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The Design and Applied of Learning Management System via Social Media on Internet: Case Study of Operating System for Business Subject

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***Abstract*—**Learning Management System (LMS) is the system which uses to manage the learning in order to grouping the content and learning activity between the lecturer and learner including online examination and evaluation. Nowadays, it is the borderless learning era so the learning activities can be accessed from everywhere in the world and also anytime via the information technology and media. The learner can easily access to the knowledge so the different in time and distance is not a constraint for learning anymore.

The learning pattern which was used in this research is the integration of the in-class learning and online learning via internet and will be able to monitor the progress by the Learning management system which will create the fast response and accessible learning process via the social media. In order to increase the capability and freedom of the learner, the system can show the current and history of the learning document, video conference and also has the chat room for the learner and lecturer to interact to each other.

So the objectives of the "The Design and Applied of Learning Management System via Social Media on Internet: Case Study of Operating System for Business Subject" are to expand the opportunity of learning and to increase the efficiency of learning as well as increase the communication channel between lecturer and student. The data of this research was collect from 30 users of the system which are students who enroll in the subject. And the result of the research is in the "Very Good" which is conformed to the hypothesis.

***Keywords*—**Learning Management System, Social Media.

I. Introduction and Problem Statement

NOWADAYS technology starts to play more important role in the education sector in order to develop the learning process, expand the learning opportunity and also lead to the enhancement of the learning management system as the technology allow both lecturer and student to communicate with each other more comfortably. So this learning management system was widely applied because this system allows the lecturer to fulfill the student's need. So the education institute can apply the technology to respond to the student's need also be able to maximize the usage of the lecturer.

So the researcher decide to research in "The Design and Applied of Learning Management System via Social Media on Internet: Case Study of Operating System for Business Subject" by design the learning management system via social media as social media is the most recent kind of communication which develop by the trend of Web 2.0 computer technology. The system can show the recent data and also the past data for the learning document, video conference, chat room etc.

A. Research Objective

The research objective is to design the learning management system via social media on internet and applied in the operating system for business subject.

B. Research Hypothesis

The learning management system via social media on internet: case study of operating system for business subject will be able to ne used and received the "Very Good" level of user's satisfaction.

H0. $\mu \geq 3.51$

H1. $\mu < 3.51$

By assuming, μ = the satisfaction of the system user

C. Research Limitation

1. System Using Limitation can be divided into 8 processes which are
1.1 Home page – To show the general information and news.
1.2 Video Conference – To view the live broadcast learning and watch the in-class learning video.
1.3 Forum – To shoe and post the comment and also create the topic.
1.4 Online Lesson – For the online self-learning by the student.
1.5 Online Test – For pre-test and post-test by the student.
1.6 Class Textbook – For the students to download and study by themselves
1.7 Chat Room – For the intermediate chatting and FAQ
1.8 Searching – To finding the related data or information
2. Content Limitation
2.1 The content which related to the process management subject.
3. Population Limitation

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3.1 30 normal users which are the students who are the system's user and also enroll in the operating system for business.

D. Research Value

The learning management system via social media on internet and applied in the operating system for business subject has been launched into the real practice.

II. Literature Review

Learning management system (LMS) has been defined in several aspects such as "LMS is the system which able to manage the learning via the network [1]. The system will contain several tools for lecturer, student and system administration which are subject management system, content management system, student management system and communication management system."[2], "LMS is the subject management software which has tools to assist the lecturer in the online class session. It objects to support the student, instructor, registration and administrator."[3], "LMS is the online learning management system which is the software to assist the virtual classroom management system. So the education institute will let the user to have a login and password in order to manage the learning by themselves and the administrator and lecturer can monitor those data by themselves as well." [4]

There is also the research about Learning Management System such as the research which aimed to study and analyze the infrastructure and computer networks for distance education, online learning via new media, e-learning and blended learning. The index assesses the consistency of the analysis to the design of the infrastructure and computer network for distance education, online learning via new media, e-learning and blended learning. The results of the testing were averaged by 9 specialists are 3.85. That the infrastructure and computer network for distance education, online learning via new media, e-learning and blended learning is designed to be appropriate to a great extent [5].

III. Research Methodology

A. Research Population and Sample

The system's satisfaction will be evaluated by the purposive selected populations which are 30 system users.

B. Research Operation

In the development process of the research, the researcher has divided the research operation into 4 stages.

1. Data Collection Process

1.1. Study and collection of general information and data from the journal and related research and also include the literature review in order to the perfection of system design.
1.2. Collection of the content in the operation system for business subject.
1.3. Collection of demand of the system and identify the capability of the system.
1.4. Study the process of the process.
1.5. Study the information of the system design and develop tool.

2. Analyze and Design Process

2.1. Define the requirement of the system
2.1.1. System requirement
2.1.1.1. CPU speed is 2.8 GHz at least
2.1.1.2. Hard Disk is 150 GB at least
2.1.1.3. Operating System is Windows XP or higher
2.1.1.4. SQL Database management system
2.1.1.5. Adobe Dreamweaver is installed
2.1.2. System capability
2.1.2.1. System development as a web application
2.1.2.2. The system will be able to show the data to the user
2.1.2.3. Video conference will be able to broadcast the live in-class teaching.
2.1.2.4. Forum will be able to post the message into the webboard.
2.1.2.5. Online Lesson will be able to allow the learning to have a self-study.
2.1.2.6. Online Test will be able to let the learner to do the pre-test and post-test
2.1.2.7. Class Textbook will allow the learner to upload and download the text book or document in soft file (PDF file) to use in the in-class learning.
2.1.2.8. Chat Room will be able to send and receive the real-time chat message.
2.1.2.9. Searching will allow the learner to search for the data via the search bar.

3. System Development Process

The system is developed by the Adobe Photoshop, Dreamweaver, Wordpress and database management program (MySQL). The system will use the Adobe Photoshop to design and edit the picture file and use Google Chrome as a web browser to initiate the system.

4. Evaluate Process

After the system has been designed and developed, the system's satisfaction was evaluated by 30 system users. The testing and evaluation process can be divided into 4 parts which are

4.1 Functional Requirement Test
4.2 Function Test
4.3 Usability Test
4.4 Security Test

In the evaluate process, the researcher has set the range of the score in the evaluation form into 5 range as Table I.

TABLE I
Range of the Score

Score	Meaning
4.51 – 5.00	The develop system has a very good quality
3.51 – 4.50	The develop system has a good quality
2.51 – 3.50	The develop system has a moderate quality
1.51 – 2.50	The develop system has a low quality
1.00 – 1.50	The develop system has a very low quality

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C. Statistics Tools in Analyzing the Data

Mean is the sum of the data from the evaluation process and divided by the number of the sample as (1):

$$\overline{X} = \frac{\sum X}{N} \quad (1)$$

assuming $\overline{X}$ = Mean of the evaluation; $\sum X$= Sum of the evaluation result; N = Number of the system user.

Standard Deviation is the value which shows how much variation exists from the average as (2).

$$\text{S.D.} = \frac{\sqrt{\sum (X-\overline{X})^2}}{N} \quad (2)$$

assuming S.D. = Standard Deviation; X = Result of the evaluation; $\overline{X}$ = Mean of the evaluation; N = Number of the system user.

IV. Research Result

In this part, there will be discussion about 2 main issues of the research which is the result of system development and result of the system's satisfaction.

A. Result of System Development

The main page of the program is shown as Fig. 1. And the user interface of the program was shown as Figs. 2-7.

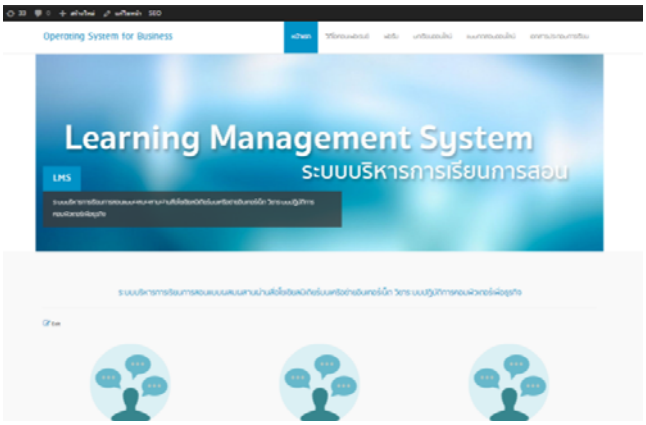


Fig. 1 Main Page

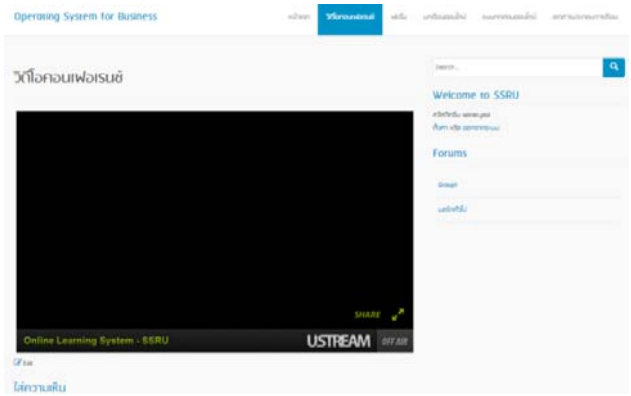


Fig. 2 Video Conference Page

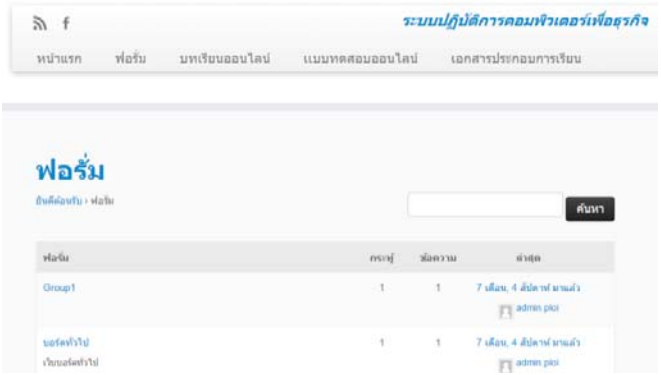


Fig. 3 Forum Page

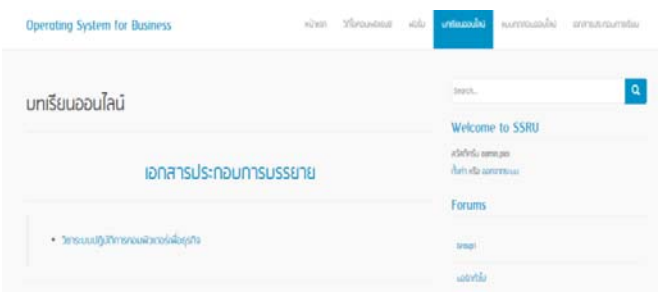


Fig. 4 Online Class Lesson Page

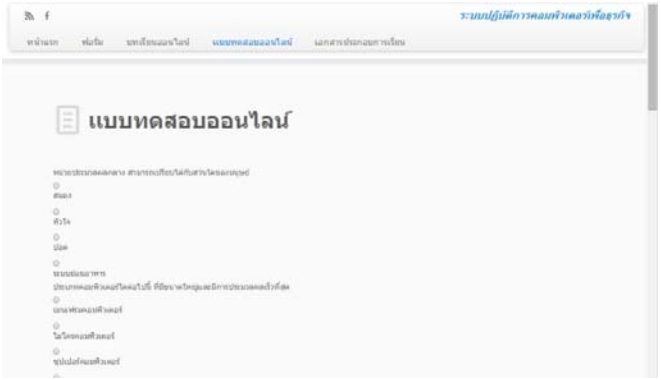


Fig. 5 Online Test Page

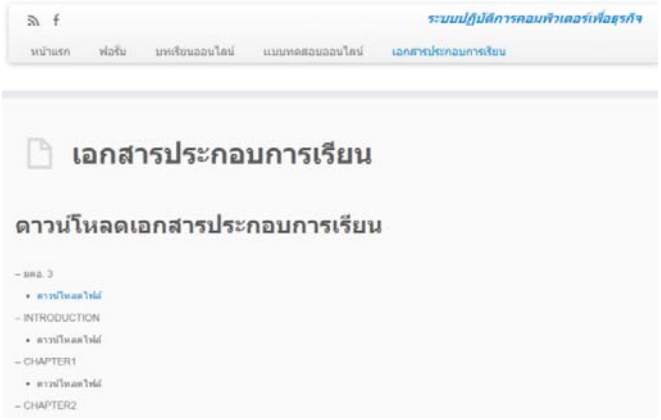


Fig. 6 Class Textbook Page

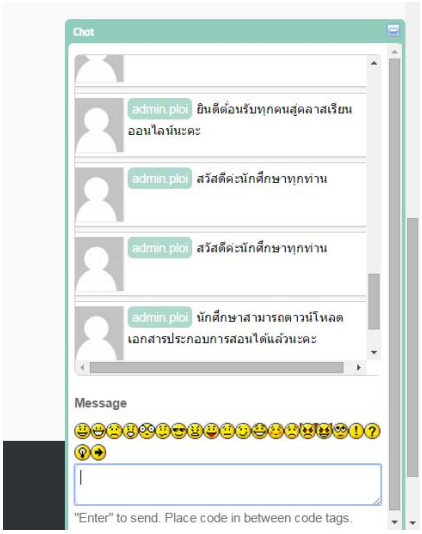


Fig. 7 Chat Room Page

B. Result of the System Satisfaction

The research was evaluated by the system users which are 30 students who enroll in the subject and the result of the evaluation is "Very Good" level for the usage of the system, system performance match with the user need and accuracy of the system and "Good" level in security of the system as shown in Table II.

TABLE II
EVALUATION RESULT

List of Evaluation	Result		
	$\overline{X}$	SD	Range
System performance match with the user need	4.63	0.61	Very Good
Accuracy of the system	4.53	0.51	Very Good
Usage of the system	4.60	0.56	Very Good
Security of the system	4.33	0.88	Good
Overall	4.51	0.11	Very Good

V. CONCLUSION

The conclusion of the result evaluation of the system is "Very Good". So the result and the hypothesis of the design and applied of learning management system via social media on internet: case study of operating system for business and be able to adopt to use in the real world.

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REFERENCES

[1] Watson W. R., Watson S. L. "An argument for clarity: what are learning management systems, what are they not, and what should they become?" TechTrends, Springer Verlag (Germany), 2007, 51(2), pp.28-34.
[2] Pumpuang K., "Meaning of Learning Management System, 2004.
[3] Chaipojpanich C., "Learning Management System, 2004.
[4] Laohacharasszaeng T., "Web-Based Instruction", e-Journal of Education, Chiang Mai University, Thailand, 2001.
[5] Nuanmeesri S., 2014, 'A Design of the Infrastructure and Computer Network for Distance Education, Online Learning via New Media, E-Learning and Blended Learning ', World Academy of Science, Engineering and Technology, International Science Index, Knowledge and Innovation Engineering, 2(9), 122.

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