ความคิดเห็นของอาจารย์และนักศึกษาคณะบริหารธุรกิจ มหาวิทยาลัย เชียงใหม่ ในการนำการเรียนการสอนทางอิเล็กทรอนิกส์มาใช้

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บทคัดย่อ

      บทความนี้เน้นการนำเสนอความคิดเห็นของอาจารย์และนักศึกษาคณะบริหารธุรกิจ มหาวิทยาลัยเชียงใหม่ เกี่ยวกับการนำการเรียนการสอนทางอิเล็กทรอนิกส์มาใช้ โดยจะรวมความคิดเห็นในด้านความรู้ความเข้าใจเกี่ยวกับการเรียนการสอนทางอิเล็กทรอนิกส์ และความพร้อมของอาจารย์และนักศึกษา ในการนำการเรียนการสอนทางอิเล็กทรอนิกส์มาใช้ รวมทั้งความคิดเห็นในด้านความเหมาะสมของการเรียนการสอนทางอิเล็กทรอนิกส์ในการสอนในห้องเรียน และความพร้อมของคณะในการนำการเรียนการสอนทางอิเล็กทรอนิกส์มาใช้

      ผลการวิจัยแสดงให้เห็นว่า นักศึกษามีความรู้ความเข้าใจเกี่ยวกับการเรียนการสอนทางอิเล็กทรอนิกส์มากกว่าอาจารย์ ทั้งนักศึกษาและอาจารย์คิดว่าการเรียนการสอนทางอิเล็กทรอนิกส์มีประโยชน์และเหมาะสมกับการสอนในห้องเรียนที่มีนักศึกษาจำนวนมากและเหมาะสมกับวิชาที่มีลักษณะเป็นการบรรยาย นอกจากนี้ทั้งนักศึกษาและอาจารย์คิดว่าตนเองและคณะยังไม่พร้อมในการจะนำการเรียนการสอนทางอิเล็กทรอนิกส์มาใช้ และคิดว่าน่าจะใช้ได้เฉพาะการจัดส่งเอกสารการเรียนหรือข้อมูลต่าง ๆเกี่ยวกับการเรียนการสอนเท่านั้น

คำสำคัญ: การเรียนการสอนทางอิเล็กทรอนิกส์, ความคิดเห็น, นักศึกษามหาวิทยาลัย, อาจารย์มหาวิทยาลัย

The Opinion of Faculty of Business Administration Lecturers and Students, Chiang Mai University about the Use of E-Learning

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This paper focuses on the opinion of the Faculty of Business Administration lecturers and students at Chiang Mai University about the use of e-learning for their teaching. The opinion includes their understanding about e-learning, and their readiness to use e-learning in their courses. Their opinions about the suitability of e-learning for their classes and the faculty's readiness for the use of e-learning are also discussed.
Results showed that students have more understanding about e-learning than lecturers. Both lecturers and students think that e-learning is very useful, but it is only suitable for the class with a lot of students and for lecturing course. Neither of them is ready for the use of e-learning. They would like to use e-learning only for delivering lecture notes and distributing information about the class.

Keywords: e-learning, opinion, university lecturer, university student

Introduction

In the information age, information technologies have a tremendous influence in our life including education. E-learning uses information technologies such as the Internet to aid students in learning their lesson outside of the classroom. Many institutes, particularly at higher level education such as university, have try to implement this new approach (e-learning) such as computer-assisted instruction (CAI), web-based instruction, online learning, videoconferencing and video on-demand. Chiang Mai University, particularly the Faculty of Business Administration has included e-learning in their policy and plan for the year 2003. Last year (2001), the university had approved a financial support of 600,000 baht for the development of high-quality online course

for 4 basic subjects. One of those 4 subjects is "Introduction to Business" which is taught by the Faculty of Business lecturers. However, the development for this type of e-learning costs about 250,000 baht per subject and needs specialists both in technical and educational areas. In addition, research by Udommaneetanakit (2001) reported that many lecturers at Chiang Mai University were not using the Internet and many used it only for communication (e-mail). This scenario raised some questions about the understanding and readiness of lecturers at The Faculty of Business Administration for e-learning use. In addition, the inadequate numbers of computers is another problem toward e-learning use. Chiang Mai University ratio of computers to

numbers of students is approximately 10 to 1 (Chiang Mai University report, 2001). The Faculty of Business Administration has only 50 computers for a total number of 1,034 students (registration record of 2001).

This paper, therefore, focuses on the opinion of The Faculty of Business Administration lecturers at Chiang Mai University about the use of e-learning for their teaching. The opinion includes their understanding about e-learning, and their readiness to use e-learning in their courses. The lecturers' opinion about the suitability of e-learning for their classes and the faculty's readiness for the use of e-learning are also discussed.

Research background

The technology acceptance model (TAM) presented in Figure 1 specifies two beliefs, perceived usefulness and perceived ease of use, as determinants of attitude towards usage, behaviour intentions and system use (Davis et al., 1989; Taylor & Todd, 1995). The model also shows that an increase in perceived ease of use contributes to improve perceived usefulness of the system to a person's work. When users spend less effort to use a system, they have a chance to accomplish more work than otherwise (Davis et al., 1989). In addition, perceived usefulness and perceived

ease of use can be affected by various external variables. For instance, good training can reduce the difficulty in using a system. Furthermore, if one system can produce more accurate results than its equally easy-to-use counterpart, it should be considered more useful.

Davis (1989) adapted TAM to investigate usage of electronic mail, a file editor, and two IBM-PC-based graphic systems (Chart-Master & Pendraw). He focused on the effects of two perceptions, perceived usefulness and perceived ease of use, and on system usage. Davis (1989) found that perceived usefulness had a strong effect on use while perceived ease of use had little effect on technology use.

King et al. (2002) proposed the three tiered policy analysis frameworks for distance education. The three policy areas are (1) the Faculty side including reward, support, and opportunities, (2) student side including support, requirements and records, and (3) management & organization including collaboration, resources & curriculum.

The study of "Needs, Concerns and Practices of Online Instructors" by Kenzie et al. (2002) reported that there were many reasons for a lecturer to teach online course. These reasons were opportunity to use technology more innovative to enhance course quality, desire to get students more involved with technology, oppor-
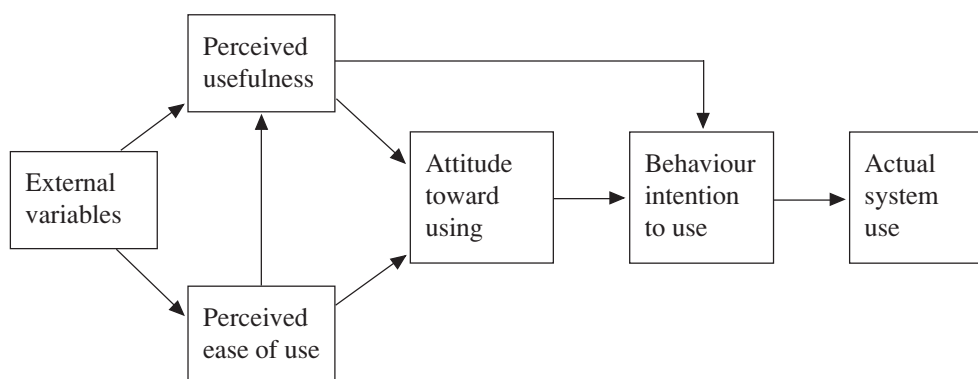

Figure 1. The technology acceptance model (TAM) adapted from Davis, Bagozzi and Warshaw (1989), p. 985.

tunity to meet needs of students at a distance, increased flexibility in working hours and location, response to students asking for online educational opportunities, chance to interact with students more frequently, and the requirement from the faculty.

The study of "Incentives and Obstacles Influencing Higher Education The Faculty and Administrators to Teach Via Distance" by Rockwell et al. (2002) indicated that there are six major factors that encourage the use of online teaching. These factors were providing innovative instruction, applying new teaching techniques, self-gratification, fulfilling personal desire to teach, recognition of work, and peer recognition. Other two factors for student advantage were access to place-bound students, and reduction of student travel time. The final factor, release time, involved both the Faculty and lecturers. Since using online course can release time of the lecturers in teaching, therefore they can use their time to do more research or social work which benefits both lecturers and the Faculty.

Wilson (2002) who studied "Concerns of Instructors Delivering Distance Learning via the WWW" indicated that instructors were concerned with many factors. These factors are sufficient time to develop and maintain course material, technical support, administrative support, sufficient time to interact with students, technical training, student familiarity with computers, equipment problems, academic honesty, necessary equipment available in faculty offices, student access to computers, web course design, student assessment/grading, and intellectual property rights.

According to the TAM model and previous studies, the research model has been proposed here for the study of the opinion of the Faculty of Business Administration lecturers, Chiang Mai University, about the use of e-learning as presented in Figure 2.

This model indicated that lecturer's opinion can influence his or her intention to use e-learning. However, the opinion can be mediated by many factors surrounding a lecturer including faculty policy and support, faculty readiness,
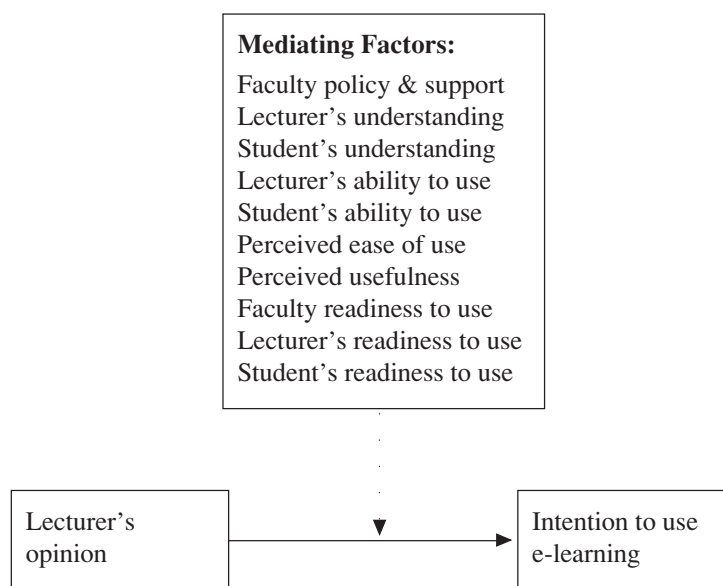

Figure 2. The research model of this study.

and student readiness. The opinion also can be influenced from the lecturer's perception towards e-learning including ease of use and usefulness, and his or her understanding about, ability and readiness to use e-learning.

Research objectives and hypotheses

This research aims to know whether students and lecturers at the Faculty of Business Administration, Chiang Mai University, understand about e-learning, think that it is useful, and are willing to use e-learning in their classes.

The hypotheses of this research are as follows:

H1: Lecturers and students opinions have an influence on their intention to use e-learning for totally substitute for teaching.

H2: Lecturers and students opinions have an influence on their intention to use e-learning for partially substitute for teaching.

H3: Lecturers and students opinions have an influence on their intention to use e-learning for information delivery.

H4: Lecturers and students opinions have an influence on their intention to use e-learning for home work assigning and submitting.

H5: Lecturers and students opinions have an influence on their intention to use e-learning for communication among students.

H6: Lecturers and students opinions have an influence on their intention to use e-learning for lecturer note delivery.

Research design

This research was designed in four steps. Firstly, the interviews had been conducted with 4 lecturers from four departments (one from each department) and 15 students (3-4 students from each year of study) to explore their understanding and opinion about e-learning. After that, the interview transcripts had been analyzed using

content analysis method (Bailey, 1982) and the results were used as a guideline for questionnaire design.

The questionnaire has eight parts: (1) lecturer's general data, (2) lecturer's understanding about e-learning, (3) lecturer's opinion on usefulness and ease of use of e-learning, (4) lecturer's opinion on the suitability of e-learning for teaching, (5) lecturer's opinion on the their readiness to use e-learning, (6) lecturer's opinion on the faculty readiness to use e-learning, (7) lecturer's desire to use e-learning, and (8) other opinions. Semantic scale was used for the questionnaires from part 3-7 in 5 scale (1 = strongly disagree to 5 = strongly agree in part 3-6, and 1 = strongly non-desire to 5 = strongly desire in part 7).

Secondly, the questionnaire was tested with 5 lecturers from different departments and 20 students for its clarity. These lecturers and students were not the same group as those were in the early interviews and all of them had some experiences with e-learning. Minor changes were done based on the suggestions from the lecturers and students interviewed. The questionnaire was then tested for reliability with alpha more than 0.60 for all six variables, except one variable (student readiness) had alpha 0.47. However, the researcher decided to keep every variable the same in order to be able to compare the results of lecturers and students.

Thirdly, the questionnaires were distributed to all lecturers (35 persons) at the faculty. However, only 50% of the questionnaires were returned at the time requested. Therefore, reminding letters were sent to the remaining lecturers and personal contact was used to get as many as possible to reply within the month. Thirty-one questionnaires were received at the requested time with four missing (two questionnaires were lost during the delivery and two did not reply) accounting to 89% respond rate. Questionnaires were also distributed to 448 students (138 freshmen, 100 sophomore, 100 juniors and 110 seniors). All questionnaires were filled in the class and returned to research assistants right at

the same day of the distribution.

Finally, data were then analyzed with descriptive statistics such as frequency and average using SPSS program. Multiple regression analysis (stepwise method) was also used to test the relationship between some variables that were indicated in the research background.

Results

The survey study from questionnaires showed that most lecturers at the Faculty of Business Administration, Chiang Mai University, are female aged above 44, and between 25-34 years old. Most of them have been using computers for more than 5 years and using the Internet for 1-5 years. Mostly they used the Internet for less than 5 hours per week at the faculty and for communication via e-mail. Most lecturers have been using PowerPoint and transparency in their teaching, and know how to use most of Microsoft office application such as Word, Excel and PowerPoint.

The survey results also showed that most students at the Faculty of Business Administration, Chiang Mai University, are female aged 18-21 years old. Most of them have been using computers and the Internet for more than 2 years. Mostly they use the Internet for less than 5 hour per week at home and for communication via e-mail. Most students know how to use Microsoft Office plus others programs such as Photoshop and Internet Explorer.

In addition, only 21 lecturers (68%) have enough knowledge about e-learning (Knowing that e-learning is not only for communication between teacher and students but also can be used for downloading lecture notes, assigning and submitting homework, testing for student knowledge, etc.). Most students (327 or 73%) know that e-learning is learning via electronic media, e-learning is self-learning (232, 51.8%) and e-learning is one kind of a distance learning (240, 53.6%).

Most lecturers had opinion that e-learning was useful (Ave. = 3.47), and was not too hard to learn to use (Ave. = 2.82). They mostly thought that e-learning was mostly useful for students to learn from anywhere, anytime, and for students to prepare themselves before coming to class, to review the lesson, or to search for extra information & knowledge. Lecturers also agreed (Ave. = 2.93) that e-learning was suitable for teaching at Faculty of Business Administration, but mainly for courses that have large numbers of students enrolled, that require lecturing (not analyzing or discussing), or that provides fundamental knowledge to students such as "Introduction to Business".

About the readiness, most lecturers did not believe that they were ready to use e-learning (Ave. = 2.77). They also did not think that the faculty was ready for e-learning use (Ave. = 2.79), particularly for the lecturers. They indicated in that, in their opinions, most lecturers

Table 1. Average results of five factors (Lecturer)

Factors	Useful	Ease	Suitability	Lecturer readiness	Faculty readiness
Average	3.47	2.82	2.93	2.77	2.79

Table 2. Average results of five factors (Student)

Factors	Useful	Ease	Suitability	Lecturer readiness	Faculty readiness
Average	3.30	2.93	2.82	3.13	2.99

Table 3. Average results of the desire to use e-learning (Lecturer)

Desire to use e-learning	Totally substitute for teaching	Partially substitute for teaching	Information delivery	Home-work assigning & submitting	Communi-cation between teacher & students	Communi-cation among students	Lecture note delivery
Average	2.03	3.77	3.94	3.52	3.55	3.19	4.03

did not truly understand about what e-learning is, and very few of them had tried to use or had developed e-learning previously.

Most students had opinion that e-learning was useful (Ave. = 3.30 and was not too hard to learn to use (Ave. = 2.93). They mostly thought that e-learning was mostly useful for learning from anywhere, anytime, and for self study. Students only agreed (Ave. = 2.82) that e-learning was suitable for teaching courses that have large numbers of students enrolled, and require lecturing (not analyzing or discussing).

About the readiness, most students believed that they were ready to use e-learning (Ave. = 3.13). However, they did not think that the faculty was ready for e-learning use (Ave. = 2.99). They indicated that most students are not truly understand about e-learning and there is not enough computers at the faculty where students can use 24 hours.

Results from Table 3 indicated that most lecturers could use e-learning for about 30% of their teaching and for distributing lecture notes (Ave. = 4.03), giving information to students (Ave. = 3.94), partially substitute for teaching (Ave. = 3.77), communicating with students (Ave. = 3.55), and assigning home work (Ave. = 3.52).

Results from Table 4 indicated that most students could use e-learning for about 30% of their teaching and for distributing lecture notes (Ave. = 3.83), giving information to students (Ave. = 3.77), partially substitute for teaching (Ave. = 3.44), communicating with students (Ave. = 3.24), and assigning home work (Ave. = 3.24).

Results from multiple regression analysis (stepwise method) showed that perceived usefulness, the suitability and lecturer's readiness had more impact for the desire to use e-learning than other mediating factors. Perceived usefulness had an influence on the communication between teacher and students (Beta = -0.459) and communication among students in the same class (Beta = -0.492). This means that lecturers who perceive that e-learning is useful believe that e-learning increase their communication with students and communication among students in the same class.

Lecturer's readiness to use had an influence on every factor except for the lecturers assigning home work and students submitting assignments. It had an effect on the desire for totally substitute for teaching (Beta = 0.360), partially substitute for teaching (Beta = 0.373), class information (Beta = -0.513) and lecture notes delivery (Beta = -0.557), and for communication

Table 4. Average results of the desire to use e-learning (Student)

Desire to use e-learning	Totally substitute for teaching	Partially substitute for teaching	Information delivery	Home-work assigning & submitting	Communi-cation between teacher & students	Communi-cation among students	Lecture note delivery
Average	2.07	3.44	3.77	3.24	3.24	2.78	3.83

Table 5. Regression analysis results (Lecturer)

Hypothesis	First variable	Second variable	Beta	Sig.	Yes/No
H1:	Useful	Totally substitute for teaching	-0.587	0.060	No
	Ease		0.063	0.718	No
	Suitability		-0.151	0.416	No
	Lecturer readiness		0.360	0.001	Yes
	Faculty readiness		-0.023	0.896	No
H2:	Useful	Partially substitute for teaching	-0.238	0.190	No
	Ease		-0.165	0.339	No
	Suitability		-0.370	0.027	Yes
	Lecturer readiness		0.373	0.026	Yes
	Faculty readiness		-0.298	0.063	No
H3:	Useful	Information delivery	-0.098	0.564	No
	Ease		-0.046	0.772	No
	Suitability		-0.313	0.041	Yes
	Lecturer readiness		-0.513	0.002	Yes
	Faculty readiness		-0.042	0.781	No
H4:	Useful	Home work assigning and submitting	-0.167	0.364	No
	Ease		0.081	0.612	No
	Suitability		-0.564	0.001	Yes
	Lecturer readiness		-0.307	0.055	No
	Faculty readiness		-0.154	0.335	No
H5:	Useful	Communication between teacher and	-0.459	0.000	Yes
	Ease	students	-0.062	0.626	No
	Suitability		-0.046	0.739	No
	Lecturer readiness		-0.552	0.000	Yes
	Faculty readiness		0.151	0.244	No
H6:	Useful	Communication among students	-0.492	0.002	Yes
	Ease		-0.294	0.050	Yes
	Suitability		-0.157	0.348	No
	Lecturer readiness		-0.377	0.012	Yes
	Faculty readiness		-0.209	0.185	No
H7:	Useful	Lecturer note delivery	0.057	0.724	No
	Ease		0.043	0.804	No
	Suitability		-0.001	0.996	No
	Lecturer readiness		-0.570	0.001	Yes
	Faculty readiness		0.276	0.087	No

between teacher and students (Beta = -0.552), and among students in the same class (Beta = -0.377). Lecturer's readiness had also an influence on the desire for lecture note delivery (Beta = -0.570). This means that lecturers who believe that they are ready to use e-learning tend to have

a higher desire to use it more than lecturers who do not believe that they have a readiness to use e-learning.

In addition, the suitability had an effect on the desire for partially substitute for teaching (Beta = -0.370), information delivery (Beta =

Table 6. Regression analysis results (Student)

Hypothesis	First variable	Second variable	Beta	Sig.	Yes/No
H1:	Useful	Totally substitute for teaching	-0.048	0.344	No
	Ease		0.028	0.515	No
	Suitability		-0.379	0.000	Yes
	Student readiness		-0.063	0.195	No
	Faculty readiness		-0.157	0.001	Yes
H2:	Useful	Partially substitute for teaching	-0.285	0.000	Yes
	Ease		0.097	0.020	Yes
	Suitability		-0.201	0.000	Yes
	Student readiness		-0.171	0.000	Yes
	Faculty readiness		-0.064	0.167	No
H3:	Useful	Information delivery	-0.301	0.000	Yes
	Ease		0.095	0.028	Yes
	Suitability		-0.051	0.341	No
	Student readiness		-0.164	0.001	Yes
	Faculty readiness		-0.096	0.045	Yes
H4:	Useful	Home work assigning and submitting	-0.268	0.000	Yes
	Ease		0.014	0.752	No
	Suitability		-0.193	0.000	Yes
	Student readiness		-0.120	0.010	Yes
	Faculty readiness		-0.053	0.276	No
H5:	Useful	Communication between teacher and students	-0.378	0.000	Yes
	Ease		0.025	0.564	No
	Suitability		-0.114	0.025	Yes
	Student readiness		-0.107	0.019	Yes
	Faculty readiness		0.051	0.280	No
H6:	Useful	Communication among students	-0.271	0.000	Yes
	Ease		0.017	0.698	No
	Suitability		-0.213	0.000	Yes
	Student readiness		-0.072	0.132	No
	Faculty readiness		-0.067	0.154	No
H7:	Useful	Lecturer note delivery	-0.275	0.000	Yes
	Ease		0.040	0.376	No
	Suitability		-0.022	0.684	No
	Student readiness		-0.211	0.000	Yes
	Faculty readiness		-0.042	0.397	No

-0.313), and the lecturers assigning home work and students submitting assignments (Beta = -0.564). However, perceived ease of use and the faculty readiness had no effect on any other factors. This means that perceived ease of use and faculty readiness have less influence on the desire to use e-learning in this study.

Results from multiple regression analysis (stepwise method) showed that perceived usefulness, the suitability and student's readiness had more impact for the desire to use e-learning than other mediating factors. Perceived usefulness had an effect for partially substitute for teaching (Beta = -0.285), information delivery (Beta = -0.301),

homework assigning and submitting (Beta = -0.268), communicating between teacher and students (Beta = -0.378), communicating among students in the class (Beta = -0.271), and lecturer note delivery (Beta = -0.275). This means that students who perceived that e-learning is useful tend to use it in many ways.

The suitability had an influence on every factor except on class information delivery and lecture note delivery. It had an effect on the desire for totally substitute for teaching (Beta = -0.379) partially substitute for teaching (Beta = -0.201), homework assigning and submitting (Beta = -0.193), communicating between teacher and students (Beta = -0.114), and communicating among students in the class (Beta = -0.213). This means that students who believe that e-learning is suitable to use in class could use e-learning other things rather than just information or lecture note delivery.

In addition, student's readiness to use had an influence on every factor except on the desire for totally substitute for teaching. It had an effect on the desire for partially substitute for teaching (Beta = -0.171), class information (Beta = -0.164), homework assigning and submitting (Beta = -0.120), communicating between teacher and students (Beta = -0.107), and lecture notes delivery (Beta = -0.211). This means that students who believe that they are ready to use e-learning could use it more than students who do not believe that they are ready to use e-learning.

Conclusion

Even though lecturers at the Faculty of Business Administration have a limited knowledge about the use and ability of e-learning, they still think that e-learning is useful, not too difficult to learn how to use it, and can be partly used to substitute their teaching hours. However, most lecturers do not believe that they are ready for e-learning and need a lot of support from the faculty such as training, user manual, technical support from computer staff, time to learn and use, free and the correct amount of software and hardware. Moreover, some lecturers need some-

one to do all the technical work for them since they do not have a high computer skill.

Even though students think that e-learning is useful and they are ready for learning how to use it, they still do not want to be totally substitute for teaching. In addition most of them do need some support from the faculty in term of technical support, training, and computer hardware and software.

The most important issues that were raised by most lecturers and students at Faculty of Business Administration are the readiness of students, and the time for lecturers to learn and develop online course. Although in this study, faculty readiness had no effect on any of the desire to use, most lecturers and students provided further concerns about the numbers of computers for students and training support as major factors towards e-learning usage. Therefore, as suggested by King, Nugent, Russell, Eich & Lacy (2002) in their policy framework, all three areas (faculty, student, management & organization) must be given close attention in order to be successful in the implementation of e-learning at the faculty level.

Suggestions

Results from this research bring to many suggestions to the Faculty of Business Administration and the interested groups as follows:

1. Lecturers and students should have more understanding about e-learning prior to its implementation.

2. The faculty should prepare hardware, software and personnel to be ready to support the use of e-learning.

3. The faculty should set the policy concerning the use of e-learning before its implementation, such as teaching workload, performance appraisal of lecturers and staff who are involved in e-learning implementation, number of class to use e-learning, number of students in an e-learning class, etc.

4. E-learning should not be a totally substitute to lecturer, and should be used only 30% of the total teaching hours.

5. The faculty should prepare for tutors to help students in e-learning classes.

6. Any institute who wish to use e-learning should evaluate its usage before, during and after implementation in order to improve e-learning usage or policy in the future.

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