Development of Online Teaching Management Model in Schools under Office Secondary Educational

Phra Suriya Dhitapasato (Na Nakorn)¹, Phramaha Sombat Dhanapaño², Phramaha Chamnan Mahajāno³, Phramaha Padet Chirakulo⁴

¹,²,³,⁴ Faculty of Education, Mahachulalongkornrajavidyalaya University

Abstract: The purposes of this research were 1) to study the problem condition of online teaching management in secondary schools, 2) to develop an online teaching management model in secondary schools, and 3) to propose an online teaching management model in secondary schools. The method were 1) quantitative research, which the 343 samples were analyzed by means of statistical analysis, mean and standard deviation, and 2) qualitative research using focus group discussion of 9 experts, and 12 expert panelists to review the appropriateness of a model. Data was analyzed by content analysis. Results indicated that 1) Problems in online teaching management overall, it was found that at a high level. When considering each aspect, it was found that online measurement and evaluation were at the highest level, and the context or environment in online teaching is at the last level. 2) Development of an online teaching management model in secondary schools, the elements of online teaching and learning management consist of: (1) Learners have knowledge and skills in information technology, (2) Instructors have qualifications, experience, knowledge and understanding of the subjects taught, counseling, (3) Lessons, the content taught is up-to-date and can be applied in daily life, (4) Context in online teaching, modernization of media, technology and innovations that facilitate learning in the curriculum, (5) Activities, Teaching and Learning that focuses on learners are provided, (6) Online measurement, Measure and evaluate the results consistent with the content and the objectives of the learning group. This also requires participation of the school administrators and parents. 3) The experts examined the model of online instructional management in secondary schools and found that it was appropriate and feasible to use in schools for the management of online teaching in secondary schools.

Keywords: Online Teaching, Management, Educational

I. INTRODUCTION

The current situation of the COVID-19 epidemic has resulted in the postponement of school openings. And the spread of online learning management methods through the internet network and information has increased a lot, so teachers as the transfer of knowledge to students have adapted. And prepare skills to deal with new learning management practices in a timely manner always ready for any uncertainty that may arise. Skills in the management of learning via the internet or various operating systems that rely on classroom management, which are different from the normal classroom in a school. Teachers' knowledge transfer skills are very important in teaching and learning. Whether it is lesson plans, teaching materials and classroom management through online networks. Teacher preparation and skill training. Whether developing skills in technology, communication and transfer. Being a good mentor including enthusiasm in managing factors related to learning management and evaluate the results that are most
appropriate to the situation in order to perform the duties of a teacher. It fosters an effective learning process for students by finally transcending location constraints and obstacles. These things must be understood, accessed, and developed. It is a valuable sustainability theory that can be applied to it can be applied in school management services as well. Both the administrative and practical levels are teachers. By using technology to integrate with teaching and learning management to be effective and effective. [1].

Online learning is another educational innovation. Which can change the old way of learning to be a new learning that uses technology to help teach. In principle, it is self-study through the internet. Learners can choose to study according to their own preferences. As for the content of the course, consisting of text, images, audio, vdo and other multimedia, these will be sent directly to the learner through the Web Browser, both the learner, the teacher and all classmates can contact, communicate, consult, exchange. Opinions are the same as in general classroom learning by using E-mail, Chat, Social Network, etc. For this reason, online learning. Therefore, it is very suitable for the current world situation to prevent infection from the Covid-19 epidemic.

In order to effectively manage education in the current situation and to improve the overall quality of education in the country, Dr. Kanokwan Wilawan, Deputy Minister of Education has established an online education management policy. This is a free education without any cost. With the cooperation of educational institutions that have an online teaching system. That is ready to support the service to use the school's online system to private schools and other affiliates across the country. In the hope that online learning will be able to educate children and youth appropriately. By studying at home, gain knowledge, be safe from the epidemic. Enhance the quality of education thoroughly and creating opportunities for everyone to learn for free. Study anywhere and anytime.[2].

In fact, online teaching has begun to be mentioned in the study of higher education institutions for a long time. Whether it is caused by teaching and learning at the bachelor's and graduate programs of leading educational institutions in foreign countries. But that has become awake of educational institutions are the teaching system of short courses for the masses Massive Open Online Course (MOOC) that has caused a stir, resulting in the project of Thailand Cyber University (TCU) to become concrete. By a network of leading universities across the country.[3].

The systems that are commonly used in online MOOC teaching are as follows:
1. Edx is an online teaching management system that has received the most attention in the world because there is a course content covering all subject areas and importantly, for free. There will be an additional cost to receive a certificate. There are also high quality courses from universities and institutes. Lots of quality from all over the world it was founded by MIT and Harvard, and has joined more than 50 universities and institutions to develop online courses in a variety of fields, such as engineering. Computer science, science and many other fields. Open Edx online teaching management system is also open source for agencies who want to develop their own online teaching management system to use. Therefore, it is popular in various agencies such as KMOOC, JMOOC, Thai MOOC, etc.
2. Coursera is an online teaching system that is equally popular with Edx, with courses from more than 100 universities around the world such as Stanford, Princeton, Bocconi, Centrale Paris, etc. Coursera is a for-profit educational organization. by applying technology to education. Founded by Andrew Ng and Daphane Koller in 2012, there is a model of operation. It partners with universities to offer online courses covering a wide range of subjects including arts,
economics, life sciences, law, computer science, chemistry, and many more, taught by qualified teachers. Global Reputation Coursera has now partnered with five universities to expand its bachelor's degree programs and Masters and is Coursera's first time to give students a real degree.

3. Khan Academy is a non-profit organization offering free education for the purpose of expanding quality education opportunities to people around the world. Through the online teaching management system khanacademy.org. The System has the main teaching tools, which are video and follow-up as the main learning activities. Currently, there are many subjects in various fields such as mathematics, science, programming, computers, history, art, etc., from kindergarten to high school level. And there are many languages used in teaching in addition to English such as Spanish, Portuguese, Hebrew, Italian, Russian, Chinese, Turkish, French, Bengali, Hindi, German and Thai was founded by Salman Khan, an American ethnic group. Bangladesh-India Line Has a former hedge fund analyst and has graduated from both MIT and Harvard Business School.

4. Udacity was founded in the same year as Coursera by Sebastian Thrun, David Stavens and Mike Sokolsky foreseeing that classroom teaching can normally only accommodate up to 200 people per class, and most learners. There is a learning behavior that likes to watch teaching videos backwards more than because they are free to learn. Therefore, the Udacity system was created, focusing on opening courses in subject areas. Computer science but later expanded to include mathematics, physics, and business. Study in a way that students can plan on their own. So students can study as much as they want each week. Suitable for students with little free time. In addition, the curriculum is divided into 3 levels: beginner, intermediate and advanced to suit the learners.

5. Canvas is an LMS system that is different from Edx Coursera and general MOOC platforms, focusing on providing convenience in managing online courses within the organization or within the university. Canvas is popular in Colleges and Universities in the United States to provide services in open source and freemium.

6. Future Learn is an online MOOC-based teaching and learning management system that has features similar to the general MOOC Platform. Communication tools Between learners and learners and tutors, because future learn believes that talking about what is learned with others in general can lead to new learning opportunities and approaches, making online learning more successful. There is also the open university, which is a document company that supports, maintains and manages it, making it believable that course online and such systems are of very high quality.

7. Udacity is a MOOC-based online teaching and learning management system that aims to is access knowledge from the best universities around the world it offers learning content that focuses on emerging science and technology to provide the best solution for learners interested in specific content areas. To be able to study deeply from Udacity.

8. Open Education Europa is a MOOC-style online teaching and learning management system developed as a gateway to innovation in learning in European countries by the European Commission. It was first launched in september 2013 as part of the Open Education Initiative to provide a single gateway to European Open Education Resources. Presentation of open educational resources all european tutoring is available in multiple languages so that it can be presented to learners, teachers and researchers. Additionally, Education Europa is a dynamic online tutoring management platform built with the latest open source technology with interactive capabilities such as chats, webboards, etc.
9. The Open University is an online MOOC-style teaching and learning management system that focuses on the adaptation of learners who have never studied online before. Because the system has a user interface design that is easy to understand and has a system to help students and other features to learn, focus on ease of use by the content learned mostly about innovations. With the rapid growth of internet networks and digital technology, websites are considered to be powerful and efficient tools with flexible tools spread all over the world flexible in learning management especially the management of distance learning. Like classroom teaching, teachers must provide activities and experiences for students. Students taking into account and good teaching. Learners and Teachers should interact with each other, so online teaching is not just about creating web-based lessons. In order for the learners to come to study the content of the lesson only, but still need to organize teaching activities with the students in mind.

II. RESEARCH OBJECTIVES

The objectives of this research article were 1) to study the problem condition of online teaching management in secondary schools, 2) to develop an online teaching management model in secondary schools, and 3) to propose an online teaching management model in secondary schools.

III. RESEARCH METHODS

Research subject development of an online teaching management model in secondary schools under the office of secondary education. The research model is research and development. Mixed method was used to collect data during qualitative research, and quantitative research by this research. The researcher has defined a total of 3 research steps as follows:

Step 1 To study the problems of online teaching and learning management in secondary schools, there are 2 steps:
   1. Study from documents and research.
   2. Study from distributing questionnaires about the problems of online teaching and learning management in secondary schools.

   1. Study from documents and research
      Method of conducting research: Study of problems from documents related to the components of teaching and learning management, online teaching, and educational institutions' information.
      Sources: from books, textbooks, articles, related research, websites
      Tool: Document Study
      Data Analysis: Content Analysis
      Results: Problems in online teaching and learning management in secondary schools
   2. Study from the distribution of questionnaires about the problems of online teaching and learning management in secondary schools under the office of secondary education.
      Source: 3,909 teachers/personnel of secondary schools under the secondary education service area office, open a table showing the sample sizes of Craigie and Morgan. A sample size of 343 people was obtained by multistage randomization.
      Tool: Questionnaire
Data Analysis: Content Analysis and Statistical Analysis, i.e. Percentage, Frequency Distribution, Mean, and Standard Deviation.

Results: Problems in online teaching and learning management in secondary schools under the office of secondary education.

Step 2: Develop an online teaching and learning model in secondary schools under the office of secondary education. There are 3 steps as follows:

1. Drafting a model for online teaching and learning in secondary schools under the office of secondary education.
   Data source: results from objective number 1
   Tool: Document Study
   Data Analysis: Content Analysis
   Outcome: A model for the development of online teaching and learning management in secondary schools under the office of secondary education. (Draft No. 1)

2. Develop an online teaching and learning model in secondary schools under the office of secondary education by Focus Group Discussion
   Data source: 3 groups of experts, 9 people: (1) experts in online teaching and learning management; (2) academics in teaching and learning management; (3) administrators of educational institutions. By choosing a specific type of selection criteria.
   Tool: Group Discussion Question Guide
   Analysis: Content Analysis
   Outcome: A model for the development of online teaching and learning management in secondary schools under the office of secondary education. (Draft No. 3)

3. Examine the development model of online teaching and learning management in secondary schools under the office of secondary education by interviewing
   Data source: 12 qualified persons by selecting a specific method and determining the selection criteria.
   Tool: Pattern Check Form
   Data Analysis: Content Analysis
   Outcome: A model for the development of online teaching and learning management in secondary schools under the office of secondary education. (Draft No. 3)

Step 3: Present a model for the development of online teaching and learning management in secondary schools under the office of secondary education, by improving, revising and presenting, there are steps as follows:

Data sources: 1) Principal advisor 2) Co-advisor 3) Researcher
Tool: Document Study
Analysis: Content Analysis
Outcome: A model for the development of online teaching and learning management in secondary schools under the office of secondary education.

IV. RESULTS

The results of the study of problems in online teaching management in secondary schools from the study of documents on the components of teaching and learning management, online teaching, and educational institution information. It can be classified into 4 aspects: 1) the learner side. 2) instructor of teaching techniques 3) evaluation aspect and 4) the process of teaching and learning as follows:
1) Learners
   1.1) Lack of response or feedback from learners.
   1.2) Students submitting incomplete assignments.
   1.3) Not sure that students understand or did you learn according to the objectives or not?
   1.4) Students do not attend all classes due to communication problems and internet connection network. Students who have lost their mobile internet have to top up while teachers go online with school internet.
   1.5) Unable to contact students to schedule appointments
   1.6) Students do not have knowledge of using the Application used in learning.
   1.7) Do not study the work file, Pre-learning documents
2) Instructor of teaching techniques
   2.1) Not sure which platform to use for teaching and learning.
   2.2) Lack of expertise in using programs or online platforms.
   2.3) There is a problem with the readiness of the computer equipment, for example, the performance of the machine is not support (spec)/ camera/ microphone and other necessary accessories.
   2.4) There is a problem with speed and stability of internet bandwidth.
   2.5) Emphasis on conveying the content of the subject, but not on the development of students' thinking processes. By thinking that when knowing the content of the course students will be able to think on their own. On the other hand, with the current IT system, if students have the correct thinking process it is very easy to access and transmit the subject matter that students are interested in.
3) Evaluation aspect
   3.1) There is no clarity on the content and methods of assessment of learning. in the course which must be changed according to the situation.
   3.2) There is a problem in organizing the online exam.
4) The process of teaching and learning
   4.1) It takes a long time to prepare to teach/adapt the lesson to be online.
   4.2) It takes longer than usual to teach live online sessions (Live Session).
   4.3) Take more time to inspect work than usual.
   4.4) Practical teaching or activities in the courses taught are not suitable for online teaching.
   4.5) It is necessary to find activities to stimulate learning all the time, making online teaching challenging.
   4.6) It takes more time to communicate with students both during class time and outside school hours.
   4.7) Must coordinate with parents and students through various communication channels, Line, Facebook, and other channels.

V. DISCUSSIONS

The results of the review of the community in the field of conservation indicated that in online learning. Learners are the key and essential element of the center of education, as success in an e-learning system is directly related to its path, both in terms of Plan the design, assessment, and organization of an online learning environment. All of which are considered support teaching and learning activities the e-learning system is not only meaningful. For students only it is
meaningful to all stakeholders in the education system, such as teachers, support personnel and educational institutions.[4]. For example e-learning teaching systems are promising. That will only be meaningful to learners if it is easily accessible, organized and well-presented. Focus on student-centered, efficient flexible and a good learning environment that can facilitate convenient for students when learners participate in learning activities and achieve or succeed in learning. According to the learning objectives and goals of studying in the course happiness from studying will affect the level. Satisfaction and help reduce the number of learners who drop out in the middle all of which will directly affect educational institutions in budget and investment terms.[5].

In online learning related learning theory that the author has presented is Gaye's learning theory, because most educators adhere to the nine-step instructional management process of Gaye in designing and developing web-based lessons. The details are as follows:

Step 1: Motivate or Encourage learners to be interested in the lesson and the content to be learned (Motivate the Learner). Providing attention-grabbing environments such as the use of graphics, animations and/or the use of audio to accompany the lesson in the introduction section.

Step 2: Inform Learners of Learning Objectives, it is very important to inform learners of the purpose of this lesson, especially for teaching on the web. where learners able to control their own learning by choosing to study the content that they want to study by themselves, so that the learners know the purpose of the lesson in advance makes the learner can focus go to the relevant lesson content. They can also choose to study specific content that they still lack understanding to help do. To provide learners with knowledge and abilities that meet the objectives of the lessons that have been defined.

Step 3: Review previous knowledge related to lesson content, Recall previous knowledge encourages learners to learn new content more quickly. In the past, the tutorials on the web can be done in a number of ways, for example: Q&A activities or grouping for learners to discuss or summarizing the content that has been studied before, etc.

Step 4: Present the Material to be Learned, It can be done in many forms: Presentations can be made with text, pictures, audio, or even video. However, it is important that teachers focus on the learners. Instructors should consider the characteristics of the learners as a priority in order to the presentation of the lesson is most suitable for the learners.

Step 5: Provide Guidance for Learning Guidelines for learning Means to guide students to apply the knowledge gained. New learning mixed with old knowledge that has already been learned. To enable learners to learn faster and more accurately.

Step 6 Involve students in learning (Active Involvement), Educators are well aware that learning arises from students having the opportunity to have directly involved in the teaching and learning process. Therefore, students should be given opportunities to participate in learning activities which may be done by organizing online discussion activities in synchronous format or exchanging ideas via webboards in asynchronous format, etc.

Step 7 Provide Feedback One of the distinctive features of web-based teaching and learning is the fact that teachers can communicate with learners directly and closely. Because the role of the teacher change from being the sole knowledge transfer become a guide and help direct the learning of individual learners. With the ability of the Internet that allows learners and teachers to stay in touch with each other at all times, enabling teachers to monitor progress and provide feedback to students. study each with convenience.

Step 8 Testing Knowledge, Testing the learner's ability is another important step because it allows both the learner and the teacher to know the level of knowledge and understanding that
the learner has. Learning has to do with the content of the lesson. Web-based knowledge testing can take many forms. Whether it's multiple-choice exams or subjective exams, organizing large or small group discussion activities, etc. which this test learners can do able to test on the web via network.

Step 9 Memorization and Implementation (Providing Enrichment or Remediation) can be done by connector designation (Links) that allow learners to choose to study additional content in will be helpful in applying the knowledge gained.

The results of the analysis of the development of online teaching management model in secondary schools the elements of online teaching and learning management are:

1. **Learners:** Having sufficient knowledge base in studying according to the courses offered. Knowledge and skills in information technology, Have a good relationship with classmates, Responsible for assigned tasks, Have a love of learning and enthusiasm for studying well-behaved, Have time to study and learn according to the curriculum can participate in student development activities confident in knowledge, Teacher's ability, Take pride in coming to study

2. **Instructors** are instructors with qualifications, experience, knowledge and understanding of the subjects taught. Able to research classes and build new knowledge able to provide academic services to the community and society. Able to communicate and use Thai language able to communicate and use foreign languages. Able to use computers and information technology have professional ethics. Have morals and ethics able to organize the learning process both inside and outside the classroom. Able to work with others effectively, possessing knowledge, Consulting experience and time. There are methods of teaching and learning to encourage learners to innovate. Reflecting on the content taught encourages ideas to create common ideas and to be able to apply the ideas that arise. Organize activities to promote creativity New ideas that are artificial intelligence in learning for students to develop more ideas and can be applied for maximum benefit.

3. **Lessons** or content taught online, i.e. are consistent with the course objectives, each course suitable for the number of credits. The course is up-to-date knowledge. There is an appropriate order of courses in learning. The total number of credits throughout the course is appropriate. The basic courses of the course are appropriate. Additional courses of study are appropriate. The content of the course is not too difficult or too easy. The content of the course is up-to-date and can be applied in daily life. The activity category for student development is appropriate, and there are practices for social service activities. There is a policy to encourage all courses, both before and after classes, in order to develop teaching and learning for learners to be effective.

4. **Context or Environment** in online teaching and learning, such as the sufficiency of classrooms, meeting rooms, audio-visual rooms and laboratories. The suitability of classrooms, meeting rooms, audio-visual rooms and laboratories. Ease of use of educational materials and equipment appropriateness and modernity of online libraries, books, journals, documents, textbooks according to the curriculum. Modernity of media, technology and innovations that facilitate learning in the curriculum. The Convenience of the online library search service. The sufficiency of the number of computers with internet links in the library. The Convenience and speed of connecting to the Internet network. Encouraging and encouraging instructors to attend national/international academic meetings, online research databases related to and convenient for teachers to access, provide books, journals, documents, textbooks related to each course of study into the online library. As well as to promote the faculty to produce a variety of books and textbooks that are modern and suitable for application in teaching provide an environment in the online classroom to promote learning, inventing, thinking of students, etc.
5. Online teaching activities include teaching and learning that focuses on learners. By reducing the proportion of knowledge transfer by teachers and increase the proportion of practice and exchange of learning between learners teaching and learning management. According to the potential of learners provide opportunities for students to participate in teaching and learning planning. Assign students to work on a time-appropriate piece. Organize extra-curricular activities for students both inside and outside the classroom. Always check the assignments assigned to students and notify students of the results. Teaching and Learning that uses technology to help enhance learning of teachers and students. Organize activities that are contemporary and meet the needs of society. Organize activities that are consistent with the identity of the school. Support and follow up on activities to improve even further. have knowledge development activities.[6]. The ability of the instructors in each subject. There is a policy to promote and develop teachers in the field of language and technology to teach students to be interested in the content they learn. Have more teaching skills This causes students to be willing to study because teachers have good teaching techniques and teaching abilities. Organize extra-curricular activities for students both inside and outside the classroom to develop teaching and learning experiences for students, enabling students to be creative. And able to apply knowledge in daily life effectively provide teaching materials in the classroom and outside the classroom to stimulate creativity, reflection, and to promote learning of students even more.

6. Online Assessment and Assessment: scoring criteria are clearly defined and students are notified. Measure and Evaluate a variety of results and meet real-world conditions. Measure and Evaluate the results consistent with the content and the objectives of the learning group. Measure and assess students' abilities, taking into account individual differences. There is a process for students to participate in measuring and evaluating their own learning. There are measurements and assessments aimed at encouraging students to be creative.[7]. There are continuous measurements and evaluations before during and after the end of the course. The assessment results are used for student development and teaching. Academic results are announced to students within a specified period of time. Assessment criteria and exams are clearly defined. Bring the results of measurement and evaluation of teaching and learning. as well as the results of the evaluation of teaching and learning activities to develop and improve teaching and learning to be more effective.

VI. RECOMMENDATIONS

A. Recommendations for Policy
1. Government and Related agencies should lead to the development of online teaching management model in secondary schools to develop to be able to practice.
2. Government and Related agencies budget should be provided to support the preparation of the development of online instructional management model in secondary schools.

B. Recommendations for Practices
1. Development of an online teaching and learning management model, there should be a method for teaching and learning to encourage learners to innovate. Reflecting on the content taught encourages ideas to create common ideas and to be able to apply the ideas that arise.
2. Development of an online teaching and learning management model, the sufficiency of classrooms, meeting rooms, audio-visual rooms and laboratories should be encouraged.
3. Development of an online teaching and learning management model, have knowledge development activities the ability of the instructors in each subject group. There is a policy to
promote and develop teachers in the field of language and technology to teach students to be interested in the content they learn.

4. Development of an online teaching and learning management model, Assessment criteria and exams are clearly defined. Bring the results of measurement and evaluation of teaching and learning. As well as the results of the evaluation of teaching and learning activities to develop and improve teaching and learning to be more effective.

C. Recommendations for Further Research

1. Because this research is a study of the issue of developing an online teaching and learning model in secondary schools. Should focus on strategic issues/strategies for academic administration production of digital teaching materials, etc.

2. Should develop an online teaching management model in secondary schools with the virtue of honesty.

CONCLUSION

Development of an online teaching management model in secondary schools, there are elements of online teaching and learning, which are: 1. Learners must have sufficient knowledge base in studying according to the courses offered. Knowledge and skills in information technology, have a love of learning and enthusiasm for studying, have time to study and learn according to the curriculum. 2. Teachers can use computers and information technology, have professional ethics, have morals and ethics able to organize the learning process both inside and outside the classroom. There are methods of teaching and learning to encourage learners to innovate. 3. Lessons or content taught online, The content of the course is not too difficult or too easy. The content of the course is up-to-date and can be applied in daily life. The activity category for student development is appropriate, and there are practices for social service activities. There is a policy to encourage all courses, both before and after classes, in order to develop teaching and learning for learners to be effective in the future. 4. Context or environment in online teaching and learning, there is a sufficient number of computers with internet links, convenience and speed of connecting to the Internet network. 5. Activities of online teaching and learning, there is an instructional management that focuses on learners. Assign students to work on a time-appropriate piece. Always check the assignments assigned to students and notify students of the results. Organize teaching and learning that uses technology media to help enhance have knowledge development activities, the ability of the instructors in each subject group. 6. Online measurement and evaluation, the grading criteria are clearly defined and students are informed. There is a process for students to participate in measuring and evaluating their own learning. There are measurements and assessments aimed at encouraging students to be creative. There are continuous measurements and evaluations before, during and after the end of the course as well as the results of the evaluation of teaching and learning activities to develop and improve teaching and learning to be more effective.

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