

Investigating the Acceptance of e-Learning among Agricultural Undergraduates

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ABSTRACT

The usage of Information and Communication Technologies (ICTs) has been widely used in educational development. As the facilities of ICTs developed, the new tools of learning have been discovered. The online learning or e-learning is a method of delivering knowledge using electronic media. E-learning has offered many advantages to the students such as more flexible learning environment as it could be anywhere, not specifically on physical class anymore. In addition, e-learning is different from the traditional learning in terms of delivery method where e-learning utilizes the Internet and Web 2.0, while traditional learning environment required the instructor, a textbook and any additional support materials. However, it is important to investigate the acceptance of e-learning among the students. The issues faced by the students during e-learning implementation should be discovered. Therefore, this study is conducted to investigate the acceptance of e-learning among agricultural students in UiTM Pahang. The data were gathered from the students from the Faculty of Plantation and Agrotechnology in Universiti Teknologi MARA (UiTM) Pahang using online questionnaire. The data were analysed descriptively using the Microsoft Excel 2010. The reported findings might be of interest to academics, administrators, and decision-makers involved in planning, developing and implementation of future e-learning activities.

Keywords: *Acceptance; Agricultural Students; e-learning; Investigating*

INTRODUCTION

Traditional learning has been implemented years ago for teaching and learning. The traditional teaching and learning approach focuses on face to face meetings and total organizational control over the process. Traditional lectures offer opportunities to inspire and motivate students, but one should not make mistake of assuming that students immediately understand and learn whatever the instructor says and puts on the board. Furthermore, some instructors are not aware of their students and keep focusing on the content rather than on what they are saying about the content.

Although the acceptance of e-learning is increasing, there are many traditional faculties that use e-learning as a supplementary to the traditional ways of learning. Most of the faculties still reluctant to abandon the traditional ways of teaching (Radović-Marković, 2010).

The e-learning is commonly referred to the intentionally use of networked information and communications technology in teaching and learning. There are numerous other terms used to describe this mode of teaching and learning such as online learning, virtual learning, network and web-based learning and also distributed learning. Basically, it refers to the educational processes that utilize the information and communication technology to facilitate learning and teaching activities. This type of learning is a method of delivering knowledge using electronic media.

E-learning allows students to participate regardless of geographic location, independence of time and place. It has progressed where students no longer need to meet face-to-face in order to complete their study programme or a course.

Since 2009, blended learning delivery mode has been initiated in Universiti Teknologi MARA (UiTM), whereby teaching and learning processes can be conducted combining face- to-face lecture sessions with e-learning slots. By opting to this new delivery method, at least 30% of course contents need to be delivered to students using e-learning practices. This study focusing on assessing acceptance of e-learning practices among students in Faculty of Plantation and Agrotechnology in UiTM Pahang. The reason for agricultural students were chosen in this study is, by referring to

the data obtained from System Management Unit, i-Learn Centre, UiTM, statistical data of blended learning deliver mode registration from 2013 shows that only minimum number of courses has been registered from the faculty.

The Faculty of Plantation and Agrotechnology is a new faculty that has been created to play a vital role in producing well-trained professionals in all areas of agriculture and related fields in the country. Faculty of Plantation and Agricultural Technology, UiTM Pahang was established in 2010, in parallel with the establishment of the Faculty in the Main Campus. There are two courses offered under the Faculty which is Diploma in Planting Management and Bachelor of Science (Hons.) Plantation Technology and Management.

LITERATURE REVIEW

Globokar (2010) stated that there is some truth to the belief that online learning can save time relative to traditional coursework, but this “time saved” is limited to the elimination of commute. The traditional class might entail a commute of an hour or longer but with online classes it may require only five minutes of preparation to make sure that the computer and internet connection is well established.

According to Reid (2005), before effective learning can take place it is necessary for the learner to read the requirement of the task, understand the task/ information being presented, to recognize what the task, or the information is suggesting, to identify the key points in the task/ information, to implement the task/ use the information, to become efficient in accessing the information and carrying out the task and to be able to transfer the new learning to other learning tasks.

Learning Styles

There were no two students that learn in the same way. The instructors in traditional face-to-face classes are limited in the extend to which they can tailor instruction to individual learning styles. According to Globokar (2010), online learning or e-learning increases flexibility and also supports

students's ability to adapt their study habits to the ways in which they prefer to process information.

In addition, students can vary in the ways that they prefer to receive information. There are four common learners namely Visual learners that most easily comprehend information that they can see, whether in the form of written words or presentations, charts and figures, Auditory learners that do well at processing information that they hear, Kinesthetic learners that prefer to learn by doing and lastly the Tactile learners that prefer "hands on work" such as building models or doing laboratory experiments.

Student's Acceptance

According to a study conducted by Lee et al., (2009), as the service quality of e-Learning improves, the learners tend to be positive towards e-Learning. E-Learning providers can enhance e-learning services as web technologies advance without additional costs by taking advantage of the declining cost of technologies which can result in greater adoption by learners. Besides, the usefulness can be enhanced by providing great services without increasing the complexity of the e-Learning process.

Radović-Marković (2010) conducted an interview to study the acceptance of e-Learning in Serbia and it was found that majority of the interviewees think that online learning is an alternative method of learning. However, the computer literacy is actually the most significant for online learning. Besides, half of the respondents think that they prefer to have discussions with colleagues and instructors through face-to-face methods.

According to Yung and Cornelius (2004) cited by Song (2010) in his report, students were examined with positive and negative experiences regarding the quality of online learning. According to the results, factors that contributed to students positive experiences were flexibility, cost-effectiveness, electronic research availability, ease of internet connection and well-designed class interface. However, the factors that contributed to the negative experiences were delayed feedback from instructors, lack of self-regulation and self-motivation, the sense of isolation, monotonous instructional methods, and poorly-designed course contents.

Pros and Cons of e-Learning

According to Richardson and Swan (2003) cited by Inoue (2007), there are six (6) advantages offered by online learning environments, namely:

1. Convenience and flexibility are offered by “anytime, anyplace, anywhere”.
2. Accessibility means that students have access to courses and course materials “24 hours a day (time independent), regardless of location (place-independent)”, making them far convenient than the traditional educational experience.
3. Asynchronous learning allows students to reflect upon the materials and their responses before responding, unlike traditional classroom.
4. Students can work at their own pace, which is especially important for non-native speakers.
5. The ability of personal identities to remain concealed means that all students, regardless of race, gender, disability, or appearance are on equal ground.
6. With the option of multiple representations of a concept embedded in an online course, students can store and retrieve information more effectively.

Besides much advantages offered by online learning, there are few disadvantages such as online learning environment is not as effective as traditional learning because of the lack of face-to-face interactions or rapport. At the same time, students will feel disconnected from their classmates because of the lack of facial and vocal expressions and other features common to traditional classroom environments including direct communication and feedback.

Kirtman (2009) in her study stated that although there have been attempts to vary the instructional methods used, most of the online sessions are best suited for visual learners. Furthermore, for online learning, there

was no way to know exactly how much time (more or less) was spent on each of the topics. Some online students may have just completed enough work to complete the online assignments but may not have gone beyond those tasks.

METHODOLOGY

Instrument Construction

The purpose of this study is to investigate the acceptance of e-learning approach among the agricultural students in UiTM Pahang. Closed questionnaire items such as the demographic profile of the respondents, users' view on blended learning approach, and online environment to support the online teaching and learning were addressed. The measurements for close - ended questionnaire were structured using the 5-point Likert scale; according to the degree of agreements, 5 for strongly agree and 1 for strongly disagree. At the same time, the respondents were also allowed to give their views and recommendations in the open-ended question.

The questionnaire was divided into five sections. The first section was the demographic profile of the respondents. The computer and internet facilities used during completing the respondents e-learning tasks was asked in the second section. Then, followed by the users' view on blended learning approach. The online environment to support the online teaching and learning was asked in the third and fourth section of the questionnaire. In the last section, the respondents were allowed to give their views and recommendations in the open-ended question. The measurements for close-ended questionnaire were structured using the 5-point Likert scale; according to the degree of agreements, 5 for strongly agree and 1 for strongly disagree. Some of the questions were asked in the form of multiple choices.

Data Collection

The questionnaires were distributed via Google Forms to all Diploma and Bachelor's degree students of the Faculty of Plantation and Agrotechnology in UiTM Pahang during the December 2014-April 2015 semester (Diploma program) and during March 2015-June 2015 semester (Bachelor's degree program). The total number of respondents answered

the questionnaire was 140 out of 400 students. Most of the students have been using i-Learn at least once in the courses they registered.

The data obtained from the questionnaire were analyzed using the Microsoft Excel 2010. Descriptive analysis such as mean and percentages were used to investigate the factors that influence the acceptance of both diploma and degree students towards the implementation of e-learning approach in UiTM Pahang; to assess the users' views on i-Learn portal as the platform for blended learning and to discover the benefits they found when teaching and learning sessions are being conducted using e-learning approach.

Data Analysis

Demographic Profiles

Students' Demographic Profile

Table 1 represents the descriptive statistics of the respondents' profile. This study indicates that 68 (48.57%) female and 72 (51.43%) male students have completed the questionnaire. A total of 121 respondents was identified as students from the Diploma in Planting Management (AT110) and another 19 respondents were Bachelor's Degree (Hons.) in Plantation Technology and Management (AT220) students in UiTM Pahang. Out of 140 students, 85.71% of them claimed that they do have internet at home. It shows that majority of the students have the access to internet easily that could support the implementation of the e-learning approach.

Table 1: Descriptive Statistics of Respondent's Profil

Measure	Items	Frequency	Percent
Diploma:	Part 1	43	30.71%
	Part 2	50	35.71%
	Part 3	2	1.43%
	Part 4	24	17.14%
	Part 5	2	1.43%
Bachelor Degree:	Part 6	19	13.57%

Students' View on e-Learning Approach

Table 2 shows the students' perception towards the implementation of e-learning approach in their learning activities at the university. From the findings, it shows that 80.72% students agreed that e-learning provides flexibility to students in terms of their needs which enable the students to study whenever and wherever they want to, and e-learning also helps the students to prepare well for class sessions as they could download notes and do their assessments online easily from i-Learn portal. These two items share the highest mean score (4.09) compared to other items.

Nevertheless, the students felt that they are uncertain whether the e-learning approach would be more effective than traditional approach (full time face-to-face) with a mean score of 3.11. Probably the students are not very much exposed to the implementation of e-learning because sometimes it depends on the lecturers who teach them who would probably prefer to use more traditional approach rather than online approach in certain subjects.

Table 2: Students' View on e-Learning Approach

	Items	Percentage					Mean
		Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	
1	E-Learning provides flexibility to students in terms of their needs (enabling students to study when they choose to)	0.71%	2.86%	15.71%	47.86%	32.86%	4.09
2	E-Learning helps students to prepare well for class sessions(eg: download notes and assessments)	0.00%	3.57%	22.14%	36.43%	37.86%	4.09
3	E-Learning decreases costs for individual students (printing)	0.71%	2.14%	25.71%	32.86%	38.57%	4.06
4	E-Learning approach supports flexibility of learning styles for students	0.71%	5.00%	18.57%	44.29%	31.43%	4.01
5	E-Learning encourages self-learning to students	0.71%	4.29%	22.14%	47.86%	25.00%	3.92
6	The lecturer helps to guide when using E-Learning	0.00%	5.00%	25.71%	57.14%	12.14%	3.76
7	E- Learning supports ideas and experience sharing amongst students	1.43%	5.71%	22.14%	58.57%	12.14%	3.74
8	E-Learning helps students learn better	1.43%	11.43%	20.00%	49.29%	17.86%	3.71

9	E-Learning supports ideas and experience sharing amongst students	0.71%	6.43%	22.86%	60.71%	9.29%	3.71
10	E-Learning increases interaction levels between individual students and the lecturer outside class	1.43%	8.57%	24.29%	53.57%	12.14%	3.66
11	E-Learning approach encourages students to participate in the discussion(reduce inhibition)	1.43%	8.57%	27.14%	50.71%	12.14%	3.64
12	E-learning increases opportunity for discussion amongst students and lecturers	2.14%	7.86%	32.14%	42.86%	15.00%	3.61
13	E-Learning supports close relationship between students and lecturer	2.86%	6.43%	31.43%	51.43%	7.86%	3.55
14	Students receive enough online feedback from lecturer	0.71%	7.86%	35.00%	48.57%	7.86%	3.55
15	E-Learning increases the study workload for students	3.57%	18.57%	33.57%	37.86%	6.43%	3.25
16	E-Learning approach would be more effective than traditional approach (full time face-to-face)	10.71%	19.29%	24.29%	40.00%	5.71%	3.11

Students' View on i-Learn Portal as Platform for e-Learning

Table 3 indicates the students' view on i-Learn portal as a platform for e-learning in UiTM. 82.14% students agreed that the notes in i-Learn portal are useful to them in the teaching and learning process. The reason could be because lecturers from other UiTM campuses who teach the same course can also place the notes in the i-Learn portal. Thus, the notes can be reached easily by the students in the portal. Not only that, majority of the students claimed that i-Learn portal is user-friendly and easily to access (mean score = 4.07). However, most students felt unsure whether they faced any technical problems when they got accessed into the i-Learn portal (mean score = 3.13).

Table 3: Students' View on i-Learn Portal as Platform for e-Learning

	Items	Percentage					Mean
		Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	
1	Notes in iLearn portal help in teaching and learning process	0.00%	2.14%	15.71%	51.43%	30.71%	4.11
2	i-Learn portal is user friendly portal	0.00%	2.86%	17.86%	48.57%	30.71%	4.07
3	The instructions provided on the i-Learn portal are easy to follow	0.00%	2.86%	19.29%	52.14%	25.71%	4.01
4	Monitoring tools in i-Learn portal helps in tracking the participations of students	0.00%	2.86%	18.57%	56.43%	22.14%	3.98
5	i-Learn portal is easy to access		5.00%	17.86%	52.14%	25.00%	3.97
6	Functionalities (group forum, course materials, etc) provided on the i-Learn portal is sufficient for BL	0.00%	6.43%	17.86%	55.00%	20.71%	3.90
7	No technical problems when accessing the i-Learn portal	10.00%	15.71%	34.29%	31.43%	8.57%	3.13

CONCLUSION AND RECOMMENDATION

From the earlier findings and discussions, it can be concluded that majority of the students under the Faculty of Plantation and Agrotechnology at UiTM Pahang perceived that the implementation of e-learning approach is beneficial to them. From the recommendations given by the students, 67.14% of them prefer to have a balanced mixture of online learning and face-to-face learning time as mostly practised in UiTM at the moment, followed by 21 (15%) students who prefer the traditional teaching with no online learning, 14 (10%) students would like to spend more time using online and have less face-to-face lecture session, and only 11 (7.86%) students prefer to have 100% online for learning and teaching process.

From the results, it is best to say that online learning gave more benefits to students such as time flexibility, notes are easier to be downloaded and viewed and also save money for printing. However, among the factors that contribute to the success of e-learning is the facility provided to the students, such as internet access facilities. Besides, the lecturers need to give a clear instructions and a transparent assessment in evaluating online quizzes and tests. However, the lecturer should identify the weaknesses of

the students and their learning style, especially the slow-learner to ensure that no student is left behind.

In addition, to support e-learning practices in teaching and learning processes, variety of online learning materials and tools can be used to deliver content and conduct assessment of the courses such as online quizzes and games, demonstration videos on practical skills, and online discussion and consultation on selected topics. These practices need online pedagogical skills of the instructors in ensuring e-learning is successfully implemented and fulfils the course learning outcomes.

Further studies related to e-learning should be extended in the future in order to find out on the students' performance in their quizzes or tests as a result of using e-learning. It is also suggested to conduct some surveys on students from other faculties in order to compare the students' perception and academic performance among faculties in UiTM Pahang in particular and UiTM in general. A larger sample size is recommended for future study as the number of e-learning users in UiTM Pahang will keep on increasing from time to time.

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