

The Effects of Expectations and Satisfaction towards E-Learning among Students

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Abstract: This study aims to identify the relationships between expectations and satisfaction of students towards learning. A total of 250 students, attended undergraduate program in the Institute of Teacher Education, a Bachelor degree program 2013–2014 in Education-Teaching specialization, involved as respondents in this study. The study was conducted using quantitative methods and questionnaires as the instrument. The main constructs such as expectations and satisfaction were analyzed using descriptive and inferential statistics which covers the frequency, percentage, mean, standard deviation, t-test, ANOVA and Pearson correlation, and eight elements were also discussed: course design quality, interaction quality between students, tutor and peers, self-directed learning, content, process, technology, social and continuance use intention. Results showed that students at Institute Teacher of Education in Sarawak, Malaysia have high level expectations of e-learning whereas satisfaction towards e-learning has an average level. For demographic elements, the study showed that gender does not significantly affect the students' expectations. However, the study found that the program has significantly affected the students' expectations of e-learning.

Key words: expectation, satisfaction, interaction quality, e-learning

1. Introduction

Electronic learning or e-learning has become popular and actively used at the Institute of Teacher Education. It is an approach for any higher education such as universities, colleges and institute which can provides benefits to both students and lecturers. Students and lecturers should be exposed to e-learning so that they will be able to apply and integrate e-learning in their teaching and learning activities. Hence, adequate training in educational technology is important and much needed so that they can apply their knowledge and skills in the future.

Electronic learning or e-learning is widely used as a learning support tool that helps students in their learning process. According to Waheed and Hussain (2010), e-learning is a method of using any electronic media either intranet or hyper-media. Boyinbode and Akintola (2009) stated that e-learning is any learning using the network for delivering information or interacting with a variety of technologies. Herman (2009) reported that e-learning is a learning conducted via electronic media such as audio, video tape, CD-ROM, satellites and computers which is link through Internet or intranet. Based on the definition above, it can be concluded that e-learning can be implemented using a variety of electronic media that requires an network environment to deliver and receiving

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information efficiently.

In 2003, the Institute of Teacher Education has taken initiative to adopt e-learning in various courses offered in the institute. By doing so, lecturers are able in delivering and distributing learning materials effectively to ensure students getting information in a real time manner. Therefore, implementation of e-learning allows students to share resources, exchange of information and able to interact with their lecturers, especially when the lecturers are away from the institute. Indirectly, students can conduct self-directed learning any way, any time and at any place. But sad to say, studies on students' expectations of e-learning and their impact on students' satisfaction have not been conducted especially in the context of Sarawak, Malaysia.

Previous studies showed that expectations contribute to academic achievement and course satisfaction among students (Paechter et al., 2010). The study carried out by Paechter et al. (2010) found that students' expectation were at a high level. Most students agreed that expectations are influenced by the acquisition of knowledge and skills. Paechter et al. (2010) stated that expertise of lecturers and role of lecturers as facilitators and counsellors are very important in e-learning. This is because support from the lecturers will help students in their learning process in using e-learning. Park (2009) describes that students get frustrated when using online learning. According to Park (2009), students were not familiar with this approach, especially for those whom are not interested using e-learning in their learning process.

Mupinga et al. (2006), emphasize the importance of elements such as communication with professors, feedback from tutors and online courses design which can give impact on students' level of satisfaction. Mupinga et al. (2006), found that the level of students' expectations are at average. Selim (2007) also emphasize that the successful of implementation of e-learning is influenced by lecturers' teaching style, students' knowledge in computers, self-efficacy, materials design, technical facilities and support by management. Hence, regular communication with the lecturers can make students feeling more comfortable using e-learning. They admit that they are not alone. Although the lecturers are busy, students will assume that their lecturers are always there whenever they need help.

The study conducted by Mohd Nihra and Krishnan (2011) found that external problems such as lack of technical assistance, log in problems, server down, low signal and slow internet accessing can provide dissatisfaction among students. These statements were supported by Mohd. Sukri Saud et al. (2007) who agreed that problems or obstacles faced by students can lead to negative impacts in using e-learning. Negative effects experienced by students will give bad and unenjoyable experiences. Bad experiences will result in less interest in continuing to use e-learning. However, students who feel comfortable and never facing problems will find that e-learning as an enjoyment tool.

Although e-learning had been implemented in the institute for more than a decade, however, few researches on students' expectations of e-learning had been studied. The researcher hope that the results of this study can contribute to four parties (a) administrative or management will give support in terms of better infrastructure, technical support and technical facilities, (b) giving system developers guidelines and criteria for improving e-learning system so that the system will be more flexible, ease to use and user-friendly, (c) motivating students to continuance to use e-learning and (d) other researchers, who are interested to conduct research on e-learning. In addition, more students will use e-learning for their learning activities. The results of this study also explain the role of the constructs, namely the eight elements in the expectation and satisfaction components in improving the productivity and performance of students.

Therefore, this study aims to determine the relationship between expectations and satisfaction of e-learning

among students at the Institute of Teacher Education. The study also aims to explore the different levels of students' expectations and satisfaction toward e-learning. The participants of this study are the group of second year and third year students (2013–2014) because they have been using e-learning as their learning tool.

2. Research Objectives

The objective of this study is to explore the relationship of e-learning expectations and satisfaction among students drawn from one institute in Sarawak, Malaysia. The research questions that guide this study are as follows:

- a) Are there significant differences in e-learning expectations by demographics (gender and course)?
- b) Are there significant differences in e-learning satisfaction among the students?
- c) Are there significant relationship between e-learning expectations and satisfaction among the students?

3. Methodology

3.1 Research Design

This study assumes a quantitative methodology, using questionnaires as an instrument, focusing on the expectations and satisfaction of e-learning among students. Rationale using descriptive survey is because it is easy to explain the real situation prevailing in the studied group, collecting and measuring variety of information involving variables that are related to the study (Yahya Don, 2006). The students in this study were enrolled in the Bachelor of Teacher Education program at the institute. The data will be analyzed using SPSS software version 20.0.

The questionnaires for this study was designed and modified from previous studies in e-learning, involving three sections: Part A consists of respondents demographic information, Part B consists of students' expectations and Part C consists of overall satisfaction towards e-learning. The questionnaires consist of 47 items and measured by a Likert Scale ranging from 5 points "Strongly Disagree" to "Strongly Agree". These questionnaires were used by other researchers in their study such as Thongmak (2014), Rhema & Miliszewska (2014), Rhema et al. (2013), Lemos & Pedro (2012), Paechter & Maier (2010), Paechter et al. (2010), Song (2010), Waheed & Hussain (2010) and Sun et al. (2008).

3.2 Sample

The sample for this study are the group of second year and third year students, majoring in various fields in the Institute of Teacher Education. Based on Krejcie and Morgan (1970) minimum population of 650 is around 242. This study involved a total of 250 respondents, 192 respondents from second year students and 58 respondents from third year students. The populations were selected from these two groups because they have been using e-learning in the institute for more than a year.

3.3 Data Analysis

The data will be analyzed using SPSS software version 20.0 (Statistical Package for Social Sciences version 20.0). Items in Part A were analyzed based on the frequency and percentage. Items in Part B and C were analyzed based on inferential statistic using T-test, One way Anova and Pearson Correlation.

4. Findings and Discussion

A total of 250 respondents participated in this study. Of the 250 respondents, 78 (31.2%) were males and 172 (68.8%) females. This shows that the numbers of respondents for females are far greater than the number of male respondents. Table 1 shows the frequency and percentage of respondents in the study. About 76.8% (192) were third year students intake 2013 and 23.2% (58) were second year students intake 2014.

Table 1 Demographics Information

Variable		Frequency (F)	Percentage %
Gender	Male	78	31.2
	Female	172	68.8
Intake	2013	192	76.8
	2014	58	23.2
Course	TESL	87	34.8
	Science	21	8.4
	History	14	5.6
	Chinese Language	71	28.4
	Religion Education	23	9.2
	Special Education	34	13.6

Respondents participated in this study were mostly majoring in Teaching English Second Language (TESL). Results at Table 1 indicate that 34.8% of the respondents were TESL, 28.4% Chinese Studies, 13.6% major in Special Education, 9.2% were Religious Education, 8.4 % major in Science and 5.6% majoring in History.

Based on the analysis of the study as shown in Table 2, it was found that the respondents have a frequency of use of e-learning within 1–2 semester and more than 4 semesters are almost equal. About 21.2% (53) had used e-learning between 1–2 semester and 20.8% (52) had been using e-learning more than 4 semesters. For respondents who had been using e-learning in the range of 0 to 1 semester showed the highest that is 43.2% (108) and 14.8% (37) had previously used e-learning between 3 to 4 semesters.

Table 2 Frequency Using E-learning

Variable		Frequency (F)	Percentage %
E-learning Usage	0 - 1 Semester	108	43.2
	1 - 2 Semester	53	21.2
	3 - 4 Semester	37	14.8
	More than 4 Semester	52	20.8

Cronbach's alpha statistic is applied to measure the internal consistency of each item under the eight constructs. Table 3 reveals the Cronbach's alpha reliability of independent and dependent variables, namely expectations (0.952) consists of 25 items and satisfaction (0.950) consists of 22 items. The Cronbach's alpha reliability coefficient for the present sample (N = 250) is 0.95, indicating that the instrument has highly reliability. All constructs for expectations and satisfaction have greater value than suggested value of 0.70 (Sekaran, 2006; Majid, 2000; Najib, 2000) and value of 0.80 recommended by Hair et al. (2010) and Cohen et al. (2007).

Table 3 Construct Reliability Statistics

Variables	Construct	No. of Items	Cronbach's Alpha
Expectations	Design Quality	11	.948
	Interaction Quality: student – Tutor	5	.952
	Interaction Quality: student – peer	4	.953
	Self-directed Learning	5	.953
Satisfaction	Content	5	.950
	Process	5	.949
	Social	4	.949
	Technology	5	.950
	Continuance Use Intention	3	.953
	Total	47	.951

By analyzing using T-test, there is no significant difference between students' expectations of e-learning. The results showed the mean value = 3.87, SD = 0.60 for male, while the mean value = 3.99, = 0.50 SD female. As shown at Table 4, the results of t-test showed the value of F = 2.170 and t = -1.652 with degrees of freedom or df = .248 and significant value of p = 0.100. Since, "t" value is -1.652 and significant value is greater than 0.05 (p = 0.100), this concludes that there is no significant difference for students' expectations of e-learning based on gender.

Table 4 T-test Analysis Students' Expectations Towards E-Learning Based on Gender

Variables		N	Mean	SD	F	t-value	df	Sig. at 0.05 level
Gender	L	78	3.87	598	2.170	-1.652	.248	100
	P	172	3.99	500				

The results of this study show that the level of expectations of male and females does not show much different. This finding is supported by Suri and Sharma (2013), which argues that there is no significantly different in students' expectations and satisfaction towards e-learning based on gender. In contrast, Md. Amirul Islam (2011) report that students' expectations and satisfaction towards technology can be affected by various factors such as lectures, course content, quality of information, learning process and patience of women. Findings by Md. Amirul Islam (2011) were also supported by Ashong & Commander (2012), which states that there is significantly different for satisfactions in terms of gender.

Table 5 reveals the results of the different levels of expectations based on course program among students in the institute. The significant value is at p = .000, which is smaller than p = 0.05. The results of this study found that students' expectations were significantly different by course programs at the institute. These findings were consistent with studies conducted by Paechter et al., (2010) and Paechter and Maier (2010), which admits that flexibility and quality in course design can improve students' satisfaction and enable students to interact with faculty and other peers. According to Paechter et al. (2010), the course design is very important to students as their learning platform. This platform provides an opportunity for students to interact, communicate and accessing learning resources effectively. Thus, the features such as easy to use, user-friendly and flexible need to be considered when designing courses based on e-learning. Flexible and user-friendly features will encourage students to continue to use and reduce the negative expectations of e-learning.

Table 5 Significance of Difference between Course Programs with Respect to Students' Expectations

	Sum of Squares (SS)	df	Mean Square (ms)	F	Sig. at 0.05 level
Between Groups	6.701	5	1.340	5.077	.000(Not significant)
Within Groups	64.411	244	.264		
Total	71.112	249			

Thus, students' expectations of e-learning were influenced by course design quality interaction quality and self-directed learning process. These constructs were considered as the main elements which will give positive impact on the level of students' satisfaction with respect to various course programs. Self-directed learning process can develop computer fluency, encouraging students' media efficiency and continuously improve computers and internet skills. Table 5 shows the analysis Anova test for the students' expectations based on course programs.

Results at Table 6 indicate the overall mean values for each constructs of students' expectations and satisfaction. All constructs for expectations had mean values above 3, which indicate that students had levels of expectations "moderate". The highest mean value of expectations (M = 4.02) corresponds to the "self-directed learning". In contrast, the "interaction quality between students and tutor" (M = 3.88) scored the lowest. The overall mean values for satisfaction had mean values above 4, except for "content satisfaction" (M = 3.99) and "social satisfaction" (M = 3.94). This indicates that students had levels of satisfaction "high". The lowest mean value corresponds to "social satisfaction" (M = 3.94) which is still moderate. The highest mean value corresponds to "technology satisfaction" (M = 4.09), which means good technology will motivate and encourage students to use e-learning. In contrast, interaction between students and tutor, interaction between students and peers play an important role in e-learning. Participation in discussion, quick feedback from tutors and tutor friendly behaviors can create an interactive two-way communication which allows sharing of ideas between students, tutors and peers. Besides that, students can share experiences and knowledge, exchanging information, building a good relationship and giving positive satisfaction towards e-learning.

Table 6 Overall Mean Level of Students' Expectations and Satisfaction

Variables	Construct	Mean	SD
Expectations	Course design Quality	3.93	.550
	Interaction Quality : student - tutor	3.88	.633
	Interaction Quality: student - peer	3.99	.594
	Self-directed learning	4.02	.589
Satisfaction	Content	3.99	.593
	Process	4.01	.637
	Social	3.94	.604
	Technology	4.09	.586

Table 7 presents the result of the Pearson correlation. From the analysis, there are coefficients of students' expectations and satisfaction is shown in Table 7. It was found that students' expectation has positive effect on students satisfaction (r = 0.814, significant at the p = 0.000). It concludes that there is a high positive correlation between the variables students' expectations to students' satisfaction. This results also found that the variables expectations contribute 81.4% to student satisfaction towards e-learning and 18.6% satisfaction was contributed by the other elements.

Table 7 Correlation between Students' Expectations and Satisfaction

Variables	R	Sig	Result
Expectations → Satisfaction	0.814**	000	High

The results of this study indicate that all construct in the variables expectation have a positive relationship and effect on students' satisfaction. This statement is supported by Harris et al. (2010) and Mupinga et al. (2006) which report that high expectations will give a low performance. They claimed that high expectations of e-learning will give negative effect on students' satisfaction.

Previous researchers such as Paechter et al. (2010), Song (2010) & Selim (2007) states that the role of lecturers (expertise, active participation, skills, support) and course design (user-friendly, flexible, easy-to-use, updated and relevant) is important and can contributes to student satisfaction. However, the results of this study found that three elements in the expectation components such as self-directed learning, interaction quality between students and peers and course design quality can give positive effects on satisfaction towards e-learning.

Based on the findings, students' expectations of e-learning are determined by four elements, namely course design quality, interaction quality between students and lecturers, interaction quality between students and peers and self-directed learning. Among the four elements, this study found that self-directed learning has a strongly positive impact on expectations and students' satisfaction, followed by the interaction quality between students and peers and the course design quality. Flexibility in course design plays an important role in increasing students' satisfaction towards e-learning. This shows that the quality of course design including relevant, accuracy, consistent and up-to-date content will help to decrease negative expectations and continuously improve students' satisfaction towards e-learning (Harris et al., 2010). In addition, the unique characteristics of e-learning such as flexible, easy to use and easy access to students, lecturers and peers can develop good relationships and promote two-way communication effectively.

In the context of self-directed learning, competency and positive attitudes were considered as essential elements. Positive attitudes enable students to acquire knowledge, develop better competencies and skills for computer and internet in e-learning effectively. Students who use self-directed learning approach in e-learning allows students to undertake learning in a flexible manner because it can be carried out any time and any place, as long as it has a wide range of network learning environments. Self-directed learning also gives students the freedom to take a variety of courses offered by the institute and mastered the skills as a whole.

Based on statistical inference analysis using T-test and ANOVA Test, the results show that there is no significant difference between expectations and satisfaction of e-learning in respect to gender among the students in the institute. However, expectations and satisfaction of e-learning was found to be significantly different with respect to course programs. Today, students' expectations of e-learning may still exist for both female, male or course programs, especially female students are more careful when using the technology. Male students prefer to explore and more adventurers. However, UNESCO (2012) found that the gap between male and female had been narrowed. Meaning to say, students can use various forms of e- technology, regardless of gender.

5. Conclusion

The study concludes that the expectations and satisfaction has a positive relationship towards e-learning among students. Various elements such as course design quality, accuracy of students giving feedback, external problems, lack of infrastructure, quick respond by lecturers, knowledge and skills in technology and software can

affect the expectations and satisfaction towards e-learning. Hence, commitment and cooperation from all parties is essential in ensuring the successful implementation and use of e-learning in the institute. This helps to increase the acceptance of e-learning, decreasing negative expectations and indirectly giving satisfaction to students. In fact, expectations of e-learning can give positive impact and increase the levels of satisfaction among students and improve learning performance as a whole. Therefore, e-learning is also regarded as a medium to promote and motivate self-directed learning, which can be applied and carried out any time and at any place.

The outcome of this study suggests recommendations to management and system developer, so that they can preview the e-learning system generally and develop the course design, contents and resources particularly. Thus, check e-learning systems is essential so that students can use the system effectively. Lecturers should be given training in designing e-contents and e-resources. Apart from that, guidance and motivation should be given to students in order to encourage student intention to continue using e-learning in their learning process. The institute should focus on open source e-learning system such as Edmodo and Schoology as an alternative. Open sources e-learning system does not need maintenance compared to system developed by the institute.

Thus, this study has limitations that should be addressed and taken into account in the future research. Firstly, other elements that can give impact on e-learning expectations could be considered, as it can contribute to the successful of implementation of e-learning, students' satisfaction and decreasing negative expectations towards e-learning. Secondly, system developers should also consider the criteria for developing e-learning to meet the needs of the students. Thirdly, the sample was taken only from one institute and this may not represent the whole students in four institutes in Sarawak, Malaysia. Due to this, the validity of the findings could be due to small number of male respondents taking part in the survey. However, this study has helped students to improve e-learning based on their past experience, at the same time also improving skills they need for their future undertaking.

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