Enhancing Learners’ Lifelong Learning Through Implementing Problem-Based Learning

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Abstract

In a period of significant global scientific and technological change university students need to be more adequately prepared to effectively integrate into the competitive working environments. Higher education is being introduced more innovative approaches to classes to encourage students to actively engage in the learning process in order to educate them to become lifelong learners who can effectively use a range of skills such as self-directed learning and critical thinking to successfully solve the problems in their daily lives. One of these innovative approaches which are being used in Western university classes is problem-based learning (PBL), and it has been gradually introduced into Asian university courses in recent years. This paper discusses the introduction of a PBL approach in a range of undergraduate classes in two universities in the south of Vietnam. It also explores Vietnamese university students’ perspectives in learning through a PBL approach. The paper discusses the contribution to Vietnamese education by providing an evaluation of the PBL implementation. It also provides educators with significant perspectives of implementing PBL to facilitate university students to become lifelong learners.

Key words: Problem-based learning, lifelong learning, critical thinking, self-directed learning.

Context of the Study

Higher education in a changing knowledge economy is important in helping maintain the growth by educating highly-skilled graduates for the economy. Education helps to create human capital in the economic environment by producing new knowledge and exploring the possibilities for its growth (Peters, 2007). In addition, the knowledge economy gradually depends on new learning processes such as problem-solving, critical thinking and creativity. The importance of the development of a “learning culture” is also introduced as a “long formal education, repeated re-education and retaining, and even life-
long education” (Peters, 2007:132). However, although the impact of the socioeconomic changes enhances the transformation of education, the process of educational change is rather challenging. Fullan (2007) argues that “real change, whether desired or not, represents a serious personal and collective experience characterised by ambivalence and uncertainty” but the results of the change can lead to “a sense of mastery, accomplishment, and professional growth” (p.22).

Vietnam’s economic reform process which started in 1986 focused on reform of education system to create qualified graduates for Vietnam to achieve its economic goal of modernisation and industrialisation of the economy (Fahey, 1996). It also means the reform requires its education system to increase the education participation in order not only to create a skilled work force for the labour market but it also aims to enhance learners’ lifelong learning skills.

It is clear that the Vietnamese education system, especially in higher education sector should make changes in order to enhance and maintain the development of new demands of the economy and to meet social demand for higher education to create skilled employees for the labour market (Pham & Fry, 2004; Hoang 2007).

**Problem-based Learning Approach**

PBL first appeared in medical schools at Case Western Reserve University in the United States in the 1950s, but it was officially introduced as a methodology by Howard Barrows at McMaster University in Ontario, Canada in the late 1960s (Boud & Feletti, 1991; Delisle, 1997; Magnussen, Ishida, & Itano, 2000). In particular, PBL is a pedagogical strategy for posing significant, contextualised, real world situations, and resources, guidance, and instruction are provided to learners as they develop content knowledge and problem-solving skills to come up with tentative solutions to the problem (Mayo, Donnelly, Nash, & Schwartz, 1993)

Even though the PBL approach has been introduced in the West for more than four decades, it has been only adopted to the Asia-pacific region for over ten years (Khoo, 2003). This delay is attributable to such factors as the lack of leading regional PBL experts, conservative attitude with attendant resistance to change, and the long standing myth that Asians students are not suited to the PBL approach (Achike and Nain, 2005).

However, a variety of studies on implementing a PBL approach in Asian educational institutions have showed optimistic responses about using this innovative approach within Asian settings. Khoo (2003) claims “most Asian schools and their students appear to be positive about adapting to PBL in their curriculum. The positive and negative observations appear to be similar to those experienced in non-Asian medical schools” (p.401). In addition, commented that students’ spontaneous participation was enhanced gradually when student groups which were not working effectively in previous discussions were assigned to smaller subgroups (Ho et al., 2001; Hussain, et al., 2007).
Methodology

This study employs quantitative and quantitative combining with case study approaches to investigate the implementation of a problem-based learning approach into a range of university classes in Vietnam. In this study, case study is interested in both the process and product of problem-based learning through main three aims. First this study hopes to explore the experiences of teaching staff in Vietnam’s universities when they adopt PBL approach into their teaching method. Second, the study also wants to understand the benefits and challenges of implementing a PBL approach into Vietnam teaching environment. Finally, this study try to discover the impact of PBL approach on student’s learning capacity. The case comprises university teachers and students, seeking their perspectives on their involvement in the implementation process of a PBL approach to units of study. The study used a purposive sample of 11 university lecturers from two universities in the South of Vietnam. The surveys were conducted for lecturers and students and interviews with lecturers and students to investigate teachers’ perceptions in implementing and students’ experience of learning through a PBL approach. There were 182 student participants from eleven PBL classes also completed student questionnaires which explored their experience in learning through a PBL approach.

Discussion

The results were analysed and discussed a range of main aims of the study, this paper aimed to discuss the effects of the implementation of PBL in supporting the learning from the perspectives of Vietnamese university students. It mainly focuses on discovering the implementation of PBL in preparing the students to become life-long learners.

The study showed that the student participants had learnt through a PBL approach prior to participating in the study. Students’ prior experience of PBL may have been beneficial for their learning during PBL sessions. In particular, it would help students effectively collaborate one another to search for tentative solutions to their groups’ learning problems. It is seen that it may be challenging when implementing a PBL approach if student groups have no or limited prior experience of team work skills. Therefore, the presence of the students who had prior experience of PBL was advantageous for students’ group work in the study. They may have applied their group work skills achieved in organising and facilitating their group collaboration during the learning process.

Students who had had opportunities to learn through a PBL approach prior to participating in the study had a considerable understanding of the approach and had gained a variety of learning skills in learning through PBL. An extract from student interview:

“In the process of solving the problem, the learners’ independent learning is highly promoted whereas the tutor’s guidance or help is only provided when requested. I think, some innovative methods used in my
Students in a range of classes had opportunities to improve their self-directed and independent learning skills because the teachers allowed them to form their own groups. It is interesting to note that these teachers all had experience of PBL prior to participating in the study. They may have known that students would have opportunities to enhance their independent learning skills through the process of forming their own groups.

Students were likely to effectively organise the group work in their individual groups. In particular, they knew to divide their group’s learning problem into different small learning issues which were then assigned to each individual member. This could be limiting compared with the opportunities to work together that would arise when all students study the same issues.

It is interesting to note that the teachers of these classes mainly supervised by group leaders including assigning learning issues to group members, managing group discussions and contacting facilitators when necessary were those who had experience of PBL prior to participating in the study. The teachers have learnt the importance of promoting students’ active and independent learning role during the group work learning in PBL classes. According to Bridges and Hallinger (1991), the amount of teacher direct instruction is reduced and learners take greater responsibility for their own learning in PBL. Vernon and Blake (1993) further assert that the teacher’s role becomes one of resource guide and group consultant. This role change promotes group processing of information rather than an imparting of information by the teacher.

The students also expressed their rich learning experience of working in groups after participating in the classes where a PBL approach had been implemented. In particular, they commented on a range of successful group work skills such as setting group norms, regularly participating in scheduled group meetings and collaboratively engaging in the process of finding tentative solutions to the group’s learning problem. Students further commented that their skills were enhanced in problem solving, collaboration, critical thinking and communication. All students found the group work beneficial for them. For example, extract of student interview two describes: “Through PBL, I had opportunities to develop skills in critical thinking and team-working, especially know how to work with other group members effectively. I have learnt how to express ideas during the group work, have appropriate and effective responses to other groups in class presentations and learn from their ways of learning and thinking. Particularly, I feel more confident in communication and have had opportunities to learn from other subject-related areas while searching for resources to solve the problem”.

The acquisition of skills in learning through a PBL approach is seen to be valuable for students’ future career as well as their further education. Only 173 responses were made from the 182 student participants to this particular issue (see the following table).
### Student responses

<table>
<thead>
<tr>
<th>Student responses</th>
<th>Number of responses n=172</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Being confident in analysing a problem and gathering resources to solve it.</td>
<td>173</td>
</tr>
<tr>
<td>- Feeling confident when presenting personal ideas in public</td>
<td></td>
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<tr>
<td>- Collaborating with other members in learning more effectively.</td>
<td></td>
</tr>
<tr>
<td>- Organising personal learning more effectively.</td>
<td></td>
</tr>
<tr>
<td>- Thinking and finding solutions for a problem faster and more effectively.</td>
<td></td>
</tr>
<tr>
<td>- Developing good relationship with many class members.</td>
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</table>

The students seemed to be optimistic about the usefulness of the learning skills they achieved. Besides the subject content, they commented on a range of skills they had gained such as collaborating, communicating, problem-solving and self-directing. As Boud and Feletti (1991) assert that PBL is recognised as an important development to teaching for professions. With the learning outcomes of both subject content and processing skills, students can enhance their knowledge as well as learn how to learn during the process of learning through the approach.

### Conclusion

The study showed that there has been an effective change in teacher and student perceptions during the process of teaching and learning through a PBL approach. For students, they not only gradually gained a deep understanding of the PBL approach itself; they also achieved a range of skills connected to the learning process such as team-working, critical thinking, problem-solving, self-directed learning etc.. These skills will be useful for the learners’ future professions as well as effectively supporting for their life-long study. For instance, it can be seen that the PBL approach significantly encouraged students’ self-directed and independent learning skills through collaboration. In particular, it appeared that the students actively engaged in group discussions, finding additional resources, working on their assigned learning issue, or attending class meetings and presentations. These learning activities were vastly different from those seen in learning using traditional methods which are seen not to fully prepare students to become life-long learners.

In addition, the teaching and learning model of PBL has been introduced in the Asia-pacific region for over ten years (Khoo, 2003). Achike and Nain (2005) further assert that “the delay is attributable to such factors as the lack of leading regional PBL experts, conservative attitude with attendant resistance to change, and the long standing myth that Asians students are not suited to the PBL approach” (p.303). However, this study showed that the participants of eastern culture -Vietnamese teachers and students - willingly adopted the PBL approach even though they also faced a range of challenges such as limited time allowance scheduled for learning units, heavy study load and group conflicts. Khoo (2003) further
claims that Asian learners can adjust their learning practices when being placed in a new learning situation. The study confirmed these findings as the responses from students showed that they readily became used to the benefits of the PBL approach which can effectively help students become active lifelong learners.

References


