

Implementation and Enhancement of Outcome-Based Education in BSE

1. Introduction

In line with PolyU's commitment of implementing outcome-based approaches in student learning, BSE has developed outcome-based curriculum for all undergraduate programmes. It is important to ensure that the outcome-based education does not remain at the stage of a kind of paper exercise, but to ensure that what has been committed in the programme document is carried out smoothly and effectively, with continuous reviews for improvement.

In 2007-08, the Outcome-Based Curriculum will be used for all levels of study in the BEng(Hons) in BSE programme, i.e. all subjects should use outcome-based approaches in student learning. In order that the OBE can be implemented effectively, several areas needing attention have been identified. Some actions have to be performed in order to enhance the involvement of all academic staff in OBE.

2. Areas that need attention regarding OBE

- As pointed out by the FCLU Consultant on OBE (Anthony Williams), the existing programme documentation is still presented as if it is teacher centred, it still lists subject contents and talks in terms of "teaching methods" rather than emphasizes on "learning outcomes".
- After implementing OBE for two academic years, many colleagues are still not clear about what OBE is. There is practically no change in teaching and assessment methods in some subjects.
- Students are not clear about what OBE is; many students do not know the learning outcomes of the subjects they are taking. Also, many students do not know the learning outcomes of the programme they are studying.
- Given that assessments in OBE focus on students' learning outcomes (i.e. how much and how well the students have learnt), this could imply that students with different abilities will follow different paths to reach their goals and may finish at different times. Class sizes are too large and/or teaching loads of colleagues are too high so that effective assessment of learning outcomes of each student for every subject is difficult or even impossible.
- As pointed out by the FCLU Consultant on OBE, there is a need to develop effective assessment methodologies as well as comprehensive rubrics/matrices for the assessment programme.

3. Action plan for outcome-based education in 2007-08

- (a) Revise the programme documents to shift the emphasis on subject contents and teaching methodologies to the learning outcomes, the learning approaches to achieve

the learning outcomes and assessment of the students' achievement of the learning outcomes. (Reference: Recommendation 1 of the Report of Anthony Williams on outcome-based learning in FCLU.)

- (b) Prepare students for effective participation in outcome-based learning. This will be conducted as compulsory learning experience lectures/seminars in the first two/three weeks of the academic year for year 1 students. These lectures/seminars introduces the outcome-based learning approach and the students learning attitude and responsibility in such a learning environment. This can also build up the link between the learning outcomes and the BSE profession for the students to develop an appreciation of the role of the profession they are studying for. (Reference: Recommendation 21 of the Report of Anthony Williams on outcome-based learning in FCLU.)
- (c) Develop/enhance methods of assessing students' learning outcomes in:
 - (i) technical subjects
 - (ii) project type subjects (group projects and individual projects)
 - (iii) WIE
 - (iv) generic attributes (this could be a task by FCLU or PolyU)
- (d) Develop an exemplar subject. A subject will be chosen from the BEng(Hons) programme for the development of an exemplar subject as a showcase to academic colleagues to demonstrate how the teaching and learning and assessment of a subject should be done using the outcome-based education approach. (Reference: Discussion in the FCLU meeting on outcome-based education on 4 May 2007.)

The above action plan will be implemented in the academic year 2007-08 if the following funding request is approved.

4. Funding request with justifications

In order to put the action plan into action, funding is required as follows:

- (a) Employment of a lecturer for one year to release the equivalent teaching load of one academic staff for work as described in the above action plan. The lecturer will do teaching as well as assist in the development of an exemplar subject for full implementation of OBE. He/she will help the subject examiner in all necessary work regarding to teaching, assisting student learning and assessment of the exemplar subject. He/she will also assist the production of demonstration materials, workshops and seminars for showing to all academic staff of the department how a subject should be delivered using the outcome-based learning approach.

APPROVED / ENDORSED BY:



ACTING Dean (CLU)

Date: 16/5/07