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## **Integrating Problem-Based Learning Pedagogy with English as a Foreign Language Courses**

*Reflections on Benefits and Challenges*

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# **Integrating Problem-Based Learning Pedagogy with English as a Foreign Language Courses: Reflections on Benefits and Challenges**

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**Abstract:** Teaching and learning of most English courses at Mae Fah Luang University emphasize rote learning or a traditional teaching approach. Large class sizes combined with a traditional teaching approach consequently produces a learning environment there is rather passive. Students rely on memorization of grammar points and fragmented discipline-centered knowledge to pass exams. It was discovered that even though students pass exams, they performed low in English proficiency. To solve this problem, a group of English lecturers began to explore a teaching method that would allow active learning where it requires students to be actively involved during the learning process. Being active learners, students will consequently sharpen their English proficiency. This study describes an educational management experience which integrates an innovative pedagogy called problem-based learning (PBL) into the teaching of two major required courses in the English Program. The study involved 109 students and 16 teachers from the English Department. The course syllabi were redesigned by merging the two courses to be taught in tandem and integrated PBL into the teaching/learning process. Through out the semester, teaching/learning was done through project work which was derived from students' interests. Students worked on their projects in groups of 6-7 members, and facilitated by advisors. At the end of the semester, two sets of the questionnaire were distributed to both teachers and students in order to get feedback and reflections on teaching/learning of the new approach. Also in-depth interviews with both students and teachers were conducted to document their perceptions towards the teaching/learning approach. The results indicated that participants perceived and reflected positively towards the use of PBL approach. Furthermore, the paper also discusses advantages and disadvantages of PBL used in the traditional educational environment, problems and lessons learned during the operational period, and possible solutions suggested for the future implementation of PBL.

**Keywords:** Problem-based Learning, Project Work, Language Education, English as a Foreign Language, Syllabus Design.

## **1 Introduction**

Problem-based learning (PBL) is recognized at two levels: pedagogical strategy and educational/curriculum method. It can also be observed that PBL is practiced in many different ways, depending on contexts of the educational environment. Throughout the decades since its initiative PBL has also been implemented successfully in several academic disciplines particularly in the fields of medicine, science and engineering. There are several studies evident that PBL enhances self-directed learning, problem solving skills, communication skills, and also fosters deep content learning through team work (Barrows & Tamblyn, 1980; Hmelo-Silver, 2004; Hung, Jonassen, & Lui, 2010). As PBL has made advances in the medical, science and engineering fields, it is still in the beginning stage in the field of language studies, particularly in the foreign language learning environment. As a language teacher, the researcher has recognized some common features of learning outcomes presented in both PBL and language learning principles. In the field of language teaching/ learning, the introduction of Communicative Language Teaching (CLT) in the 1970s has made a major paradigm shift. The focus of learning outcome has been on producing learners with language competence or communicative competence which fosters language students to be able to function or apply knowledge and skills beyond the classroom context. The term that describes this kind of learning outcome is 'communicative competence' (Hymes, 1972). Later Canale & Swain (1980) identified communicative competence into four dimensions: linguistic/grammatical competence, sociolinguistic competence, discourse competence, and strategic competence. It can be observed that the common learning outcomes shared between PBL and CLT are:

Communication skills= Discourse competence+ Sociolinguistic competence

Problem-solving skills= Strategic competence+ Discourse competence+ Sociolinguistic competence

Besides addressing the common values gained between PBL and CLT, the goal of the cases study was also to evident that PBL encourages self-directed learning and collaborative learning/working among students. This study describes an educational management experience which integrates PBL strategy into two English courses taught in tandem. The study involved 109 students and 16 teachers from the English Department. Learning was done through project work which was derived from students' interests. Students participated in their projects in small groups of 6-7 members, and were facilitated by advisors. Empirical data was collected by questionnaires and interviews. The qualitative results indicated that participants perceived and reflected positively towards the use of PBL instructional strategy. The discussion focuses on advantages and disadvantages of PBL used in the traditional educational environment, problems and lessons learned from the PBL integration into the existing syllabi, and possible solutions suggested for the future implementation of PBL.

## 2 A Description of the PBL Organized Model

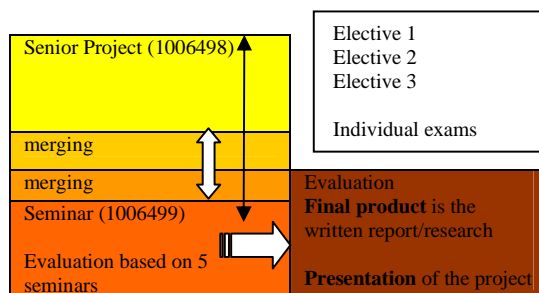
Before the two courses are put into the actual practice, the given elements of the courses are as shown in Table1.

Course Name	Senior Project	Seminar on Contemporary Issues
Course Code	1006498	1006499
Amount of credit earned	3(3-0-6) The course gives 3 credit hours. Traditionally, the course is run for 15 weeks (45 hours of class time). Each week requires 3 hours of lecture time, no lab, and 6 hours of students' self study time.	3(3-0-6) The course gives 3 credit hours. Traditionally, the course is run for 15 weeks (45 hours of class time). Each week requires 3 hours of lecture time, no lab, and 6 hours of students' self study time.
Course description (original)	An independent study of the selected topic under a close supervision of an advisor which requires an objective setting, hypothesizing, literature reviewing, researching, analyzing, culminating in paper and oral presentations.	A study of a selected contemporary issue, with logical analysis of the aspects under study, culminating in a seminar in forms of oral and paper presentations.
Type of Course	Major Required	Major Required
Grading method	S/U S = satisfactory at 70% + U= unsatisfactory at 69% or less	S/U S = satisfactory at 70% + U= unsatisfactory at 69% or less

**Table 1:** Given elements of the courses before integrating PBL

### 2.1 New Elements of the two Courses

The committee of the English program then later agreed on setting the objectives, details of course outlines, a teaching method for the two classes, and details of assessment. Objectives of Senior Project course set by the English department committee are 1) students are expected to apply knowledge from their English major studies and research skills in producing a selected project work; 2) students are expected to give oral presentations on the process of their project work; and 3) students are expected to display their project work in paper and oral presentations for the public. Objectives of Seminar on Contemporary Issues course set by the English department committee are 1) students are expected to explore the topic of interest and engage in seminars on various issues; 2) students are expected to give oral presentations on the selected topic; and 3) students are expected to display learned knowledge in the form of a paper presentation. In practice, the two courses were merged and taught in tandem, but were graded separately. Learning was done through a project work which covered 3 fields, 16 themes: Literature (3 themes), Linguistics (5 themes), and Education & ESP (8 themes). Details are illustrated by the following figure and tables.



**Figure1:** Integrated PBL Model

A Semester Plan was designed and agreed upon by both teachers and students. Details as presented in Table 2.

Week1	- Orientation on how these two course will be run throughout the semester and a clarification on teachers' and learners' roles - Theme selection	
Week 2-5	Meeting advisors+ Theme overview (lecture) Brainstorming a topic/research question(s) Library search	Seminar1
Week 6-7	Writing a formal proposal	Seminar 2
Week 8-9	Methodology: designing instrument(s)	Seminar 3
Week 10-11	Data Collection	Seminar 4
Week 12-13	Data Analysis Finish up the report	Seminar 5
Week 14-15	Presentation= Exhibition Paper Report Due	

**Table 2:** Schedule and Semester Plan

### 2.2 New Assessment Strategy

Although the two courses were combined in terms of content of the project and teaching/learning practice, the evaluations of the two courses were separated. Also each student was assessed individually, but their working/learning strategy was in small group format. Detail of grading is shown in Table 3.

<b>Senior Project ( 1006498)</b>		<b>Seminar on Contemporary Issues ( 1006499)</b>	
Final Product 30% (evaluated by the advisor 15% and co-advisor 15%)		Seminar1 20% Seminar2 20% Seminar3 20% Seminar4 20% Seminar5 20%	
Learning Progression 20% (evaluated by the advisor)			
Presentation/Exhibition 50% :			
- Advisor 20%			
- Co-evaluator from the related field 20%			
- Public 10%			
		*for each seminar, there will be 2 evaluators (the group advisor and an invited lecture in the related field)	
Total points for advisor	55%	Total points for advisor	50%
Total points from external evaluator	45%	Total points from external evaluator	50%
<b>Grand Total</b>	<b>100%</b>	<b>Grand Total</b>	<b>100%</b>
S - 70		S - 70	
U - less than 70		U - less than 70	

**Table 3:** Grading Criteria of the Two Courses.

In running these two courses in tandem, we combined the two courses together in terms of time management and topic/theme selection in producing a project. Students worked together in a small group, 6-7 members, under the same theme. Students chose the theme by themselves and worked under guidance of one advisor. In parallel with doing the project work, they were also required to hold 5 formal seminars. Each seminar was required to operate in a format of a panel discussion where all members must be actively involved in presenting the progress of their works, asking constructive questions and offering possible answers in order to help develop the project. Each seminar was evaluated by 2 evaluators (advisor and external evaluator). The main purpose of the seminars was to evaluate students' learning progress through doing their project work. Students and advisors were expected to progress their learning /teaching according to the schedule given in the semester plan. Students and supervisors worked together to set up their own schedule for lecturing and advisory periods—place and time to meet. Each group knew that would spend 6 hours per week with their advisors.

### 3 Methodologies

In order to detect values gained from the perceptions of both students and teachers from integrating PBL as instructional strategy with the two courses, questionnaires and interviews were used to collect empirical data. There were two sets of questionnaires, one distributed to 109 students and another one distributed to 16 teachers at the end of the semester (after the exhibition of the students' project work). The purpose of the two sets of questionnaires are as follows: 1) to confirm that the guidelines of the teaching method are followed properly; 2) to detect students' perception towards their own learning process and learning outcome; 3) to detect students' perception towards their advisor's facilitation process and quality; and 4) to detect teachers' perception toward the integration of PBL educational strategy. Interviews with students were conducted in group interviews. A total of 16 students participated in the interviews and were separated into 3 groups with the members of 6, 6, and 4 respectively. Furthermore, the interviews with 4 teachers were conducted individually. The purpose of the interviews was to get more open-ended opinions and reflections. The interview questions dealt with their open-ended opinions on what are the positive and negative points of conducting teaching/learning with two courses through PBL instructional strategy.

### 4 Results

4.1 Results from the students' questionnaire survey (Item 1-10) are as follows:

- 1) The questionnaire was distributed to 109 students, but 66 were returned. From 66 students, 21 worked on a linguistics theme; 16 worked on a literature theme; and 29 worked on an education and ESP theme.
- 2) From 66 students, 60 students reported they held 5 seminars; 2 reported they held 1 seminar; 2 reported they held 3 seminars; and 2 reported they held more than 5 seminars.
- 3) From 66 students, 50 students reported there were 2 evaluators at each seminar; 7 reported there was 1 evaluator; and 4 reported there were more than two evaluators at each seminar.
- 4) From 66 students, 31 students reported they had more than 3 meeting with their advisors before each actual seminar; 7 students had 3 meetings; 11 had 2 meetings; and 13 had only one meeting. 4 students didn't report on this item.
- 5) From 66 students, 30 students reported spending more than 3 hours/week on self-study related to their project; 13 reported spending 3 hours/week; 13 reported spending 2 hours/week; 3 reported spending 1 hour/week, and 7 did not report on this item.
- 6) 66 students reported on their perceptions on knowledge gained; detail is shown below.

statement	none	very little	fair	good	excellent
I have gained knowledge from doing the project work.	-	-	8 12.12%	32 48.48%	26 39.39%

7-10) 66 students reported on their perceptions on their satisfactory level of the advisory, quality of their final product, their learning process and their collaborative skills; detail is shown below.

statement	poor	below av.	average	above av.	excellent
7) I am satisfied with my advisor's supervision.	-	2 3.03%	13 19.70%	21 31.82%	30 45.45%
8) My perception towards the quality of my product.	1 1.52%	2 3.03%	26 39.39%	24 36.36%	7 10.61%
9) My perception towards learning my process.	-	-	15 22.73%	38 57.58%	13 19.70%
10) I worked well with the team.	-	-	15 22.73%	38 57.58%	13 19.70%

4.2 The results from the teachers' questionnaire survey are as follows:

- 1) There were 16 teachers participated in this study and all 16 teachers returned the questionnaire survey: 3 from the field of Literature; 5 from the field of Linguistics; and 8 from the field of Education and ESP.
- 2) Questionnaire item 2 was to get the information whether or not the teachers had complied with the agreement of a number of hours spent on advisory time, required 6 hours per week. 9 teachers reported that they spent 6+ hour per week with students as required; 1 teacher reported spending 4 hours; 5 teachers reported spending 3 hours, and 1 teacher reported spending 2 hours.
- 3) Regarding the guideline, each study group and the advisor must hold 5 seminars to report and discuss the progress of the project work. One teacher reported holding only one seminar and the other 15 reported holding 5 seminars as required in the guideline.
- 4) Regarding the guideline, there must be a co-evaluator for each seminar. It was preferred that the co-evaluator should be the same person for all five seminar. The intention was for teachers to develop their collaborative teaching and to best students' learning process. 12 teachers reported having the same co-evaluator through out the five seminars and 4 teachers reported not having the same co-evaluator for the seminars.

5-8) The next three items reported on teachers' perception towards students' learning.

Statement	Poor	Below average	Average	Above average	Excellent
5) My students' presentation and communication skills.	-	1 6.25%	3 18.75%	7 43.75%	5 31.25%
6) My students' self-directed learning.	-	3 18.75%	2 12.50%	5 31.25%	6 37.50%
7) My students' team work skills (collaborative skill)	-	1 6.25%	4 25.0%	3 18.75%	8 50.0%
8) Quality of my students' final product.	-	1 6.25%	9 56.25%	5 31.25%	1 6.25%

9) Teachers' perception towards the improvement of their students' learning.

N/A	No improvement	Very little improvement	Satisfactory improvement	Significant improvement
-	-	3 18.75%	9 56.25%	4 25.0%

4.3 The results from students' interview

All sixteen students responded that they like learning through this method because they had become responsible for their own learning and gained team work skills. A group of 6 students who worked together on designing the basic English communicative lessons said that it was harder and more demanding on them to work on the project than learning by listening to lectures and completing exercises, but they have learned a lot from working on this project together. The second group did their project work under the same theme, but worked on one individual mini research. They expressed that they liked how they could work independently and manage their own schedule. They however regret that they didn't really get to work as a team fully because each of them worked on the individual mini research. One student expressed that although they worked under the same theme, they tended to work individually on their part; therefore, they did not benefit as much as they could during the seminar sessions. Other four students who worked under different theme all responded positively toward the way the two courses were conducted. They liked how they got to manage their own working time and were able to be self-directed during their project work period. However, these four students also expressed some negativity regarding their project work. Two students said that they didn't have freedom to initiate what they really wanted to do on their project. They said that their advisor controlled what and how the project should be done. One student reported having a problem on the advisory process. One last student gave some very insightful remarks and comments on the teaching/ learning strategy we used. The student first expressed that the way we conducted the two classes can be very beneficial to some group of students, but can also hurt some students. The student was concerned with the standard of the supervision because some groups were very happy on their learning progress and on their products, but some groups were not sure if they had gained anything in terms of content knowledge and even collaborative skills. The student further expressed that all of these depended on their advisors; however, it appeared that one common skill all students seemed to gain was self-directed study, including time management.

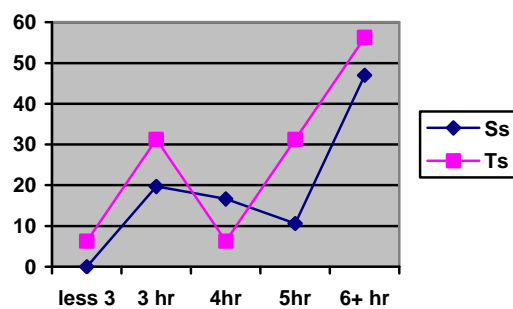
4.4 The results from teachers' interview

All four teachers expressed that conducting the two courses this way is very challenging for both teachers and students. In general they were happy with the results in terms of students' learning and the final products/reports. However, they all agreed that there still be improvement in terms of standard procedures in conducting the two courses and grading methods used with these two courses. For instance, the issue of free riders, it was noticed

among teachers and students that some teachers did not spend a proper amount of time on advisory and lecturing. Some teachers were too controlling of students' project, not allowing students' initiation on their own projects. Some teachers allowed some projects that were not correlated; therefore, students did not learn from one another and they did not get to work collaboratively. The four teachers further addressed the grading issue. They agreed that using S and U grading method for these two courses is quite unfair for the hard working students and also allowing a lot of free riders. The grading factor could contribute to the discouragement of students with high potential to produce a mediocre project work because they could not see the difference in getting a reward for their effort and quality of their work because the passing grade had a very wide range, 70-100 points. This issue of course is something we need to reflect on and intend to improve.

## 5 Discussions

The results from the student questionnaire indicated that 66 out of 109 students (60.55%) returned and completed the questionnaire. 90.91% (from 66 students) reported that they and their advisors had held 5 seminars regarding the course agreement. 9.09% of students reported that their group did not hold five seminars as agreed. The report from the teachers on the same item showed consistency of the two reports was agreed. That was 15 teachers (93.75%) reported that they held all five seminars, but one teacher (6.25%) reported holding only one seminar. The next agreement was that each group would have 6 hours per week of consultancy from their advisors. 46.97% of students reported that their advisor spent six hours or more per week with them, 10.61% reported spent 5 hours per week, 16.67% reported spent 4 hours per week, 19.70 reported spent 3 hours per week. No advisor spent less than 3 hours on the advisory time reported by students. The report from the teachers on this item showed a similar result as the students, as shown in figure 2.



**Figure 2:** Students' and teachers' reports on advisory time.

The report on an agreement of having co-evaluator for each seminar showed a conflict between students' and teachers' reports. It was agreed that each seminar should have at least 2 evaluators. All 16 teachers reported that there were two evaluators at each seminar. 12 teachers (75%) also reported that they had the same co-evaluator at each seminar for a reason of being consistent in commenting and following through with students' learning progress. However, the result from student report showed that 75.76% of students reported that their group had two evaluators at each seminar as agreed, 6.06% report that they had more than 2 evaluators at each seminar, and 18.18% reported that they had only one evaluator at each seminar which was their own advisor. Lastly, the results from the reports on the students' learning process and the final product of the project work from both teachers and students showed an agreement between their perceptions as shown in the graphs.

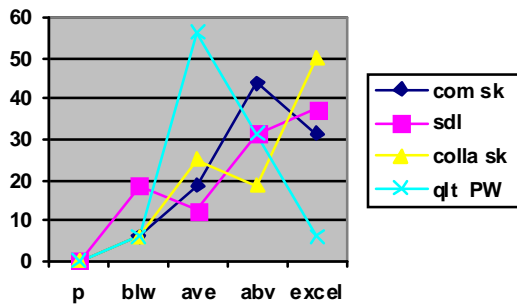


Figure 3: Teachers' Perceptions (%)

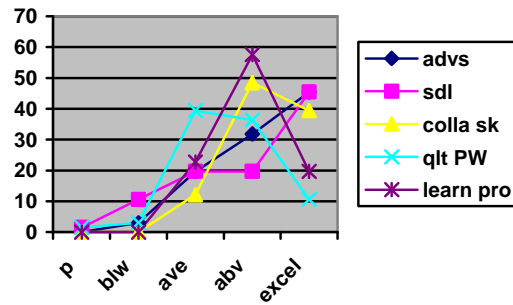


Figure 4: Students' Perceptions (%)

The results indicated both teachers and students had very similar perceptions toward the values gained during their learning process which included communication skills, collaborative skills, self-directed learning. They also viewed the quality of the final product of their project work similarly.

## 6 Reflections and Conclusion

The practice of PBL through project work by students and teachers from the English Department at Mae Fah Luang University (MFU) is called the 'subject project' combined with 'assignment-based project' (Kolmos, 1996). Through their practice, problems, subjects, and methods were chosen beforehand by teachers to some extent. Most students however have free choice to work on problems/themes within the subjects and free choice of method was also allowed with some groups. Even though this practice may appear to be a teacher-controlled project in some extent; the crucial point here is that MFU had a willingness to initiate change for its education paradigm. It is realized that there is always room for development for both students and teachers. Learning and teaching in higher education must now be concerned with motivation, involvement, self-directed process, and life-long learning. If the educational aim here is to produce competent holistic students, PBL then gives advantages of fostering the development of learning dimensions that will prepare students for the changing world. Advantages of integrating PBL in this case were that students strongly engaged in the interactive process. They communicated and exchanged ideas, felt a responsibility for their own learning and also for their peers'. In contrast, disadvantages were workloads and time limitation because project work demands more time from both teachers and students. This is also true for this case study as well because all participants must work around the existing curriculum structure. In addition to the two courses with the integration of PBL, there were also other 4-5 subjects that students also had to take in the same semester. These individual subjects also required 15 weeks of in-class study and had several tests and exams. This particular semester, of course, was very stressful for students to manage their time and to fulfill each subject's requirements. The consequence of time constraints was that some information may not be shared or discussed properly. Another point I would like to reflect on is the issue of supervision. It was obvious that the reason some teachers were not consistent in their supervision was because they lacked proper training. Some do not have a deep understanding of what PBL and project work is all about and that there are also time constraints. They therefore encountered some criticism about their supervision. How can we improve the situation? The obvious answer is to first train teachers before taking part in the PBL organized study. Lastly, it can be concluded that PBL used as instructional strategy in this particular case study received positive responses and acceptance from both teachers and students. All participants agreed that conducting the two courses this way definitely provides and encourages an active learning process. Learning through working on a project, obviously enhances students' communication skills, management skills, teamwork skills, self-directed learning or autonomous learning, and problem-solving skills. PBL emphasizes producing learners who will be able to solve problems in their field of study and continue to pursue new learning throughout their lives and thus allows them to be competent world citizens. This is the reason why PBL is viewed as one of the most effective pedagogical strategies fostering student-centered and active learning.



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