (2-tailed)	.	.645	.148	.038
	N	97	97	97	97
Age	Pearson Correlation	.047	1	-.098	-.092
	Sig. (2-tailed)	.645	.	.339	.373
	N	97	97	97	97
Ethnic origin	Pearson Correlation	.148	-.098	1	-.236*
	Sig. (2-tailed)	.148	.339	.	.020
	N	97	97	97	97
Highest education level	Pearson Correlation	-.211*	-.092	-.236*	1
	Sig. (2-tailed)	.038	.373	.020	.
	N	97	97	97	97
Number of years in present position	Pearson Correlation	.045	.464**	-.098	-.621**
	Sig. (2-tailed)	.661	.000	.337	.000
	N	97	97	97	97
Job level	Pearson Correlation	-.118	-.011	-.125	.683**
	Sig. (2-tailed)	.248	.918	.221	.000
	N	97	97	97	97
Number of years with present organization	Pearson Correlation	.005	.763**	-.093	-.331**
	Sig. (2-tailed)	.958	.000	.366	.001
	N	97	97	97	97
Frequency of using e-learning system (in a month)	Pearson Correlation	.038	-.053	-.147	.514**
	Sig. (2-tailed)	.713	.605	.151	.000
	N	97	97	97	97
Computer skills level (1=low and 5 = high)	Pearson Correlation	-.128	.068	-.164	.571**
	Sig. (2-tailed)	.210	.507	.108	.000
	N	97	97	97	97
indfac	Pearson Correlation	.084	.091	-.006	.278**
	Sig. (2-tailed)	.412	.374	.955	.006
	N	97	97	97	97
Indchar	Pearson Correlation	.102	.095	-.012	.257*
	Sig. (2-tailed)	.319	.353	.907	.011
	N	97	97	97	97
indperc	Pearson Correlation	.053	.080	.004	.295**
	Sig. (2-tailed)	.603	.434	.972	.003
	N	97	97	97	97
orgfac	Pearson Correlation	.012	.061	-.020	.392**
	Sig. (2-tailed)	.906	.550	.848	.000
	N	97	97	97	97
sysfac	Pearson Correlation	.093	-.064	-.067	.413**
	Sig. (2-tailed)	.364	.537	.514	.000
	N	97	97	97	97
eleacc	Pearson Correlation	.004	-.168	-.030	.510**
	Sig. (2-tailed)	.970	.099	.772	.000
	N	97	97	97	97

Correlations

		Number of years in present position	Job level	Number of years with present organization	Frequency of using e-learning system (in a month)
Gender	Pearson Correlation	.045	-.118	.005	.038
	Sig. (2-tailed)	.661	.248	.958	.713
	N	97	97	97	97
Age	Pearson Correlation	.464**	-.011	.763**	-.053
	Sig. (2-tailed)	.000	.918	.000	.605
	N	97	97	97	97
Ethnic origin	Pearson Correlation	-.098	-.125	-.093	-.147
	Sig. (2-tailed)	.337	.221	.366	.151
	N	97	97	97	97
Highest education level	Pearson Correlation	-.621**	.683**	-.331**	.514**
	Sig. (2-tailed)	.000	.000	.001	.000
	N	97	97	97	97
Number of years in present position	Pearson Correlation	1	-.551**	.749**	-.451**
	Sig. (2-tailed)	.	.000	.000	.000
	N	97	97	97	97
Job level	Pearson Correlation	-.551**	1	-.291**	.560**
	Sig. (2-tailed)	.000	.	.004	.000
	N	97	97	97	97
Number of years with present organization	Pearson Correlation	.749**	-.291**	1	-.246*
	Sig. (2-tailed)	.000	.004	.	.015
	N	97	97	97	97
Frequency of using e-learning system (in a month)	Pearson Correlation	-.451**	.560**	-.246*	1
	Sig. (2-tailed)	.000	.000	.015	.
	N	97	97	97	97
Computer skills level (1=low and 5 = high)	Pearson Correlation	-.486**	.601**	-.167	.554**
	Sig. (2-tailed)	.000	.000	.102	.000
	N	97	97	97	97
indfac	Pearson Correlation	-.371**	.397**	-.203*	.419**
	Sig. (2-tailed)	.000	.000	.046	.000
	N	97	97	97	97
Indchar	Pearson Correlation	-.364**	.383**	-.199	.409**
	Sig. (2-tailed)	.000	.000	.050	.000
	N	97	97	97	97
Indperc	Pearson Correlation	-.364**	.399**	-.199	.413**
	Sig. (2-tailed)	.000	.000	.051	.000
	N	97	97	97	97
orgfac	Pearson Correlation	-.404**	.376**	-.212*	.327**
	Sig. (2-tailed)	.000	.000	.037	.001
	N	97	97	97	97
sysfac	Pearson Correlation	-.515**	.407**	-.353**	.378**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	97	97	97	97
eleacc	Pearson Correlation	-.645**	.487**	-.431**	.465**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	97	97	97	97

Correlations

		Computer skills level (1=low and 5 = high)	indfac	Indchar	Indperc	orgfac
Gender	Pearson Correlation	-.128	.084	.102	.053	.012
	Sig. (2-tailed)	.210	.412	.319	.603	.906
	N	97	97	97	97	97
Age	Pearson Correlation	.068	.091	.095	.080	.061
	Sig. (2-tailed)	.507	.374	.353	.434	.550
	N	97	97	97	97	97
Ethnic origin	Pearson Correlation	-.164	-.006	-.012	.004	-.020
	Sig. (2-tailed)	.108	.955	.907	.972	.848
	N	97	97	97	97	97
Highest education level	Pearson Correlation	.571**	.278**	.257*	.295**	.392**
	Sig. (2-tailed)	.000	.006	.011	.003	.000
	N	97	97	97	97	97
Number of years in present position	Pearson Correlation	-.486**	-.371**	-.364**	-.364**	-.404**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	97	97	97	97	97
Job level	Pearson Correlation	.601**	.397**	.383**	.399**	.376**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	97	97	97	97	97
Number of years with present organization	Pearson Correlation	-.167	-.203*	-.199	-.199	-.212*
	Sig. (2-tailed)	.102	.046	.050	.051	.037
	N	97	97	97	97	97
Frequency of using e-learning system (in a month)	Pearson Correlation	.554**	.419**	.409**	.413**	.327**
	Sig. (2-tailed)	.000	.000	.000	.000	.001
	N	97	97	97	97	97
Computer skills level (1=low and 5 = high)	Pearson Correlation	1	.499**	.475**	.511**	.460**
	Sig. (2-tailed)	.	.000	.000	.000	.000
	N	97	97	97	97	97
indfac	Pearson Correlation	.499**	1	.987**	.970**	.670**
	Sig. (2-tailed)	.000	.	.000	.000	.000
	N	97	97	97	97	97
Indchar	Pearson Correlation	.475**	.987**	1	.917**	.653**
	Sig. (2-tailed)	.000	.000	.	.000	.000
	N	97	97	97	97	97
Indperc	Pearson Correlation	.511**	.970**	.917**	1	.663**
	Sig. (2-tailed)	.000	.000	.000	.	.000
	N	97	97	97	97	97
orgfac	Pearson Correlation	.460**	.670**	.653**	.663**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.
	N	97	97	97	97	97
sysfac	Pearson Correlation	.527**	.822**	.804**	.808**	.626**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	97	97	97	97	97
eleacc	Pearson Correlation	.564**	.704**	.702**	.673**	.761**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	97	97	97	97	97

Correlations

		sysfac	eleacc
Gender	Pearson Correlation	.093	.004
	Sig. (2-tailed)	.364	.970
	N	97	97
Age	Pearson Correlation	-.064	-.168
	Sig. (2-tailed)	.537	.099
	N	97	97
Ethnic origin	Pearson Correlation	-.067	-.030
	Sig. (2-tailed)	.514	.772
	N	97	97
Highest education level	Pearson Correlation	.413**	.510**
	Sig. (2-tailed)	.000	.000
	N	97	97
Number of years in present position	Pearson Correlation	-.515**	-.645**
	Sig. (2-tailed)	.000	.000
	N	97	97
Job level	Pearson Correlation	.407**	.487**
	Sig. (2-tailed)	.000	.000
	N	97	97
Number of years with present organization	Pearson Correlation	-.353**	-.431**
	Sig. (2-tailed)	.000	.000
	N	97	97
Frequency of using e-learning system (in a month)	Pearson Correlation	.378**	.465**
	Sig. (2-tailed)	.000	.000
	N	97	97
Computer skills level (1=low and 5 = high)	Pearson Correlation	.527**	.564**
	Sig. (2-tailed)	.000	.000
	N	97	97
indfac	Pearson Correlation	.822**	.704**
	Sig. (2-tailed)	.000	.000
	N	97	97
Indchar	Pearson Correlation	.804**	.702**
	Sig. (2-tailed)	.000	.000
	N	97	97
Indperc	Pearson Correlation	.808**	.673**
	Sig. (2-tailed)	.000	.000
	N	97	97
orgfac	Pearson Correlation	.626**	.761**
	Sig. (2-tailed)	.000	.000
	N	97	97
sysfac	Pearson Correlation	1	.790**
	Sig. (2-tailed)	.	.000
	N	97	97
eleacc	Pearson Correlation	.790**	1
	Sig. (2-tailed)	.000	.
	N	97	97

*. Correlation is significant at the 0.05 level (2-tailed).

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

Regression

Descriptive Statistics

	Mean	Std. Deviation	N
eleacc	3.4313	.77979	97
indfac	3.5876	.88157	97
orgfac	3.1443	.94019	97
sysfac	3.9691	.68956	97

Correlations

		eleacc	indfac	orgfac	sysfac
Pearson Correlation	eleacc	1.000	.704	.761	.790
	indfac	.704	1.000	.670	.822
	orgfac	.761	.670	1.000	.626
	sysfac	.790	.822	.626	1.000
Sig. (1-tailed)	eleacc	.	.000	.000	.000
	indfac	.000	.	.000	.000
	orgfac	.000	.000	.	.000
	sysfac	.000	.000	.000	.
N	eleacc	97	97	97	97
	indfac	97	97	97	97
	orgfac	97	97	97	97
	sysfac	97	97	97	97

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	sysfac, orgfac, indfac[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: eleacc

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.861[a]	.742	.733	.40280

a. Predictors: (Constant), sysfac, orgfac, indfac

b. Dependent Variable: eleacc

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43.286	3	14.429	88.928	.000[a]
	Residual	15.089	93	.162		
	Total	58.375	96			

a. Predictors: (Constant), sysfac, orgfac, indfac

b. Dependent Variable: eleacc

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.048	.245		-.196	.845
	indfac	-.041	.087	-.047	-.472	.638
	orgfac	.374	.060	.450	6.239	.000
	sysfac	.618	.106	.546	5.810	.000

Coefficients[a]

Model		95% Confidence Interval for B	
		Lower Bound	Upper Bound
1	(Constant)	-.534	.438
	indfac	-.215	.132
	orgfac	.255	.492
	sysfac	.407	.829

Coefficients[a]

Model		Correlations			Collinearity Statistics	
		Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)					
	indfac	.704	-.049	-.025	.284	3.517
	orgfac	.761	.543	.329	.533	1.875
	sysfac	.790	.516	.306	.314	3.182

a. Dependent Variable: eleacc

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	indfac	orgfac	sysfac
1	1	3.929	1.000	.00	.00	.00	.00
	2	.043	9.521	.29	.01	.50	.01
	3	.022	13.399	.26	.36	.49	.03
	4	.006	25.226	.45	.64	.00	.97

a. Dependent Variable: eleacc

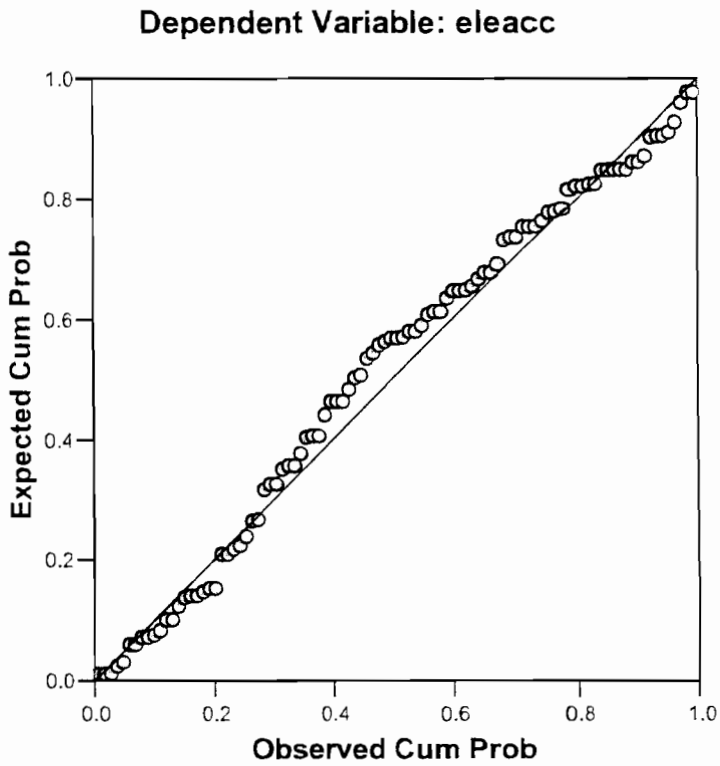
Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.0793	4.7032	3.4313	.67149	97
Std. Predicted Value	-2.013	1.894	.000	1.000	97
Standard Error of Predicted Value	.049	.153	.079	.021	97
Adjusted Predicted Value	2.1202	4.7052	3.4322	.67097	97
Residual	-.92922	.80187	.00000	.39646	97
Std. Residual	-2.307	1.991	.000	.984	97
Stud. Residual	-2.361	2.038	-.001	1.009	97
Deleted Residual	-.97297	.84064	-.00091	.41711	97
Stud. Deleted Residual	-2.422	2.074	-.003	1.018	97
Mahal. Distance	.452	12.929	2.969	2.368	97
Cook's Distance	.000	.163	.013	.025	97
Centered Leverage Value	.005	.135	.031	.025	97

a. Dependent Variable: eleacc

Charts

Normal P-P Plot of Regression Standardized Residual



Scatterplot

Dependent Variable: eleacc