

6th International Forum on Engineering Education (IFEE 2012)

Enhancement in Monitoring for Integrated Project Implementation

Norliza Abd Rahman, Siti Rozaimah Sheikh Abdullah, Noorhisham Tan Kofli^{*}, Siti Masrinda Tasirin, Siti Kartom Kamarudin, Jamaliah Md. Jahim

Department of Chemical & Process Engineering, Faculty of Engineering & Built Environment, Universiti Kebangsaan Malaysia, 43600 UKM Bangi, Selangor, Malaysia

Abstract

Integrated project for Year III has been introduced by the Department of Chemical and Process Engineering since 2007/2008 session. This project integrates three or four compulsory subject for each semester. The purpose of this project was to minimize student work load and help student to understand how each courses are related. Project monitoring is one of the procedures to evaluate the performance of integrated project. Since implementation of this project, the coordinator of integrated project will give feedbacks to the students on their performance after they have completed presenting their project. Even though this method is quite sufficient for student to learn their mistake unfortunately similar mistakes was repeated during their final year design project in final year. In order to overcome this problem, student self-assessment for integrated project was introduced during Semester II, Session 2011/2012. The results show that the students were able to detect their mistakes and errors, and some correction was done to their project.

© 2013 The Authors. Published by Elsevier Ltd. Open access under [CC BY-NC-ND license](https://creativecommons.org/licenses/by-nc-nd/4.0/).

Selection and/or peer-review under responsibility of Professor Dr Mohd. Zaidi Omar, Associate Professor Dr Ruhizan Mohammad Yasin, Dr Roszilah Hamid, Dr Norngainy Mohd. Tawil, Associate Professor Dr Wan Kamal Mujani, Associate Professor Dr Effandi Zakaria.

Keywords: Project monitoring; Integrated project; Soft skill; self-learning; course integration.

1. Introduction

Outcome Based Education (OBE) at higher learning colleges and universities make a tremendous change in teaching and learning. Starting in Semester I Session 2005/2006 [1] there is a new approach implemented in education curriculum at the Faculty of Engineering and Built Environment, Universiti Kebangsaan Malaysia.

^{*} Corresponding author. B Tel: +6-0389216401
E-mail address: maverick@eng.ukm.my

This approach requires students to play an active role in the learning process and encourage each course lecturers adopting innovative delivery methods such as Project Based Learning (PBL), Project Oriented Problem Based Learning (POPBL), Active Learning (AL), Cooperative Learning (CL) [2]. One of the changes that have initiated by the Department of Chemical and Process Engineering (JKKP), following the implementation of OBE at the faculty level is the implementation of the Integrated Project (IP) at the departmental level. JKPP has taken an initiative to implement the Integrated Project for Year II Session 2006/2007 [3-4]. Year II Session 2006/2007 this is the first batch of students who have been exposed to the OBE in Session 2005/2006.

The implementation of this Integrated Project urgently needs strong cooperation from every lecturer involved. This is because previously, each course is considered to be autonomous for each lecturer who teaches the course. However, after the implementation of the Integrated Project, it has become a platform that integrates all departments' courses at each semester for each year of study, Year I, Year II and Year III [5].

2. Integrated Project year III at JKPP

2.1. Objectives and Outcomes of the Integrated Project

Integrated Project implemented in JKPP is a project that combines theory and application courses at the same time. It is implemented as a group project, based on the program and it has an open solution to allow students to be innovative. Integrated Project implemented in each semester starting from Year I until Year III. This means that every student will face six Integrated Projects during their study at JKPP. In the final year of JKPP (Semester VII and VIII), they will face a more comprehensive Integrated Project that combines theory and understanding of all the courses that they have learned since Year I until Year III (Semester I to Semester VI) through a project known as Process Plant Design Project.

Year III Integrated Project is designed to consolidate all department courses (usually consisting of three or four courses department) offered in each semester. The courses involved in integrated projects, are listed in Table 1 for the Chemical Engineering Program and Table 2 for Biochemical Engineering Program. Assignments given in IP cover all elements related to all the courses involved in any one semester. Sample tasks are defined in [3]. Overall, the IP has the following specific objectives:

- Integrate all aspects of the different courses in the chemical engineering curriculum.
- Apply knowledge and theory derived from the lecture into an integrated project.
- Prevent students from being overburdened with too many projects at any one semester.

Among the program outcomes that are evaluated through the IP implementation include the ability to [6]:

- Apply basic knowledge (PO1, PO2).
- Identify current issues (PO3)
- Use modern engineering tools such as ICON ®, HYSYS ®, SUPERPRO ®, AUTOCAD ® or other in problem solving (PO6).
- Communicate effectively orally and in writing (PO7).
- Work in a team with the ability to manage (PO8).
- Adherence to the lifelong learning skills (PO9).

2.2. Year III Integrated Project Implementation

To ensure a smooth implementation of the Year III IP, one of the lecturers who teach department courses in each semester will be appointed as the coordinator whom is responsible for coordinating the IP implementation throughout the semester. IP Coordinator is also responsible to discuss with other lecturers who are totally involved with IP at the beginning of the semester to decide the relevant IP topics to all courses and finally draft

Download English Version:

<https://daneshyari.com/en/article/1114962>

Download Persian Version:

<https://daneshyari.com/article/1114962>

[Daneshyari.com](https://daneshyari.com)