

Online Monitoring Learning Progress in RMUTSB

Luxsanan Ploywathanawong

**Faculty of Science and Technology, Rajamangala University of Technology Suvarnabhumi (RMUTSB),
Suphanburi 72130, Thailand**

E-mail: luxsanun_p@rmutsb.ac.th

บทคัดย่อ—การสร้างเว็บไซต์รายงานผลการเรียนนักศึกษา สามารถช่วยอาจารย์ฝ่ายวิชาการ จัดการ ตรวจสอบ ติดตามความก้าวหน้าทางการเรียน และการลงทะเบียนเรียนในแต่ละเทอม ด้านนักศึกษา ส่งเสริมความกระตือรือร้น ความก้าวหน้า และการลงทะเบียนเรียนในแต่ละเทอม ผู้วิจัยได้ทำการประเมินผลการใช้งานระบบด้วยการหาความพึงพอใจของเว็บไซต์รายงานผลการเรียนนักศึกษาที่พัฒนาขึ้น โดยใช้วิธีการเลือกกลุ่มตัวอย่างแบบเจาะจง (Purposive Sampling) ประชากรเป็นนักศึกษาระดับปริญญาตรี คณะวิทยาศาสตร์และเทคโนโลยี มหาวิทยาลัยเทคโนโลยีราชมงคลสุวรรณภูมิ โดยแบ่งเป็น 2 กลุ่ม ดังนี้ กลุ่มแรกเลือกจากนักศึกษาระดับปริญญาตรี คณะวิทยาศาสตร์และเทคโนโลยี มหาวิทยาลัยเทคโนโลยีราชมงคลสุวรรณภูมิ ศูนย์สุพรรณบุรี จำนวน 30 คน, และกลุ่มที่สองเลือกจากอาจารย์ที่ปรึกษา หรือผู้ที่เกี่ยวข้อง จากมหาวิทยาลัยเทคโนโลยีราชมงคลสุวรรณภูมิ จำนวน 10 คน ผลการวิจัยพบว่า เว็บไซต์รายงานผลการเรียนนักศึกษาที่สร้างขึ้นมีค่าเฉลี่ยและส่วนเบี่ยงเบนมาตรฐานความพึงพอใจของนักศึกษา ต่อการใช้เว็บไซต์ ของนักศึกษารวมอยู่ในระดับมากที่สุด ได้ค่าเฉลี่ย 4.30 และมีค่าเฉลี่ยและส่วนเบี่ยงเบนมาตรฐานความพึงพอใจของอาจารย์ ต่อการใช้เว็บไซต์ ของอาจารย์รวมอยู่ในระดับมากที่สุด ได้ค่าเฉลี่ย 4.47 แสดงให้เห็นว่า เว็บไซต์รายงานผลการเรียนนักศึกษาที่สร้างขึ้นสามารถนำไปใช้ในด้านการจัดการตรวจสอบ ประเมินผล และแสดงคะแนนของนักศึกษา ซึ่งช่วยลดความผิดพลาด ช้ำซ้อนของข้อมูล สะดวกในการตรวจสอบข้อมูลความก้าวหน้าทางการเรียนของนักศึกษา ในภาพรวมทั้งหมดได้โดยตรง ส่งผลดีในการวางแผนการเรียน และการจัดการตารางเรียนได้อย่างเหมาะสม

Abstract—Online Monitoring Learning Progress (OMLP) website was developed to support the reporting of student grade results in RMUTSB (Rajamangala University of Technology Suvarnabhumi, Suphanburi campus). The level of satisfaction to OMLP website was evaluated using purposive sampling method. The population for sampling are students and instructor from RMUTSB, which are thirty-students from faculty of science and technology in RMUTSB and ten-instructors from RMUTSB. The evaluation results of OMLP website shown the highest level of satisfaction for both student and instructor users. The OMLP website has been fully developed. Therefore, the OMLP website was helped instructors in teaching, management and report the grading results of the student. As a result of the promotion of teaching and learning. This system can be reduce the error, redundancy in the registration of students, and convenient for monitoring the progress of learning appropriately.

Keywords—Online Monitoring Learning Progress; grade results; Support Student Systems.

I. INTRODUCTION

Rajamangala University of Technology Suvarnabhumi, Suphanburi campus (RMUTSB) is a university located in Suphanburi, Thailand. RMUTSB providing undergraduate and graduate level of education. Presently, the registrar office of RMSTSB has an effective Registration system available. However, the accessible of student's grade results for instructors and advisors were not convenient to use, which cause problems in the registration of students and complicate to scheduling the course time table. Therefore, the development of Online Monitoring Learning Progress (OMLP) was designed to address the problems we have with the current systems. The OMLP was aimed to provide the easier way with an easy-to-use interface for instructors or advisors to view the grade results of students.

II. LITERATURE REVIEW

This report was presented, Web creates new challenge for client/server applications. Currently, no data transmission over the network with a web server. There can be long, complicated than anticipated by many computer scientists. Programmers need to learn a new application architecture, skills, processes and programming on mainframes. Client/server environment has been designed with an easy format. Graphics program has been designed for use in a relational database, the command logic, business rules database format. Which are written and stored in the database. And links on the site [1].

III. METHODOLOGY

The procedure for developing Online Monitoring Learning Progress (OMLP) website for undergraduate students from faculty of science and technology of RMUTSB was performed as follows:

- a) Study the literature review and planed the research schedule.
- b) Gathered and analyzed information about the method to evaluate the grade result in RMUTSB.
- c) Design the website.
- d) Investigate user satisfaction survey form to evaluate the effectiveness of OMLP website.
- e) Develop and test the designed website.
- f) Advertise the website
- g) Used the developed website
- h) Maintain and updating the website

add/delete/edit news announcement; add/delete/edit courses; and view grade result of students.

Group II Students: User was allowed to view news announcement; edit profile; add school record; add school record (not calculated grade); view faculty member information; view grade results; edit/delete school record; and edit/delete school record (not calculated grade).

Group III Guest: User was allowed to view news announcement of the website.

Moreover, the OMLP website has a utility function to generate the report, which are convenient for students and instructors to keep tracking the progress of students.

B. User interface of OMLP website

The screen shorts of user interface were illustrate in Figure 2 to 5.

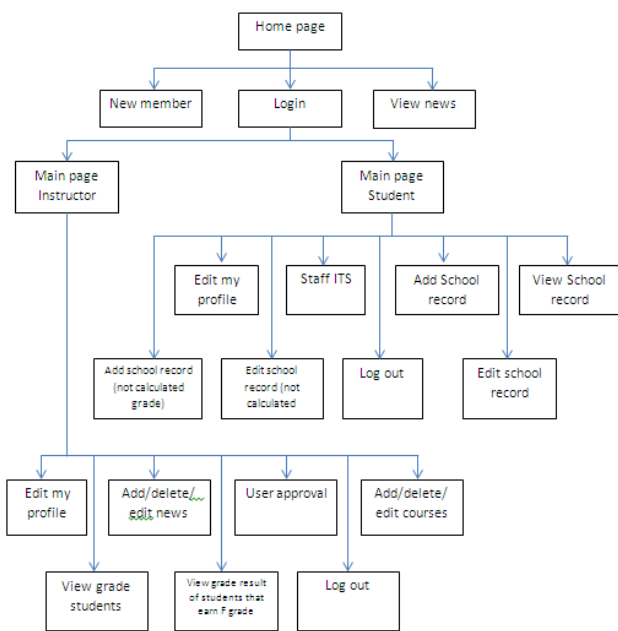


Figure 2 screen of student menu page

Academic year	ID Subjects	Subjects Name	Units	Grade	Compute
2556_1	400-11-01	Integrated Information Technology	3	B+	10.5
2556_1	401-12-03	Foundation Calculus	3	C+	7.5
2556_1	406-11-01	Physical Education	1	C+	2.5
2556_1	407-11-03	Science for Everyday Use	3	B	9
2556_1	408-11-04	Computer Programming	3	C	6
2556_1	600-11-01	Strategies for Success	3	C+	7.5
2556_1	603-11-01	That for Communication	3	B	9
2556_1	603-12-02	Reading English for Learning	3	C+	7.5

Figure 3 screen of student grade result page

Figure 1 Hierarchy view of home page for Online Monitoring Learning Progress (OMLP) website

IV. RESULTS AND DISCUSSION

The OMLP website was composed of two systems, which are member system and reporting of grade results system. The systems were classified the users into three groups, which are instructors, students, and guest.

A. Management system

The users were allowed to use the main function of website in difference levels. The accessibility of three groups of user to the website were describe as follows:

Group I Instructor: User was allowed to edit profile; user approval; view grade result of students that earn F grade;

ID Stu	Name	Last name	Student Group	Total enrollment	Total GPA Detail
355408241001	Kemarat	Sekkrasany	ITS35541	22	2.39
355408241002	Jarurat	Phongthorn	ITS35541	22	2.07
355408241003	Jirada	Phonmalakul	ITS35541	22	2.84
355408241004	Chai-chana	Chumrit	ITS35541	22	3.48
355408241005	Thamrong	Sekiat	ITS35541	22	2.07
355408241006	Tanitsorn	Chai-sin	ITS35541	22	2.34
355408241007	Takun	Sriphongpaon	ITS35541	22	3.09
355408241008	Tanyong	Somrasmit	ITS35541	22	3.73
355408241009	Takun	Komaha	ITS35541	22	1.91
355408241010	Teeaporn	Inthapath	ITS35541	22	2.93
355408241011	Praai	Yodhawan	ITS35541	22	2.59
355408241012	Pancha	Promsri	ITS35541	22	2.85

Figure 4 screen of student grade result page



Figure 5 screen of selected student grade result page

C. OMLP website evaluation

User satisfaction to OMLP website survey was used as a tool to evaluate the OMLP website. The results of all user satisfaction are an excellent level.

The survey form was used to estimate the satisfaction level of the user to the OMLP website. The survey form is a rating scale and the scale is classified into five levels, which are summary the score in form an interval scale as follows [2].

Excellent	5	points
Very good	4	points
Good	3	points
Fair	2	points
Poor	1	points

Then we gather all of the score to find the mean of score, and compute the significant level of user satisfaction. The calculations for significant level of user satisfaction were shown as follow: [3].

- a) Range = Maximum point – Minimum point
= 5-1
= 4
- b) Class interval = Range /number of interval
= 4/5
= 0.8

The average points as follows:

- 4.21 – 5.00 mean the users have an excellent level of satisfaction to the system.
- 3.41 – 4.20 mean the users have a very good level of satisfaction to the system.
- 2.61 – 3.40 mean the users have a good level of satisfaction to the system.
- 1.81 – 2.60 mean the users have a fair level of satisfaction to the system.
- 1.00 – 1.80 mean the users have a poor level of satisfaction to the system.

The results from user satisfaction to OMLP website survey were summarized in Table 1 and 2.

Table 1 Instructors user satisfaction to OMLP website survey results

Topics	No. of Instructors	Mean points	S.D.	Satisfaction Level
1. The web site has a beautiful design and appropriate function to use.	10	4.30	0.82	excellent
2. The web site is easy and convenience to used	10	4.40	0.84	excellent
3. The data in website are reliable.	10	4.80	0.42	excellent
4. The website display the information fast.	10	4.50	0.70	excellent
5. The website is convenient to use.	10	4.50	0.85	excellent
6. The user can edit information in website in an easy way.	10	4.40	0.69	excellent
7. The website provides an effective solution for education.	10	4.00	0.94	very good
8. Web site provide useful information for teaching and learning of the users.	10	4.50	0.52	excellent
9. The website is useful for instructors and student.	10	4.60	0.51	excellent
10. Web site provide useful information for tracking the learning progress of students.	10	4.70	0.48	excellent
Average point (10 questions)	10 persons	4.47	0.67	excellent

The information in Table1 represent the mean point and standard deviation (S.D.) of user satisfaction of instructor users. The average user satisfaction level is excellent level, which has an average point of 4.47. The result in Table 1 shown that the users were satisfy the OMLP website in excellent level, except the evaluation in the topic “The website provides an effective solution for education.”, which result in very good level of user satisfaction.

Therefore, the website was a useful tool for the instructor to monitoring the learning progress of students. The website has an easy-to-use interface for instructors or advisors to view the grade results of students, which can be reduce the error and workload for instructors.

The results from student user satisfaction to OMLP website survey shown in Table 2.

Table 2 Students user satisfaction to OMLP website survey results

V. CONCLUSIONS

The research aimed to develop the online grade result (OMLP) website and evaluate the user satisfaction to the developed website. The OMLP website provides facilitate and reduce redundancy for instructor to manage the course and checking the student grade results. The website is a useful tool for collaboration between students and instructors, which the instructors can announce the news to the students through the website. Moreover, the satisfaction of instructors and students to the website were in excellent level, which the mean point of 4.47 and 4.30, respectively. The website has an easy-to-use interface for instructors or advisors to view generate the report of student's grade results. The students can check their grade and scheduling the study plan for their next semester.

ACKNOWLEDGMENT

We would like thankful for the support of research fund from RMUTSB. This work cannot complete without the great support from all faculty member and students from Faculty of Science and Technology, RMUTSB, Suphanburi campus for inform the survey and give a very useful suggestion for this research. And, Thankful my sister for translate. Lastly, we would like to express my gratitude to my parents, for their support and encouragement that provided the foundation for this work. If any mistake in this work we would like to welcome and will improve it in the future.

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Topics	No. of student	Mean points	S.D.	Satisfaction Level
1. The web site has a beautiful design and appropriate function to use.	30	4.30	0.70	excellent
2. The web site is easy and convenience to used	30	4.23	0.89	excellent
3. The data in website are reliable.	30	4.27	0.82	excellent
4. The website display the information fast.	30	4.40	0.72	excellent
5. The website is convenient to check the learning progress.	30	4.13	0.90	very good
6. The user can used login function and convenient to use the website.	30	4.40	0.77	excellent
7. The website improved the learning behavior of students.	30	4.17	0.87	very good
8. Web site provide useful information for teaching and learning of the users.	30	4.43	0.67	excellent
9. The website is useful for instructors and student.	30	4.37	0.71	excellent
10. Satisfaction level to the OMLP website.	30	4.30	0.75	excellent
Average point (10 questions)	30 persons	4.30	0.78	excellent

From Table 2, the user satisfaction was ranked in excellent level with the mean point of 4.30. The users satisfy the website in excellent level in all topic in the survey form. Except two topics, "The website is convenient to check the learning progress" and "The website improved the learning behavior of students", the users have given the very good level of satisfaction to the website.