

# PREPARING ONLINE EXAM GUIDE IN MOODLE SYSTEM FOR GENERAL EDUCATION COURSES

Sureeporn Phuangthong<sup>1</sup>, Suwannarit Wongcha-um<sup>2</sup>

<sup>1</sup>The Office of General Education and Innovative Electronic Learning, Suan Sunandha  
Rajabhat University

<sup>2</sup>Faculty of Humanities and Social Sciences, Suan Sunandha Rajabhat University  
*Email:* suriporn.ph@ssru.ac.th<sup>1</sup>, suwannarit.wo@ssru.ac.th<sup>2</sup>

## ABSTRACT

The objectives of this research are 1) to build knowledge and understanding in working to be the same standard and 2) to reduce errors in the work by measuring the number of complaints and problems of the examination. Estimated from the number of complaints about problems with the examination. Assessment of the satisfaction of using the manual online examination system from 400 users. The data are analyzed by using frequency, percentage, mean and standard deviation.

The results of the research show that 1) the operation using the online exam manual system can manage the event more efficiently. There is a decrease in the number of students' complaints in conducting the final semester comprehensive examination. In the first semester, the number of complaints is 0.97%, the second semester, the number of complaints is 0.19%, and in summer semester, the number of complaints is 0.17%. 2) The results of the satisfaction analysis by using the online exam manual, in terms of the book form, it is found that the overall satisfaction is the most level. When consider in each item, find that the color and design are interesting in which text size is easy to read and the arrangement of the images, the text is well organized and the satisfaction level is highest. For content find that overall is the most satisfied when considering each item, it is found that the completeness/sufficiency of the content in the manual is the most satisfactory.

**Keywords:** Manual, Online exam system, General Education Course, Moodle system

## INTRODUCTION

The spread of the Coronavirus Disease 2019 (COVID-19) has caused an adjustment to a new way of life or New Normal. Especially in educational institutions that cannot manage teaching and learning. Therefore, it is necessary to use an online learning model to ensure continuous learning. In this regard, online learning has components such as instructors, learners, content, learning media, learning resources, process communication system, information technology, network system, educational measurement and evaluation, and learning models. There are many learning's methods that allow teachers and students to interact together. By considering the format is consistent and suitable for the subject characteristics and the context of the learners that will lead to the application for effective

online learning management. As a result, learners achieve objective learning outcomes [1].

Currently, the creation of a learning management system via the Internet or commonly known as "e-Learning system" is gaining immense popularity. Whether it is an educational institution, a government organization or a private organization, there is an e-Learning system for employees to use within the organization. By learning through the e-Learning system, there are advantages that students can learn anytime, anywhere, not limited by date, time and place. Moreover, some organization applies the e-Learning system for evaluating employees. Before the assessment, there will be a set time for the learners the content, including the learner can set a password and the time period for each course LMS (Moodle, ATutor, Claroline, Open LMS , eFront, etc.) [2].

The Office of General Education and Electronic Learning Innovation has set up a fully online learning format in accordance with the COVID-19 virus epidemic situation. The Office of General Education and Electronic Learning Innovation has chosen Moodle System in which instructors and lecturers in the same course are able to fully manage the course structure. For the course structure creating can be scheduled to be taken on a weekly basis or as a non-deterministic course that students can choose to study on their own. Furthermore, course content management is very flexible, able to adjust to include activities in each week of the course, such as quizzes, forums, assignments, glossaries, resources, choices, surveys, Chats and workshops. Therefore, the researcher is interested in studying the Quiz Module processing in order to create the knowledge and understanding of the work practices to be the same standard. It also can be a reference document in work that personnel can work interchangeably. Additionally, in order to reduce mistakes in the work because there is no operating manual in this section.

## **LITERATURE REVIEW**

Moodle is web-based course management software. By setting up a website management system that supports administrators, lecturers and students. There are tools to support organize knowledge resources, activities and learning environments via the web effectively. This system has been developed based on Open-Source Software such as PHP and MYSQL [3]. Moodle activities consist of the following:

1. Teacher activities, it is an activity that can apply membership, the moderator approve and assign as a lecturer or course creator. In which the instructor creates a course, can define the nature of the course, add documents, lessons, sequence of events as appropriate, announce news or arrange a conversation with students. Furthermore, this Moodle can be backed up as a single file, restore data that was previously backed up or use it on another device, and can download student scores recorded from activities to be processed in Excel. Including, it able to set student groups to facilitate the management of large numbers of students. The lecturer can also cancel students in the course in which in the case that found the students behave inappropriately or attending the wrong course and monitor each student's activities, such as how often a lesson is read or test scores, add an appointment or events displayed with a calendar create content in SCORM or create GIFT exams and import them into the system.

2. Student Activities, it is an activity that students can apply for membership and wait for membership approval (Some systems can apply and attend immediately). They can learn from reading documents or lessons that the instructor determines to study at an appropriate time, leaving questions or comments and conversation between lecturers and students. Including, students able to do activities as assigned, such as doing exercises or submitting homework, able to edit their own personal information and read the lecturer's bio fellow students in class or in a group.

## METHODOLOGY

Develop online examinations manual for General Education subjects by using the Moodle system. Evaluate the comparative results from the number and percentage of problem submissions caused by errors in the examination system management.

## RESULTS

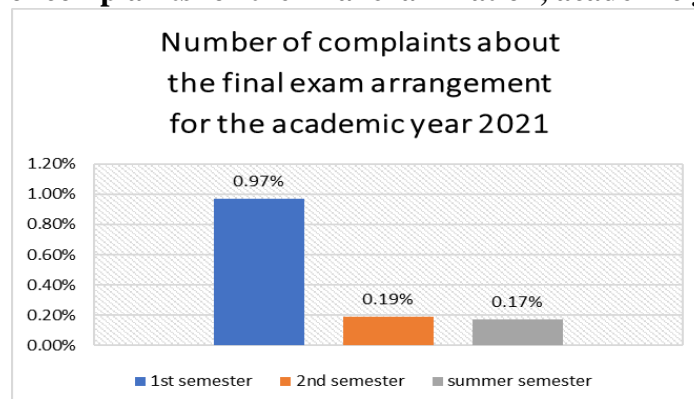
### The result of Implementation online examination system manual

As a result, form creating an online examination system manual for General Education subjects and practice by using Moodle system. It is found that it could manage the event more efficiently. From the summary report, the number of students accepting applications for the Comprehensive Examination at the end of the semester has decreased as shown in Table 1.

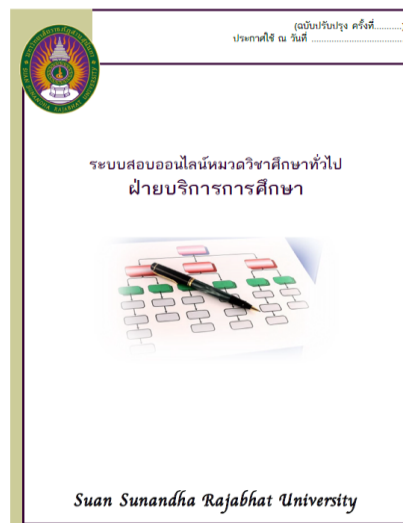
**Table 1 Comparison** of complaints number for the final examination, final examination, 2021

Academic year 2021	Credit	Complaints number	Percentage
Semester 1	32,494	315	0.97
Semester 2	25,321	49	0.19
Summer Semester	1,180	2	0.17

**Figure 1**  
Number of complaints for the final examination, academic year, 2021



**Figure 2**  
**Handbook of the online examination system for General Education subjects using the Moodle system**



**คำนำ**

คู่มือการปฏิบัติงานระบบสอบออนไลน์หมวดวิชาศึกษาทั่วไปนี้ จัดทำขึ้นเพื่อให้ผู้ปฏิบัติงานใช้เป็นแนวทางในการดำเนินงาน การปฏิบัติงานมีตั้งแต่การขอคู่มือจัดการสอบประมวลผลความรู้ การรับข้อสอบจากผู้ปฏิบัติงาน และการจัดส่งข้อสอบฉบับต้นฉบับที่ศึกษาที่ขอปฏิบัติงาน

ซึ่งในคู่มือวิชาการสาขาวิชาที่เป็นวิชาการอื่น ๆ ตามที่กระทรวงศึกษาธิการได้ประกาศ การให้สัตยาบันและอนุมัติกับภาคส่วนการศึกษาในการจัดการเรียนการสอน และจัดสอบอยู่ตลอดเวลา ดังนั้น การปฏิบัติงานควรมีการตรวจสอบและยึดตามรายวิชาที่เป็นสอบของสำนักวิชา การศึกษาทั่วไปฯ ให้สามารถดำเนินการสอบออนไลน์หมวดวิชาศึกษาทั่วไป ไปปฏิบัติได้เป็นอย่างดี

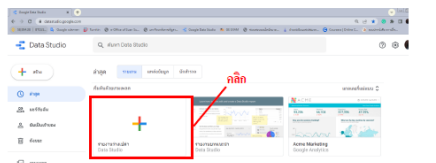
ผู้จัดทำมีวัตถุประสงค์ 1) วัตถุประสงค์ของการจัดทำคู่มือ 2) ขอบเขตของกระบวนการ 3) วัตถุประสงค์เฉพาะ 4) หน้าที่ความรับผิดชอบ 5) ความสะดวกของการปฏิบัติงานและผู้เกี่ยวข้อง 6) วัตถุประสงค์ที่ 6) ชื่อตำแหน่งที่รับผิดชอบของกระบวนการ 7) กระบวนการและขั้นตอนการปฏิบัติงาน (เดิมและใหม่) 8) ทรัพยากรการปฏิบัติงาน และ 9) รายละเอียดของขั้นตอน

ขอให้ผู้ที่เกี่ยวข้องและปรับแก้ความจำเป็นของข้อมูลการปฏิบัติงานที่กำหนดของ คู่มือฉบับนี้ ให้ตรงกับเหตุการณ์และปรับปรุงระบบสอบออนไลน์หมวดวิชาศึกษาทั่วไป

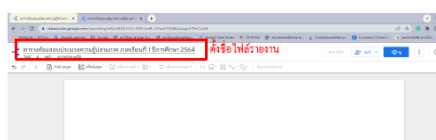
สมหญิงคำ  
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**2. การสร้าง Google Data studio**

- 2.1 เข้าเว็บไซต์ <https://datastudio.google.com/>
- 2.2 เลือกที่ **สร้างรายงานใหม่** เพื่อสร้างรายงาน ดังรูป

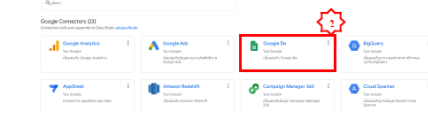
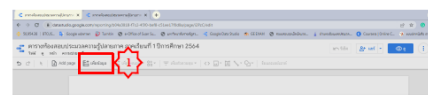


- 2.3 คัดเลือกรายงาน และออกจากหน้าเว็บไซต์ <https://datastudio.google.com/>

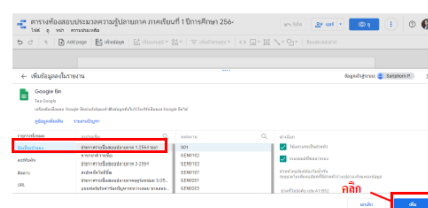


**2.4 เชื่อมต่อข้อมูล data studio ไปยัง Google sheet เลือก เพิ่มข้อมูล**

sheet



- 2.5 เลือก Google sheet ที่ต้องการนำมา เชื่อมต่อข้อมูล แล้ว คลิก เพิ่ม เพื่อเพิ่มรายงานใหม่ตามจุดที่ต้องการข้อมูล และตั้งชื่อให้ดู ใช้ชื่อ Record Count



**The result of satisfaction analysis using the online examination manual**

Mean stratification equation is used to interpret the mean of scores.

**Formula:** Class Interval = (Highest score – Lowest score) / Number

For example: Class Interval = (5–1)/5 = 0.8

Criteria for interpreting mean values are as follows:

- 1.00 – 1.80 mean least satisfied
- 1.81 – 2.60 mean less satisfaction
- 2.61 – 3.40 mean moderately satisfied
- 3.41 – 4.20 mean very satisfied
- 4.21 – 5.00 mean most satisfied

**Table 2 Mean and Standard Deviation of Satisfaction using the Online Examination Manual in term of Handbook**

Handbook	Satisfaction Level		
	Mean	S.D.	Meaning
1. Colors and designs are attractive.	4.65	0.489	Highest
2. Font size is easy to read	4.60	0.598	Highest
3 . Arrangement of images and text are appropriate and orderly	4.40	0.598	Highest
4. Ease to communication	4.10	0.718	High
<b>Total</b>	<b>4.44</b>	<b>0.197</b>	<b>Highest</b>

From Table 2, the mean and standard deviation of the satisfaction by using the online examination manual in term of Handbook found that the overall is at the highest level (mean = 4.44). The highest level of satisfaction are attractive colors and designs (mean = 4.65), font size that is easy to read (mean = 4.60), and text arrangements are appropriate and orderly (mean = 4.40), followed by at a high level is the ease of communication (mean = 4.10), respectively.

**Table 3 Mean and Standard Deviation of Satisfaction using the Online Examination Manual in term of content**

Content	Satisfaction Level		
	Mean	S.D.	Meaning
1. The completeness/sufficiency of the content in the manual	4.75	0.444	Highest
2. The process is continuous and clear	4.70	0.470	Highest
3. Easy to read and understand	4.70	0.470	Highest
4. Up to date	4.60	0.503	Highest
<b>Total</b>	<b>4.69</b>	<b>0.242</b>	<b>Highest</b>

From Table 3, the mean and standard deviation of the satisfaction using the online examination manual in terms of content found that the overall is at the highest level (mean = 4.69). It can be sorted as follows: first, the completeness/sufficiency of the content in the manual (mean = 4.75), clear continuity (mean = 4.70), easy to read and understand (mean = 4.70) and up to date (mean = 4.60), respectively.

### **The use of research results in routine work**

From the research results, it is found that personnel or various departments that use the online learning system by using Moodle system can be used as a guideline for online learning operation and can operate exams more efficiently.

## **CONCLUSION**

The result of using the online examination manual is found that it could manage the event more efficiently. From the report summary, the number of students complaining about the preparation of the comprehensive final examination has decreased in the first semester. The number of problems reported is 0.97 percent. In the second semester, the number of

problems reported is 0.19 percent, and in the summer semester, the number of problems reported is 0.17 percent, respectively.

Satisfaction analysis results of using the online examination manual in terms of handbook, the mean and standard deviation of satisfaction by using the online examination manual is found that the overall is at the highest level (mean = 4.44). The most satisfied is colors and designs are attractive (mean = 4.65), font size is easy to read (mean = 4.60), and images and text are arranged appropriate and orderly (mean = 4.40), the ease of communication is at high level (mean = 4.10), respectively.

In terms of content, the mean and standard deviation of satisfaction by using the online examination manual is found that the overall content is at the highest level (mean = 4.69). All items can be ranked as follows: first, the completeness/sufficiency of the contents (mean = 4.75), followed by clear continuity (mean = 4.70). Easy to read and understand (mean = 4.70) and the content of the manual up to date (mean = 4.60), respectively.

## DISCUSSION

Implementation of the online examination manual can manage work more efficiently. From the summary of the report of complaints for the final examination preparation, the number of students decreased in the first semester, the number of complaints is 0.97 percent. In 2<sup>nd</sup> semester, the number of reporting problems is 0.19% and 0.17 percent in summer. As the results of the satisfaction analysis by using the online examination manual in terms of print and content, it is found that the satisfaction is at the highest level in both areas. When the manual is well prepared and appropriate can be used to work, the job will result in more efficient operations. But if the developed manual can be used for operation, it must be revised and retested. It consisted with the work of Sodsai Lertdej (2019) that studies the development of a manual for administrative operations and correspondence, Faculty of Humanities and Social Sciences, Nakhon Sawan Rajabhat University. A study of the problems of clerical work and correspondence work and development of a manual for clerical work and correspondence to be more effective is found that there is an issue with a typo, complex text. The format of the manual is still incomplete; so many details in the manual must be adjusted. Online learning is very popular in today's teaching and learning because it can respond to students' needs quickly and easily accessible at any time, resulting in a better quality of learning. As well as Suksai, P. and Intharaphu, E. [5] who have studied "Online Activity Learning on the Art of Photography for the Second Year Innovation and Educational Technology Students" of 35 people found that the quality of online lessons on the art of photography by experts was at a very good level. Efficiency of online lessons from field experiments with real samples, the E1/E2 values were 82.37/84.69. It can be concluded that Online lessons created for those students to use as learning activities in the art of photography are effective according to certain criteria. And from the comparison of learning achievement, there was higher learning achievement after learning than before learning. The learning satisfaction of learners from learning activities with online lessons was at a very satisfied level. It can be concluded that learning activities with online lessons on the art of quality photography can be used in teaching and learning.

## REFERENCES

- Wayo, W., Charoennukul, A., Kankaynat, C., & Konyai, J. (2020). Online Learning under the COVID-19 Virus Epidemic Situation: Concepts and Application of Teaching and Learning Management. *REGIONAL HEALTH PROMOTION CENTER 9 JOURNAL*, 14(34), 285–298. Retrieved from <https://he02.tci-thaijo.org/index.php/RHPC9Journal/article/view/242473>
- Anat Rattanathirakul. (2010). Build an e-Learning System with Moodle Complete Edition. Bangkok : SE-EDUCATION.
- Silpakorn University. (n.p.). Manual of SU e-Learning system. Retrieved June 6, 2022, from [https://elearning.su.ac.th/pluginfile.php/4374/mod\\_resource/content/1/Manual.pdf](https://elearning.su.ac.th/pluginfile.php/4374/mod_resource/content/1/Manual.pdf).
- Loeddet, S. (2020). The Development of Clerical Work and General Administration Manual Handbook Faculty of Humanities and Social Sciences at Nakhon Sawan Rajabhat University. *The Academic Journal: Faculty of Humanities and Social Sciences Nakhonsawan Rajabhat University*, 6(2), 276–287. Retrieved from <https://so05.tci-thaijo.org/index.php/hssnsru/article/view/241649>
- Suksai, P., & Intharaphu, E. (2018, September 26). Online Activity Learning on the Art of Photography for the Second Year Innovation and Educational Technology Students. <http://eresearch.ssru.ac.th/handle/123456789/712>