

The Factors Affecting to the Learning Management System in the Instructional Management of the teacher profession students in Computer Education

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Abstract

This research aimed to study the factors affecting to learning management system in the instructional management of the teacher profession students in computer education, Faculty of Education, Uttaradit Rajabhat University. The material was online questionnaires, and the participants were the second semester, academic year 2015 profession teacher students in computer education, Faculty of Education, Uttaradit Rajabhat University. Purposive sampling was conducted with 60 computer education students, and the statistical analysis was comprised of percentage, mean, standard deviation, IOC, and factor analysis. The research found that there were 9 aspects of the factors affected to learning management system in the instructional management of the teacher profession students. The utility was the most important aspect, following by the instructional activity planning, the LMS knowledge, the location, the Internet and computer, the device, the Internet speed, and the least important one, the communication.

Keywords: LMS, Computer Education, Online learning, Teacher profession students

Introduction

The main target in Thai education development was to develop the learners qualified with leaning process for the prosperity both individual and society with knowledge transfer, training, culture descending, maintenance and creativity, academic advance, body of knowledge from environmental, social, learning management, and the factors contributing individual to continuously learn through life (National Education Act of 1990, 1990).

In the present time, it was the era of everything changed rapidly and prosperously because the more technology was brought to connect a lot of information

from every region of the globe together. The trend of social transformation occurred in the 21st century which comprehensively influenced on the living way of society. In view of the instructional management, teachers had to be more active and ready to make the students skillful for heading out to survive in the 21st century. The most important thing was Learning Skill causing the transformation in instructional management for children in the 21st century to make them knowledgeable, competent, and in-need skillful, which was from the instructional management revolution including other preparations that contributed the learning as mentioned.

The education management via the Internet was to make the potential of information technology the incentive in learning management system. LMS was the online education management with network and device, and the significant elements for teachers, students, and administrators such as course management system, content management system, learner management system, and lesson management system, and communication management and interaction system such as chat, e-mail, and webboard etc (Pumpuang & Sosongchuen, 2014).

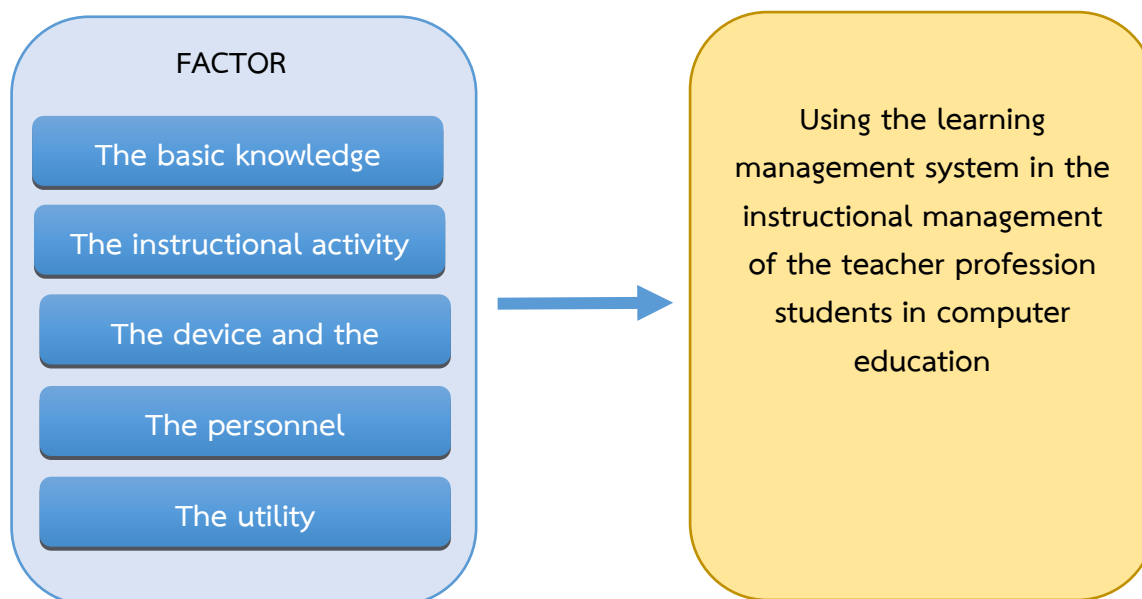
Learning management system was regarded as one of the most important devices to effectively manage the online instruction in the present. It could be seen from the research about the instruction management system development via network system of undergraduate level. It found that the learning achievement of the students who went through the instructional management was higher in the learning achievement (Buabangphol, 2011), and the research about the online instructional management development for teachers and students found that the online management supported working and studying both teachers and students, which the advantage of the system was that it was easy to use and ultimately comprehensive in the consumer dimension. (Neankratok & Ua-apisitwong, 2014)

From the reasons above, the researcher realized the LMS importance in the instructional management, which Faculty of Education, Uttaradit Rajabhat University had the students who were going to be teacher profession trainee in schools, and the students in computer education brought LMS to use as a device in the instructional management of computer education, Faculty of Education, Uttaradit Rajabhat University. The research was conducted to be as an alternative in selecting appropriate LMS of other fields students and next generation students and to be a guideline in designing and developing LMS in the instructional management further.

Objectives

To study factors affecting to learning management system in the instructional management of the teacher profession students in computer education, Faculty of Education, Uttaradit Rajabhat University.

Concept theory framework



Methods

In this research, it aimed to study factors affecting to learning management system in the instructional management of the teacher profession students in computer education, Faculty of Education, Uttaradit Rajabhat University by using survey research in collecting the information with online questionnaire.

3.1 The instrument in collecting data

In this research, the researcher used online Questionnaires divided into 2 parts: part one was the general data questionnaire and part two was the specific questionnaire asking about the factors affecting to learning management system in the instructional management of the teacher profession students in computer education, Faculty of Education, Uttaradit Rajabhat University. The instrument was combined with 5 rating scales: the basic knowledge, the instructional activity planning, the device and the location, the personnel, and the utility.

3.2 The instrument

The researcher constructed the instrument through the following procedures.

3.2.1 Study the textbook, the document, the academic article, the concept and theory, and the research related to the factors affecting to Learning Management System to be an alternative in creating the questionnaire.

3.2.2 Consider the factors expected to be related to using Learning Management System in the instructional management from the textbook, the document, the related research and consult with advisor for finding conclusion about factors to conduct the study and make it consistent to the research.

3.2.3 Design and create the draft of questionnaire by using the data from 3.2.2 and submit to advisor for examining and correcting each of the contents if it covers and conforms to the purpose.

3.2.4 Examine the content validity by having 5 specialists recheck and bring the result to find the congruence index and the purpose with the technique IOC (Index of Item – Objective Congruence) and improve the questionnaire as the specialists' recommendation.

3.2.5 Bring the qualified questionnaire from IOC to conduct with the population similar to the participant group: the 30 5-years teacher profession students in computer education, Faculty of Education, Bansomdejchaopraya Rajabhat University and bring the result to find out reliability by α – Coefficient of Cronbach.

3.2.6 Bring the result to revise the questionnaire for the complete version.

3.3 Data Collection

The researcher had the data conduction as the following.

3.3.1 Ask the cooperation from the students who were teacher profession trainee in each school in computer education, faculty of education, Uttaradit Rajabhat University to complete the questionnaire.

3.3.2 The researcher conducted the data collection by using online questionnaire within 1-2 weeks.

3.3.3 Bring the questionnaire to be rechecked about the accuracy and completion. After that bring the qualified questionnaire to be replaced and classified and grades based on the fixed criteria.

3.4 Data Analysis

3.4.1 Bring the data from the sample group to be assessed based on the statistics of research methodology by using SPSS (Statistic Package for Social Science)

3.4.2 Analyze the data from the questionnaire part one: the general data by explicating frequency and percentage.

3.4.3 Analyze the data from the questionnaire part two: the factors affecting

to using Learning Management System in the instructional management of the teacher profession students in computer education, faculty of education, Uttaradit Rajabhat University by finding Mean (\bar{x}), Standard Deviation (S.D.), and Factor Analysis by using Principal Component Analysis, Orthogonal Rotation, and Varimax Rotation.

Results

4.1 The results

From the research, the factors affecting to Learning Management System in the instructional management of the teacher profession students in computer education, faculty of education, Uttaradit Rajabhat University could be concluded as follows.

4.2 The general data analysis

From the general data analysis of the population who were the teacher profession students in computer education, faculty of education, Uttaradit Rajabhat University, it found that there were 24 male and 36 female and they were in between 20-25 years. Most of them were trainee in the junior high school 1-3, and the duration of using LMS in the instructional management was between 12 a.m. – 5 p.m. The LMS duration was 1-3 hours, and the school that used LMS was the training school. The Internet speed was more than 1 mb, and the regular used device in LMS instructional management was computer.

4.3 The analysis result of the factors affecting to Learning Management System in the instructional management of the teacher profession students in computer education, faculty of education, Uttaradit Rajabhat University

The result that extracted factors by using factor analysis in each aspect was comprised of 5 aspects as the followings.

4.3.1 The basic knowledge: the survey element analysis result could be grouped into 2 parts:

4.3.1.1 The knowledge related to LMS had the Eigen Value at 3.513 which consisted of 5 important variables. Those were the students realized LMS system had the variables value at 0.865, the students in the classroom knew the LMS system had the variables value at 0.792, the school personnel understood the LMS system had the variables value at 0.763, the trainees could construct LMS system to use in the instruction had the variables value at 0.826, and the students used LMS system such as Moodle, Atutor, Learnsquare, Edmodo, Google site etc. had the variables value at 0.771.

4.3.1.2 The Internet and computer using had Eigen value at 1.479 which consisted of two important variables: the trainees who could use computer and the Internet had the variables value at 0.887, and the students who could use computer and the Internet had the variables value at 0.850.

4.3.2 The instructional activity planning: the survey element analysis result could be grouped into 2 aspects.

4.3.2.1 The instructional activity planning had Eigen value at 6.424 which consisted of the six important variables: providing the system to create course and lesson had the variables value at 0.783, to make the knowledge source in the school had the variables value at 0.893, to collect the data and details of the students in class had the variables value at 0.805, to use in assigning the test and homework for students had the variables value at 0.730, to use in grading and evaluating the students' performance had the variables value at 0.867, and to use in browsing the statistics of students' attention had the variables value at 0.812.

4.3.2.2 The communication had Eigen value at 1.065 which contained one important variables. It was used in communication between teachers-students and students-students such as webboard, E-mail, and chat. It had the variables value at 0.823.

4.3.3 The device and location: the survey element analysis result could be divided into 3 parts.

4.3.3.1 The location had the variables value at 2.892 which contained four important variables: the school having computer and tablet for students had the variables value at 0.767, the Internet speed in the training school had the variables value at 0.542, that the school computers were enough for students had the variables value at 0.890, and that the school computers were ready to use had the variables value at 0.892.

4.3.3.2 The device had Eigen value at 1.284 containing two important variables: that the college students had their own computer, tablet, and smartphone had the variables value at 0.821, that the students had their own computer, tablet, and smartphone had the variables value at 0.821.

4.3.3.3 The Internet speed had Eigen value at 1.123 which contained two important variables: the Internet speed at the college students' homes had the variables value at 0.792, and the Internet speed at the students' homes had the variables value at 0.788.

4.3.4 The personnel: from the survey element analysis result, all variables were related to each other and had Eigen value at 2.928 which consisted of four significant variables: The school director supporting using LMS system in the instructional management had the variables value at 0.869, the students in favor of LMS system had the variables value at 0.831, the school teachers using LMS system in their instructional management had the variables value at 0.867.

4.3.5 The utility: from the survey element analysis result, all the variables were

related to each other and had Eigen value at 9.853 which consisted of 13 significant variables: studying at anywhere anytime had the variables value at 0.832, studying via the Internet had the variables value at 0.791, having the course management system had the variables value at 0.910, having the content management had the variables value at 0.921, having the performance assessment and follow-up system had the variables value at 0.905, having the communication instrument and interaction system had the variables value at 0.913, having the extracurricular activity during the class had the variables value at 0.909, being the knowledge center had the variables value at 0.846, having Chat system had the variables value at 0.794, having Webboard had the variables value at 0.871, being easy to be the teaching material had the variables value at 0.869, having the utilities for teaching had the variables value at 0.908, and being free software had the variables value at 0.842.

Conclusions and Discussion

According to the results of this research, the factors, which affected the learning management system in the instructional management of the teacher profession students in computer education, Faculty of Education, Uttaradit Rajabhat University, can be elaborated as follows.

The factors affecting the learning management system in the instructional management of the teacher profession students have 9 aspects. The most significant aspect was the utility. That is, compared with the others, its Eigen value was at 9.853. Additionally, the most significant valuable in this aspect was content management, which had the variables value at 0.848. This result was in line with Chaipojpanich&Chanwimol (Chaipojpanich & Chanwimol, 2003) who stated that LMS was software for course management, which had various functions designed for facilitating users for online instructional management. Moreover, (Pimhanam, 2003) also stated that LMS was developed for instructional activities, evaluation, testing, and commentary web board in each course, including following-up system for academic result.

The second most significant aspect was the instructional activity planning which had Eigen value at 6.424; moreover, the most significant valuable in this aspect was the grading and evaluating the students' performance had the variables value at 0.867. This result was accordance with Dachakubt's instructional management theory (Dachakubt, 2011). Her theory was about managing online instruction. It had software as a center for conveying instruction media through network system which facilitated users to access the contents anywhere and anytime. Additionally, an instructor could record instructional management efficiently in this program (Palinud, 2001)

The third most significant aspect was the knowledge related to LMS which had Eigen Value at 3.513, and the most important valuable in this aspect was the students' realizing on LMS which had the variables value at 0.865. The later orders of the aspects were the personnel, the location, the Internet and computer using, the device, and the Internet speed, respectively.

Finally, the least significant aspect was the communication which had the variables value at 1.065. This result was accordance with BuabangPhol (2011) which stated that learning management system was efficient and important equipment for online instructional management at the present time. Moreover, it was found that, according to the researches related to the development of learning management system via network at the higher education level, the performance of the students who studied through the system was higher (Buabangphol, 2011). According to the researches related to the development of online learning management system for instructors and students, it was found that this system could encourage both instructors' teaching and students' learning. The advantages of this system were easiness of its usage and various functions covering users' needs (Neankratok & Ua-apisitwong, 2014).

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