Study Satisfaction with E-Learning lessons in the subject “Search and Technology Information for Research” of graduate students, College of Logistics and Supply Chain, Suan Sunandha Rajabhat University

Sunisa Thongbaion *[1] and Krisada Krudthong [2*]

[1*] *Sunisa Thongbaion, College of Logistics and Supply Chain,*

Suan Sunandha Rajabhat University, Bangkok, Thailand

[2*] Krisada Krudthong College of Logistics and Supply Chain

Suan Sunandha Rajabhat University 1 U-thong Nok, Dusit, Bangkok, Thailand

E-Mail: sutisa.to@ssru.ac.th[1], krisada.kr@ssru.ac.th[2]

*Corresponding author

Abstract

This research aimed to 1. Create an e-learning lesson for the subject “Researching and Information Technology for Research.” 2. To evaluate the efficiency of the E-Learning lesson for the subject “Researching and Information Technology for Research” 3. To study the satisfaction of graduate students in the field of logistics and supply chain management towards the use of the e-learning lesson for the subject “Business Information Technology.” The sample group used in this research was a group of master's degree students at the College of Logistics and Supply Chain, Suan Sunandha Rajabhat University.

This research was questionnaire research. The sample group used in the satisfaction of online learning of the Ph.D. students in the field of logistics and supply chain management at Suan Sunandha Rajabhat University consisted of 18 items divided into 4 dimensions. The researchers tested the questionnaire using Cronbach's Alpha Coefficient, yielding a reliability score of 0.82768. The results of the research found that 1) after receiving e-learning, the students had an average academic achievement score of students in the subject of Searching and Technology. The findings provide valuable information for future research. At a statistical significance level of 0.05, the results were higher than before receiving e-learning instruction. Overall, the average value was at the highest level, which was ($\bar{X}$ = 4.40, S.D. = 0.56. When considering each item, it was found that, first of all, attending online classrooms according to the schedule provided by the university regularly was ($\bar{X}$ = 4.75, S.D. = 0.44). The study looked at how satisfied Doctor of Business Administration students in Logistics and Supply Chain Management were with online learning. The results showed that overall, the students in the sample group were moderately satisfied with online learning ($\bar{X}$ = 3.35, S.D. = 0.914). The average value was at a moderate level (($\bar{X}$ = 2.81, S.D. = 1.03). Third, there were issues with the learning support facilities. The mean score was at a moderate level ($\bar{X}$ = 2.65, S.D. = 1.54), and the mean score of environmental problems was at a low level ($\bar{X}$ = 2.17, S.D. = 1.54), respectively.

Keyword: Lesson, E-Learning, Information Technology for Research

1. Introduction

Online learning is seen as a sort of educational innovation that transforms conventional teaching techniques by integrating technology to facilitate instruction. Additionally, another interpretation refers to distance learning education conducted through a website. This form of learning entails utilizing a computer to browse the internet. Contemporary technology and the internet converge to facilitate high-quality interactive education, obviating the necessity for travel. It is readily available and easily accessible anywhere, at any time. The establishment of education (educator competencies and contemporary online learning management, 2020).

Due to the COVID-19 epidemic, the College of Logistics and Supply Chain has transitioned from in-person instruction to online education. This necessitates that teachers, staff, and students modify their learning behaviors to accommodate a new methodology. This is essential to guarantee the seamless and effective advancement of the teaching and learning process. The researcher aims to assess the satisfaction levels of graduate students in Logistics and Supply Chain Management at the College of Logistics and Supply Chain, Sunandha Rajabhat University, regarding their E-Learning experiences in the course "Search and Information Technology for Research." This will enhance two forms of online education, aligning them more closely with current developments. This may result in comprehensive online education in the future.

Online learning encompasses several definitions and interpretations, including the use of computers, Internet networks, intranets, extranets, television transmissions, or satellite signals. The knowledge may be presented in familiar formats, such as computer-assisted instruction, web-based instruction, online learning, or satellite-based distance learning, or in less common formats, such as video-on-demand learning. Currently, the majority of individuals, while referring to online learning (E-Learning), denote educational content or information specifically created for instruction or training, utilizing web technologies for content delivery. The course management system technology facilitates the administration of many instructional activities, allowing students engaged in online learning (e-learning) to utilize multimedia and interactive technologies for presentation.

The National Science and Technology Development Agency (2002:1) defined online learning as all forms of instruction and education that utilize electronic mediums to connect learners and educators; it may also be referred to as a teaching and learning process conducted through computers or electronic media devices, including video equipment, satellite systems, and the Internet. Currently, e-learning is an educational method that predominantly utilizes Internet technology to access numerous supplementary knowledge sources.

This is a summary of the aforementioned definitions and meanings: Online learning is defined as the process of education conducted through electronic media, facilitating communication between geographically distant learners and instructors, enabling education to occur at any location and time, and effectively addressing learners' interests and talents.

E-learning emerged as a reaction to distance learning. The learners are not required to convene at the same location simultaneously. The material from e-Learning Courseware, a meticulously designed and developed form of computer-based educational media, must engage students. The presentation of knowledge content using multimedia emphasizes non-linearity, incorporates interactive activities for learner engagement, and includes exercises and assessments for learners to evaluate their comprehension. We segment the e-learning courseware into components (modules). While studying independently, students must participate in online discussions, share their perspectives, and ask questions of their peers. Subsequently, the instructor may schedule a meeting for students to convene (either in person or virtually), but not for additional instruction in the conventional distance learning approach. The teacher can use this time to emphasize crucial concepts that students often find challenging or to answer questions that students have raised during their independent study before class. (Shaharudin, M. R., Abdullah, D., Zainoddin, A. I., Legino, R., & Wararatchai, P. ,2023). Nonetheless, the implementation of e-learning can enhance conventional educational approaches. When employed appropriately, educators need not rely on lectures as a pedagogical approach.

Content is regarded as the fundamental element in any educational system, including elearning. Nonetheless, while E-Learning is regarded as an emerging educational modality in Thailand, the quantity of generated content for this learning format is little. Meeting the requirements for education, training, knowledge growth, and the potential development of persons and organizations is insufficient. Nevertheless, pertinent institutions have persistently endeavored to address this issue. The National Science and Technology Development Agency (NSTDA) has established a collaborative network with prominent universities in the country, including Sukhothai Thammathirat Open University, to produce online English courses for office personnel. Furthermore, there is collaboration with King Mongkut's University of Technology Thonburi and other educational institutions. Colleges, schools, government agencies, and other stakeholders are actively transforming current content into online lectures. This indicates that knowledge producers will thrive in academic, professional, and indigenous knowledge domains.

E-learning is a pedagogical approach that enables learners to engage in self-directed study and acquisition of knowledge. Consequently, the learning management system functions as a hub that organizes the content order of lessons, transmits lessons across the computer network to learners, and assesses lesson effectiveness while managing and facilitating all services for learners. The Learning Management System (LMS) is deemed an essential element of e-learning since it facilitates the preparation of the curriculum and all instructional materials from the moment the student commences their studies. Upon the learner's initiation of the lesson, the system will commence operations by transmitting the requested lesson across the computer network (Internet, intranet, or other networks) for display on the learner's web browser. The system will then monitor and document progress, as well as generate comprehensive reports of the learner's activities and outcomes in each learning unit until the course concludes.

Distance learning typically involves autonomous study without the necessity of attending conventional classes. Students will acquire knowledge from printed materials, radio, television, and several other media. E-learning is a subset of distance learning; however, it is distinguished

by its use of interactive communication, which enhances learner engagement and enthusiasm for the material. Furthermore, it serves as a mechanism for learners to communicate, query, consult, and exchange ideas with both instructors and peers. Researchers can categorize communication tools into two distinct groups. 1) Real-time communication modalities, encompassing chat (text, voice), whiteboard/text slides, instantaneous annotations, interactive polling, conferencing, etc. 2) Asynchronous communication methods, such as web forums and email, among others.

Assessment is a crucial element that will enhance e-learning as a whole educational experience. Consequently, several subjects necessitate pre-enrollment knowledge assessments to assist students in selecting the most suitable lessons and courses. This will optimize the efficacy of the learning that transpires. Each lesson in the course will conclude with a minor exam at the chapter's completion and a major exam prior to the course's conclusion. The learning management system will retrieve exams from the Test Bank System, a component integrated within the LMS.

Other affirmative emotions, particularly those possessing a feedback mechanism, are present. Happiness might elicit other positive emotions. Thus, it is evident that happiness is a complex emotion, exerting a more significant impact on an individual than other pleasant emotions. Wichai (1988) posited a strong correlation between the notion of fulfilment and human needs. Universal fundamental requirements exist for all individuals; hence, fulfilment is achieved alone when these human wants are satisfied.

Kotler and Armstrong (2002) stated that human action is driven by a motivation or drive, which constitutes a compelling need that compels individuals to act in order to satisfy their own requirements. Individual demands vary significantly. Certain demands are biological and emerge from stressful circumstances, such as hunger or adversity. Certain needs emerge psychologically. These wants may arise from the pursuit of recognition, esteem, or a sense of belonging. Many needs may insufficiently motivate individuals to take action at the moment. Under adequate stress, necessities evolve into motives. The two predominant theories are Abraham Maslow's theory and Sigmund Freud's theory.

2. Objective

1. To create an E-Learning lesson for the subject “Research and Information Technology for Research”

2. To evaluate the efficiency of the E-Learning lesson for the subject “Research and Information Technology for Research”

3. To study the satisfaction of graduate students in the field of Logistics and Supply Chain Management towards the use of the E-Learning lesson for the subject “Business Information Technology”

3. Method

This study examines the satisfaction of graduate students in Logistics and Supply Chain Management at the College of Logistics and Supply Chain, Rajabhat Sunandha University, participating in the "Searching and Information Technology for Research" course. The study population comprised 30 students assessing satisfaction with online learning in the Doctor of Business Administration program at the College of Logistics and Supply Chain during Semester 1 of the Academic Year 2023. The study utilized a sample group. Sample cohort the determination of sample size will employ Taro Yamane's methodology at a 95% confidence level. Establish the permissible error margin at 5%. Replace the values in accordance with the formula to obtain the desired group. Instruments utilized in the research: The study utilized instruments for data collection, specifically a questionnaire developed through the following processes. Characteristics of the instrument: The instrument employed in this study was a questionnaire developed by the researcher, segmented into three sections, as outlined below: Part 1 consisted of a questionnaire regarding the respondents' general information. The checklist question inquired about the following aspects: gender, age, year level, equipment utilized for online learning, learning system, Internet system employed, and place for online learning. Part 2 comprised inquiries regarding students' perspectives on online learning, their happiness with online education, the Doctor of Business Administration Program, and the College of Logistics and Supply Chain. The question format consists of four components in a scoring scale: content and learning management, instructor presentation medium, learning activities, and assessments. Part 3 pertains to inquiries regarding issues, recommendations, and supplementary viewpoints. This is an open-ended question designed to enable responders to offer supplementary comments and suggestions beyond those in Part 2.

The instruments utilized in this investigation were developed as follows: Examine documents and research reports. This study examines the ideas, concepts, and principles related to online learning and student satisfaction in the Doctor of Business Administration program at the College of Logistics and Supply Chain. Utilize the data acquired from the study to design a questionnaire and have three experts assess its validity. The specialists who assessed the content validity of the questionnaire (IOC) comprise: Assistant Professor Samakkorn HoBantrad is a full-time educator focused on student satisfaction in online learning. Doctorate in Business Administration, College of Logistics and Supply Chain Assistant Professor Chalermwut Khammuang, Lecturer, evaluates student satisfaction with online learning in the Doctor of Business Administration program at the College of Logistics and Supply Chain. Assistant Professor Pairat Channgam, Lecturer, Doctor of Business Administration, specializing in Logistics and Supply Chain Management at Rajasuan Sunandha University. Analyze expert data to determine the average value of the questionnaire by selecting items with an average value of 0.50 or greater. The minimum consistency index recorded was 0.67, while the maximum was 1. Prior to testing, the professionals refined and enhanced the questions. A total of 30 individuals were employed to assess the reliability of the questionnaire, computing the Alpha coefficient using Cronbach's method. The questionnaire was employed to assess its reliability by calculating the coefficient alpha via the Cronbach technique. The questionnaire's reliability was 898, meeting the standards for use as a data gathering instrument.

Data analysis, the researcher conducted the analysis using a computer program for statistics and research. The researcher conducted the analysis, classifying the results into four steps: Part 1: General information of the respondents, classified by gender, age, grade level, equipment used for online learning, learning system, internet system used, and location used for online learning. We conducted the analysis using frequency distribution and percentage calculations. Part 2: Analysis of student satisfaction level towards online learning of Doctor of Business Administration students in Logistics and Supply Chain Management, Rajasuan Sunandha University, by finding the mean and standard deviation. Part 3: This study compares the satisfaction levels of Doctor of Business Administration students in Logistics and Supply Chain Management at Rajasuan Sunandha University with online learning, examining the differences between independent and dependent variables using the t-test and F-test statistics. For two independent variables, an independent t-test was used to look at the difference in means. For more than two independent variables, a one-way ANOVA or F-test was used to look at the differences in a way that was statistically significant. The researcher examined pairwise differences at the 0.05 significance level, or 95% confidence level, using the Least Significant Difference (LSD) method.

4. Results

The researcher looked at how happy graduate students in the field of logistics and supply chain management at the College of Logistics and Supply Chain, Suan Sunandha Rajabhat University, were with the e-learning lesson on "searching and information technology for research." Here are the results: (1) The level of satisfaction of the students in the Doctor of Business Administration program in Logistics and Supply Chain Management, Suan Sunandha Rajabhat University, overall, in each aspect is at a moderate level. (2) The comparison of the level of satisfaction of the students in the Doctor of Business Administration program in Logistics and Supply Chain Management, Suan Sunandha Rajabhat University, can be summarized as follows: (2.1) Categorized by gender, it was found that males and females had no different satisfaction with the online learning of the students in the Doctor of Business Administration program in Logistics and Supply Chain Management, Suan Sunandha Rajabhat University, both overall and in each aspect. (2.2) Categorized by age, it was found that the students in the Doctor of Business Administration program in Logistics and Supply Chain Management, Suan Sunandha Rajabhat University The results showed significant differences in both overall and individual aspects. (2.3) Students in the PhD business administration program in logistics and supply chain management at Suan Sunandha Rajabhat University were pleased with their learning. There were big differences between the groups in terms of teaching materials, learning activities, and exams, with a significance level of .05. As for the content and learning management, there was no difference. (2.4) Classified by the equipment used for online learning, it was found that the PhD Business Administration students in Logistics and Supply Chain Management, Suan Sunandha Rajabhat University, were not different in both overall and in each aspect. It was found that PhD Business Administration students at Suan Sunandha Rajabhat University were pleased with their online learning in Logistics and Supply Chain Management (2.5). This was categorized by the learning system used and showed a significant difference in the learning activities at a .05. As for the content and learning management, the mediums of the teacher's presentations, and the examinations, there was no difference. (2.6) Classified by the internet system used, it was found that the PhD Business Administration

students in Logistics and Supply Chain Management at Suan Sunandha Rajabhat University are not different in the overall picture and in each aspect. The overall picture and each aspect of students were similar regardless of their online learning location, at 70 percent.

5. Conclusion and Suggestions

It was found that students in the Doctor of Business Administration program in Logistics and Supply Chain Management at Suan Sunandha Rajabhat University were satisfied with their online learning. Based on the collected data, the researcher has the following suggestions: (1) Suggestions for implementation: The research showed that students in the Doctor of Business Administration program in Logistics and Supply Chain Management at Suan Sunandha Rajabhat University are moderately satisfied with their online learning. In order for students to access equipment and services of the university that facilitate students to be more satisfied with online learning during the COVID-19 situation, such as providing or lending electronic devices to increase access to equipment to be able to access learning more, and may be coupled with increasing the rounds of distributing SIM cards with internet and internet packages for students who already have electronic devices to be able to access the internet more, including publicizing through the Facebook of the organization that can easily reach the student group by publicizing easy and convenient learning methods or methods for self-development through various recommendations to stimulate students to be more interested in learning, or even organizing knowledge training, learning methods Self-development of students can enhance their ability to study effectively, potentially leading to a higher level of satisfaction with their studies. (2) Suggestions for future research: There should be a comparison of online study behavior during the COVID-19 situation of students from other universities that have measures for online teaching. Additionally, a study should examine the correlation between other factors that contribute to online learning satisfaction during the COVID-19 pandemic, such as extracurricular activities or training programs that provide supplementary knowledge beyond the scope of general education courses. And the population used in the study should be expanded, such as studying with students in other fields to cover the entire population of the College of Logistics and Supply Chain, Suan Sunandha Rajabhat University.

References

Chaiwong, P. (2019). Development of e-learning Lessons, Information and Communication Technology Courses For Mattayomsuksa 3 Students Yang Talat Wittayakhan School. Journal of Educational Technology and Communications. 2(4), 120-131. Retrieved May 25, 2022, from:

https://so02.tcithaijo.org/index.php/etcedumsujournal/article/view/242353/164505

Chuanchom, C. (2018). The Development of E-learning Lesson for Information Technology in Daily Life on Using Microsoft Office for Bachelor Degree at Burapha University. *Academic Journal of Thailand National Sports University*, *10*(3), 195-206.

Preecha Wararat Chai. (2019). Consumer behavior and service marketing strategies affecting customer satisfaction of Pracharat stores in Nakhon Pathom Province. Journal of Management Science Review, 21(1), 113-124.

Shaharudin, M. R., Abdullah, D., Zainoddin, A. I., Legino, R., & Wararatchai, P. (2023). The evolution of circular economy: A literature review on sustainability transitions and challenges. International Journal of Research and Innovation in Social Science (IJRISS).pp 102-115.

Wanchai Pengwan. (2016). Development of E-Learning lessons in the subject "Business Information Technology". Journal of Burapha University, Humanities and Social Sciences, 8(Special), 467-480.

Wichai Puarungroj, W., Pongpatrakant, P. and PhromkhotTrends, S. (2017). Trends in Modern Teaching and Learning Methods using Online Formative Assessment Tools. Walailak Journal of Learning Innovations. 3(2), 44-68. Retrieved January 30, 2023, from: https://so03.tcithaijo.org/index.php/jliwu/article/view/107667/85308