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Assessing Readiness for E-Learning among Students of Universiti Selangor

¹Nasrudin Md Rahim, ²Siti Hawa Mohd Yusoff and ³Shahida Abd Latif

¹Nasrudin Md Rahim, Faculty of Science and Biotechnology, Universiti Selangor, 45600, Bestari Jaya, Selangor, Malaysia.

²Siti Hawa Mohd Yusoff, Faculty of Science and Biotechnology, Universiti Selangor, 45600, Bestari Jaya, Selangor, Malaysia.

³Shahida Abd Latif, Faculty of Science and Biotechnology, Universiti Selangor, 45600, Bestari Jaya, Selangor, Malaysia.

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ABSTRACT

Background: The usage of e-Learning methodology has become a new attraction for potential students as shown by some higher learning institutions in Malaysia. As such, Universiti Selangor (Unisel) should be ready to embark on e-Learning teaching and learning in the near future. The purpose of the study is to gauge the readiness of Unisel's students in e-Learning environment. A sample of 110 students was chosen to participate in this study which was conducted in January 2013. This sample consisted of students from foundation, diploma and degree program. Using a structured questionnaire, respondents were assessed on their basic Internet skills, access to technology required for e-Learning and their attitude towards characteristics of successful e-Learning student based on study habits, abilities, motivation and time management behaviour. The result showed that respondents did have access to technology that are required for e-Learning environment, and respondents were knowledgeable regarding the basic Internet skills. Furthermore, the result showed that respondents' attitude did meet all characteristics of successful e-Learning student regardless whether they were in foundation, diploma or degree program. As a conclusion, the study shows that current Unisel's students are ready to participate in e-Learning environment if the institution decided to embark on e-Learning methodology.

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INTRODUCTION

The usage of Information and Communication Technology (ICT) has been widely spread in Malaysia today. Based on Internet World Statistics (Internet World Stats, 2009) there is 25.7 million or 66 percent of Malaysian's population has access to the Internet in the second quarter of 2009. The report also indicates that the number of Internet users among Malaysian had grown rapidly by 357 percent from the year 2000 to 2009. Internet today is not only related to email, web page or messenger but also related to education. The application for Internet education is referred to as e-Learning. As stated by Nagy (2004), e-Learning refers to learning that depends on or enhanced by electronic or online communication using the latest information and communication technologies.

The earliest usage of e-Learning in Malaysia's higher education was used by medical students of the International Medical University in 1999 (Abas, Z.W., 2009). The project was scrapped in 2003 due to insufficient use and instructor training. The use of e-Learning concept was also used by other higher institutions such as Universiti Tun Abdul Razak (Unitar), International Islamic University Of Malaysia (IIUM), Open University Malaysia (OUM) and Wawasan University. Among all institutions that adopted e-Learning method of delivery, OUM is considered as the most successful. When it started in 2001, OUM only had 753 students which then increased to over 78,000 students in January 2009 (Abas, Z.W., 2009). This shows that the usage of e-Learning in higher education has becomes new attraction to potential students.

As Universiti Selangor (Unisel) is facing competition against other public and private universities, it is important for Unisel to be ready for e-Learning method of teaching and learning. Before embarking of the e-Learning methodology and policy, it is important that the institution gauges the level of readiness among its students and educators, and also the institutional readiness. This is to avoid any issues that might be faced by Unisel if the e-Learning to be implemented in the future. This study is focusing on the first part that is the readiness among students.

Corresponding Author: Nasrudin Md Rahim, Faculty of Science and Biotechnology, Universiti Selangor, 45600, Bestari Jaya, Selangor, Malaysia.

MATERIALS AND METHODS

Disproportionate Stratified Random Sampling technique was used in selecting the sample among students. This is due to the low number of students registered in foundation. Roscoe (Roscoe, J.T., 1975) proposed that sample size that appropriate for survey research is no less than 30 but no more than 500 respondents and a minimum sample size of 30 for each group is necessary if the samples are to be broken into subsamples. Therefore the breakdown of the sample size is as follows,

Table 1: Sample Size Breakdown of Respondents.

Level of Study	Sample Size	Percent (%)
Foundation	30	27.3
Diploma	40	36.4
First Degree	40	36.4
Total	110	100

The study used a structured questionnaire where the respondents were asked to fill-in their answers. The questionnaire was adopted from Mercado (Mercado, C.A., 2008) suggestion. The questionnaire was divided into three parts. Part one was on the basic background of the respondents. This part provided the predetermine answers for the respondents to choose. Part two was on the technology access required for e-Learning and basic Internet skills. Answers required for this part was a nominal answer that is either 'Yes' or 'No'. The third part was on the students' attitude towards e-Learning. The attitude towards e-Learning was measure based on study habits, abilities, motivation and time management behaviour. This part used Likert Scale from 1 until 5.

The data collected was first being tested on the reliability and validity of the questionnaires and respondents. The reliability was tested using Cronbach coefficient alpha test since it is the most commonly used in testing data reliability (Sekaran, U., 2003). The analysis consisted of two parts; descriptive and inferential analysis. The descriptive part showed the frequency of the respondents' demographic background from part one. The inferential analysis was conducted in order to test the following hypotheses:

H₁₀ : Students' study habits do not meet the characteristics of successful e-Learning student.

H₂₀ : Students' abilities do not meet the characteristics of successful e-Learning student.

H₃₀ : Students' motivation does not meet the characteristics of successful e-Learning student.

H₄₀ : Students' time management do not meet the characteristics of successful e-Learning student.

H₅₀ : There is no relationship between level of study and meeting the characteristics of successful e-Learning student.

For statistical purpose, this is translated into: H₀ is rejected if p-value < 0.05 while H₀ is failed to be rejected if p-value ≥ 0.05. The hypotheses were tested using one sample mean comparison using Student's t distribution and Kendall's tau nonparametric correlation coefficient. All hypotheses were tested using significance value of 0.05. Statistical Analysis Software (SAS) software was adopted in processing and analyzing the data.

Results:

A total number of 110 students participated in this study which was conducted in January 2013. Of 110 respondents, 45 were male and 65 were female students.

Table 2: Gender Breakdown.

Gender	Sample Size	Percent (%)
Male	45	40.9
Female	65	59.1
Total	110	100

Testing the reliability of the questions that used Likert Scale for study habits, abilities, motivation and time management shows that data from this study is reliable with Cronbach's alpha values ranged from 0.69 to 0.78 as shown in Table 3. Sekaran (Sekaran, U., 2003) stated that the closer the alpha value to 1 means the data is more reliable. In general, reliabilities less than 0.60 are considered to be poor, those in the 0.70 range are considered acceptable, and those over 0.80 are considered good. Therefore we can conclude that reliability of the data collected in this study is acceptable.

Table 3: Reliability Test.

Category	Number of items	Cronbach's Alpha
Study habits	7	0.72
Abilities	5	0.69
Motivation	5	0.71
Time management	6	0.78

When investigating on technology access, majority of respondents did have access to technology required for e-Learning. This is because 98 (89%) of the respondents owned a computer and 75 (68%) respondents did have access to computer and Internet connection at home. However only 48 (44%) respondents did have access to computer with stable Internet connection in campus.

Respondents were also competence in basic Internet skills. This is due to 110 (100%) respondents had email address, 102 (93%) respondents knew how to navigate the web pages, 103 (94%) respondents knew how to download files using any web browsers, 89 (81%) respondents knew how to resolve common errors while surfing the Internet such as “page not found” or “connection time out”, and 67 (61%) respondents knew how to access an online library or other resource database.

When assessing the characteristics of successful e-Learning student among the respondents, it was found that abilities scored the highest mean point of 3.59 followed by time management (3.53), study habits (3.42) and lastly motivation (3.21). To test whether students’ attitude significantly meet characteristics of successful e-Learning student the following hypotheses were conducted,

H1₀ : Students’ study habits do not meet the characteristics of successful e-Learning student.

H2₀ : Students’ abilities do not meet the characteristics of successful e-Learning student.

H3₀ : Students’ motivation does not meet the characteristics of successful e-Learning student.

H4₀ : Students’ time management do not meet the characteristics of successful e-Learning student.

(Test value ≤ 3 , meaning characteristic is met if value > 3).

Using one sample t-test on the above hypotheses at significance value 0.05, it is concluded that students’ attitude do meet the characteristics of successful e-Learning student for all categories. This is because all processes gathered p-value that are less than 0.05 as shown in Table 4, therefore all H₀ are rejected.

Table 4: Test on Students’ Attitude Towards Characteristics of Successful E-Learning Student.

Category	Mean	Standard deviation	t-statistics	p-value
Study habits	3.42	0.61	7.17	<.001
Abilities	3.59	0.72	8.60	<.001
Motivation	3.21	0.78	2.81	.003
Time management	3.53	0.76	7.25	<.001

Testing whether in order to meet the characteristics of successful e-Learning student it depends on the level of study, the following hypothesis is tested,

H5₀ : There is no relationship between level of study and meeting the characteristics of successful e-Learning student.

Table 5 shows that all Kendall’s tau correlation coefficients are very small ranging from -0.13 to 0.08. With all p-values gathered are more than 0.05 it means that the null hypothesis cannot be rejected at significance value of 0.05. Therefore it can be conclude that there is no relationship between level of study and the characteristics of successful e-Learning student.

Table 5: Test on Relationship Between Level of Study and Characteristics of Successful E-Learning Student.

Category	Kendall’s tau correlation coefficient	p-value
Level of study vs. study habits	0.08	.40
Level of study vs. abilities	-0.13	.14
Level of study vs. motivation	0.06	.48
Level of study vs. time management	0.04	.60

Discussion:

Based on the results it is clear that Unisel’s students do have the basic requirements for e-Learning that are: able to access to computer and have a stable Internet connection. However, the findings find that students had a stable Internet connection while they were at home but not when they were in campus. Thus there is a need to further improve the Internet connection in campus to ensure a better e-Learning environment.

The results show that Unisel’s students were well verse with the usage of Internet. All of the respondents interviewed had email account thus communicating through email shall not be a problem when implementing e-Learning. Students also knew how to download files using any web browsers which means that distribution of materials through online will not be a problem. It can also be seen from the results that students also had experience accessing online library or other resource database. When there exist problem while surfing the Internet, the study shows that students were able solve it by themselves.

The study reveals that Unisel’s students met the characteristics of successful e-Learning student when the hypothesis test showed that all hypotheses were rejected at the significance value, $\alpha = 0.05$. Furthermore, the study also shows that whether students were in foundation, diploma or degree program level, they were all ready to participate in e-Learning environment. This is because the correlation coefficients are very small and the hypothesis of no relationship between level of study and characteristics of successful e-Learning student cannot be rejected.

Conclusion:

From the above study, it can be concluded that current Unisel's students are ready to participate in e-Learning environment if the institution decided to embark on e-Learning methodology and policy. Students are ready with technology needed and Internet skills that are required by e-learning environment. It can also be concluded that all level of study such as foundation, diploma and degree can adopt the e-Learning methodology in Unisel. Future study on the rediness of the educators and institutional will help Unisel to further understand the total readiness towards e-Learning.

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