Problem Based Learning: a flexible teaching tool

Ronke Shoderu
London Metropolitan Business School
London Metropolitan University

Introduction

One of our aims as lecturers is to create a learning context that engages students and help them develop a deeper understanding of the subject matter. Often these aims need to be achieved within an environment characterised by large classes and limited contact hours.

This paper provides a reflection on the attempt to address the issues above using Problem-based Learning (PBL). The approach was introduced with some success in the 3rd year module on the 'Regulation of International Trade' (BU3058). The evidence suggests that student's engagement increases and that better learning takes place.

PBL is a student-centred approach whereby students, usually working within small groups, generate information necessary to solve specific problems or tasks. In its 'pure' form 'students must be able to determine on their own what to learn and from what resources, guided by the facilitator or tutor' (Barrows 1996, p.7). In this respect the main role of the lecturer is to facilitate the learning process by supporting the groups and helping to co-ordinate the investigation, but not to act as the sole determinant of what might be perceived to be correct. It also potentially gives a voice to students who might not normally participate in class discussion.

Context: the module and student diversity

The BU3058 module is a final-year undergraduate core module for two single honours programmes and a designate on a pathway course [1]. The module aims to provide an overview of the world trading system and role of international law and to enable students to develop analytical and problem-solving skills within the area of international trade institutions and regulation.

The student cohort was relatively diverse in a number of aspects. With the courses attracting a significant proportion of international students, the module itself included students from Finland, Italy, Korea, Japan, Greece, Turkey, Somalia, France,

Portugal, Colombia, Russia, Latvia, Nigeria and, of course, the UK. The majority of students are non-law students who have taken one law module at certificate level (but not necessarily English law) and in some cases elective business law modules at intermediate level. All the same, the international element of the module is likely to be a new aspect of law for the majority of students. The module runs in semester 1 with approximately 130 students and in semester 2 with approximately 50 students.

The diversity of the student body also presented a challenge in terms of identifying and understanding the learning processes, and students' expectations of class contact activity against 'notions of national academic activity which embrace egalitarian, hierarchical, group or individualist approaches to study' (Savin-Baden & Howell Major 2004).

Why Problem Based Learning?

At the end of the previous academic year, some consideration was given as to how to find a balance between information provision (lecture) and analysis and discussion within existing time constraints. One of the major concerns about the restrictions on the contact time was in trying to address the issue of student confidence in their ability to understand a relatively complex subject area and the impact that this level of confidence had in terms of generating class discussion.

There are many views as to the impact of PBL, how this particular method should be defined and the form it should take; however, the basis of PBL is that students learn by 'doing.' This is supported by the theory that students' learning is enhanced when they work together in a cooperative environment (Allen et al 1996; Barrett 2005; Juwah 2002; Scott n.d.). In this context the process of PBL served a dual purpose of developing students' understanding of the subject matter and in their skills development - for instance, in leadership (Palmer & Major 2004).

By providing a structured but flexible approach to learning, PBL can help address the challenge of diversity. Students learn at their own pace through the set activities and this continuous contact with the lecturer allows for a dual feedback process.

The Approach

In its pure form PBL involves student engagement with a task or problem first, followed by the solution generated purely from student research and enquiry or knowledge construction, even if this process may lead students to a 'dead end' (Barrows 1996). The method adopted for the module provided an integrated or hybrid approach in which lectures were given during the first few weeks to introduce key concepts and structure to the subject matter. A module booklet was provided and supported by a detailed website which contained lecture notes, supporting journal articles and weblinks.

The PBL cycle adopted consisted of three tasks for the semester with each task taking three weeks to complete and present (see Figure1).
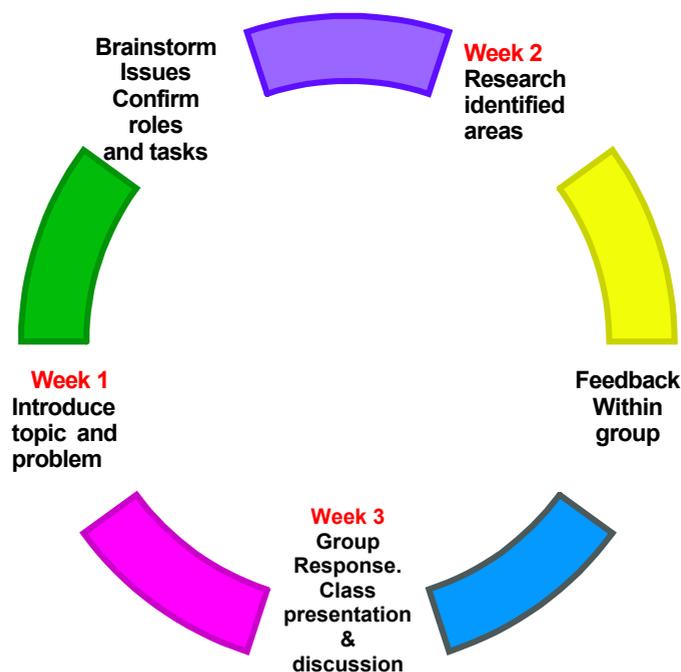
Week 1: Introduction to topic and problem: the class contact time was used for discussion within the PBL groups in terms of identifying and analysing key issues and to consider aspects for further exploration.

Week 2: Research identified areas: a weekly plenary session was then used to consider common areas for clarification.

Week 3: Group response: groups presented their research for class discussion.

Students were encouraged to submit drafts for detailed feedback but the tasks did not form part of the module assessment, although important in the preparation for the final examination. They were also invited to give feedback on the management of the group in terms of matching skills to the group tasks required.

Figure 1: PBL cycle

Brainstorm Issues Confirm roles and tasks

Week 2 Research identified areas

Week 1 Introduce topic and problem

Feedback Within group

Week 3 Group Response. Class presentation & discussion

Students' Reactions

There was some variation in how each of the PBL groups responded to the idea that the tasks were not assessed. In some cases this factor appeared to support the 'ethics of individualism' (Savin-Baden 2001) in the sense that some students did not engage as fully as they might have done if the task had been an assessed presentation or group work assessment [2]. The more effective and successful groups tended to be those

who were open to the supportive aspect of sharing information and promoting understanding within the group.

The module feedback forms from the students appear to support the view that the groups who gained most from the process where those who worked well together, were organised, and able to submit draft reports on the tasks, while at the same time ensuring that each member of the group had a good working knowledge of the whole subject. These groups were able to appreciate the advantages of completing tasks in order to receive timely feedback on performance and development. Some students enjoyed the process of discovery learning and class debate, while others preferred a more structured and directive approach and a degree of anonymity.

A sample of the responses from students is listed below:

Likes:
'Get lots of knowledge by problem based tasks'
'I think problem based learning approach quite good because it is much easier to understand the topic'
'I had a supportive group that worked well together. I enjoyed the module and PBL'
'Interaction between the group members – looked forward to other opinions'
'Liked the problem based scenarios – made studying WTO regulations fun in order to be able to defend a position (towards using it) rather than just to learn some regulations. PBL made WTO relatable as opposed to distant histories'

Dislikes:
'Working with groups because they are difficult to manage'
'I don't think the problem task based was effective in this module,
probably because it wasn't marked'
'The PBL approach. Students feel completely lost and feel that there is a
lack of guidance so as to know what information is relevant or not'
'Work load is too high. Problem based learning was a problem'
'The work load is insane (good to learn for yourself but insane still) Not
all groups worked effectively'.

Reflections and development

From a teaching perspective, the PBL approach is a time-consuming process with regards to the preparation required for the module and in the provision of regular feedback on written submissions. There were issues relating to group management with some of the groups and the danger that some might implode. This was a particular problem where groups were formed from late arrivals in some instances with new students arriving in week 5. The process of facilitating the groups during the class contact time was also challenging on occasion, in terms of ensuring all groups

were seen and progress monitored. Greater use of discussion tools on the VLE site ('WebLearn') will be considered in the future as a means of monitoring progress as well as group interaction.

On a positive note, the process produced some excellent performances in terms of class debate and sample submissions. On reflection, it seems to be the case that a more explicit link between the PBL tasks and assessment would provide a greater incentive for students to engage in the process and will be explored in the future. In doing so the challenge is in developing tasks that provide a level of difficulty sufficient to engage and challenge students but not too complex so as to limit the usefulness of the PBL student-centred approach (Jonassen & Hung 2008).

PBL permitted a more interactive and far less prescriptive use of class contact time. The process also facilitated knowing the students within the cohort and therefore being able to identify concerns about the subject matter and student's understanding and level of engagement. In this context PBL proved to be a relatively flexible tool in addressing these key teaching and learning issues.

As a means of providing closer interaction, PBL highlighted the diversity of student expectations of classroom activity which was made more acute by the diverse student cohort. In future greater consideration will be given as to how to better harness or exploit this diversity to complement the PBL process, possibly in the context of a comparative analysis.

Notes

1) BA (Hons) Business Administration, BA (Hons) International Business, BA (Hons) Business Law Pathway
2) Findings from student feedback form.

References

Allen, D, Duch, B, Groh, S, (1996) 'The Power of Problem-Based Learning in Teaching Introductory Science Courses' in Wilkerson, L, Gijseaers, W, eds Bringing Problem Based Learning to Higher Education, Jossey-Bass Publishers

Barrett, T, (2005) Understanding Problem Based Learning, Handbook of Enquiry & PBL, Barrett, T, MacLabrainn, I, Fallon, H (Eds). Galway: CELT 2005

Barrows, H (1996) 'Problem Based Learning in Medicine and Beyond: a Brief Overview' in Wilkerson, L, Gijseaers, W, (eds) Bringing Problem Based Learning to Higher Education, Jossey-Bass Publishers

Jonassen, D & Hung, W (2008) 'All Problems Are Not Equal: Implications for Problem Based Learning, The Interdisciplinary Journal of Problem Based Learning, Vol.2 No. 2, article 4. See http://docs.lib.purdue.edu/ijpbl/vol2/iss2/4

Juwah, C (2002) Using Communication & Information Technologies to Support Problem-Based Learning
http://www.heacademy.ac.uk/assets/York/documents/resources/resourcedatabase/id449_using_it_to_support_problem-based_learning.pdf

Palmer, B, & Major, C, (2004) 'Intersection of Leadership and Group Dynamics in Problem-Based Learning' in Savin-Baden, M, Howell Major C, eds. Challenging Research in Problem Based Learning, The Society for Research into Higher Education & Open University Press

Savin-Baden, M, (2001) Problem Based Learning in Higher Education: Untold Stories, Open University Press

Savin-Baden, M & Howell Major, C (2004) Foundations of Problem-based Learning, The Society for Research into Higher Education & Open University Press

Scott, A (n.d.) Reflections on the use of problem-based learning, PBL working group
http://www.ukcle.ac.uk/resources/pbl/scott.html

Biographical note:
Ronke Shoderu is a Senior Lecturer in Business Law at London Metropolitan Business School and Course Leader for the BA Business Law pathway. Email: r.shoderu@londonmet.ac.uk