The evolution of PBL in 'Economics for Business' (ECQ450) from 2004 to 2009.

This is a short(!) history of the introduction of PBL in the ECQ450 mega-module. The final page includes some reflections on the process and views on future prospects.

First implementation (2004)

- Student group structure (3/4 students to a group, maximum of 24 in a seminar class).
- 4 'three week' problems (1 formative, 3 assessed).
- seminar class participation part of assessment, penalty marks for non attendance.
- Each problem led up a group presentation and report.
- Partial PBL implementation - traditional lecture programme retained.
- Paper based class records.
- Blackboard used as a materials depository.
- 3 problems counted for 30% of overall mark, formal exam counted for 70%
-

Advantages;
Students found the new approach interesting, involvement in group work and class attendance much improved over traditional seminar approach.

Disadvantages;
Timetable organization was chaotic - students attempted to ignore their timetables and attend the most convenient seminar, or to miss out the first few weeks of seminar classes or to assume that all that was required was lecture attendance. Formation of groups was very difficult - in some cases, group numbers were still changing in week 5 of a 12 week semester.

Some student dissatisfaction to to low proportion of overall marks given to the 'problems'

Teaching staff (the seminar tutors) were not well prepared for the implementation of PBL. In traditional seminars staff were used to being 'flexible' about class attendance - not requiring students attend the correct seminar etc. They were also used to traditional teaching (the 'expert' versus 'facilitator' problem). Staff complained that the amount of paperwork involved in this implementation of PBL was excessive compared to what was expected in other modules.

Second implementation (2005)

1st semester.

- Student group structure retained
- 3 'four week' problems (1 formative).
- seminar class participation part of assessment, penalty marks for non attendance.
- Each problem led up a group presentation and report.

- Partial PBL implementation - traditional lecture programme for first four weeks, followed by 'interesting topics' lectures (not related to the problems)
- Paper based class records.
- Blackboard used as communication tool and as materials depository
- 2 problems counted for 60% of overall mark, End-of Unit assignment (worth 40%) replaced exam.

Advantages;
Students liked the change, the increased weighting of the seminar based problems encouraged groups to work harder.

Disadvantages;
The prospect of a accurate timetable for the start of teaching was not fulfilled by the University's new system. The first four weeks were again chaotic - class and group sizes changing weekly - the first formative problem was impossible to implement as intended.

This module suffered from the common 'anybody can teach introductory economics' attitude. New teaching staff appeared at the start of the first teaching week. We suffered a rerun of the 2004 staff related difficulties.

2nd Semester (2005) changes.

As a direct consequence of the timetable confusion in the early weeks in the first semester we decided to replace the first formative with 4 week based 'mini-problems' (the hope was that this approach would allow group flexibility in the first four weeks). This difficulty here was that a seminar class was too short to allow useful group work to be completed.

I introduced an on-line database. This allowed seminars tutors to enter participation marks, presentation marks etc directly to a database from the classroom. It also allowed them some flexibility to alter the class membership - paper work was reduced.

Third implementation (2006).

- Student group structure retained
- Back to 3 'four week' problems (1 formative).
- seminar class participation part of assessment, penalty marks for non attendance.
- Each problem led up a group presentation and report.
- 'Full' PBL implementation - no traditional lectures. Lecture slots used to explain the structure, process and the 'mechanics' of the module
- 'Blended Learning' component introduced. Students required to use Blackboard for out of class group discussions and to upload copies of presentation material etc. This activity was assessed and counts towards problem marks.
- On-line Module database to ease the timetabling difficulties.

Advantages;

Teaching staff getting used to the on-line database reduced the timetabling difficulty (effectively we reassigned about 10% of students outside the official timetable).

Disadvantages;
Blackboard was a disaster. Two reasons for this;

- The authentication process used to allow students access broke down for extended periods
- It proved to be extremely difficult (and error prone) to use the VLE for group based activities as required by out PBL implementation. see 'Blended Learning & Groupwork: Is Blackboard Useful" on this website for details.

2nd Semester (2006) changes.

As a result of the Blackboard difficulties we moved to using a separate student accessible database (again see 'Blended Learning & Groupwork: Is Blackboard Useful" on this website for details). Effectively we abandoned Blackboard as a blended learning component of our PBL implementation because of its groupwork limitations.

Fourth implementation (2007).

- Student group structure retained, 3 'four week' problems (1 formative). Seminar class participation part of assessment, penalty marks for non attendance.
- Seminar class participation part of assessment, penalty marks for non attendance.
- Each problem led up a group presentation and report. Report weighting increased to 50% of problem marks (Presentation down to 10%)
- 'Partial' PBL implementation. Each 'problem cycle' has three associated workshops (lectures). This change was a result of increased pressure from within the department to implement the traditional 'lecture/seminar' structure

  Background

  review of relevant theory

  hints on application of theory
- Students required to use the WorkSpace for out of class group discussions, answer short on-line weekly tests and to upload group reports etc. This activity was assessed and counts towards problem marks.
- Students who failed to contribute to their group report automatically scored zero for the module (irrespective of their other marks).

Advantages;
By now the '3 problem cycle' + groupwork was well established. Experience lessened the effect of the student churning between seminars. The structure of the WorkSpace eased the difficulty of moving students between groups.

Disadvantages;
Some students complained that the 'non-contribution' to the group report was too severe. We continued to suffer from the common 'anybody can teach introductory economics' attitude. Teaching staff appeared at the start of the first teaching week with no experience of PBL.

The importance of the 'outside the classroom' groupwork (use of the WorkSpace) was misunderstood or perhaps simply discounted by teaching staff.

Fifth implementation (2008).

- Because of the change to a 10 week teaching semester, the problem cycle was reduced from four to three weeks, (first week used to introduce the PBL concept).
- Group log books introduced (to be retained by the appropriate group leader for the duration of the semester.
- 'Partial' PBL implementation retained. Each 'problem cycle' has three associated workshops (lectures).

    Background

    review of relevant theory

    hints on application of theory

Advantages;
Except (!) for the collapse of the teaching period from 12 to 10 weeks the structure was virtually unchanged. Numbers of 'new' staff on module reduced.

Academic staff, PBL and blended learning

After the last five years experience I have come to some conclusions:

1. Where well implemented, PBL is very good at getting groups of students to apply economic concepts to realistic market situations.
2. Except (perhaps) in small modules a realistic PBL approach requires some 'outside classroom facilities (effectively on-line blended learning component).
3. The greatest stumbling block to the successful implementation of a flexible PBL/ blended learning approach is neither the on-line technology nor student acceptance but is the institutional academic culture. (I think this was obscured in the earlier years in ECQ450 by the frustration in getting the technology working).
4. Mega-modules have particular problems because of the tension between attempts to encourage individualised tutor interaction and the requirement to ensure some consistency in the student experience.

The common perception of teaching (in WBS Marylebone at least) is closely tied to face-to-face contact with students, either in lecture or seminar with relatively minor effort directed to coursework and exam marking. The rationalization of the module programme, including the growth of mega-modules, has meant that the design and preparation of lecture and seminar material has become the sole responsibility of module leaders.. Our present timetable arrangements make no explicit allowance for innovative PBL or blended learning activities.

Consider the following:

- We are 'allowed' or perhaps even 'encouraged' to introduce innovative learning and teaching techniques such as blended learning but very little help in the form of timetable allowances is available.
- The 'Centre' determines our academic strategy (think of the academic year changes!) with little obvious input from teaching staff.

These are not circumstances which encourage teaching staff to develop new and interesting ways of teaching!

We have tried to release some 'blended learning resource' by limiting seminar classes to one hour, the other half hour of the standard timetabled slot to be used on WorkSpace related activities.

Over the last three years, I have formed the opinion that many academic staff view PBL and blended learning as unconnected with 'real' teaching, certainly as something that is not an integrated part of their teaching. In ECQ450 this view meant that it was impossible to get most seminar tutors to consistently monitor or interact with students in their WorkSpaces. Many tutors take the view that use of the blended learning component (the WorkSpace) is nothing to do with them and automatically refer all queries to the module leader.

In WBS we seem to be about to develop some truly monster modules (student numbers between 900 and 1000), I doubt that any PBL approach will allow deep learning in these large numbers!