

# Faculty of Administrative Science & Policy Studies Universiti Teknologi MARA

# Factor Contributing to the Effectiveness of Online Learning in the University.

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Supervisor's Comments

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#### **CHAPTER 1**

#### INTRODUCTION

#### 1.1 Introduction

According to O'Malley (1999), online-learning as a form of distance learning is being promoted as the educational medium of the future which includes web based courses, computer mediated communications and multimedia enhanced delivery medium and it has the potential to make the learning process an active one. In Rosenberg's (2001) study found that: onlinelearning is learning which take place as a result of experiences and interaction in an internet environment. It is not restricted to a regular school day and can take place in a variety of locations including home, school and communities school locations e.g. libraries, cafes etc. The importance of an online- learning strategy and warned this was not just about utilizing tools because an effective e-learning strategy must be more than the technology itself and the content it carries.

In UiTM Samarahan, the online learning was known as I-Learn. This Elearning system can be defined as learning management system that synthesize the functionality of computer-mediated communications system and learning technology of facilitate learning. These systems aim to accommodate a wide range of learning styles and goals, to encourage collaborative and resourcesbased learning and allow greater sharing and re-use of resources ultimately leading to the enrichment of UiTM's knowledge repository.

The researcher interested to conduct this study in order to determine the factor contributes the effectiveness of online-learning system in UiTM campus Samarahan. Besides that, this research might become a useful data toward the students, lectures and UiTM campus Samarahan which will improve the system of i-learn.

#### 1.2 Problem statement

Many institutions of higher learning have adopted distance and online education as the next logical step in educational delivery systems. These systems are being promoted as the educational teaching of the future. Some experts have gone as far as to predict that the "residential based model," that is, students attending classes at prearranged times and locations will disappear in the near future (Blustain, Goldstein, and Lozier 1999 and Drucker 1997).

However, one principal question that must be addressed is how will these new educational delivery approaches that move away from the basic face to face relationship between a professor and students impact student learning and student perceptions of learning (Means et. al, 2009). According to Moore, Gary C. and Izak Benbasat (1991), students need to improve their perception on online-learning because this perception indirectly will block the acceptance of online-learning and as the consequences, this discourage students to use onlinelearning as one of their tools to get education.

In addition, the students' satisfaction may be a major factor that contributes to success or failure whereas this is affected by both positive and negative experiences in the learning process (Chen, Lin, & Kinshuk, 2008). According to Kearsley (2002), students' tend to drop out and feel frustrated with the course if they didn't get enough feedback.

Another problem of statement in online learning is does online learning ensuring that students' meets their needs and interests? According to Palloff and Pratt in 2001, the typical online student is seeking an active approach to learning and more involvement in the learning process but if the students' needs are not met, then they are likely to withdraw from the course (Ghadeer Zainuddin Filimban, 2008).

#### 1.3 Research objectives

This research consists of three objectives. There are;

- i. To determine the factors contribute the effectiveness of online learning among undergraduate students.
- Q: What are the factors contributing the effectiveness of online learning among undergraduate students?
- ii. To examine the significance difference of factors contribute the effectiveness of online learning and mode of the study.
- Q: Whether there is significant differences of online learning and mode of study?
- iii. To study the relationship between academic performances on factors contribute to the effectiveness toward online system.
- Q: What is relationship between academic performance and factors contribute to the effectiveness of online learning?

#### 1.4 Scope of the study

The study was conducted among the UiTM undergraduates' students. The scope will cover the students from the Faculty of Administrative Science and Policy Studies. In this Faculty of Administrative Science and policy study, we focus on degree students which cover mode of study full time and E-PJJ. Besides that, this study is regarding on factors contribute the effectiveness of i-learn learning among the students of this faculty.

The researcher will collect data from one month before submitted the research. Lastly, the scope of study focused on undergraduates' students in UiTM which we targeted155 of the respondent from the 250 population of Bachelor Administrative Science faculty.

#### 1.5 Significance of the study

#### 1.5.1 Researcher

The study is significant for the researcher to explore the factors contributing to the effectiveness of online-learning as a tool in delivering educational systems. It is hoped that the finding and the analysis of this study could be used by the researchers to determine the factor of success and failure in online learning and there will be improvement as it's become a tool in delivering educational systems toward students' performance.

It has been significant to study the acceptance of the undergraduate students on using online learning. It's important for the researcher to know whether students accept online learning as a tool in perceive the knowledge nowadays which will impact the educational system in the future.

#### 1.5.2 Future Research

The recommendation of this study could enhance the undergraduate student on using online learning system as a tool in delivering educational systems with more effective.

#### 1.6 Definition of terms/concepts

#### 1.7.1 Online-learning

Online education can be defined as to imply instruction through a connection to a computer system at a venue distant from the learner's personal computer. Seen this way, online education is both an instructional alternative for on-campus learning and teaching and a case of distance education. (Kathy Michael, 2012).

#### 1.7.1.1 Blended learning

A blended learning approach combines face to face classroom methods with computer-mediated activities to form an integrated instructional approach. In the past, digital materials have served in a supplementary role, helping to support face to face instruction. (Chia-Wen Tsai, Pei-Di Shen and Meng-Chuan Tsai, 2010).

#### 1.7.1.2 Fully online-learning

Fully online learning is a form of distance education in which all instruction and assessment are carried out using online, internet based delivery. (lain McPhee and Tor Söderström, 2012).

#### **CHAPTER 2**

#### LITERATURE REVIEW & CONCEPTUAL FRAMEWORK

#### 2.1 Literature review

#### 2.1.1 What is Online Learning.

As online learning opportunities increase in today's society, the librarians need to consider additional ways to design online instruction effectively. Developing strategies necessary to teach and learn online successfully requires an understanding of e-learning. According to J.Rosenberg (2001), E-learning refers to the use of internet technologies to deliver a broad array of solutions that enhance knowledge and performance. Beside that, online learning is the use of art network technology to design, deliver, select, administer and extend learning.(Blustain, Goldstein, and Lozier 1999 and Drucker 1997).

According to Kommers and Rainny (2002), distance education is broadly define as any learning as take place when the teacher and the student separated by physical distance. Nipper (1989) classified distance education as having three generations, first came correspondence teaching circa 1840; then in the 1970s came the second generation of broadcast and multimedia followed in the mideighties by computer mediated communication. There is overlap in the generations but the move in distance education has tended to be from single mode (correspondence) to multimedia(correspondence, broadcasting, audio cassettes and video) to computer-mediated communication (correspondence both synchronous and asynchronous, video and audio conferencing, video, CD ROM etc) (Hawkridge, D. 1998). The developments over the generations have sought to increase learner participation and interaction with the materials, with their tutors and with their peers.

The third generation is where online learning sits. However, elements of both first and second generation can be seen in most online learning courses. The internet, along with other technologies, has facilitated a change in the way people communicate. This change has an impact on all areas of our lives, including the way in which we learn. It is no longer essential to be physically present in a classroom; our contribution can be delivered online.

Besides that, distance education is commonly divided into synchronous and asynchronous learning environment. In a synchronous environment, the teacher and the students interact in a real time. Often students meet in the location, typically a classroom, at a designated time for either one-way or twoway video conferencing, which is transmitted by a teacher from a different location.

Online learning opportunities are now common place, both within the framework of formal post-secondary education and as part of continuing education offered through professional association. Typically, the content for online learning is in the electronic form and is stored either in CD ROM's or on servers. Learners access these contents directly from stand-alone computers or from the servers through the networked computers. The contents are typically developed to be engaging and interactive and the learners are supported virtually by the instructors. The National Center for Education Statistics report that : In 2001, about 3.1 million individual were enrolled in distance education courses at either two-or four-year institutions, twice as many as 1995 as cited in Waits and Lewis, 2003. The rapid growth in the number of distance education courses and programed has had profound impact on the ideas and belief about teaching and learning. The use of the internet with web-based coursework has become a core method of instruction in distance education, particularly in higher education.

Furthermore, the increasing number of students enrolled, the course offerings and availability of distance education speak to the importance of this method of instruction. The growth in distance education programs in recent years has been fueled by the development of the internet and technologies that support online learning. Online education appears the power to change the education landscape but while technological innovation is necessary to the development of distance education, it is not sufficient to assure that the distance education is effective. Students have different learning styles and some students may learn best by watching and listening others by reading, and others by doing and moving or by hands-on environment. Therefore, it is important to consider student's learning style while developing a distance-learning course.

#### 2.1.2 Form of online learning.

Based on literature, there are two types of online learning as discussed below:

I. Full online-learning.

Fully online learning is a form of distance education in which all instruction and assessment are carried out using online, internet based delivery ((Lockwood and Gooley, 2001; Ausburn, 2004). Full online learning is one form of distance delivery. Ko and Rossen (2001) defined online learning as the act of conducting course partially or totally through the internet. Sims (2003) in researching the expectations of learners for an interactive online environment that engages them concluded that learner control of the environment with active communication providing feedback were essential components of interactivity.

Stacey (1999) found that small collaborative groups, when committed to regular online interaction, could learn extremely effectively at a distance. The students' process of learning was achieved through collaborative behaviors, from their sharing the diverse perspectives of the other group members to being able to seek feedback and clarify ideas through the group's communication, either electronically or through other forms of communication, stimulated by the electronic group communication. The Western Association of schools and Collages has reviewed the issues of approval for distance education programmed. They have supported the inclusion and application of technology, particularly the internet, in online learning in higher level degree programs.

#### II. Blended Learning

Blended learning is learning that is facilitated by the effective combination of different modes of delivery, models of teaching and styles of learning, and is founded on transparent communication amongst all parties involved with a course (Heinze et al. 2007). Hereafter, many studies have demonstrated that blended learning has better effectiveness than traditional teaching (Liu et al. 2007; Pereira et al. 2007; Shen et al. 2007a). Sun, Joy, and Griffiths (2007) presented a new approach to the incorporation of learning style theory in developing an adaptive online learning system in which the adaptation into education systems was improved. Following this approach, in the blended learning model developed in this study, adaptive blended learning was realized by providing customized online learning content, tailored to learners' individual learning styles.

#### 2.1.3 Factors contribute to the effectiveness of online learning

According to Ghadeer Zainuddin Filimban, with the rapid development of technology, online learning is increasing significantly and becoming a popular method of education for many universities and colleges around the world. Where previously only face-to-face interaction was possible, technology can be used to "transform" space and time and enables students to communicate, coordinate and collaborate their activities at any time without the need for face-to-face contact (Alavi, Wheeler, & Valacich, 1995). In addition, the students especially the universities students' must aware that in the ICT world, they not only change their behavior in accepting the new method of learning but also change their perception toward online learning which can improve the students' efficiency and effectiveness in learning. Therefore, due to this rapid advancement of

technology, it is critical to examine various important factors that must be considered in order to create effective online courses.

#### *i.* Learners' perception

According to Flynn, Concannon, Bheacháin (2005), a negative perception potentially creates barriers to online learning. Hence, a positive prior perception motivates a student to engage with the learning systems. Karns (1993) mention that students' perceptions were measured through ratings of pairwise similarity, attributes, liking for the learning activities (preference), and degree to which they believed the activities contributed to their learning (effectiveness) because students' perception are critical to enhance teaching and learning through e-learning (Park, 2009). As Martens, Bastiaens and Kirschner discuss, there is often a gap between what instructor and course designers perceive and what students perceive. Therefore, it's difficult to implement online learning because developers must be able to predict how students perceive the tasks (Martens, Bastiaens, Kirschner, 2007). In contrast, with this implementation, implications will be very positive if predicted correctly. According to Flaherty and Mottner (2001) found that several online educational tools contributed to students' perceptions of overall learning.

#### ii. Learners' satisfaction

Learners' satisfaction with learning can be described as the degree to which a learner feels a positive association with his/her own learning experiences (Dewiyanti et al., 2007). In addition, learner satisfaction may be a major factor that contributes to success or failure whereas this is affected by both positive and negative experiences in the learning process (Chen, Lin, & Kinshuk, 2008). As learner's satisfaction also can influence students motivation and attitude which both of this may strongly influence how well students learn (McFarland and Hamilton 2005). Therefore, within the online environment, particularly within courses that are structured around an asynchronous design, students have the ability to learn at their own pace, go

back and reread or review portions of lectures they found challenging, take breaks when they are tired, and work at times most conducive to their own learning (York, 2008). According to Zhu,C (2012), the Flemish students ranked flexibility in time as the main advantage of online learning, and the Chinese students found that working collaboratively online was a big advantage. In addition, Connolly et al. (2007) found that online students performed better than on-campus students in their study. As for the result, both of flexibility in time and other online learning activity such as collaborative written assignments, group discussions, debates and critiques of arguments as this can enhance knowledge construction, increase learner satisfaction and as well as their performance because one of the greatest strengths of online learning is the flexibility it provides to the learner and educator (Petrides, 2002; Schrum, 1998).

#### iii. Interaction

The level of interaction has been shown to be a predictor of perceived learning in online courses (Rovai and Barnum 2003). This has been shown through educational research that more effective learning takes place if learners are actively involved, rather than being passive listeners (Nurmela, Palonen, Lehtinen, & Hakkarainen, 2003). Hence, Whisler (2005) states that the online interaction, including instructor-to-learner, learner-to-learner, learner-to-content, and learner-to-learning interface, is a critical component of learner satisfaction because it need to provide feedback and encouragement as well as clarifying instructions, due dates, and expectations, which is most essential for students who have experienced most of their education in traditional classroom settings (Jaffee 1997). On the other hand, the use of asynchronous learning networks (ALNs), a term that denotes online classrooms through which students interact with one another and their instructors but at times of their own choosing (Jaffee 1997; Moore 2005) because according to Zhao et al. (2005) that low instructor involvement led to less positive outcomes for distance education but more positive outcomes as instructor involvement increased. The results of Bienz's study also showed that "challenge-quality and difficulty" were of more importance to many of the students. Although the students found the class assignments difficult, they also stated that the instructors were challenging, motivating, encouraged critical thinking skills, and held high expectations for them. In addition, students found the classes which incorporated a lot of interactive discussions were their favorite. Therefore, when learners do not get enough feedback in an online course, they feel frustrated with the course and tend to drop out (Kearsley, 2002)

#### iv. Course structure

According to Jones & Kelley (2003), course content in an online learning environment should be challenging, current, easy to access, relevant to students' needs, and conveyed in an interesting manner as in the traditional classroom. For that reason, the course structure dimension should be divided into two parts: course expectations (Grandzol, 2004) and course infrastructure (Tham & Werner, 2005). A research by Peltier et.al (2003) mention that course structure provides students with guidance in terms of topic coverage, rules of behavior, and expectations. Therefore, course structure should be designed in such a way that students can move from one activity to another easily and in a logical flow (Eastman & Swift, 2001; Karuppan & Karuppan, 1999) because learning is more effective when clear guidelines and instructions are provided to students (Fraser, 1986). Thru, the quality of the course structure will influence the ease to which interactions take place and how content is delivered (Grandzol, 2004; Sivakumar & Robertson, 2004; Tham & Werner, 2005). As Palloff and Pratt (2001) pointed out that:

"... the more typical online student is seeking an active approach to learning and more involvement in the learning process.... [They are] not content with being taught to, the online student seeks to engage with faculty in a more collaborative learning partnership." (p. 2) Furthermore, with the example from Harlen and Doubler (2004) study, they concluded that online students understanding of the science content in a course designed for using science enquiry skills was significantly greater than the on-campus students. As for a result, excellent online education is needed to ensure that e-learners receive outstanding instruction that meets their needs and interests (Ghadeer Zainuddin Filimban, 2008).



Fig 2.1; Conceptual framework

The above conceptual framework identify that factor contributing to the effectiveness of online learning is determined by four independent variables. Under learner's perception a negative perception potentially creates barriers to online learning. Hence, a positive prior perception motivates a student to engage with the learning systems. As similar to learner's satisfaction which is the second factor in contributing to the effectiveness of online learning, also can influence students' motivation and attitude which both of this may strongly affected by both positive and negative experiences in the learning process.

Furthermore, the interaction in online learning also one of important factor because if learners do not get enough feedback in an online course, they feel frustrated with the course and tend to drop out. The last factor in contributing to the effectiveness of online learning is on course structure because it's should be designed in such a way that students can move from one activity to another easily and in a logical flow. As the result, learning is more effective when clear guidelines and instructions are provided to students.

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#### **CHAPTER 3**

#### **RESEARCH METHOD**

#### 3.1 Introduction

In this chapter, the research methodology explained about how well the study will be carried out. Section 3.1 discusses on research design, section 3.2 explains on sample size and section 3.3 discuss a sampling technique. Section 3.4 discussing on unit of analysis, on the other hand, section 3.5 discussing on data collection and also section 3.6 data analysis which relates to this research.

#### 3.2 Research design

In this research, the researchers are using quantitative data. Quantitative data means the data get from the questionnaire. Therefore, the questionnaires will distribute to the Faculty of Administrative Science and Policy which consist full-time and E-PJJ

#### 3.3 Unit of analysis

In this research, the unit of analysis is constructed on individual. Based on the learners' perception, learners' satisfaction, interaction and course structure, each of respondents will be investigate individually to know the result of the investigation.

#### 3.4 Sample size

According to Krjecie and Morgan table population size (Uma Sekaran, 2009), the researchers are randomly distributing 155 questionnaires from 257 students of The Faculty Administrative science and Policy studies.

#### 3.5 Sampling technique

In order to complete this research, the researchers selected simple random sampling technique and cluster technique to choose the sample size of the respondents. The respondents will be divided into different part which is The Faculty of Administrative Science and Policy Studies, Kota Samarahan which the will researchers distribute the questionnaire randomly through the representatives for each of the part and the representatives will collect it back. At the end the researchers will get it and make the analysis. The most reason is to more specific on the group of respondents and to get actual data as they require from their search.

### 3.6 Instrument

Objectives	Variable/s	Measurement	Scale	Statistics
To determine the factors contribute the effectiveness of	a. Learners' perception.		Interval	
i-learn learning.	b. Learners' satisfaction.	Perception on factors.		Descriptive statics
	c. Interaction.			
	d. Course structure.			
To examine the significant difference of factors contribute the effectiveness of i-learn learning and mode of study.	<ul> <li>a. Factors contribute the effectiveness of i-learn learning.</li> <li>b. Mode of study.</li> </ul>	Student mode of study.	Interval and nominal	Independent sample t-test
To study the relationship between academic performance and factors contribute to the effectiveness toward i-learn learning.	Academic performance.	Grade of the students.	Ordinal and Likert Scale	Spearman Correlation

#### 3.7 Data collection

In this research, the data was collected based on two mediums which are through questionnaire and using the printed sources (secondary data).

#### 3.7.1 Primary Data

I. Questionnaire.

In this research, the researcher use selfadministered questionnaire. The reason is to obtain the data and information from the respondents. There are several advantages on conducting this kind of questionnaire such as more economical, enough time is given to the respondent to answer the questionnaire, no influence from the interviewers and no gesture from the interviewer to affect the response obtained. In addition, this questionnaire is adapted by scholar case study where this research questionnaire is divided into two (2) section which is Section A and Section B.

- 3.7.2 Secondary Data
  - I. Printed Sources.
  - II. Journal.
  - III. Case study

#### **CHAPTER 4**

#### FINDINGS

#### 4.1 Introduction

This chapter will try to highlight and discuss the result and findings based on the analysis done on the data collected from respondent. This research focuses on factors contribute the effectiveness of online system in Universiti Teknologi Mara, Kota Samarahan, Sarawak. The discussion then will try to accomplish the entire objective in chapter 1 and also will attempt to answer the research question. Therefore, for simplicity of analysis and findings this chapter will be divided into three parts: data collection, respondents' demography and also objectives findings.

#### 4.2 Data Collection

A total of 200 sets of questionnaires were distributed to the respondents in Universiti Teknologi Mara which consist of Faculty of Administrative Science & Policy Studies. However, only 152 sets were returned back to the researcher and discussion will focus on the responds from the 152 questionnaires

#### 4.3 Respondents Demography

This segment is to analyze the respondent demography which consists of eight demographic questions. Descriptive statistic is used in this segment to derive the frequencies and to determine the mean.

Table 1

Demographic	Frequency	Percentage
Gender		
Male	32	21.1
Female	120	78.9

Frequency and Percentage of Respondents Demographic

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Age		
18 - 22	66	43.4
23- 27	56	36.8
28-31	19	12.5
More than 31	11	7.2
Mode		
Full-Time	102	67.1
E-PJJ	50	32.9
GPA		
2.00 - 2.49	11	7.2
2.50-2.99	60	39.5
3.00-3.49	61	40.1
3.50-3.99	20	13.2

In order to know the general information about the respondents demography on frequencies and percentage are analyzed. Table 1 shows that out of 152 respondents, there were 21.1 % of male and 78.9 were female. These respondents also came in different ages which the most age between 18- 22 which represents 43.4% (n= 66) and the lowest percentage of age is 7.2% which is age more than 31 (n= 11). The mode of the study for the faculty will be cover on full-time students which is 67.1% (n= 102) and E-PJJ students for 32.9% (n= 50). From the aspect of grades for the students, most of them highly scored their GPA between 3.00 - 3.49 which contribute 40.1% (n=61) and the lowest frequency of the score grades is (n=11) which is GPA between 2.00- 2.49 represents 7.2%...

#### 4.4 Objective Findings

#### Objective 1:

# To Determine The Factors Contribute The Effectiveness Of Online Learning.

This part of the discussion is to determine the factors contribute the effectiveness of online learning in University Teknologi Mara for four factors which are learners' perception, learners' satisfaction, interaction and course structure.

#### Table 2

Description statistics of factors contribute the effectiveness of I-learn learning

Factors	N	Mean	Standard	
			Deviation	
Learners' Perception	152	3.99	0.663	
Learners' Satisfaction	152	3.73	0.808	
Interaction	152	3.88	0.771	
Course Structure	152	3.84	0.719	

As shown table 2, the researcher reported that the overall factors mean score of 3.99 is the highest factors contribute the effectiveness of online Learning. The lowest mean score is from Learners' Satisfaction which mean score of 3.73. This showed that most of the students agreed factor of learners' perception is the main factor contributes the effectiveness of online learning.

1 2 10

#### **Objective 2:**

# To Examine The Significance Differences Of Factors Contribute The Effectiveness Of Online Learning And Mode Of The Study.

#### Table 3

T – test Factors contributing the effectiveness of online learning and mode of the study

Factors	Mode of	Mean	Standard	T- test fo	or Equality of
	Study		Deviation	Means	
				т	Sig(2tailed)
Learners'	Full- Time	3.91	0.069	-2.13	0.035
Perception	E-PJJ	4.15	0.626		
Learners'	Full-Time	3.64	0.796	-2.02	0.045
Satisfaction	E-PJJ	3.92	0.809		
Interaction	Full- Time	3.77	0.756	-2.43	0.016
	E-PJJ	4.09	0.765		
Course	Full- Time	3.77	0.743	-1.7	0.090
Structure	E-PJJ	3.98	0.651		

In the table 3, there is a significant between variance of full- time and the E-PJJ (p= -2.13) in factor contributing the effectiveness of online learning for learners' perception. From the row of Equal variances assumed, p-value is 0.035. There is a no significant difference between mean of full-time and E-PJJ in learners' perception. Besides that, for the learner' satisfaction, there is significant difference of satisfaction between full-time and E-PJJ (p= -2.02) as given in table 3.

From the row of Equal variances assumed, p-value is 0.045 and there is no significant mean of full-time and E-PJJ in learners' satisfaction. For the interaction there is significance between full-time and E-PJJ (p=-2.43). From the row of equal variances assumed p-value is 0.016 and there is no significant difference mean of full-time and E-PJJ for interaction. Finally, there is significant difference between variance of full-time and the E-PJJ (p=-1.7). As given in the table 3, the row of equal variances assumed p-value is 0.090 and there is still no significance difference mean for factors course structure off full-time and E-PJJ.

#### **Objective 3:**

## To Study The Relationship Between Academic Performance On Factors Contribute To The Effectiveness Toward Online Learning.

Table 4

Correlation

		GPA
Spearman's'	Correlation Coefficient	-0.06
Learners	Sig (2 –tailed)	0.41
Perception	N	152
Learners'	Correlation Coefficient	-0.11
Satisfaction	Sig (2 –tailed)	0.15
	N	152
Interaction	Correlation Coefficient	-0.07
	Sig (2 –tailed)	0.35
	N	152
Course	Correlation Coefficient	-0.08
Structure	Sig (2 –tailed)	0.29
	N	152

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

Based on table 4 above, there is no relationship between GPA and the factors contribute to the effectiveness of online learning. Among the four factors contribute to the effectiveness the correlation coefficient for Learners Perception is -0.06, Learners satisfaction -0.11, interaction -0.07, course structure -0.08. All of this showing a negative result which mean there is no relationship between them.

#### **CHAPTER 5**

#### CONCLUSION AND RECOMMENDATION

#### 5.1 Introduction

This study was intended to determine the factors contribute the effectiveness of online learning and its relationship to mode of study and also the students' academic performance. The survey has found the following;

- 1. The learner perception is the most factors contributing the effectiveness of online learning among undergraduate students.
- 2. There are significant different between factors contribute to the effectiveness and mode of study.
- There almost no relationship or negative relationship between academic performance and factors contribute to the effectiveness toward online learning.

#### 5.2 Discussions on the Objectives

# 5.2.1 To determine the factors contribute the effectiveness of online learning.

The study finds learner's perception has contributed to the effectiveness of online learning rather than other factors. Based on table 2, the researcher reported that the learners' perception is the main factor contributes the effectiveness of online learning with mean score of 3.99. This finding supported by Flynn, Concannon, Bheacháin (2007) as the positive perception by the learner can contribute to the effectiveness of online learning because a negative perception potentially creates barriers to online learning. In addition, the similar results also prove that students' perception are critical to enhance teaching and learning through online

learning (Park, 2009). This study is based on learners' perception, leaners' satisfaction, interaction and course structure. However, a study by james et.al (2007) indicate other factors contribute to the effectiveness of i-learn learning which are the course content is the single most important factor in determining the perceived quality of the online learning experience. As hypothesized, the study found that content delivery technology, instructor support and mentoring, course structure, student to student interactions, and instructor-to-student interactions all impacted the students' perceptions. Therefore, these findings suggest the best online courses are interactive collaborative learning environments and that managing course content in an online environment (Peltier et.al, 2007).

# 5.2.2 To examine the significant difference of factors contribute the effectiveness of online learning and mode of study.

In the table 3 concluded that there is a significant between variance of full- time and the E-PJJ in factor contributing the effectiveness of online learning and mode of study. The E-PJJ students have more positive perception toward online learning rather than full-time students as shown in a significant between variance of full- time and the E-PJJ (p= - 2.13) in factor contributing the effectiveness of online learning for learners' perception. This result also proven by Flynn, Concannon, Bheacháin (2005) finding that pointed toward a positive prior perception motivates a student to engage with the learning systems. In addition, finding also show that the E-PJJ students also more feel satisfied with online learning than full-time students. In table 3, the finding is significant difference of satisfaction between full-time and E-PJJ (p= -2.02) has supported by Petrides, 2002; Schrum, 1998 which explain that both of flexibility in time and other online learning activity such as collaborative written assignments, group discussions, debates and critiques of arguments as this can enhance knowledge construction, increase learner satisfaction

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because one of the greatest strengths of online learning is the flexibility it provides to the learner and educator.

Whisler (2005) states that the online interaction, including instructor-to-learner, learner-to-learner, learner-to-content, and learner-tolearning interface, is a critical component of learner satisfaction. In study, the E-PJJ students also shown interaction in online learning give more satisfaction rather than full-time students. As evidance in table 3, there is significance between full-time and E-PJJ (p=-2.43) for interaction. However, study by (Driscoll et al, 2012) have found that the negative impact of instructor interaction on student performance. This point to that student who viewed interacting with their instructor as an important part of being successful in online courses tended to do worse on the exam. Another factor contribute to the effectiveness of online learning is course structure. From the finding, significant difference between variance of fulltime and the E-PJJ (p=-1.7) has indicate that a good course structure can guide E-PJJ students rather than the full-time student. The guality of the course structure will influence the ease to which interactions take place and how content is delivered (Grandzol, 2004; Sivakumar & Robertson, 2004; Tham & Werner, 2005).

# 5.2.3 To study the relationship between academic performances and factors contribute to the effectiveness toward online learning.

The study also find that there almost no relationship or negative relationship between academic performance and factors contribute to the effectiveness toward online learning. This is means by factors contribute to the effectiveness toward online learning has not affected the students' academic performances. This is consistence with evidences which mention that student performance is affected by class settings, where academically stronger students are more likely to be enrolled in the face to face sections of the course than the online sections (Driscoll et.al, 2012). Furthermore, Driscoll (2012) also find that the exam is a less effective assessment tool for measuring the type of student learning that occurs through interaction. Therefore, it is relevance that the factor contributes the effectiveness of online learning does not affect the student performances because it's less effective to measure from the student academic performances.

#### 5.3 Recommendations

Throughout this study, the researcher recommend on the aspects of how to enhance online learning in UiTM, Sarawak.

First recommendation is improve the quality of lecture delivery in online learning. The reasons is lecture delivery in online learning is important as it is for traditional classes where as it impacts course structure, course content, and the amount of interaction between students and lectures. Second recommendation is the instructors need to develop new skills and techniques in lecture especially in interpreting the information to make it easy for students to understand. It is importance because lecture need to structure the course content, manage expectations, effectively deliver content, and provide an opportunity for students to communicate. Third recommendation is the role of faculty and university in provide good facilities. The important is that through this facilities its can reduce the frustration in participating online learning as this may occur sometime when the student experiences the difficulty to enter online system.

#### 5.4 Limitations

a) The difficulty in interpreting the questionnaire among E-PJJ students.

All through the contribution of the researcher questionnaire, the researcher found that several E-PJJ students have the difficulty in interpreting the questionnaire which this might lead to frustration in answering questionnaire.

b) The finding doesn't represent as whole.

The researcher only distribute questionnaire among students in UiTM,Sarawak. Therefore, the data collected only describe the UiTM, Sarawak and doesn't represent the whole UiTM. In addition, this study finding can't be generalized to indicate that whole UiTM is having the same problem.

#### 5.5 Conclusion

In conclusion, this study has determined that learners' perception is the factors that contribute the effectiveness of online learning than other factor. Furthermore, the finding also answer that there are significant different between factors contribute to the effectiveness and mode of study and no relationship or negative relationship between academic performance and factors contribute to the effectiveness toward online learning. Therefore, the researcher recommends that by improve the quality of lecture delivery in online learning, develop new skills and techniques in lecture especially in interpreting the information to make it easy for students to understand and the role of faculty and university in provide good facilities can increase the learners' perception and decrease the level of frustration because frustration can demotivate the students to participating in online learning in UiTM.

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### APPENDICES

#### Section A: Demographics

1. Gender

Male Female

2. How old are you (actual age in years)? \_\_\_\_\_ Years



3. What is your race?



4. What is your current semester?



5.Mode of study



7. What is your current GPA (If unsure, please estimate)?



8. How frequent do you log in i-Learn system in week?



Section B: Factors contribute the effectiveness of i-Learn system.

Instructions: For the following questions, please indicate how much you agree or disagree with the following statements by circling the corresponding number.

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Ag	ongly gree 6)	Moderately Agree (5)	Agree (4)	Disag Moder (3)	ately	Disagree (2)	Strongly Disagree (1)
9	9 I think sharing knowledge through online discussion is time consuming (Tagoe.M, 2012)					65432	2 1
10		to face delivery is earn (Lim, Hong	-			65432	2 1
11		find i-Learn syst be.M, 2012).	em easy to	o use		65432	2 1
12	I intend to use fully i-Learn (Lim, Hong & Tan, 2008).			n, Hong		65432	2 1
13	I feel comfortable taking part in discus- sion in actual classroom setting (Driscoll et.al, 2012).		discus-		65432	2 1	
14	Feeling like I am part of a class is important to me (Driscoll et.al, 2012).				65432	2 1	
15	Using i-Learn system at the university can improve teaching (Tagoe.M, 2012).					65432	2 1
16	I benefit from using interactive applica- tion (Lim, Hong & Tan, 2008).			pplica-		65432	2 1
17		able to concentra Learn (Lim, Hong				65432	2 1

18	Uploading coursework in i-Learn is easy (Lim, Hong & Tan, 2008).	654321
19	I enjoyed working other classmate on projects or in study groups in i-Learn (Lim, Hong & Tan, 2008).	654321
20	I usually read online reading on the computer rather than printing them out (Driscoll et.al, 2012).	654321
21	I think i-Learn will improve teaching and learning (Lim, Hong & Tan, 2008).	654321
22	i-Learn is user friendly (Tagoe.M, 2012).	654321
23	I satisfied with the function of the i- Learn environment (Zhu.c, 2012).	654321
24	I think sharing knowledge through i- Learn is a good idea (Lim, Hong & Tan, 2008).	654321
25	Online discussion enables students ex- change idea and comments (Lim, Hong & Tan, 2008).	654321
26	The instructor presented course expec- tations very clearly (Driscoll et.al, 2012).	654321
27	The instructor for the course provided prompt feedback on assignments (Driscoll et.al, 2012).	654321
28	The instructor was actively involved in course discussion (Driscoll et.al, 2012).	654321
29	The instructor made him/her accessible to students (Driscoll et.al, 2012).	654321

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