

**LEARNER SATISFACTION TOWARDS E-LEARNING
AMONG FINAL YEAR FULL TIME AND PART TIME STUDENTS
IN UNIVERSITI UTARA MALAYSIA**

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UNIVERSITI UTARA MALAYSIA

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**LEARNER SATISFACTION TOWARDS E-LEARNING
AMONG FINAL YEAR FULL TIME AND PART TIME STUDENTS
IN UNIVERSITI UTARA MALAYSIA**

**A thesis submitted to the Graduate School in partial fulfillment of the requirement
for the degree Master of Science (Management), Universiti Utara Malaysia**

by

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ABSTRACT

The purpose of this study was to explore the learner's satisfaction toward e-learning. Moreover, this study also tried to determine whether the dimensions of learner's satisfaction moderate the relationship with knowledge gained. Data were collected from 111 final year students, part time and full time by using simple random sampling. A questionnaire consisting of 30 questions was administered to the respondents. The study showed that learner's satisfaction dimensions were positively related with e-learning. The study also found out that the dimensions learner's satisfaction influenced toward e-learning with 80.1 percent.

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CHAPTER 1

INTRODUCTION

1.1 Background of study

e-learning is learning that takes place in an electronically simulated environment. e-learning, web-based training, internet-based training and computer-based training are the next-generation instruction methods being developed today. With e-learning, users can immerse themselves in a three-dimensional environment to further enhance their learning experience. Moreover, e-learning can be done anywhere and anytime as long as the user has the proper hardware. Today, e-learning is fast becoming a reality through higher education like UUM and others.

e-learning can be done using an internet connection, a network, an intranet, or a storage disk. It uses a variety of media like audio, text, virtual environments, video, and animation. e-learning, in some ways, is even better than classroom learning methods as it is a one-on-one learning method, it is self-paced and it has an experiential-learning format.

As with any other forms of learning, e-learning depends on its delivery method and content to ensure its success. For this reason, e-learning modules have to be interesting, interactive and informative in order to be effective. Because it is computer/software based however, e-learning has the capability of immersing its students completely within

an environment most conducive to learning. This sets it apart from classroom-style learning.

1.2 Problem Statement

Cognitive science has been examining the nature of self-regulation, and self-regulated learning in particular, for some time now. Many learners never gain a good understanding of how to regulate their own learning or the ability to use learned strategies in new learning situations. Results of studies in self-regulated learning have shown that for learners who are still at the lowest stages of self-regulatory development, instructors must provide structure in order for these learners to grasp new material and concepts and for learners to learn to become more self-regulating. Further, there is some evidence that individual study at a distance lacks the modeling, social, and environmental influences that provide the structure or scaffolding required to improve self-regulatory skills claims that learners who are not competent self-regulators can be “slaughtered” in e-learning distance learning courses. These learners are not autonomous or self-regulating in their learning and would therefore not be able to change their behaviors in distance learning as required in Moore’s proposed theory of transactional distance. According to Moore’s proposed theory then, if these learners are unable to be autonomous in their learning, additional structure and dialogue would be required on the part of the instructors in order to reduce transactional distance. Consequently, learner autonomy, or the ability to self-regulate learning needs to be further investigated. If course structure determines how autonomous adult learners have to be in e-learning courses, and if adult learners have

varying abilities to be autonomous in learning situations, especially when learning at a distance, then the effect of both course structure

1.3 Purpose of Study

The purpose of this exploratory correlational study was to investigate how well a conceptual model of learning in a e-learning explained learners' satisfaction with perceived knowledge gained in e-learning courses. The relationships between the following set of independent variables were examined: (a) course structure; (b) learner autonomy; and (c) computer technology experience.

1.4 Research Objectives

Within correlational research, research objectives are provided to explain and suggest relationships between independent and dependent variables. In this study, the following are the research objectives.

1. To determine the relationship of a learner's satisfaction with knowledge gained in e-learning
2. To examine the relationship of the dimensions of learner's satisfaction with knowledge gained in e-learning
3. To seek which independent variables explain and predict the greatest amount of variance in the level of a learner's satisfaction with knowledge gained in e-learning.

1.5 Research Questions

Within correlational research, research questions are provided to explain and suggest relationships between independent and dependent variables. In this study, the following research questions were investigated:

1. What is the relationship of course structure with a learner's satisfaction with knowledge gained in e-learning?
2. What is the relationship of learner autonomy with learner's satisfaction with knowledge gained in e-learning?
3. What is the relationship between a learner's experience with computer technology and learner's satisfaction with knowledge gained in e-learning?
4. What are the inter-item relationships between course structure, learner autonomy, computer technology experience, and satisfaction with knowledge gained in e-learning?
5. Which independent variables explain and predict the greatest amount of variance in the level of a learner's satisfaction with knowledge gained in e-learning?

1.6 Research Hypothesis

The study was conducted to understand the relationship of learner satisfaction among the student either it have a significant relationship with the knowledge gained

from e-learning. A positive association between learner satisfaction and knowledge gained from e-learning was expected. Thus, eventually the study hypothesized that there is a positive and significant relationship between those two variables.

Hypothesis 1

Ho 1: There is no significant difference between demographic factors with the knowledge gained from e-learning.

HA 1: There is a significant difference between demographic factors with the knowledge gained from e-learning.

Hypothesis 2

Ho 2: There is no positive relationship between course structures with the knowledge gained from e-learning.

HA 2: There is a positive relationship between course structures with the knowledge gained from e-learning.

Hypothesis 3

Ho 3: There is no positive relationship between learner autonomy with the knowledge gained from e-learning.

HA 3: There is a positive relationship between learner autonomy with the knowledge gained from e-learning.

Hypothesis 4

Ho 4: There is no positive relationship between computer technology experience with the knowledge gained from e-learning.

HA 4: There is a positive relationship between computer technology experience with the knowledge gained from e-learning.

Hypothesis 5

Ho 5 = There is no significant influence between course structures, learners autonomy and computer technology with e-learning

HA 5: There is a significant influence between course structures, learners autonomy and computer technology with e-learning

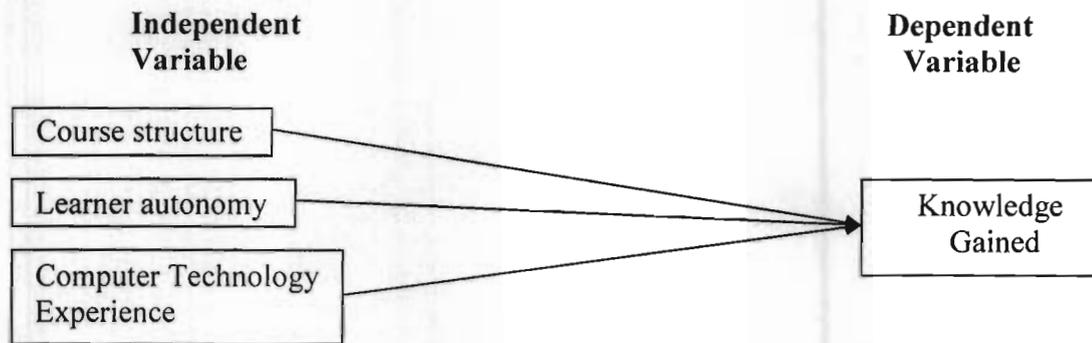
1.7 Research Framework

Based upon the proposed outline model of external variables belief attitude, this study hypothesized that both course (organization/clarity and breadth of coverage of the digital content) and instruction (instructor enthusiasm, group interaction, and individual rapport) would directly influence learners' perceived learning value. As to learner control, individuals differed in their ability to take advantage of this feature; the increased flexibility, which sometimes made it harder for learners to stay focused on viewing lecturing materials and to monitor learning progress meant that individuals might skip important content and, as a result, understand less subject material or learn valuable

concepts less thoroughly. In addition, learners' prior knowledge and ability have explained some of the negative findings in learner control (Williams, 1996), since individuals with little prior specific knowledge and ability would not benefit from high degrees of learner control (Lee and Lee, 1991). Since subjects in this study were mostly freshmen or sophomores in the continuing education division and were regarded as learners without sufficient specific prior knowledge, this study posited that learner control would negatively impact perceived learning value. However, proponents of learner control have argued that higher degrees of learner control led to higher levels of student satisfaction (Merrill, 1994).

Learner satisfaction was defined by students' attitude toward instructors, courses, instruction method, and e-learning technology; therefore, course (organization/clarity and breadth of coverage of the digital contents) and instruction (instructor enthusiasm, group interaction, and individual rapport) would have direct influences upon learner satisfaction. Prior research postulated that content and format formed end-user computing satisfaction (Doll and Torkzadeh, 1988; Doll, Xia, and Torkzadeh, 1994; Mchaney, Hightower, and Pearson, 2002; Wang 2003), and instructor, content, interaction, and learner control were antecedents of virtual learning environment effectiveness (satisfaction, effects) (Piccoli, Ahmad, and Ive, 2001). In addition, perceived learning value would directly influence satisfaction based on the outline model; this relationship was similar to prior research findings, where perceived value led to customer satisfaction (McDougall and Levesque, 2000) or learner satisfaction (Chiu, Hsu, Sun, Lin, and Sun, 2004).

Figure 1: Research Framework



1.8 Importance of the study

The importance of this study could be articulated in the following context, especially for students and researchers.

When the students understood their needs, they will try to cope with all means of responsibility to improve level of awareness and the factors that influence them to increase their understanding in their study. The e-learning perception of the students may inspire the management and eventually develop a positive manner towards engaging e-learning management in the university.

The findings of this study hope to give insights to researchers about the level of learner satisfaction toward e-learning among full-time and part-time student in UUM. More importantly, the results of the study will benefit the researchers by providing them more perspectives and ideas regarding the nature of the variables focused in this study.

1.9 Definition of Terms

The terms uses in this study were as below;

1.9.1 Course structure

Constitutive Definition: Course structure includes course learning objectives, course goals, expectations of the instructor, learner participation requirements, assignments, due dates, work quality requirements, assessment, and teaching methods to be used (Kearsley & Lynch, 1996).

Operational Definition: The term as used in this study is explicated through the syllabus of the courses included in the study and includes course learning objectives, course goals, content themes, teaching methods, illustrations, work quality expectations of the instructor, learner participation and attendance requirements, assignments, tasks, text, due dates, planned interactions (instructor-learner, learner-learner, content-learner, and environment-learner), pedagogical framework for the course design, modeling and provision of appropriate cognitive strategies for the course, assessment and evaluation, technical assistance available, and the course environment or medium. Using the syllabus, the courses were evaluated by three instructional design experts utilizing a rubric designed for this purpose. A structure score was assigned to each course based on the rubric score.

1.9.2 Autonomy

Constitutive Definition: Autonomy is the degree to which a learner is able to be self-directed in their learning (Candy, 1991).

Operational Definition: The term as used in this study was defined as a learner's score on the Motivated Strategies Learning Questionnaire (MSLQ) (Pintrich, Smith, Garcia & McKeachie, 1991; 1993) instrument measuring level of self-regulation for learning in a specific course.

1.9.3 Web-based course

Constitutive Definition: A Web-based course is any course which has all components or a portion of the components provided via the World Wide Web.

Operational Definition: The term as used in this study refers to undergraduate courses that were designated as "distance learning" in the degree schedule of UUM

1.10 Scope of the Study

The study explores whether e-learning is carried out among the full-time and part-time students in UUM. What kind of support in terms of people, process and product are available to help them. The participants involved in this study were students in University Utara Malaysia from various colleges in UUM.

1.11 Organization of the Report

This research project consists of five chapters. Chapter 1 outline the introduction of the study, the problem under investigation, the purpose and significance of study, the scope, the research objectives, framework and the hypotheses. Chapter 2 reviews the literature, outlining the meaning of the e-learning, describing the importance of e-learning in terms of learner satisfaction. Chapter 3 present the methodology which explained the variables and measurement, sample, research instrument used, scale of measurement, data collection method and statistical testing and analysis. The results of the study are discussed in Chapter 4. The final chapters, chapter 5 present the discussion of the results. It also highlights the implications of the results, limitation of the study and recommendations for future research.

CHAPTER II

LITERATURE REVIEW

2.1 Introduction

Since an e-learning system is an integration of computer, communication, and digital content adopted for teaching and learning use, a review of related literature for evaluating learner satisfaction should include research related to information system satisfaction, assessment of educational quality, and their relationships.

2.2 E-Learning

The definition of e-learning and the underpinning theory is still emerging. Nevertheless, any definition of e-learning should not be centric upon any one form of content or technology. For the purposes of this paper e-learning will therefore be defined as learning that involves the acquisition, generation and transfer of knowledge using information and communications technology (ICT). The technology involved may be as simple as a shortwave radio or as complex as a non-browser-based handheld device accessing content off satellite networks. Much of the debate on e-learning reflects uncertainty about the role that learning can play in both corporate and community contexts. This uncertainty is especially true of e-learning, the primary focus of the research discussed in this paper. Indeed, the present level of doubt is such that the fate of e-learning as a defined, distinct field of endeavour hangs in the balance.

2.3 Theoretical Model

The Theory of Reasoned Action (Ajzen and Fishbein, 1980; Fishbein and Ajzen, 1975) and the Technology Acceptance Model (Davis, Bagozzi, and Warshaw, 1989) have been widely applied to IT-related research. The Theory of Reasoned Action was used for predicting and explaining human behaviors in general and explained their causal relationships as belief attitude intention behavior. The Technology Acceptance Model modified the Theory of Reasoned Action to study the adoption behavior of information systems in particular and suggested that external variables directly influenced the belief constructs. Based upon these two fundamental theories, this study proposed an outline model such that external variables belief attitude. Thus, three sets of research variables-external variables, beliefs, and attitudes-were examined for this research.

2.4 External Variables

External variables are special information or messages that can guide learners' attitude development toward e-learning technologies. Mathieson (1991) suggested that external variables should guide the development of information systems. Piccoli, Ahmad and Ives (2001) postulated two determinant dimensions-human and designthat influence learning effectiveness in the virtual learning environment. The human dimension included instructors and learners, while the design dimension was comprised of learning mode, technology, learner control, content, and interaction. Learner satisfaction was determined by the students' attitudes toward the instructor, instructional method, courses, and e-

learning technologies (Pirrong and Lathen, 1990). Spooner et al. (1999) compared courses, instructors, instruction methods, and communication in the evaluation of teaching between distance education and traditional classes. In contrast, the current study evaluated the influence of three dimensions on learner satisfaction with e-learning: instructor, course, and learner control.

Teachers play a major role in students' learning in virtually any environment (Webster and Hackley, 1997). From a questionnaire in which students evaluated educational quality, Marsh (1982; 1992) assessed teaching effectiveness in the traditional classroom, using ten dimensions for assessment: learning/academic value, enthusiasm, instructor's course organization, group interaction, instructor rapport, breadth of coverage, quizzes, homework, workload and difficulty. Quizzes, homework, workload and difficulty were activities outside the category of classroom instruction, and the current study followed Coffey and Gibbs (2001) in its decision not to include these four dimensions in the research. The reasoning for this decision included the fact that the other six dimensions are those most likely to have difference meanings in the e-learning context than they do in the traditional classroom context, as student perceptions of effective teaching depend highly on the context in which instruction is delivered (Abrami, d'Apollonia, and Cohen, 1990). For example, digital content, which has been criticized as "an industrial form of teaching that emphasizes packaged information," was the evaluated object, rather than instructors or staff members. Therefore, the evaluations for organization/clarity and breadth of coverage were related to digital content, not instructors or persons who took care of the delivery portion and managed actual interactions with students. Elissavet and

Economides (2003) stated that the educational hypermedia software must give consideration to high-quality education and technology. Content, presentation and organization are two of the factors that must be evaluated for their physical acceptance by learners. Since the subject matter expert or the group of instructors who recorded the digital contents might or might not be the same person who taught the distance education course, this study categorized organization/clarity and breadth of coverage into the digital content dimension, while enthusiasm, group interaction, and rapport were in the instructor dimension.

A unique feature of e-learning is its ability to provide functionalities for learning control to transfer from instructor to learner (El-Tigi and Branch, 1997). Learner control is determined by the extent to which a learner can direct his or her own learning experience (Shyu and Brown, 1992) in accordance with his or her own time, place, learning flow, pace, content, and so on (Milheim and Martin, 1991; Williams, 1996); the emergence of Internet and e-learning technologies facilitated this kind of learning environment (Oliver and Omari, 1999). Therefore, e-learning transformed the educational paradigm from that of "teaching" to that of "learning" (Bates, 1995). Piccoli et al. (2001) posited group interaction and learner control as two of the system design factors that could impact learner satisfaction. In essence, e-learning was closely related to the issue of learner control (Park, 1991). Therefore, the external variables that influenced e-learner satisfaction were the organization and clarity, and breadth of coverage of the digital content; instructor enthusiasm; instructor rapport; group interaction; and learner control.

2.5 Beliefs

Faculty members and educational administrators determine the role of media and technology in education based on their beliefs regarding how people learn. Four psychological perspectives of how people learn are behaviorism, cognitivism, constructivism, and socio-psychological perspective; e-learning technology appears to have the capacity to satisfy the learning beliefs from behaviorism to the socio-psychological perspective (Heinich et al., 1996).

In previous studies, behavioral beliefs were defined as a person's beliefs that the behavior will lead to certain outcomes, and attitudes were determined by behavioral beliefs (Ajzen and Fishbein, 1980; Fishbein and Ajzen, 1975); perceived value was an overall evaluation of a product utility as to what has been given or taken (Zeithaml, 1988); self-reported learning, consisting of items such as understanding basic concepts and learning facts, was one of the dependent variables used in measuring students' perceptions of their learning in a GDSS-supported collaborative learning environment (Alavi, 1994), a construct similar to Marsh's learning/academic value construct, which consisted of four items including learning something valuable and learning the subject materials. Therefore, this study adopted perceived learning value as the belief construct.

2.6 Attitude

In previous studies, attitude toward a behavior was the degree to which performance of the behavior was positively or negatively valued (Ajzen and Fishbein, 1980; Fishbein and Ajzen, 1975); and customer satisfaction was used as a dependent variable to assess the success of an information system (Delone and Mclean, 1992; Doll and Torkzadeh, 1988; Doll, Xia, and Torkzadeh, 1994; Mchaney, Hightower, and Pearson, 2002). Because learner satisfaction was comprised of a student's attitude toward teacher, teaching method, courses, and teaching facility (Pirrong and Lathen, 1990), it was the outcome variable for the current research. Ting (2000) used three items to measure outcomes of student ratings of traditional classes: overall satisfaction with lecture performance, overall satisfaction with course design, and self-rated efforts devoted to study.

2.7 Course Structure

Course structure may impact how adult learners perceive their learning by providing flexibility that allows these adults to focus on their individual learning needs, rather than requiring them to follow a rigidly prescribed course of study, and by providing planned opportunities for various types of interactions. The studies reviewed on course structure indicate that there are multiple components of course structure and that these components, or a lack of them, have an impact on learning. However, the majority of these studies did not examine overall course structure or they did not ascertain the learners' perspective of the course structure.

In addition, most studies examining course structure did not utilize Moore's proposed construct of structure in the conceptual model, nor did they examine the impact of providing structure on the ability to function autonomously in the courses. Most did not examine structure in e-learning courses. Finally, the few studies that did ask learners whether they were satisfied with the structure of a course did not define what constituted the course structure, nor did the studies examine the level of structure in the courses included in the study. For this study, course structure was measured using a rubric designed to determine the level of structure in each course, and multiple components of structure were included, including planned interactions and the degree of flexibility in the courses.

2.8 Autonomy

For adult learners, the ability to be autonomous or self-regulating in learning, may impact perceptions of learning as less autonomous learners may require additional course structure in order to successfully gain the knowledge or skills they require while more autonomous learners may resent a more controlled environment.

Few studies have examined the construct of learner autonomy in Web courses. Those that have indicate that autonomy is a complex construct that requires further study. The socio-cognitive theory of self-regulated learning has been compared to autonomy and includes

many components that directly affect the ability to learn independently as is often required in e-learning courses.

The literature on self-regulated learning indicates that the ability to self-regulate correlates with achievement on test scores and course grades. While little work has been done that examines the effect of self-regulated learning in Web-based learning environments, there is some evidence that self-regulated learning skills can be developed in Web courses, and that this additional support can have an impact on learning outcomes. In addition, the studies examined indicate that the theoretical basis for the instructional design of the course interacts with the learner's ability to self-regulate. None of these studies have directly measured autonomy or examined how course structure impacts the ability to be self-regulating in learning.

This study utilized the Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich, et al., 1991, 1993) to measure self-regulation for learning directly. A self report instrument, the MSLQ includes 15 subscales grouped under the categories of Learning Strategies and Motivation. The subscales measure a range of components that constitute the ability to function autonomously in learning situations that generally havenot been included in previous studies. The conceptual model proposed in this study suggests that it is learner autonomy that drives the level of course structure required by the learner.

2.9 Computer Technology Experience

The results of the studies examining computer and Web experience in relation to learning in e-learning courses are mixed. There is some evidence that experience with both increases a student's belief that they will be successful in e-learning courses. However, only two studies examined specific aspects of computer and Web experience and only one of those found any significance based on computer or Web experience. The Lim (2001) study did not investigate satisfaction with perceived learning in the courses included in the study while the Stein & Wheaton (2002) study did examine satisfaction with learning, but found no relationship between computer and Web experience and satisfaction with learning. Consequently, computer and Web experience and their impact on learning in Web-based courses need to be further explored. Studies on computer experience and self-regulated learning indicate that self-efficacy for computer and Web tasks may increase self-regulation by increasing self-efficacy for computer and Web tasks in Web courses.

This study obtained information on both computer and Web technology experience through the Computer Technology Experience section of the Learner Profile Questionnaire, based on the Demographic Questionnaire developed by Stein and Wheaton (2002). This section of the instrument included subscales that measure experience with computers, the Internet, E-mail, Web course software, and keyboard skills. A summed score of these subscales provided the Computer Technology Experience (CTE) score.

2.10 Satisfaction with Perceived Knowledge Gained through e-learning

No literature was found that examined satisfaction with perceived knowledge gained in a course that included course structure and autonomy as variables. The adult education literature indicates that adult learners may have difference goals in pursuing education, and that these are generally intrinsically motivated. For this reason, traditional measures of achievement may not be appropriate for adult learners. There is a very limited literature base that indicates that learners' satisfaction with learning may be a good indicator of whether a course and an instructor are meeting the needs of the students. Consequently, satisfaction with perceived knowledge gained was used as the dependent variable for this study.

Web-based distance education has been described as the fastest growing segment of adult education, yet the literature indicates that we know little about how adults learn in Web-based environments. In addition, few theories of learning for online or Web-based distance learning exist. This study examined a conceptual model of learning in Web-based courses based on Moore's proposed constructs (1991, 1993) and Zimmerman's socio-cognitive self-regulated learning theory (1989, 2000) within an adult education context that is seen as representing the majority of adult distance learners those adults enrolled in Web-based undergraduate and graduate formal education programs. In doing so, the study investigated the primary research question of whether course structure and a

learner's ability to function autonomously in a e-learning course could explain learner's satisfaction with what they perceive they learn in the course.

CHAPTER III

METHODOLOGY

3.1 Introduction

This section consisted of population and sample of the study, sampling method, data collection method, research instrument, and data analysis technique.

3.2 Research Design

This is an exploratory research study, as its major purpose was to gain a better understanding of the learner satisfaction toward knowledge gained from e-learning. Survey-based methods were used to collect detailed information regarding the characteristics of the students in their respective faculty.

3.3 Research Population

According to the Centre for Graduate Student, UUM., Puan Farhana, there are a total of 22,077 student in three difference colleges in UUM. Out of that number, 1,876 were from the faculty of business management. The full time students from the College of Business (COB) were taken as samples where they are taking business management program. There are 445 part time students from the distance learning centre which taking the same

program. There were the students studying under the Faculty of Business Management taken from this faculty to represent the whole population of students in the college.

3.4 Research Sampling

In this study, probability sampling was used because the elements in the population have some known chance or probability of being selected as sample subjects. The sampling method used in this study was simple random sampling. According to Cavana (2001), this sampling design, which is the most efficient, is a good choice when differentiated information is needed regarding various strata within the population known to differ in their parameters. Therefore, respondents are used as samples in this study. A total of 300 final year student from the population of 1,876 student will be used as the sample in this study. According to Sekaran (2000), at least 331 samples are needed to represent the total population of 2321 respondents.

3.5 Instrumentation

The survey method was employed for this study. Structural design of the questionnaire is based on the factor involving learner satisfaction toward knowledge gained from e-learning. Questionnaire using Likert 5-point scale ranging from 'strongly agree' (coded 5) to 'strongly disagree (coded 1) is designed based on a combination of self-designed questions and proposed by Marsh (1982). The total of items used in the study is 30 which are to find out the respondents' view on the learner satisfaction views on the ways to

gained knowledge from e-learning. The distribution of questionnaire items is as illustrated in Table 3.5

Table 3.5: Distribution of Questionnaire Item

Variables	Total Item
Demographic Factors	8
Knowledge gained in e-learning	7
Learner's Satisfaction:	
1. Course Structure	5
2. Learner autonomy	5
3. Computer Technology Experience	5

3.6 Reliability Testing

Reliability testing was done to test the appropriateness of questionnaire used in this study. In this study, reliability test employed the used of Cronbach Alpha testing as it is the most frequently used reliability test tool by social researchers. The overall Cronbach Alpha reliability coefficient for the variables is highly acceptable. According to Cavana (2001), the reliability analysis scale can be accepted if the Cronbach Alpha coefficient is between 0.6 and 1.0. The alpha value of the reliability test is as illustrated in Table 3.6

Table 3.6: Reliability Test

Variables	Alpha
Knowledge gained in e-learning	0.870
Learner's Satisfaction:	
1. Course Structure	0.891
2. Learner autonomy	0.764
3. Computer Technology Experience	0.874

3.7 Data Collection Procedures

In this study, questionnaires were used as primary data collection method. The full-time and part-time students were the respondents. In order to ensure higher response rate, respondents were informed in advance prior to and after the survey instrument were sent. Questionnaires were distributed to the students in their respective college from their faculty. Explanations were will be given to the respondents on how to complete the questionnaire. A total of 150 sets were distributed. Data collection had been carried out in April, 2008.

Table 3.7 shows the number of questionnaires that were distributed, and those were usable. Of the 150 questionnaires distributed, 115 (76.67%) were returned to the researcher. A total of 111 (96.51%) were used for analysis, and the rest 4 (3.49%) were rejected because they were not filled in appropriately.

Table 3.7: The Total and Percentage of Distributed, Returned, Usable, and Rejected Questionnaires

Report	Total	Percentage (%)
Distributed	150	100.00
Returned	115	76.67
Usable	111	96.51
Rejected	4	3.49

3.8 Data Analysis:

Data collected were processed employing descriptive and inferential statistics via the Statistical Package for the Social Science (SPSS) Version 14.0.

3.8.1 Descriptive Statistics

According to Leary (2004), descriptive statistics are used to summarize and describe the behavior of participants in a study. To report on the respondents' demographic factors such as gender, age, marital status, and number of semesters as well as to describe their levels of learner satisfaction and knowledge gained from e-learning, descriptive statistics such as means, frequencies and percentages were used.

3.8.2 Inferential Statistics

Inferential statistical analysis always involves the process of sampling and the selection of a small group assumed to be related to the population from which it is drawn (Best & Kahn, 2003). According to Leary (2004), inferential statistics are used to draw conclusions about the reliability and generalisability of one's findings. Inferential statistics such as the t-test, Analysis of Variance (ANOVA), Pearson's Product-Moment Correlation Analysis (Pearson's r), and Multiple Regression Analysis will be used in this analysis.

CHAPTER IV
FINDINGS AND ANALYSIS

4.1 Introduction

This chapter reports the results of the study. Data were analyzed using several methods such as descriptive statistics (frequencies and means) and analysis of inference.

4.2 Descriptive Statistics of Data Collection

The demographic factors in this study are gender, age, race, college, experience, time, frequency of using e learning and method of study. Furthermore the descriptive statistic of the dependent variable and independent variables were also being analyzed.

4.2.1 Descriptive Statistic of Demographic Factor

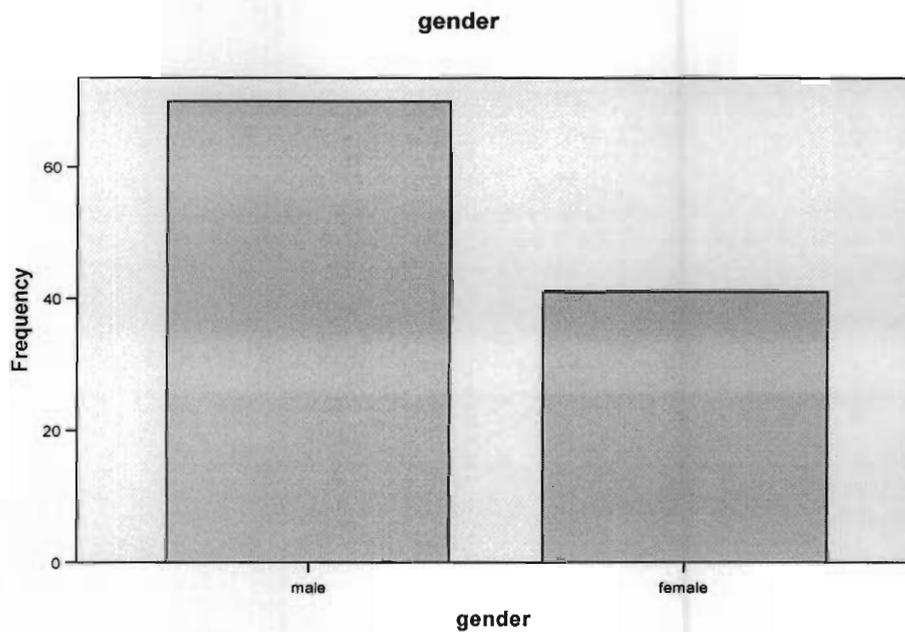
Table 4.2.1: Demographic Factor

No	Items	Frequency	Percentage
1	GENDER		
	1. Male	70	63.1
	2. Female	41	36.9
2	AGE		
	1. Below 24 years old	22	19.8
	2. 25 – 32 years old	29	26.1
	3. 33 – 40 years old	45	40.5
	4. 41 – 47 years old	15	13.5

3	RACE 1. Malay 2. Indian 3. Chinese	103 2 6	92.8 1.8 5.4
4	COLLEGE 1. College of Business 2. College of Art and Science 3. College of Law, Government and International Studies	51 48 12	45.9 43.2 10.8
5	EXPERIENCE 1. Less than 1 year 2. 1-2 years 3. 3-4 years 4. More than 5 years	62 22 12 15	55.9 19.8 10.8 13.5
6	TIME 1. Less than 1 hour 2. 1-2 hours 3. 3-4 hours 4. More than 5 hours	59 23 11 18	53.2 20.7 9.9 16.2
7	FREQUENCY OF USING E-LEARNING 1. Hardly Never 2. Sometimes 3. Often 4. Very Often 5. All the time	62 20 8 6 15	55.9 18.0 7.2 5.4 13.5
8	METHOD OF STUDY 1. Full time 2. Part time	60 51	54.1 45.9

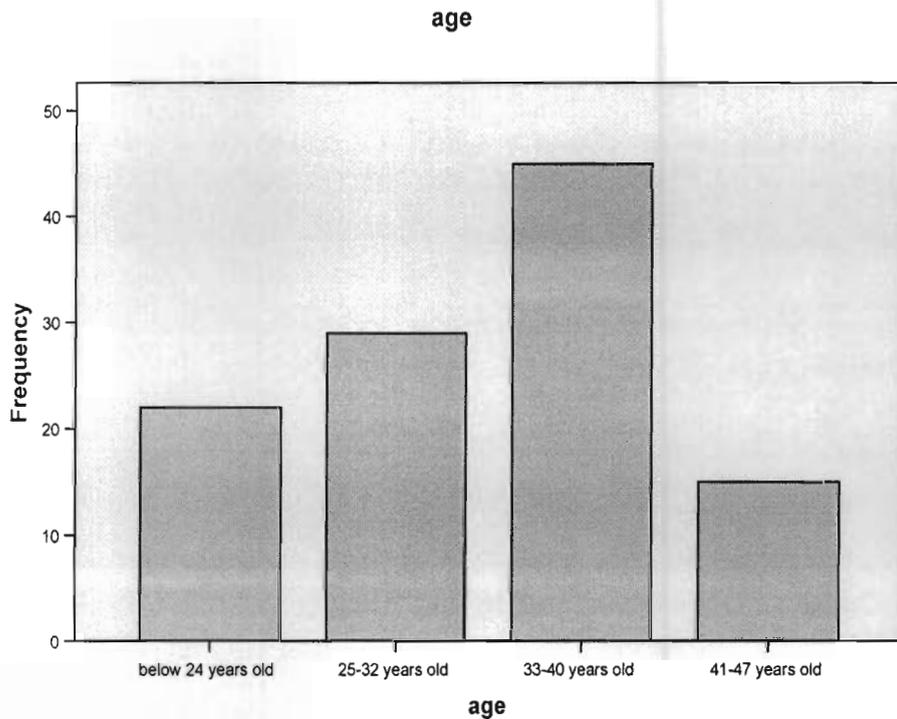
From the output above will be much explained by the bar chart below;

Figure 2: Gender



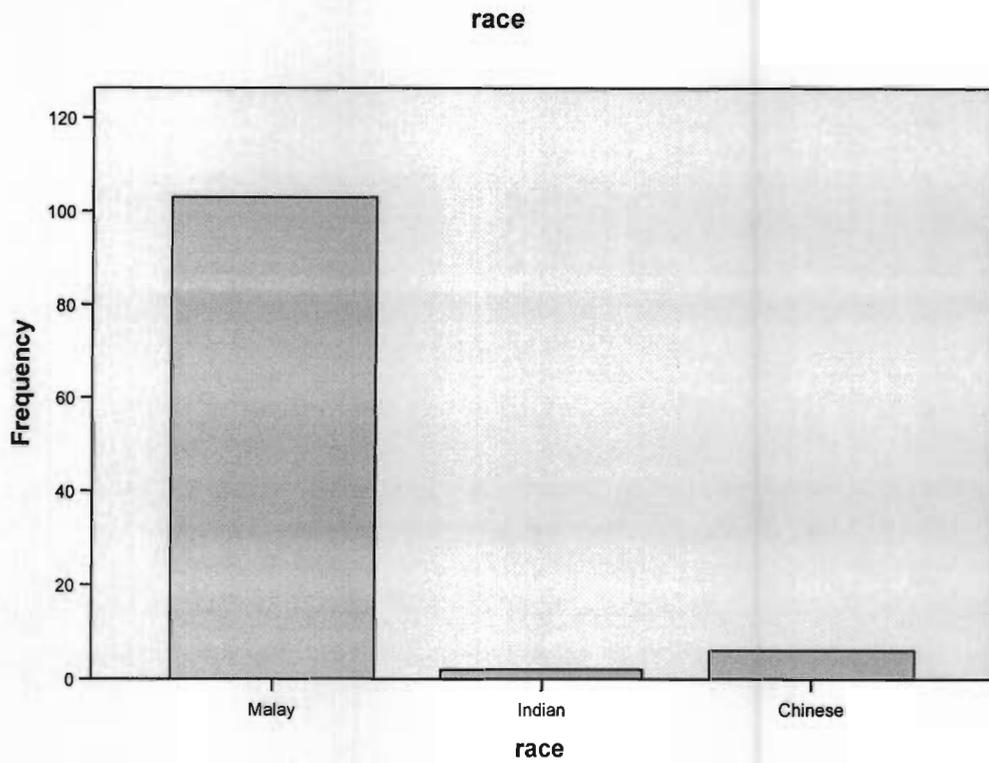
From the figure 2 above it seems that the male respondents were the most in UUM which is 63.1 percent or 70 respondents. The rest was the female which is only 36.9 percent or 41 respondents.

Figure 3: Age



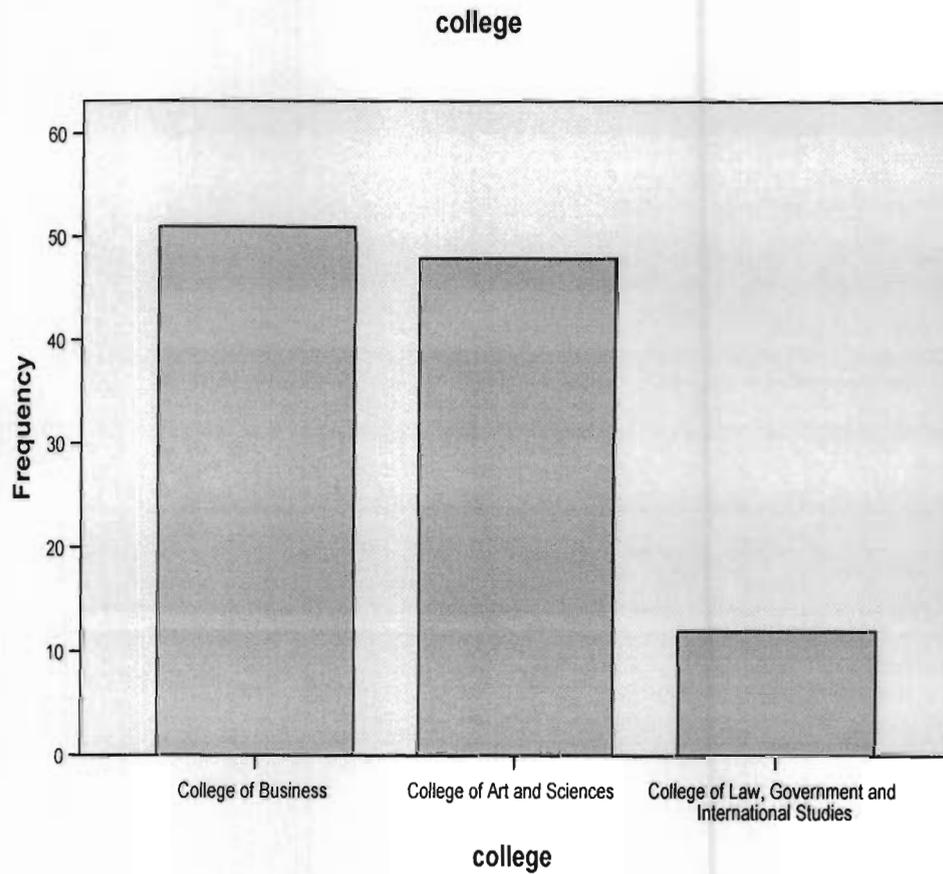
The above figure 3, shows that 40.5 percent or 45 of the respondent at the age between 33-40 years old. Twenty-two respondents at the age below 24 years old years and 26.1 percent of the respondents were at the age between 25-32 years old. The rest of the respondents were between 41-47 years old or 15 respondents.

Figure 4: Race



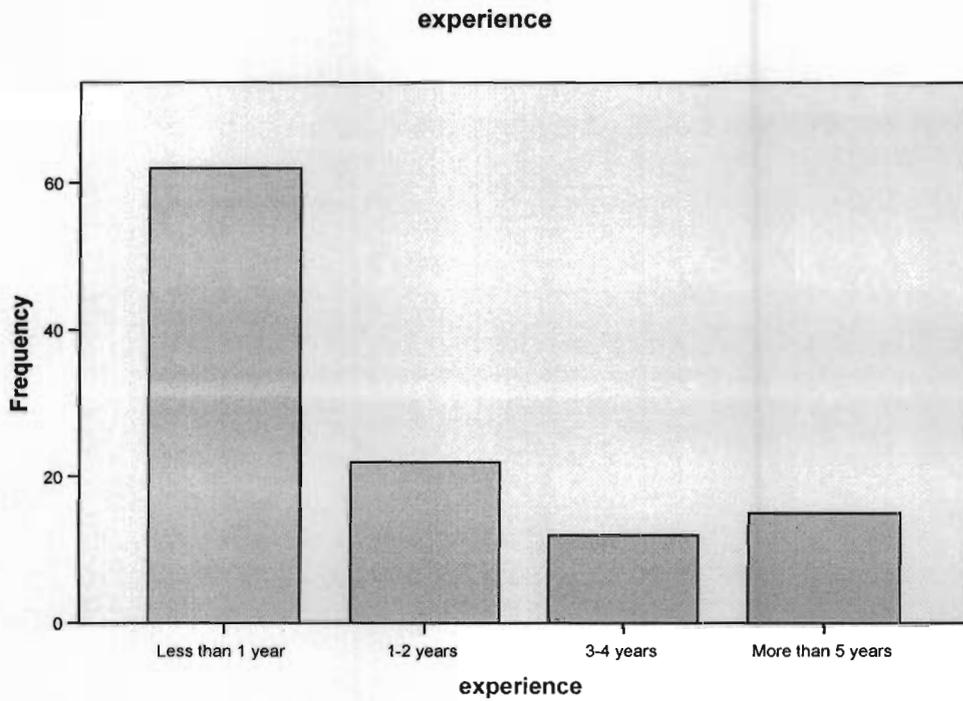
The above figure 4 shows that 92.8 percent or 103 of the respondent were Malay. Six of the respondents were Chinese and only two of the respondents were Indian.

Figure 5: College



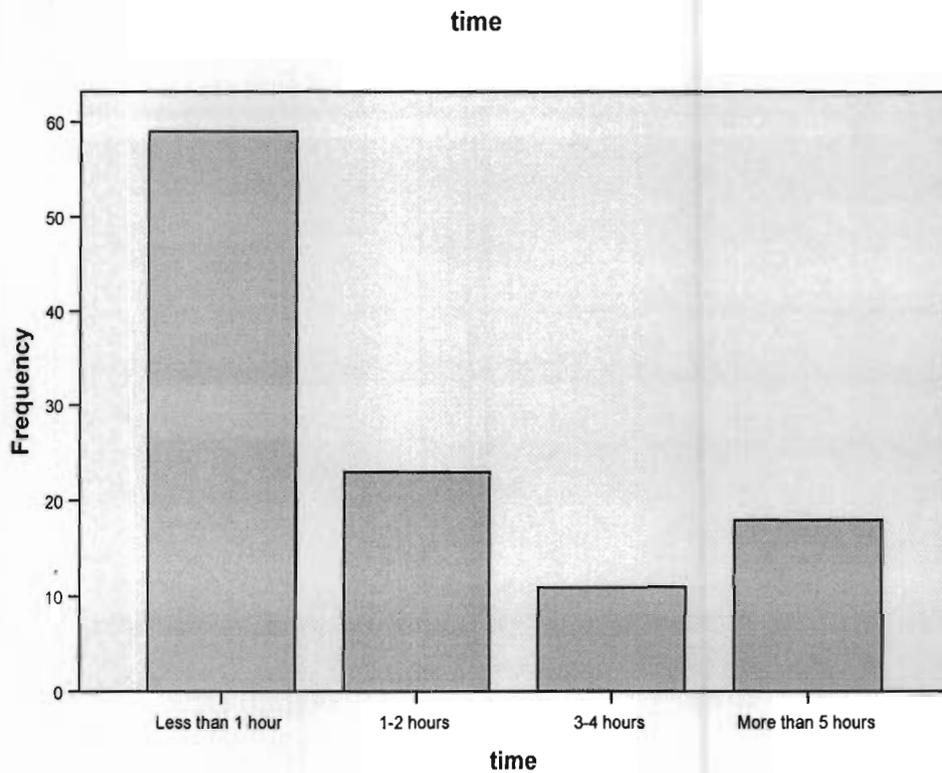
The above figure 5 shows that 45.9 percent or 51 of the respondent were from College of Business and 43.2 percent or 48 of them were from the College of Art and Science. The rest of the respondents were from the College of Law, Government and International Studies.

Figure 6: Experience



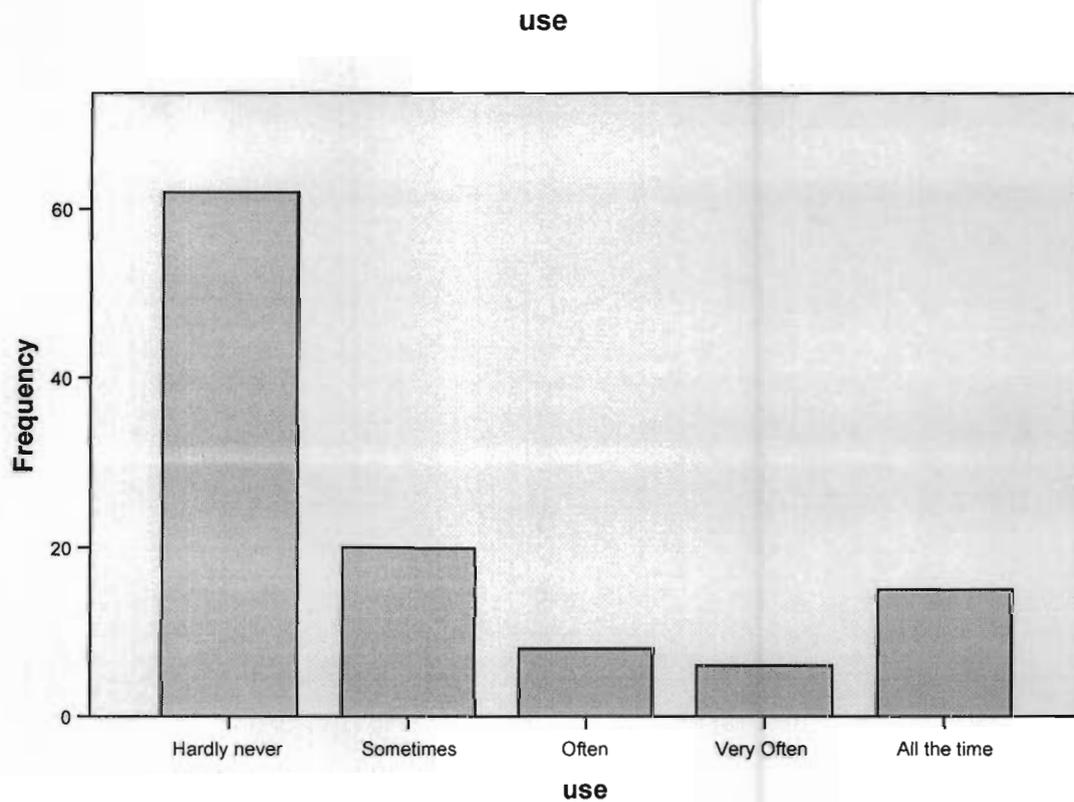
It seems that the respondent has a vast experience of using e-learning. From the output 62 or 55.9 percent of the respondents has less than 1 years of experience. Followed by 22 or 19.8 percent of the respondents has 1-2 years of experience. Only 12 or 10.8 percent of the respondents has 3-4 years of experience. Finally 15 or 13.5 percent of the respondent has the experience of using the e-learning for more than 5 years.

Figure 7: Time for using e-learning



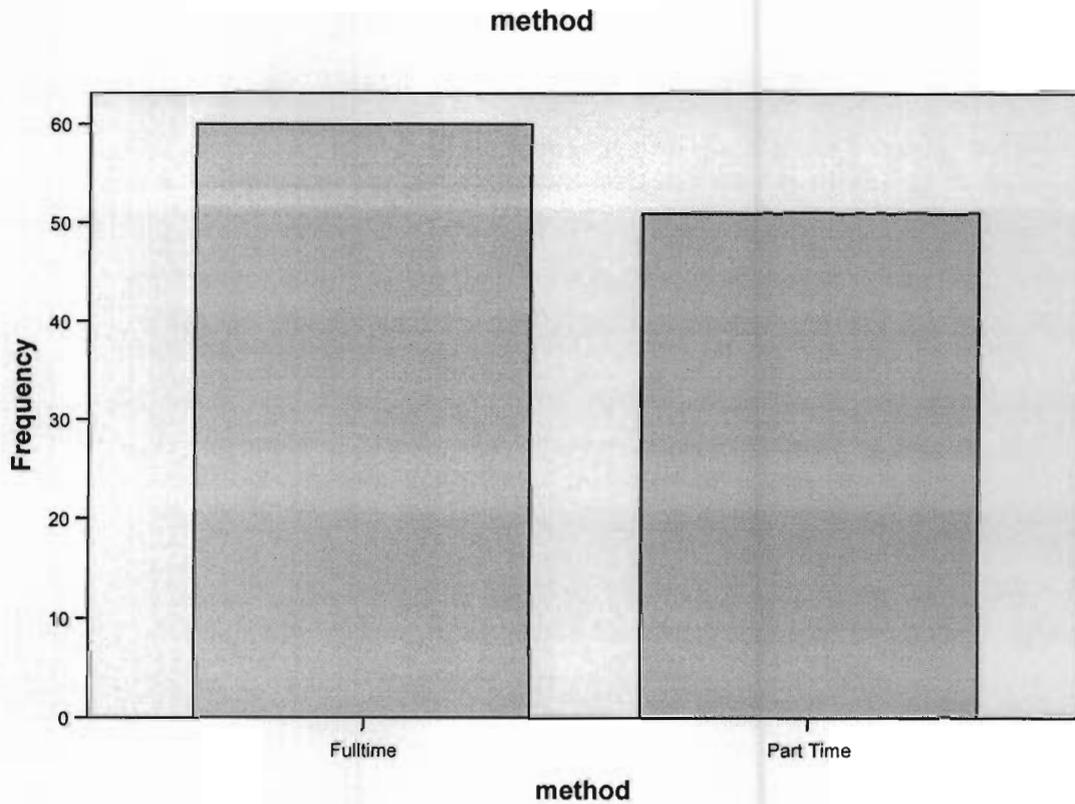
From figure 7, it shows that the time respondent spent in using e-learning. From the output 59 or 53.2 percent of the respondents had spent less than 1 hour. Followed by 23 or 20.7 percent of the respondents had spent between 1-2 hours. Only 11 or 9.9 percent of the respondents had spent between 3-4 hours. Finally 18 or 16.2 percent of the respondent had spent more than 5 hours.

Figure 8: Frequency of using e-learning



From the figure 8 it shows that 62 or 55.9 percent of the respondents hardly never use the e-learning system. Twenty or 18.0 percent of them sometimes used the e-learning. Eight of the respondent very often used the system and six of them use is very often. Finally 15 or 13.5 percent of the respondent use it all the time.

Figure 9: Method of study



From the figure 9 above, it shows that 60 or 54.1 percent of the respondent were full time students and 51 or 45.9 were part time students.

4.3. Testing the Hypotheses

4.3.1 Hypotheses testing for demographic factors

Hypothesis 1(a) was stated as follows:

Ho1(a)= There is no significant difference between gender and e-learning

Table 4.3.1(a): Independent samples test between gender and e-learning

	N	Mean	Standard Deviation	Mean Difference	t	Significance
Male	70	2.88	0.525	-0.0048	-0.049	0.961
Female	41	2.89	0.464			

The results of the t-test done are shown in output 4.3.1(a). As can be seen, the difference in the mean of 2.88 and 2.89 with standard deviation of 0.525 and 0.464 for male and female on e-learning were insignificant. Since this significant level is much greater than the acceptable level of 0.05 (or 5 per cent), we do accept the null hypothesis (Ho1). Therefore, there is no significant difference of e-learning between male and female respondents.

Hypothesis 1(b) was stated as follows:

Ho1 (b) = There is no significant difference between age and e-learning

Table 4.3.1(b): One-way ANOVA between age and e-learning

E-learning	F	Significant
Age	2.228	0.089

The results of ANOVA, testing this hypothesis, are shown in output 4.3.1.(b) In the case of age factor, the F value 2.228. This F value is not significant at the level 0.089. This implies that there is no difference between e-learning and age factor.

Hypothesis 1(c) was stated as follows:

Ho1(c) = There is no significant difference between races and e-learning

Table 4.3.1(c): One-way ANOVA between races and e-learning

E-learning	F	Significant
Races	1.255	0.289

The results of ANOVA, testing this hypothesis, are shown in output 4.3.1(c) In the case of races factor, the F value 1.255. This F value is not significant at the level 0.289. This implies that there is no difference between e-learning and races factor.

Hypothesis 1(d) was stated as follows:

Ho1 (d) = There is no significant difference between college and e-learning

Table 4.3.1(d): One-way ANOVA between college and e-learning

E-learning	F	Significant
College	10.893	0.000

The results of ANOVA, testing this hypothesis, are shown in output 4.3.1(d) In the case of college factor, the F value 10.893. This F value is significant at the level 0.000. This implies that there is difference between e-learning and college factor. Since there was a significant difference, Post Hoc Tests (Turkey-HSD) was done and the College of Law, Government and International Studies was the dominant college in using the e-learning.

Hypothesis 1(e) was stated as follows:

Ho1 (e) = There is no significant difference between experience and e-learning

Table 4.3.1(e): One-way ANOVA between experience and e-learning

E-learning	F	Significant
Experience	1.948	0.126

The results of ANOVA, testing this hypothesis, are shown in output 4.3.1(e) In the case of experience factor, the F value 1.948. This F value is not significant at the level 0.126. This implies that there is no difference between e-learning and experience factor.

Hypothesis 1(f) was stated as follows:

Ho1 (f)= There is no significant difference between time and e-learning

Table 4.3.1(f): One-way ANOVA between time and e-learning

E-learning	F	Significant
Time	16.093	0.000

The results of ANOVA, testing this hypothesis, are shown in output 4.3.1(f) In the case of time factor, the F value 16.093. This F value is significant at the level 0.000. This implies that there is difference between e-learning and time factor. Since there was a significant difference, Post Hoc Tests (Turkey-HSD) was done and the time spent between 1-2 hours was the dominant time usage in using the e-learning.

Hypothesis 1(g) was stated as follows:

Ho1 (g) = There is no significant difference between usage of e-learning system and e-learning

Table 4.3.1(g): One-way ANOVA between usage of e-learning and e-learning

E-learning	F	Significant
Usage of e-learning	3.801	0.006

The results of ANOVA, testing this hypothesis, are shown in output 4.3.1(g) In the case of usage of e-learning factor, the F value 3.801. This F value is significant at the level 0.006. This implies that there is difference between e-learning and the usage of e-learning factor. Since there was a significant difference, Post Hoc Tests (Turkey-HSD) was done and the usage of time for “sometimes” was the dominant time usage in using the e-learning.

Hypothesis 1(h) was stated as follows:

Ho1 = There is no significant difference between method of study and e-learning

Table 4.3.1(h): Independent samples test between method of study and e-learning

	N	Mean	Standard Deviation	Mean Difference	t	Significance
Full time	60	2.73	0.406	-0.336	-3.720	0.000
Part time	51	3.06	0.544			

The results of the t-test done are shown in output 4.3.1(h). As can be seen, the difference in the mean of 2.73 and 3.06 with standard deviation of 0.406 and 0.544 for part time and full time on e-learning were significant. Since this significant level is much greater than the acceptable level of 0.05 (or 5 per cent), we do accept the alternative hypothesis (H_{a1}). Therefore, there is significant difference of e-learning between part time and full time respondents. Since it is significant, the value of mean in part time students shows that there were more dominant in using the e-learning system.

4.4 Hypothesis testing relationship between course structures, learners autonomy and computer technology with e-learning

Hypothesis 2 was stated as follows:

Ho 2 = There is no significant relationship between course structures and e-learning

Ha 2 = There is significant relationship between course structure and e-learning

Table 4.4(a): Correlation between course structure and e-learning

	Pearson Correlation (r)	Significant
Course Structure	0.393	0.000

Since both variable are interval, Pearson Correlation test was done, the results of which are shown in Table 4.4(a). There is a significant positive correlation between course structure and e-learning with a significant value of 0.000. Hence we do reject the null hypothesis Ho 2. In other words course structure and e-learning are related with a weak relationship.

Hypothesis 3 was stated as follows:

Ho 3 = There is no significant relationship between learner autonomy and e-learning

Ha 3 = There is significant relationship between learner autonomy and e-learning

Table 4.4(b): Correlation between learner autonomy and e-learning

	Pearson Correlation (r)	Significant
Learner autonomy	0.881	0.000

Since both variable are interval, Pearson Correlation test was done, the results of which are shown in Table 4.4(b). There is a significant positive correlation between course learner autonomy and e-learning with a significant value of 0.000. Hence we do reject the null hypothesis Ho 3. In other words, learner autonomy and e-learning are related with a strong relationship.

Hypothesis 4 was stated as follows:

Ho 4 = There is no significant relationship between experience in computer technology and e-learning

Ha 4 = There is significant relationship between experience in computer technology and e-learning

Table 4.4(c): Correlation between experience in computer technology and e-learning

	Pearson Correlation (r)	Significant
Experience in computer technology	0.393	0.000

Since both variable are interval, Pearson Correlation test was done, the results of which are shown in Table 4.4(c). There is a significant positive correlation between experience in computer technology and e-learning with a significant value of 0.000. Hence we do reject the null hypothesis Ho 4. In other words, experience in computer technology and e-learning are related with a weak relationship.

4.5 Hypothesis testing influence between course structures, learners autonomy and computer technology with e-learning

Hypothesis 5 was stated as follows:

Ho 5 = There is no significant influence between course structures, learners autonomy and computer technology with e-learning

Ha 5 = There is a significant influence between course structures, learners autonomy and computer technology with e-learning.

Table 4.5: Regression between course structures, learner's autonomy and computer technology with e-learning.

Model Summary

Model	R	R Square
1	0.895	0.801

Anova

Model	F	Significant
1	217.283	0.000

Coefficients

Model	B	Beta	t	Significant
Constant	0.129		0.692	0.490
Learner autonomy	0.746	0.836	18.731	0.000
Computer Technology	0.215	0.163	3.641	0.000
Course Structure	0.215	0.836	3.641	0.000

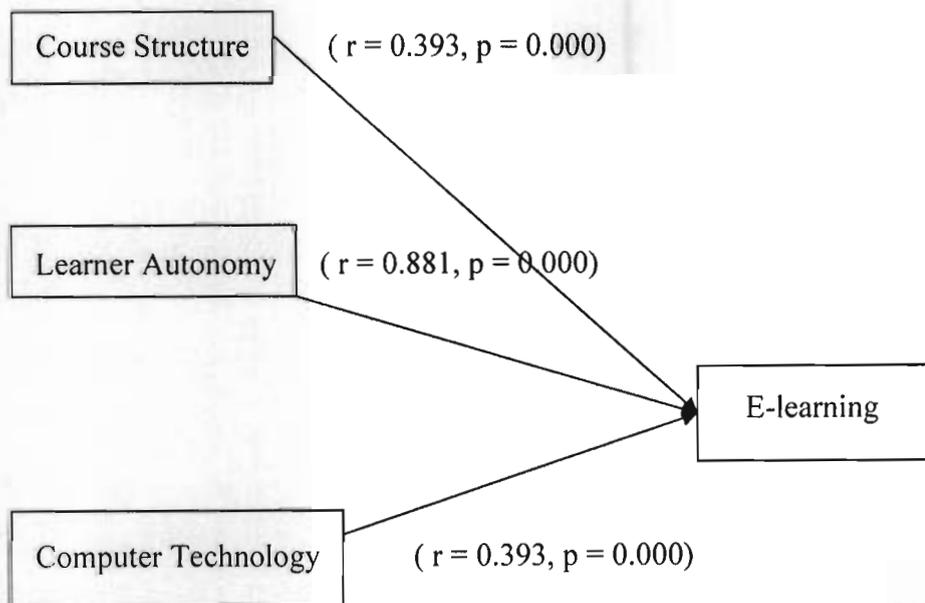
The results of regressing the independent variables against e-learning can be seen in output above. The first table in the output 'Model Summary' shows the independent variable that are entered into the regression model, the R (0.895), which is the correlation of the independent variables with the dependent variable. The R Square found was (0.801). This is the explained variance and is actually the square of the multiple R $(0.895)^2$. Thus only 80.1 percent of the variables influence the dependent variable.

The ANOVA table shows that the F value of 217.283 ($p = 0.00$) is significant at the 0.01 level. What the results mean is that 80.1 percent of the variance (R-Square) in e-learning has been significantly explained by the course structures, learners autonomy and computer technology. From the output it shows that the factor of learner autonomy was the dominant factor in assessing the usage of e-learning system.

4.6 Summary of the findings

The result of the correlation and regression shows that the all the factors of course structures, learner's autonomy and computer technology was correlated toward e-learning. It shows that the dominant factor that correlated and influence toward e-learning was the learner's autonomy. Thus these dimensions play an essential role the usage of e-learning system in UUM. The table below shows the outcome of this study.

Table: 4.6: Outcome of the Study



CHAPTER V

CONCLUSION

5.1 Introduction

This chapter discusses the findings of the study and highlights the issues pertaining to the usage of e-learning among the part time and full time students of UUM. It also suggests a measure that should be considered in any future attempt in this area. Implications for e-learning usage research and practice are discussed. The chapter concludes with a discussion of study limitations and future research directions.

5.2 Main effects on usage of e-learning

This study was developed to look at the e-learning usage of UUM students from various faculties. Based on the results obtained from this study, generally it shows that the level of e-learning usage among students is still at a moderate stage. Most of them do not know about using advanced software or programs.

This exploratory study represents an initial attempt to examine a model of learning in an e-learning course. The model integrates constructs from Moore's proposed theory of transactional distance (1991, 1993) and Zimmerman's socio-cognitive self-regulated learning theory (1989, 2000) in formal e-learning-based courses. It goes beyond previous

studies by: 1) measuring the overall structure of the courses, including the planned interactions and the degree of flexibility on each component of course structure, and the course environment and medium, 2) measuring learner autonomy and including autonomy in the overall model, and 3) examining the degree of satisfaction with learning that participants had in their courses.

For practitioners, this study suggests that the ability to be autonomous, that is to self-regulate learning in a E-learning course, is significant in overall satisfaction with what students believe they have learned. The findings of this study indicate that the courses provided moderate levels of structure, flexibility, and interaction for the learners. In addition, these courses provided little, if any modeling of the self-regulating behaviors required learning the course material. Based on these findings it appears that E-learning teachers require further professional development on how to provide adequate structure, flexibility and interactions in their E-learning courses for those students who may lack the level of autonomy required to learn the course material. In addition, E-learning instructors need to develop the ability to teach and model self-regulatory behaviors. Institutions offering E-learning courses need to provide development for their E-learning instructors on presenting and modeling these self-regulatory skills. The professional development offered to these E-learning instructors should also include information to help instructors gain a better understanding of the developmental processes their students experience as they become more self-regulating in their courses, and how, as instructors, they can support these processes. Socio-cognitive self-regulated learning theory (Zimmerman, 1989, 2000) suggests that instructors should begin with higher levels of

structure for lower level courses and new learners, moving to lower structure as students become more expert in the area of study. In this study, the majority of the students were enrolled in low level courses; however all levels of courses had low levels of structure. Instructors of these lower level courses should also model behavior that are known to lead to successful learning in E-learning courses and should provide appropriate guidelines for useful cognitive strategies for the course.

The conceptual model proposed and examined in this study combined a proposed theory of distance learning with socio-cognitive self-regulated learning theory to offer an explanation of how learning in E-learning courses might occur. Although previous studies indicated that course structure effects satisfaction with perceived learning in E-learning courses (Kanuka, 2001; Saba & Schearer, 1994; Stein & Wheaton, 2002), for the learners in this study, course structure had no statistically significant relationship with perceived learning. Thus, research on learning in E-learning courses needs to include the examination of the components of self-regulation that have the greatest impact on satisfaction with learning. Further, the study of learning in E-learning environments needs to examine how the use of self-regulatory skills differs in E-learning courses and face-to-face courses. While it has been shown that novel learning environments reduce the ability to self-regulate learning (Howard-Rose & Winne, 1993; Pintrich & DeGroot, 1990; Schunk, 2001; and Wolters, 2003) little research has been conducted on the impact of the E-learning environment and its influence on the ability to self-regulate learning; for these few studies the findings are mixed. Research on learning in E-learning

environments needs to further examine the impact of the E-learning environment on the ability to self-regulate learning.

“What is the level of the students towards e-learning?” The level of the students towards e-learning was measured whether their attitude could provide them knowledge to improve their performance their learning. The results of this study indicated that in general the student’s perception towards of e-learning usage was moderate with the value of mean 2.86. Most of the respondents agreed that the factor of course structure, learners autonomy and experience with computer technology play an essential role in using e-learning toward their study.

5.3 Conclusions

There are three objectives in this study. All the objectives were answered accordingly with the analysis done. First, to determine the relationship of a learner’s satisfaction with knowledge gained in e-learning. In a general the level of e-learning is moderate. In general the usage of e-learning among the students of UUM will enhance their skills and thus increase their quality of learning and achieve the objectives of the management of the university.

Second, to examine the relationship of the dimensions of learner’s satisfaction with knowledge gained in e-learning. Further the findings of the study have some important managerial implications. The positive relationship identified between learner satisfaction

and e-learning supports a long-held proposition running through the various literatures which states that the attainment of organizational goals is determined by satisfying the needs of employees more efficiently and effectively in performing a task.

Third, to seek which independent variables explain and predict the greatest amount of variance in the level of a learner's satisfaction with knowledge gained in e-learning. The finding shows that the dimension of learner autonomy was the dominant factor in determining the knowledge gained. Thus, e-learning also emphasizes the need to attain market position by developing quality student specifically targeted to well-defined ICT segments and which are backed up by the management and peers support which will increase their positive attitude toward the use of e-learning. Further research is needed to assess the influencing of e-learning among students and lecturers whose main task involves ICT.

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**COLLEGE OF BUSINESS
FACULTY OF BUSINESS MANAGEMENT
UNIVERSITI UTARA MALAYSIA**

**LEARNER'S SATISFACTION TOWARD E-LEARNING AMONG FINAL YEAR
FULL TIME AND PART TIME STUDENTS IN UUM**

This is a study conducted as part of my requirement to be awarded a master in Business Management from University Utara Malaysia. This project will contribute to the theory of technology of acceptance model.

Your participation will consist of answering questions. It is estimated that answering the questions will not be more than 5 minutes. All responses will be kept anonymous; **PLEASE ANSWER ALL QUESTIONS.**

Your cooperation in this master project is greatly appreciated. Again, thank you for your valuable time.

Sincerely yours

Ainimazita Bt Mansor (86933)
MSc. Management
Faculty of Business Management

Please provide accurate responses to ALL questions. The information which you provide in answering this questionnaire is completely CONFIDENTIAL. Your honest opinion is very much appreciated.

SECTION 1: Personal Background

Please tick [✓] or answer the question in the provided box for each of the statement below.

1. What is your GENDER?

- 1. Male []
- 2. Female []

2. What is your AGE group?

- 1. 18 – 25 Years old []
- 2. 26 – 34 Years old []
- 3. 35 – 44 Years old []
- 4. 45 – 54 Years old []
- 5. Above 55 Years old []

3. What is your Race?

- 1. Malay []
- 2. Indian []
- 3. Chinese []
- 4. Other (please state) _____

4. Please state the name of your college.

- 1. College of Business []
- 2. College of Art and Sciences []
- 3. College of Law, Government and International Studies []

5. Years of online experience

- 1. Less than 1 year, []
- 2. 1-2 years []
- 3. 3-4 years []
- 4. More than 5 years []

6. On average, how much time do you spend on the e-learning system every week

- 1. Less than 1 hour []
- 2. 1-2 hours []
- 3. 3-4 hours []
- 5. More than 5 hours []

7. On average, how often do you use the e-learning system each week?

- 1. Hardly never []
- 2. Sometimes []
- 3. Often []
- 4. Very Often []
- 5. All the time []

8. Method of study

- 1. Fulltime []
- 2. Part time []

SECTION 2: Investigating into adoption of e-learning

Please circle your choice for each of the following statements.

<i>(Strongly Disagree)</i>	<i>(Disagree)</i>	<i>(Not Sure)</i>	<i>(Agree)</i>	<i>(Strongly Agree)</i>
1	2	3	4	5

A. Knowledge gained in e-learning

- 1. I am able to operate the e-learning system with less support and assistance. 1 2 3 4 5
- 2. I am confident that I can overcome any obstacles when using the e-learning system. 1 2 3 4 5
- 3. I believe that I can use different e-learning software and systems to receive education. 1 2 3 4 5
- 4. Functions of the e-learning system support the processes and demands required by the course. 1 2 3 4 5
- 5. Available functions on the e-learning system support requirements of the course. 1 2 3 4 5

6. Assuming I have access to the e-learning system, I intend to use it. 1 2 3 4 5

7. Given that I have access to the e-learning system, I plan to use it. 1 2 3 4 5

B. Course Structure

1. Using the e-learning system improves my learning performance. 1 2 3 4 5

2. Using the e-learning system increases my learning productivity. 1 2 3 4 5

3. Using the e-learning system enhances my effectiveness in my learning. 1 2 3 4 5

4. I find the e-learning system to be useful in my learning. 1 2 3 4 5

5. I search and share the related course content from the internet to help my learning. 1 2 3 4 5

C. Learner autonomy

1. Interacting with the e-learning system does not require a lot of my mental effort. 1 2 3 4 5

2. I find the e-learning system to be easy to use. 1 2 3 4 5

3. My interaction with the e-learning system is clear and understandable. 1 2 3 4 5

4. I find it easy to get the e-learning system to do what I want it to do. 1 2 3 4 5

5. As more and more students use the e-learning system, I think related services (such as training and support) will soon be developed. 1 2 3 4 5

D. Computer Technology Experience

1. Most students in my university use the e-learning system. 1 2 3 4 5
2. My teachers or classmates search and share the related course content from the internet to help my learning. 1 2 3 4 5
3. Content on the e-learning system is updated on a regular basis. 1 2 3 4 5
4. The e-learning system often provides the updated information. 1 2 3 4 5
5. As more and more students use the e-learning system, I think related software and hardware will soon be developed. 1 2 3 4 5

Thank you for your Cooperation

Frequencies

[DataSet1] D:\ARIR (D)\Marzita\data.sav

Statistics

		gender	age	race	college	experience	time	use
N	Valid	111	111	111	111	111	111	111
	Missing	0	0	0	0	0	0	0

Statistics

		method	Knowledge gaind in e-learning1	Knowledge gaind in e-learning2	Knowledge gaind in e-learning3	Knowledge gaind in e-learning4	Knowledge gaind in e-learning5
N	Valid	111	111	111	111	111	111
	Missing	0	0	0	0	0	0

Statistics

		Knowledge gaind in e-learning6	Knowledge gaind in e-learning7	Course structure1	Course structure2	Course structure3	Course structure4
N	Valid	111	111	111	111	111	111
	Missing	0	0	0	0	0	0

Statistics

		Course structure5	Learner autonomy1	Learner autonomy2	Learner autonomy3	Learner autonomy4	Learner autonomy5
N	Valid	111	111	111	111	111	111
	Missing	0	0	0	0	0	0

Statistics

		Computer Techonology Experience1	Computer Techonology Experience2	Computer Techonology Experience3	Computer Techonology Experience4	Computer Techonology Experience5
N	Valid	111	111	111	111	111
	Missing	0	0	0	0	0

Statistics

		Knowledge gained in e-learning	Course Structure	Learner autonomy	Computer Technology Experience
N	Valid	111	111	111	111
	Missing	0	0	0	0

Frequency Table

gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid male	70	63.1	63.1	63.1
female	41	36.9	36.9	100.0
Total	111	100.0	100.0	

age

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid below 24 years old	22	19.8	19.8	19.8
25-32 years old	29	26.1	26.1	45.9
33-40 years old	45	40.5	40.5	86.5
41-47 years old	15	13.5	13.5	100.0
Total	111	100.0	100.0	

race

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Malay	103	92.8	92.8	92.8
Indian	2	1.8	1.8	94.6
Chinese	6	5.4	5.4	100.0
Total	111	100.0	100.0	

college

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid College of Business	51	45.9	45.9	45.9
College of Art and Sciences	48	43.2	43.2	89.2
College of Law, Government and International Studies	12	10.8	10.8	100.0
Total	111	100.0	100.0	

experience

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Less than 1 year	62	55.9	55.9	55.9
1-2 years	22	19.8	19.8	75.7
3-4 years	12	10.8	10.8	86.5
More than 5 years	15	13.5	13.5	100.0
Total	111	100.0	100.0	

time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 1 hour	59	53.2	53.2	53.2
	1-2 hours	23	20.7	20.7	73.9
	3-4 hours	11	9.9	9.9	83.8
	More than 5 hours	18	16.2	16.2	100.0
	Total	111	100.0	100.0	

use

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Hardly never	62	55.9	55.9	55.9
	Sometimes	20	18.0	18.0	73.9
	Often	8	7.2	7.2	81.1
	Very Often	6	5.4	5.4	86.5
	All the time	15	13.5	13.5	100.0
	Total	111	100.0	100.0	

method

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fulltime	60	54.1	54.1	54.1
	Part Time	51	45.9	45.9	100.0
	Total	111	100.0	100.0	

Knowledge gaind in e-learning1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	10	9.0	9.0	9.0
	diaagree	41	36.9	36.9	45.9
	Neither Agree Nor Disagree	18	16.2	16.2	62.2
	Agree	32	28.8	28.8	91.0
	Strongly Agree	10	9.0	9.0	100.0
	Total	111	100.0	100.0	

Knowledge gaind in e-learning2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	21	18.9	18.9	18.9
	diaagree	13	11.7	11.7	30.6
	Neither Agree Nor Disagree	17	15.3	15.3	45.9
	Agree	40	36.0	36.0	82.0
	Strongly Agree	20	18.0	18.0	100.0
	Total	111	100.0	100.0	

Knowledge gaind in e-learning3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	15	13.5	13.5	13.5
	diaagree	24	21.6	21.6	35.1
	Neither Agree Nor Disagree	20	18.0	18.0	53.2
	Agree	52	46.8	46.8	100.0
	Total	111	100.0	100.0	

Knowledge gaind in e-learning4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	7	6.3	6.3	6.3
	diaagree	27	24.3	24.3	30.6
	Neither Agree Nor Disagree	6	5.4	5.4	36.0
	Agree	62	55.9	55.9	91.9
	Strongly Agree	9	8.1	8.1	100.0
	Total	111	100.0	100.0	

Knowledge gaind in e-learning5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	19	17.1	17.1	17.1
	diaagree	45	40.5	40.5	57.7
	Neither Agree Nor Disagree	11	9.9	9.9	67.6
	Agree	23	20.7	20.7	88.3
	Strongly Agree	13	11.7	11.7	100.0
	Total	111	100.0	100.0	

Knowledge gaind in e-learning6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	33	29.7	29.7	29.7
	diaagree	42	37.8	37.8	67.6
	Neither Agree Nor Disagree	17	15.3	15.3	82.9
	Agree	16	14.4	14.4	97.3
	Strongly Agree	3	2.7	2.7	100.0
	Total	111	100.0	100.0	

Knowledge gaind in e-learning7

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	14	12.6	12.6	12.6
	diaagree	36	32.4	32.4	45.0
	Neither Agree Nor Disagree	22	19.8	19.8	64.9
	Agree	36	32.4	32.4	97.3
	Strongly Agree	3	2.7	2.7	100.0
	Total	111	100.0	100.0	

Course structure1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	26	23.4	23.4	23.4
	diaagree	28	25.2	25.2	48.6
	Neither Agree Nor Disagree	14	12.6	12.6	61.3
	Agree	36	32.4	32.4	93.7
	Strongly Agree	7	6.3	6.3	100.0
	Total	111	100.0	100.0	

Course structure2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neither Agree Nor Disagree	78	70.3	70.3	70.3
	Agree	33	29.7	29.7	100.0
	Total	111	100.0	100.0	

Course structure3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neither Agree Nor Disagree	61	55.0	55.0	55.0
	Agree	50	45.0	45.0	100.0
	Total	111	100.0	100.0	

Course structure4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	diaagree	21	18.9	18.9	18.9
	Neither Agree Nor Disagree	47	42.3	42.3	61.3
	Agree	43	38.7	38.7	100.0
	Total	111	100.0	100.0	

Course structure5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	diaagree	46	41.4	41.4	41.4
	Neither Agree Nor Disagree	59	53.2	53.2	94.6
	Agree	6	5.4	5.4	100.0
	Total	111	100.0	100.0	

Learner autonomy1

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	15	13.5	13.5	13.5
diaagree	24	21.6	21.6	35.1
Neither Agree Nor Disagree	20	18.0	18.0	53.2
Agree	52	46.8	46.8	100.0
Total	111	100.0	100.0	

Learner autonomy2

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	7	6.3	6.3	6.3
diaagree	27	24.3	24.3	30.6
Neither Agree Nor Disagree	6	5.4	5.4	36.0
Agree	62	55.9	55.9	91.9
Strongly Agree	9	8.1	8.1	100.0
Total	111	100.0	100.0	

Learner autonomy3

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	19	17.1	17.1	17.1
diaagree	45	40.5	40.5	57.7
Neither Agree Nor Disagree	11	9.9	9.9	67.6
Agree	23	20.7	20.7	88.3
Strongly Agree	13	11.7	11.7	100.0
Total	111	100.0	100.0	

Learner autonomy4

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	33	29.7	29.7	29.7
diaagree	42	37.8	37.8	67.6
Neither Agree Nor Disagree	17	15.3	15.3	82.9
Agree	16	14.4	14.4	97.3
Strongly Agree	3	2.7	2.7	100.0
Total	111	100.0	100.0	

Learner autonomy5

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	14	12.6	12.6	12.6
diaagree	36	32.4	32.4	45.0
Neither Agree Nor Disagree	22	19.8	19.8	64.9
Agree	36	32.4	32.4	97.3
Strongly Agree	3	2.7	2.7	100.0
Total	111	100.0	100.0	

Computer Techonology Experience1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	26	23.4	23.4	23.4
	diaagree	28	25.2	25.2	48.6
	Neither Agree Nor Disagree	14	12.6	12.6	61.3
	Agree	36	32.4	32.4	93.7
	Strongly Agree	7	6.3	6.3	100.0
	Total	111	100.0	100.0	

Computer Techonology Experience2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neither Agree Nor Disagree	78	70.3	70.3	70.3
	Agree	33	29.7	29.7	100.0
	Total	111	100.0	100.0	

Computer Techonology Experience3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neither Agree Nor Disagree	61	55.0	55.0	55.0
	Agree	50	45.0	45.0	100.0
	Total	111	100.0	100.0	

Computer Techonology Experience4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	diaagree	21	18.9	18.9	18.9
	Neither Agree Nor Disagree	47	42.3	42.3	61.3
	Agree	43	38.7	38.7	100.0
	Total	111	100.0	100.0	

Computer Techonology Experience5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	diaagree	46	41.4	41.4	41.4
	Neither Agree Nor Disagree	59	53.2	53.2	94.6
	Agree	6	5.4	5.4	100.0
	Total	111	100.0	100.0	

Knowledge gained in e-learning

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	diaagree	35	31.5	31.5	31.5
	Neither Agree Nor Disagree	60	54.1	54.1	85.6
	Agree	13	11.7	11.7	97.3
	Strongly Agree	3	2.7	2.7	100.0
	Total	111	100.0	100.0	

Course Structure

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	diaagree	20	18.0	18.0	18.0
	Neither Agree Nor Disagree	75	67.6	67.6	85.6
	Agree	16	14.4	14.4	100.0
	Total	111	100.0	100.0	

Learner autonomy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	3	2.7	2.7	2.7
	diaagree	35	31.5	31.5	34.2
	Neither Agree Nor Disagree	57	51.4	51.4	85.6
	Agree	13	11.7	11.7	97.3
	Strongly Agree	3	2.7	2.7	100.0
	Total	111	100.0	100.0	

Computer Technology Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	diaagree	20	18.0	18.0	18.0
	Neither Agree Nor Disagree	75	67.6	67.6	85.6
	Agree	16	14.4	14.4	100.0
	Total	111	100.0	100.0	

Descriptives

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Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
gender	111	1	2	1.37	.485
age	111	1	4	2.48	.962
race	111	1	3	1.13	.469
college	111	1	3	1.65	.669
experience	111	1	4	1.82	1.089
time	111	1	4	1.89	1.131
use	111	1	5	2.03	1.443
method	111	1	2	1.46	.501
Knowledge gained in e-learning1	111	1	5	2.92	1.177
Knowledge gained in e-learning2	111	1	5	3.23	1.386
Knowledge gained in e-learning3	111	1	4	2.98	1.112
Knowledge gained in e-learning4	111	1	5	3.35	1.125
Knowledge gained in e-learning5	111	1	5	2.69	1.299
Knowledge gained in e-learning6	111	1	5	2.23	1.109
Knowledge gained in e-learning7	111	1	5	2.80	1.110
Course structure1	111	1	5	2.73	1.307
Course structure2	111	3	4	3.30	.459
Course structure3	111	3	4	3.45	.500
Course structure4	111	2	4	3.20	.736
Course structure5	111	2	4	2.64	.585
Learner autonomy1	111	1	4	2.98	1.112
Learner autonomy2	111	1	5	3.35	1.125
Learner autonomy3	111	1	5	2.69	1.299
Learner autonomy4	111	1	5	2.23	1.109
Learner autonomy5	111	1	5	2.80	1.110
Computer Techonology Experience1	111	1	5	2.73	1.307
Computer Techonology Experience2	111	3	4	3.30	.459
Computer Techonology Experience3	111	3	4	3.45	.500
Computer Techonology Experience4	111	2	4	3.20	.736
Computer Techonology Experience5	111	2	4	2.64	.585
Knowledge gained in e-learning	111	2.00	5.00	2.8559	.72422
Course Structure	111	2.00	4.00	2.9640	.57093
Learner autonomy	111	1.00	5.00	2.8018	.78416
Computer Technology Experience	111	2.00	4.00	2.9640	.57093
Valid N (listwise)	111				

T-Test

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Group Statistics

	gender	N	Mean	Std. Deviation	Std. Error Mean
E_learning	male	70	2.8837	.52520	.06277
	female	41	2.8885	.46457	.07255

Independent Samples Test

	Levene's Test for Equality of Variances		t	df	t-test for Equality of Means					
	F	Sig.			Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
								Lower	Upper	
E_learning	Equal variances assumed	.292	.590	-.049	109	.961	-.00483	.09908	-.20120	.19154
	Equal variances not assumed			-.050	92.312	.960	-.00483	.09594	-.19537	.18571

Oneway

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Descriptives

E_learning

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean			Minimum	Maximum
					Lower Bound	Upper Bound	Mean		
below 24 years old	22	2.8442	.53436	.11393	2.6072	3.0811	1.86	3.43	
25-32 years old	29	2.9212	.44947	.08346	2.7502	3.0922	2.43	3.57	
33-40 years old	45	2.7905	.55879	.08330	2.6226	2.9584	2.14	4.29	
41-47 years old	15	3.1619	.21508	.05553	3.0428	3.2810	2.86	3.43	
Total	111	2.8855	.50151	.04760	2.7911	2.9798	1.86	4.29	

Test of Homogeneity of Variances

E_learning

Levene Statistic	df1	df2	Sig.
2.725	3	107	.048

ANOVA

E_learning

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.627	3	.542	2.228	.089
Within Groups	26.039	107	.243		
Total	27.666	110			

Oneway

[DataSet1] D:\ARIR (D)\Marzita\data.sav

Descriptives

E_learning

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean			
					Lower Bound	Upper Bound	Minimum	Maximum
Malay	103	2.8793	.50399	.04966	2.7808	2.9778	1.86	4.29
Indian	2	2.5000	.50508	.35714	-2.0379	7.0379	2.14	2.86
Chinese	6	3.1190	.41813	.17070	2.6803	3.5578	2.57	3.57
Total	111	2.8855	.50151	.04760	2.7911	2.9798	1.86	4.29

Test of Homogeneity of Variances

E_learning

Levene Statistic	df1	df2	Sig.
.058	2	108	.944

ANOVA

E_learning

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.628	2	.314	1.255	.289
Within Groups	27.038	108	.250		
Total	27.666	110			

Oneway

[DataSet1] D:\ARIR (D)\Marzita\data.sav

Descriptives

E_learning

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean			
					Lower Bound	Upper Bound	Minimum	Maximum
College of Business	51	2.7395	.45955	.06435	2.6102	2.8687	1.86	3.57
College of Art and Sciences	48	2.9048	.41081	.05930	2.7855	3.0240	2.14	3.43
College of Law, Government and International Studies	12	3.4286	.64177	.18526	3.0208	3.8363	2.57	4.29
Total	111	2.8855	.50151	.04760	2.7911	2.9798	1.86	4.29

Test of Homogeneity of Variances

E_learning

Levene Statistic	df1	df2	Sig.
1.985	2	108	.142

ANOVA

E_learning

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.644	2	2.322	10.893	.000
Within Groups	23.022	108	.213		
Total	27.666	110			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: E_learning
Tukey HSD

(I) college	(J) college	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
College of Business	College of Art and Sciences	-.16527	.09285	.181	-.3859	.0554
	College of Law, Government and International Studies	-.68908*	.14813	.000	-1.0411	-.3370
College of Art and Sciences	College of Business	.16527	.09285	.181	-.0554	.3859
	College of Law, Government and International Studies	-.52381*	.14901	.002	-.8779	-.1697
College of Law, Government and International Studies	College of Business	.68908*	.14813	.000	.3370	1.0411
	College of Art and Sciences	.52381*	.14901	.002	.1697	.8779

*. The mean difference is significant at the .05 level.

Homogeneous Subsets

E_learning

Tukey HSD^{a,b}

college	N	Subset for alpha = .05	
		1	2
College of Business	51	2.7395	
College of Art and Sciences	48	2.9048	
College of Law, Government and International Studies	12		3.4286
Sig.		.429	1.000

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 24.238.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Oneway

[DataSet1] D:\ARIR (D)\Marzita\data.sav

Descriptives

E_learning

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean			Minimum	Maximum
					Lower Bound	Upper Bound	Mean		
Less than 1 year	62	2.8318	.40615	.05158	2.7287	2.9349	2.14	3.57	
1-2 years	22	2.8571	.67151	.14317	2.5594	3.1549	2.14	4.29	
3-4 years	12	2.8571	.74106	.21392	2.3863	3.3280	1.86	3.43	
More than 5 years	15	3.1714	.21733	.05611	3.0511	3.2918	2.86	3.43	
Total	111	2.8855	.50151	.04760	2.7911	2.9798	1.86	4.29	

Test of Homogeneity of Variances

E_learning

Levene Statistic	df1	df2	Sig.
8.346	3	107	.000

ANOVA

E_learning

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.432	3	.477	1.948	.126
Within Groups	26.234	107	.245		
Total	27.666	110			

Oneway

[DataSet1] D:\ARIR (D)\Marzita\data.sav

Descriptives

E_learning

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean			Minimum	Maximum
					Lower Bound	Upper Bound	Mean		
Less than 1 hour	59	2.7143	.44784	.05830	2.5976	2.8310	1.86	3.57	
1-2 hours	23	3.4224	.42308	.08822	3.2394	3.6053	2.71	4.29	
3-4 hours	11	2.8701	.37501	.11307	2.6182	3.1221	2.14	3.14	
More than 5 hours	18	2.7698	.35040	.08259	2.5956	2.9441	2.14	3.14	
Total	111	2.8855	.50151	.04760	2.7911	2.9798	1.86	4.29	

Test of Homogeneity of Variances

E_learning

Levene Statistic	df1	df2	Sig.
1.232	3	107	.302

ANOVA

E_learning

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.602	3	2.867	16.093	.000
Within Groups	19.064	107	.178		
Total	27.666	110			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: E_learning
Tukey HSD

(I) time	(J) time	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Less than 1 hour	1-2 hours	-.70807*	.10376	.000	-.9789	-.4373
	3-4 hours	-.15584	.13863	.675	-.5176	.2060
	More than 5 hours	-.05556	.11366	.961	-.3522	.2411
1-2 hours	Less than 1 hour	.70807*	.10376	.000	.4373	.9789
	3-4 hours	.55223*	.15474	.003	.1484	.9561
	More than 5 hours	.65252*	.13283	.000	.3058	.9992
3-4 hours	Less than 1 hour	.15584	.13863	.675	-.2060	.5176
	1-2 hours	-.55223*	.15474	.003	-.9561	-.1484
	More than 5 hours	.10029	.16154	.925	-.3213	.5219
More than 5 hours	Less than 1 hour	.05556	.11366	.961	-.2411	.3522
	1-2 hours	-.65252*	.13283	.000	-.9992	-.3058
	3-4 hours	-.10029	.16154	.925	-.5219	.3213

*. The mean difference is significant at the .05 level.

Homogeneous Subsets

E_learning

Tukey HSD^{a,b}

time	N	Subset for alpha = .05	
		1	2
Less than 1 hour	59	2.7143	
More than 5 hours	18	2.7698	
3-4 hours	11	2.8701	
1-2 hours	23		3.4224
Sig.		.661	1.000

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 19.334.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Oneway

[DataSet1] D:\ARIR (D) \Marzita\data.sav

Descriptives

E_learning

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean			Minimum	Maximum
					Lower Bound	Upper Bound	Mean		
Hardly never	62	2.9562	.49392	.06273	2.8308	3.0817	2.14	4.29	
Sometimes	20	2.5143	.52927	.11835	2.2666	2.7620	1.86	3.43	
Often	8	3.0714	.22908	.08099	2.8799	3.2629	2.86	3.29	
Very Often	6	3.0000	.15649	.06389	2.8358	3.1642	2.86	3.14	
All the time	15	2.9429	.50015	.12914	2.6659	3.2198	2.14	3.57	
Total	111	2.8855	.50151	.04760	2.7911	2.9798	1.86	4.29	

Test of Homogeneity of Variances

E_learning

Levene Statistic	df1	df2	Sig.
1.381	4	106	.245

ANOVA

E_learning

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.471	4	.868	3.801	.006
Within Groups	24.195	106	.228		
Total	27.666	110			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: E_learning
Tukey HSD

(I) use	(J) use	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Hardly never	Sometimes	.44194*	.12286	.004	.1010	.7829
	Often	-.11521	.17948	.968	-.6133	.3829
	Very Often	-.04378	.20427	1.000	-.6107	.5231
	All the time	.01336	.13747	1.000	-.3682	.3949
Sometimes	Hardly never	-.44194*	.12286	.004	-.7829	-.1010
	Often	-.55714*	.19986	.048	-1.1118	-.0025
	Very Often	-.48571	.22239	.194	-1.1029	.1315
	All the time	-.42857	.16319	.073	-.8815	.0243
Often	Hardly never	.11521	.17948	.968	-.3829	.6133
	Sometimes	.55714*	.19986	.048	.0025	1.1118
	Very Often	.07143	.25802	.999	-.6447	.7875
	All the time	.12857	.20916	.972	-.4519	.7091
Very Often	Hardly never	.04378	.20427	1.000	-.5231	.6107
	Sometimes	.48571	.22239	.194	-.1315	1.1029
	Often	-.07143	.25802	.999	-.7875	.6447
	All the time	.05714	.23078	.999	-.5833	.6976
All the time	Hardly never	-.01336	.13747	1.000	-.3949	.3682
	Sometimes	.42857	.16319	.073	-.0243	.8815
	Often	-.12857	.20916	.972	-.7091	.4519
	Very Often	-.05714	.23078	.999	-.6976	.5833

*. The mean difference is significant at the .05 level.

Homogeneous Subsets

E_learning

Tukey HSD^{a,b}

use	N	Subset for alpha = .05	
		1	2
Sometimes	20	2.5143	2.9429
All the time	15	2.9429	2.9562
Hardly never	62	2.9562	3.0000
Very Often	6	3.0000	3.0714
Often	8		
Sig.		.106	.966

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 11.780.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

T-Test

[DataSet1] D:\ARIR (D)\Marzita\data.sav

Group Statistics

method	N	Mean	Std. Deviation	Std. Error Mean
E_learning Fulltime	60	2.7310	.40670	.05250
Part Time	51	3.0672	.54387	.07616

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
E_learning Equal variances assumed	2.411	.123	-3.720	109	.000	-.33627	.09039	-.51542	-.15713
Equal variances not assumed			-3.635	91.339	.000	-.33627	.09250	-.52001	-.15254

Correlations

[DataSet1] D:\ARIR (D)\Marzita\data.sav

Correlations

		E_learning	Course_Structure	Learner_autonomy	Computer_Technology
E_learning	Pearson Correlation	1	.393**	.881**	.393**
	Sig. (2-tailed)		.000	.000	.000
	N	111	111	111	111
Course_Structure	Pearson Correlation	.393**	1	.275**	1.000**
	Sig. (2-tailed)	.000		.003	.000
	N	111	111	111	111
Learner_autonomy	Pearson Correlation	.881**	.275**	1	.275**
	Sig. (2-tailed)	.000	.003		.003
	N	111	111	111	111
Computer_Technology	Pearson Correlation	.393**	1.000**	.275**	1
	Sig. (2-tailed)	.000	.000	.003	
	N	111	111	111	111

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

Correlations

[DataSet1] D:\ARIR (D)\Marzita\data.sav

Correlations

		E_learning	Course_Structure
E_learning	Pearson Correlation	1	.393**
	Sig. (2-tailed)		.000
	N	111	111
Course_Structure	Pearson Correlation	.393**	1
	Sig. (2-tailed)	.000	
	N	111	111

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

Correlations

[DataSet1] D:\ARIR (D)\Marzita\data.sav

Correlations

		E_learning	Learner_autonomy
E_learning	Pearson Correlation	1	.881**
	Sig. (2-tailed)		.000
	N	111	111
Learner_autonomy	Pearson Correlation	.881**	1
	Sig. (2-tailed)	.000	
	N	111	111

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

Correlations

[DataSet1] D:\ARIR (D)\Marzita\data.sav

Correlations

		E_learning	Computer_Technology
E_learning	Pearson Correlation	1	.393**
	Sig. (2-tailed)		.000
	N	111	111
Computer_Technology	Pearson Correlation	.393**	1
	Sig. (2-tailed)	.000	
	N	111	111

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

Regression

[DataSet1] D:\ARIR (D)\Marzita\data.sav

Variables Entered/Removed^b

Model	Variables Entered	Variables Removed	Method
1	Computer_Technology, Learner_autonomy		Enter

a. Tolerance = .000 limits reached.

b. Dependent Variable: E_learning

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.895 ^a	.801	.797	.22581

a. Predictors: (Constant), Computer_Technology, Learner_autonomy

ANOVA^b

Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression Residual Total	2 108 110	11.080 .051	217.283	.000 ^a

a. Predictors: (Constant), Computer_Technology, Learner_autonomy

b. Dependent Variable: E_learning

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		t	Sig.
		B	Std. Error	Beta			
1	(Constant)	.129	.186			.692	.490
	Learner_autonomy	.746	.040	.836		18.731	.000
	Computer_Technology	.215	.059	.163		3.641	.000

a. Dependent Variable: E_learning

Excluded Variables^b

Model	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
1	Course_Structure	.a	.	.	Tolerance .000

a. Predictors in the Model: (Constant), Computer_Technology, Learner_autonomy

b. Dependent Variable: E_learning