

# Final Year Project (FYP) assessment using Moodle (ULearn) platform as a management system: From coordinator view

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**ABSTRACT** – Final year project (FYP) is a compulsory course for undergraduate. FYP submissions and assessments can be achieved efficiently through a course management system for evaluations involving logbook, written thesis, oral and poster presentations. This paper describes how Moodle-based ULearn platform had been used by our faculty to manage and assess FYP works of students. The FYP ULearn platform serves as a one-stop platform for coordinating, conducting online assessment, managing student evaluation and marks submissions. Active participation of the FYP ULearn platform, as well as positive feedbacks from the students and lecturers implies the benefit of the platform in implementing the submissions and assessments processes for FYP.

## 1. INTRODUCTION

Online learning system developments are gradually spreading throughout the global educational system, particularly for replacing classroom teaching with distance learning and distributed learning [1-3]. Many advanced online platforms have been developed to facilitate online learning activities. Moodle platform is popular for the course developers mainly due to its superior features and layout, particularly in terms of creation of assignment submission, gradebook notification settings, and access to course modules [4-6]. Furthermore, Moodle platform has been continuously improved due to the advantages offered by the open-source learning platform.

Online platforms have been used in universities for online monitoring of final year projects (FYP) for several years [7,8]. FYP has been offered as two compulsory courses named as bachelor degree project 1 (BDP1) and bachelor degree project 2 (BDP 2), to be taken by the student in two consecutive semesters. FYP requires the student to perform an independent research study on a selected FYP topic after discussion with his/her FYP supervisor. FYP is typically carried out by the student on an individual basis in two semesters within the time frame set and agreed upon between the student and the supervisor. The student is required to complete his/her research study by which the findings are presented in written form as thesis and then defended through presentation and question and answer (QnA) session.

FYP need to provide students with hands-on experience with practical project work and encourages them to embark on a self-learning path under close supervision of their supervisors. Nevertheless, the challenges incur by Covid-19 pandemic since March 2021 has created the needs for a fully online based FYP

system to support the FYP supervision, students' submission, assessment, and marks submissions. Thus, it is essential that online based system is put in place for the FYP coordination to allows users (i.e. FYP coordinators, students, supervisors, and panels) to effectively monitor, contribute, and communicate all the matters related to FYP implementation, and assessment. Previous research has shown that an online platform for FYP purpose received positive user feedback [9,10].

This paper provides a brief description of the fully implementation of FYP through Moodle-based ULearn platform by Faculty of Mechanical and Manufacturing Engineering Technology (FTKMP), Universiti Teknikal Malaysia Melaka. FTKMP with the support from Centre for Instructional Resources & Technology (PSTP) is concentrating its efforts on the development of integrated online submission and rubric assessment tools to improve the users' experience, particularly on the communication of students' work with the appropriate supervisors and panels.

## 2. METHODOLOGY

### 2.1. Overview of ULearn as FYP Management System

UTeM ULearn platform is currently based on Moodle 3.9. The platform serves as FYP management system which functional as the central point for retrieving feedback, announcements, submission, information, downloading files and conduct assessments. The platform involves 4 types of users which are coordinators, students, supervisors, and panels for FYP.

The system's accessibility is set accordingly, based on each user's responsibility. The coordinators have the most access and authority. This is followed by the supervisors, panels, and students, who can conduct assessments and provide feedback. Students have the least amount of access to the system, with only the ability to upload and download files, as well as read all the information available on the course page that is made visible to the students. The following sections provide detailed explanations for each user.

### 2.2. Coordinators

FYP Coordinators' roles begin one week before the start of a new semester. Firstly, coordinators need to set up the FYP course page and enroll all the active academic staff into the course. The enrolled staff will assume roles as supervisor and evaluation panel when the course page starts to operate.

On the first week of the semester, coordinators need

to ensure all students who have registered for the FYP course are enrolled in ULearn. The student's name, student identification number, group program and email address are required for the enrollment list. The coordinators will compare the enrolled students' name list with the course registration list generated from UTeM Sistem Maklumat Pelajar (SMP) portal.

Links to important information such as announcements, guidelines, and submissions must be included on the course page. Announcements or notifications can be easily distributed to all users by using the forum activity module and setting the subscription settings to forced. This enables the program coordinators to post an announcement, and all users will be notified via email. Dateline reminders, other important notifications, or advice can be made in the announcements.

The coordinators use the group option to group the students according to the students' programme. This enables the assigned coordinator for each of the respective programme to keep track the activity status of the students in the FYP course page throughout the semester. Supervisors and appointed evaluation panels is allowed to see their students' submission files. All submissions are assessed online. The coordinators use ULearn feature to create assessment rubrics that are aligned to the set learning outcomes of the FYP. Separate assignments module to the assessment rubrics for each student are provided for supervisors, and evaluation panels. Clear descriptions and guidance are provided for the supervisors and panels to ensure correct assessments are performed by the respective assessors.

Finally, the coordinators can use filter options to track the progress of all students and assessors' activities. This enables the coordinators to identify and remind the respective students or supervisors whose progress are fallen behind schedule. At the end of the semester, the coordinators can export all the grades from ULearn to Excel and upload them to the university examination office's central system. All of the files submitted by students can be downloaded for archival purposes in either hardcopy or softcopy version.

### 2.3. Students

Students are responsible to enroll into the FYP course page and then select their respective programme to perform submission of their logbook, thesis report, and presentation video links. They are expected to consult with their supervisors and make the necessary changes based on the feedback they received from their supervisors or evaluation panels. In order to ensure the smooth implementation of the FYP activities, the students also are required to keep updated to announcements, and retrieve guidelines or resources shared by coordinators.

### 2.4. Supervisor and Evaluation Panels

Logbook, thesis reports and presentation video links uploaded by the students can be downloaded or opened online by the assessors (i.e. supervisors and evaluation panels). Assessments on the students based on the submitted documents can be done through mark key-into evaluation rubrics prepared by FYP coordinators.

Feedbacks can be made by the assessors through the comment box below the evaluation rubric, or as comments on the assessed documents which then uploaded as a feedback file. Consistent with the university regulations, the default ULearn setting ensure the marks are hidden from the students.

## 3. RESULTS AND DISCUSSION

### 3.1. Course Page Setup

Figure 1 shows FYP course page viewed by students at ULearn platform. There are four basic sections on the page: announcements, FYP information, work progress and evaluations. Only the coordinator can edit and design the additional section. However, all users (including the students) can use the download files icon to download, or read them in a pop-up window.

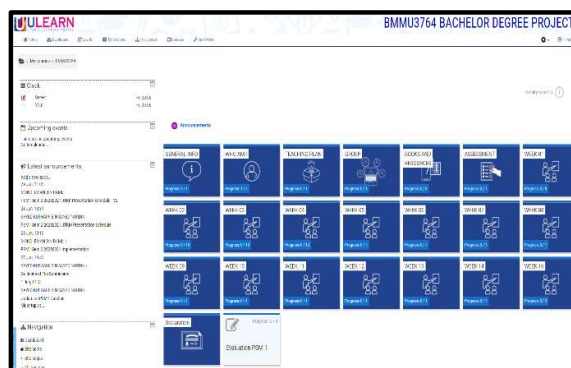


Figure 1 Main page of FYP course page.

### 3.2. Monitoring Student's Submission

The coordinator can set the submission due date in the ULearn's assignment settings. After the due date, the coordinators and assessors able to display and sort the submissions and grading updates of each student. Example of the summary of submission is shown in Figure 2. Besides, the coordinators can display a summary of submission and grading updates to track the FYP's overall progress (Figure 3).

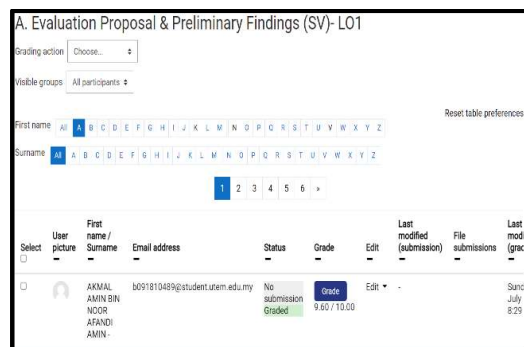


Figure 2 Monitoring student's submission.

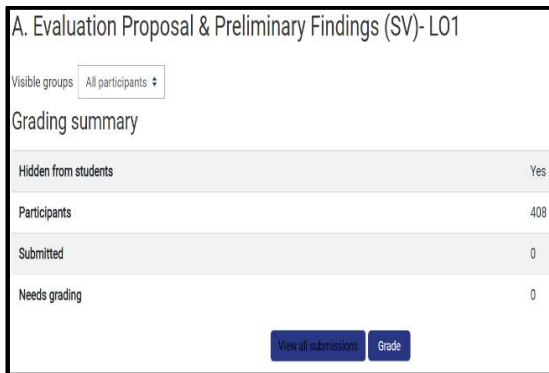


Figure 3 Summary of number of student's submission status.

### 3.3. Rubrics, Evaluation and Feedback

Figure 4 depicts an example of a rubric evaluation for supervisors and panels. When the assessment is completed, the supervisor and panels can alert about it. Figure 4 shows that supervisors need to give a mark for 4 types of rubric, panel 1 for 3 types of rubric and panel 2 for 1 rubric.

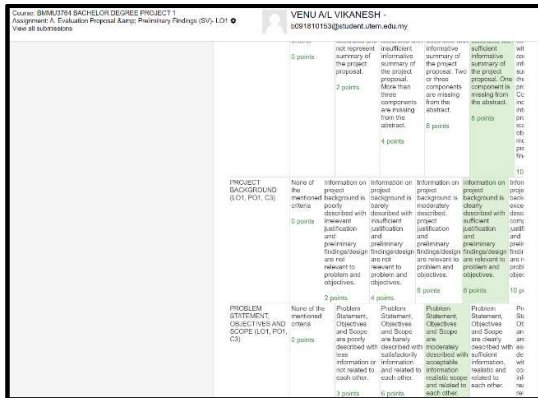


Figure 4 Student's submission and feedback details.

### 3.4. Gradebook

The online rubric's total marks for each student can automatically be transferred to the gradebook. The gradebook allows the coordinators, supervisors and panels to directly view the students' performance (Figure 5). These grades are exported to Excel for the following process.

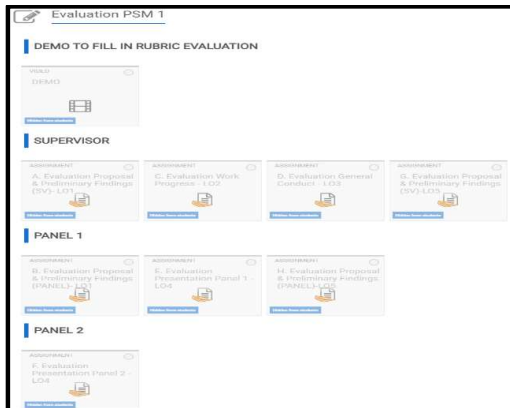


Figure 5 Example of assessment rubric layout.

### 3.5. Coordinators' perceptions

Figure 6 shows on how to download all the marks from supervisors and panels by following the numbering on figure. Coordinators can choose which program of student to be downloaded. This method had approximately reduced time of marks management for a program of FYP around 90%.

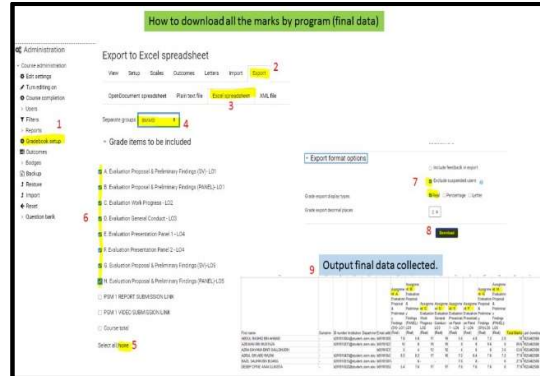


Figure 6 Exporting marks workflow.

## 4. CONCLUSIONS

The use of ULearn platform for FYP activities such as document submissions, progress monitoring, and assessment enable the coordinator to effectively monitor progress of FYP implementation during the whole semester. Students can benefit from having a platform for information, feedback submission and retrieval. As a result, it is simpler for them to download files and upload submissions at any time and from any location before the due date and time. Supervisors and panels can also download student submissions for assessment purposes at any time and from any location. Most importantly, positive responses from lecturers are also significant because they show that the system has the potential to be a useful tool for lecturers and coordinators.

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