Advances in
Social Science,
Education
and Humanities
Research

Problem Identification and Solution Design: Project Based Learning Approach in Improving Students Active Participation and Confidence in English Class

[1*]Putiviola Elian Nasir, [2]Rifki Dermawan

[1, 2] *International Relations Department, Universitas Andalas*
[*]*Corresponding author. Email: putiviolaeliannasir@soc.unand.ac.id*

ABSTRACT

Previous experience related to teaching English as a foreign language for International Relations Department of Universitas Andalas demonstrated that the majority of the students' English language ability is within the intermediate level. This should lead to English speaking students with no difficulty to express their ideas and opinions. On the contrary, this has yet to be the culture of IR students. Before this study, researchers have concluded that this is due to ineffective class activities because the root of the problem has not been solved. This research analyses the use of Project Based Learning approach as possible solution to the issue. Students are positioned as the owners of the class, thus actively shaping the class including their abilities. They are encouraged to identify the root problems of English language learning, create solutions, design activities appropriate for the solutions and implement the programs. The method of this research is mixed methods, using both quantitative and qualitative methods. This research design is necessary to measure the change in student attitude, which becomes of the learning outcomes of this class. After implementation of this approach for the first half of the semester, positive results have already been demonstrated, where 100% of the students have experienced an increase in their confidence to use and speak English. However, there is still 11% of the total students who although experienced a boost of confidence, were not able to meet the desired 30% increase of confidence.

Keywords: Confidence building, Problem identification, Solution, Project Based Learning, English

1. INTRODUCTION

1.1. The Need for Effective English Learning Strategy for Universitas Andalas' International Relations Students

English is a necessary skill required by students to be able to compete at the local, national and especially at the global level. Therefore in countries where English is not the native language of its people, schools have been implementing English classes to help their students survive in the professional field. This has been the strategy of Indonesia, where English is a mandatory subject starting from junior high school to higher education such as at university levels. In Universitas Andalas, West Sumatra, English course has become a General Compulsory Course in all faculties. Specifically for the International Relations (IR) Department, the students' English proficiency plays an important role firstly because the majority of

subject materials are in English and that English is the language of instruction in many of IR classes.

This ability is also crucial in the career of students after they graduate, because the ability to master English is required in various IR Department's students outcomes. This means, that this requirement is one of the goals that students need to achieve at the end of their study at the department, with the help of lecturers. There are four main student learning outcomes in the IR Department which are outcomes related to attitude, knowledge, general skills and specific skills [1].

Within the attitude outcome, students' English ability will contribute to the specific goal of "Working together and having social sensitivity and concern for society and the environment". This goal can describe the context of international Non-governmental Organizations (NGOs) and International Governmental Organizations (IGOs), where alumni

who work in these types of institutions be able to communicate in foreign languages, especially English.

Other outcomes that emphasize English language skills can be seen in the knowledge outcome such as "Mastering theories, concepts, and methodologies of international relations", "Mastering political, economic, legal, and socio-cultural aspects as well as interrelationships between these aspects in the context of international relations" and "Mastering local, state, regional and global issues, actors and dynamics". As previously explained, the majority of scientific references that support the achievement of these outcomes are in English, therefore to achieve this, IR students must have sufficient English language skills.

The significance of the English class is clearly illustrated in the general skills outcome which describes "Able to express thoughts and arguments orally and in writing in Indonesian and/or English and/or other foreign languages." This confirms that the IR students must be able to communicate in a foreign language, other than Indonesian, and preferably English.

The ability to speak English is an effective tool especially to achieve the specific/special skills outcome in the form of being "Able to apply and utilize media in responding to global challenges", "Able to produce media content related to issues - contemporary global issues", "Able to influence the public to increase awareness of domestic and international phenomena", and "Able to disseminate research results and/or scientific ideas to the public". In order for students to be able to obtain these achievements, English language skills can be an appropriate support system.

Previous English classes has applied Student Centered Learning (SCL) method. Various SCL methods have been applied in English classes such as Small Group Discussions to discuss specific topics in groups Discovery Learning where students complete assignments based on independent exploration, and independent Project Based Learning. However, based on the entirety of assessment, students have not been able to achieve maximum results. From numerical assessment, the actual grades of students in this class are sufficient to excellent. This can be seen from the number of English students in the 2020/2021 odd semester (first semester of the 2020/2021 academic year), who completed the English class with an A score of 78% for class A and 61% for class B.

The problem exists in student confidence and active participation; where it is still very low. There have been active students, however, this only applies to a third of the class population. The online lecture process is also a challenge for this course where language learning should be more practical, but in reality, it is becomes challenging to conduct through Zoom, ilearn (Universitas Andalas learning platform) or Whatsapp because it consumes more time, lacks engagement with students and issues internet related problems. Therefore, practice was often replaced with assignments which cannot reflect the student's abilities in real time. The teaching method that has been previously used in English classes have proved to although have been useful, however have not been able to maximally release the students' potentials.

1.2. Appropriate Project Based Learning Method to Increase Student Confidence and Participation

As one of the steps in solving this problem, this research proposed the use of appropriate Project Based Learning (PJBL) and Outcome Based Assessment (OBA). The PJBL method offered by the research team is in accordance with the concept of PJBL itself, which involves students actively with efforts to improve student achievement in class. The PJBL method does not only enhance student involvement, but also demonstrates students' critical and creative thinking skills related to class projects. This is supported by Setiono's statement which asserts that "Project Based Learning is a way of learning that involves students to work on projects that are useful in solving community or environmental problems" [2]. This critical and creative thinking begins with the provision of problem-based and investigative class projects. The PJBL method in the English class fulfills the characteristics of PJBL such as learning through projects based on problems; the projects must be in accordance with the learning objectives and in accordance with real conditions, as well as providing feedback to students to guarantee changes [3].

Education including the Teaching and Learning Process (PMB) both formally and non-formally is a process that continues to develop. It follows the needs of the students but is also adapted to the demands of the professional world. Currently, Indonesian universities are building a curriculum that focuses on Outcome Based Education (OBE) which prioritizes

the achievement of graduate goals/outcomes. Student Centered Learning (SCL) is a learning method that is currently being applied to achieve this. The difference between SCL and Teacher Centered Learning (TCL) is in the position of students and teachers, where there is a take and give process between the two. The teacher is not the only source of knowledge, and students have a role in classroom development. The SCL method itself consists of various types such as discovery learning, small group discussion, problem based learning, project based learning, self-directed learning, collaborative learning, cooperative learning and simulation to name a few [4]. Each of these types of SCL can be beneficial if applied properly. This study uses a project based learning method due to its ability to explore students' creativity and critical thinking capabilities which will result in increased confidence and participation specifically for English Class in the IR Department.

Various studies related to PJBL have been applied to evaluate the implementation and effectiveness of this learning method. Various positive results were obtained such as the ability of this method to improve soft skills such as effective communication skills, self-development, and teamwork [5]. Furthermore, PJBL can prepare students for professional setting because of the transfer of knowledge related to skills in the professional world among fellow students [6], as well as being able to improve "project-work related skills" such as to plan, organize, negotiate, make consensus, to take responsibility, research and present information" [7]. In accordance with the objectives of this study, research has discovered that the PJBL method has been able to improve students' creative thinking and problem solving skills, where there is a relationship between these two variables. Supporting the statement from Bina Nusantara University, Kokotsaki argues that PJBL is an active learning method involving students, by emphasizing the characteristics of PJBL on student autonomy, collaboration (both among students and with teachers), communication and evaluation, all of which are organized in the context of what is currently happening in the world [8].

2. METHOD

The PJBL method that was applied in this study prioritizes the active role of students in finding problems related to learning English either within the students themselves or in their environment. This stage is the first stage of the proposed PJBL for this class. This process is important to find the root cause of the difficulties in mastering English from the students themselves. To discover the problem, students design questionnaire related to English language learning problems and distribute it to respondents who are also students and professionals. After discovering the root of the problem, students are formed in groups to find solutions that can be implemented for each problem.

These solutions were then applied during English class lectures, and when necessary using other types of SCL methods. The solution can be in the form of materials, student attitudes, learning methods, or strategies in learning. In addition to focusing on the active role of students, this PJBL method trains collaboration between students and lecturers. In this case, it can be said that students participated in designing the syllabus of this class. Since students contribute and are involved in the design and implementation of lectures, it is hoped that this can evoke a sense of belonging among the students thus encouraging serious and effective learning atmosphere.

2.1. Research Setting

The research was conducted in English classes class A and B for students majoring in International Relations, UNAND in the Odd Semester of 2021/2022. The duration of the study is during the current semester, from August to December 2021. However, at the time of the writing of this article, the class has only been conducted half of its semester, therefore results presented in this article are temporary results. This study uses mixed-method qualitative and quantitative. This is necessary because changes will be assessed numerically and qualitatively. Quantitative research is used to assess changes obtained through numerical data (student scores). However, changes in numerical form do not necessarily lead to positive results. Since this research plays a role in assessing the changes felt by students in PBM, qualitative data is seen as equally important.

2.2. Research Subject

This study will focus on the confidence, student involvement (engagement) and their English language

skills of HI UNAND students, namely students of class 2021, who are first year students. The research subjects consist of students from both English classes. There are 60 students from Class A and 57 students from Class B.

2.3. Data Analysis

The data for this study will be obtained directly from the subject of this study therefore included into primary data. Quantitative data is obtained through regular assessments to see changes in student abilities or behavior. This type of data is also known as time series data. Meanwhile, qualitative data or verbal data will be obtained through discussions with students at the beginning of the course, questionnaires distributed in the middle of the course and interview at the end of the course.

Data analysis was conducted to assess two elements, namely whether there was a change in students' ability to speak English and whether the PJBL method was able to help students achieve student outcome from this course. Changes in student abilities are assessed in two ways, they are through:

1. Numerical data analysis
   a. English test conducted through a simple English test from the British Council website (https://learnenglish.britishcouncil.org/online-english-level-test): the beginning and end of course.
   b. Midterm and final exam which will be compared.
   c. Individual and group work.
   d. Number of students who are active in class: beginning of class to end of class compared.
   e. Questionnaire in mid semester.

2. Verbal data analysis
   a. Discussion at the beginning of class.
   b. Quality of student involvement in class: quality of students' questions, comments' or responses.
   c. Interview at the end of class.

After data analysis, an evaluation stage was conducted to determine the right method and improvement for the following year. Validity tests were applied for questionnaires and interviews, to ensure that the questions asked are appropriate for the purpose of conducting the research.

3. RESULT AND DISCUSSION

This research is based on the implementation of PJBL in English class of the IR Department. The basis of the PJBL is the root of the English learning problem and its solution. After conducting survey and discussions related to the root problems, students along with the lecturer provide solutions. Below is the table of the timeline and activities of English class PJBL method.

Table 1. Timeline and Activities per Week

Week	Problem to solve	Solution-based Activity	Language Ability
1	Ineffective English Learning	Explanation of class project	-Listening -Speaking
2	-Lack of practice -Lack of confidence	Finding root of the problem: -Survey -Discussion	-Courage/ Confidence -Listening -Speaking
3	-Lack of practice -Lack of confidence -Unsupportive environment	Finding solutions to the root problems: -Group activity -Start WAG group -Make English activity calendar	-Courage/ Confidence -Listening -Speaking -Reading -Writing
4	-Lack of vocabulary -Lack of practice -Unsupportive environment -Lack of confidence	-Understanding context, -Explanation of objects (What is it? game) -WAG group	-Vocabulary -Courage -Listening -Speaking -Reading
5	-Lack of vocabulary -Unsupportive environment	-Treasure Hunt -WAG group	-Vocabulary -Reading -Grammar
6	-Lack of confidence -Lack of practice -Lack of vocabulary -Unsupportive environment	- Crazy inventions -WAG Group	-Vocabulary -Courage -Listening -Speaking -Reading
7	-Lack of practice -Lack of vocabulary -Unsupportive environment	- Song Day - WAG group	-Vocabulary -Grammar -Listening -Speaking -Reading
8	Midterm – mid semester evaluation		

From Table 1, it can be clearly seen that the focus of this project is to maximize students English ability that they already have during the four to ten years of learning English. This project does not focus on grammar enhancement, rather on increased in confidence and creating new strategies through different activities to maintain sustainable practice environment. All of these activities were created by the students and the lecturer as a response to the solution that the students designed.

3.1 Class Assessment

3.1.1 British Council English Test

In order to evaluate the progress of the students' English ability specifically for grammar and reading competencies, students are encouraged to take the British Council English Test which is provided online in the British Council website. This test will be conducted twice, at the beginning and at the end of the course. Students have completed the first test at the beginning of the class. From a total of 60 students who participate in English class A, 51 students or 85% of students completed the test. Whilst for English Class B, 82% of students completed the test (47 out of 57 students).

Table 2. British Council English Test Results Class A

English Level	Number of Students
Beginner	0
Beginner to Pre-intermediate	1
Pre-Intermediate	0
Intermediate	44
Upper Intermediate	6
Advanced	0
Total Number Students Class A	**51**

Table 3. British Council English Test Results Class B

English Level	Number of Students
Beginner	1
Beginner to Pre-intermediate	5
Pre-Intermediate	0
Intermediate	41
Upper Intermediate	0
Advanced	0
Total Number Students Class B	**47**

These tables demonstrate that only 7% of students are at the beginner or beginner to pre-intermediate level. Whereas the majority of students are already at the intermediate to upper intermediate level. This result supports the results of English class of the previous year, where the majority of students' grades in this class is more than sufficient. Since this is the result in the beginning of the class, there should be an shift from the beginner to the intermediate level.

However, there is still no comparison with the end test because the English class is still ongoing.

3.1.2 Midterm Exam, Individual and Group Work

Midterm exams for class A and B, similar to other activities in English class are based on agreement between the lecturer and the students. This is part of the result of the Project Based Learning of the class. Both of the midterms focus on confidence, speaking and listening abilities of the students (evaluation also include grammatical and vocabulary competencies, although at a smaller rate). Class A have agreed on orally reviewing movies in groups and Class B's midterm is a 10 minute podcast on specific issues which are also conducted in groups. The result of the midterm reinforces the result of the English test which concludes the majority of students having intermediate speaking and listening skills (88% of students having grade A, 7% of students with grade A-, and 5% of students with grade B+).

Individual work in this class were conducted in the beginning of the course and in the sixth week of class. For the first individual assignment, all of the students (100%) were able to understand the instructions and delivered correct results, this was related to survey that they had to do on the problems of English language learning. The second individual work focused on reading comprehension and creative thinking. For this second assignment, more than 90% of students were able to correctly connect between the instructions of the lecturer with the objects that they had to find.

Group assignments were conducted in the second, sixth and seventh week. During these group assignments, the lecturer noted that during the sixth and seven week, students were more comfortable in speaking English in their groups; where before in group work in the second week, the portion of English language use compared to Indonesian language for speaking was half and half. In the sixth to seventh week, the group was able to speak English 70% – 80% of the time during the group assignment in class.

3.1.3 Student Engagement in Class

In the first week of class, the lecturer focused on the explanation of the PJBL method of English class, its aim, its strategy and its implementation, all conducted using English. Student participation is still very low, however, it is concluded that it is not only because students still have fear when having to speak in English, but also because it was the first time they

were in the class. During the second class, where materials focused on difficulties in learning English, was where students started to become more confident.
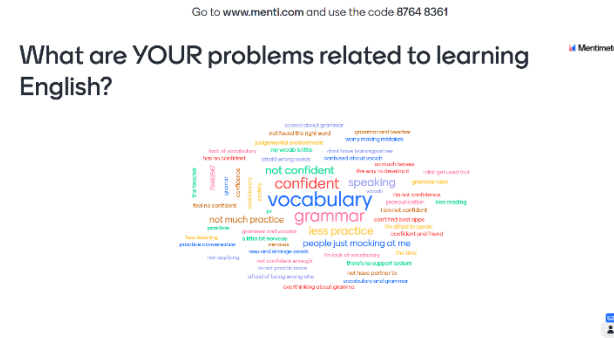

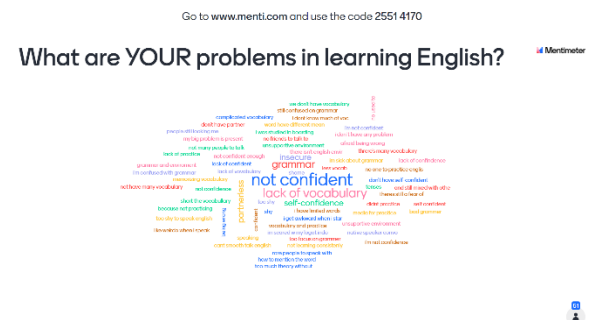**Figure 1. Mentimeter on Problems of English Language Learning Class A**

Figure 2. Mentimeter on Problems of English Language Learning Class B

From discussions in class, supported by the use of mentimeter.com, both from the students themselves and their respondents, they discovered that most of their problems revolve around: lack of confidence, unsupportive environment, lack of vocabulary, grammar-oriented and lack of practice. During this discussion, the number of students who participated in this discussion was the highest compared to student participation on the same week, in the previous years. For class A, 33% of students shared their experiences and fears of English learning and for class B, 38% of students participated in the same discussion topic. For the following weeks, the number of student participation varied, depending on the type of activity conducted in class, with the number of student participation always above 30%, with various changes in the students who participated.

High participation was also accompanied by qualified responses from the students, meaning that since many of the activities required discussions,

student engagement did not only contain of 'yes' or 'no' responses, but even more were in the forms of explanations and descriptions. This was evident during the discussion of experience sharing in learning English. The duration of students who expressed their feelings and opinion were between five to ten minutes per person. Other activities such as Crazy Inventions were able to encourage students to describe objects for more than five minutes. The drawing activity and the 'What is it' Game was also able to draw more than 15 participants for each round (10 rounds). This game also required students to explain an object in detail.

This result illustrates that it is imperative to plan and conduct appropriate activities which are appropriate to students' needs. Since the root of the English language learning problem is lack of practice which leads to lack of confidence and not having supportive environment, therefore activities which can push students to practice their already acquired knowledge is a must. In this case, class activities focus on 'forcing' the students to apply their English on fun but also creative activities. These type of activities create conditions where students will need to use their vocabulary and critical thinking, thus cannot rely on 'yes' or 'no' answers.

3.1.4 Mid Semester Questionnaire

The mid semester questionnaire is to evaluate student perception related to the class, but specifically to the PJBL method. The questionnaire requires students to answer questions on comparison on their confidence and feelings of English speaking and learning before and after class. The questionnaire also refer to questions about the effectivity of this method to their learning abilities and increase of confidence.

From the responses, 74% of students have never been exposed to this method during their previous English class. Furthermore, 95% of students believed that this method; identifying root causes, discovering solutions and creating appropriate activities was useful for their English learning process. For the remaining 5%, reasons why this type of method did not have positive results because even after this method they are still unable to create progress, or because they believed that every individual has unique ways of learning therefore it cannot be a 'one size fits all' strategy. However, 98% of students stated that the class activities were already matched the solution that they outlined.

Related to the impact that the class had on the students, 100% of the students stated that the English

class was useful for them. Students further described the increase of their ability, although not in grammar, but in other domains such as in speaking, listening comprehension, vocabulary and confidence. For the increase in student confidence, 100% of the students affirmed that their confidence or courage had risen, from 5% to 100%.

Table 4. Increase of Confidence among English Class Students

Class	Confidence Increase (%)					No Response
	0 – <30	≥30 – ≤50	>50 – ≤70	>70 – ≤90	>90 – 100	
A	7	18	17	13	3	1
B	5	9	14	13	2	6

From Table 4, data has demonstrated that students have experienced a rise in their confidence, where in class A, the majority of the students' confidence have improved between 30% - 50%. Whereas for class B, the majority of confidence improvement was between 50% - 70%. On the contrary, there is still 12% of students in class A and 10% of students in class B who were not able to have a confidence boost of 30% or over, which was one of the desired outcomes of this class. Both class A and B had the same number of students who had an improvement in their confidence of more than 70% to 90%. Students in the 'no responses' column did not specify the percentage of their precepted confidence improvement, however they all testified that the course was able to encourage them to speak and use their English language abilities.

4. CONCLUSION

Similar to students in other English classes, the level of English abilities of students from English Class A and B of the International Relations Department has not been and is not an issue. This has been proven by student grades of English classes over the previous years. However, the problem of speaking English and having the will to continue learning the language has been an obstacle not only for students of the IR Department.

This becomes a concern since English fluency is a part of IR students' learning goals, or a significant means to achieve that goal. Moreover, this will impact these students within their professional career in the future. This course, through the use of Project Based Learning method attempted to solve this problem by positioning students as active contributors to the course. This was achieved by encouraging students to

critically think and identify underlying issues that prevented them from learning English. This approach was considered as a full approach towards resolve the problem, by giving the students the power to question, design and implement their own thoughts and ideas into the class.

From observation of the first half of the semester, it can be concluded that this method has been successful in increasing students' confidence in speaking English, up to 100%. However, there is still a small percentage where this increase did not achieve the desired goal of student confidence rise of 30%.

REFERENCES

[1]   U. A. Ilmu Hubungan Internasional, FISIP, "Kurikulum KKNI-HI UNAND (mulai 2016)." http://hi.fisip.unand.ac.id/profil-jurusan (accessed Oct. 20, 2021).

[2]   P. Setiono, N. Yulianti, and S. Dadi, "Meningkatkan Nilai Karakter Peserta Didik melalui Penerapan Model Pembelajaran Project Based Learning," *J. Pendidik. Guru Sekol. Dasar*, vol. 13, no. 1, pp. 86–92, 2020.

[3]   Universitas Bina Nusantara, "Project Based Learning, sebuah Metode untuk eLearning," 2019. https://binus.ac.id/knowledge/2019/09/project-based-learning-sebuah-metode-untuk-elearning/.

[4]   Telkom University, "Student Centered Learning dan Kombinasi Metode-Metode Pembelajaran," 2019. https://ctle.telkomuniversity.ac.id/docs/teachin-resources/science-maths-and-technology/penerapan-metode-student-centered-learning-pada-mata-kuliah-interaksi-manusia-dan-komputer-dan-jaringan-komputer/.

[5]   K. Cain and S. Cocco, "Leadership

Development through Project Based Learning," *Proc. Can. Eng. Educ. Assoc.*, pp. 1–6, 2013, doi: 10.24908/pceea.v0i0.4869.

[6] F. Musa, N. Mufti, R. A. Latiff, and M. M. Amin, "Project-based learning: Promoting meaningful language learning for workplace skills," *Procedia - Soc. Behav. Sci.*, vol. 18, pp. 187–195, 2011, doi: 10.1016/j.sbspro.2011.05.027.

[7] S. G. Stein, *Equipped for the future: A customer-driven vision for adult literacy and lifelong learning*. Washington, DC: National Institute for Literacy, 1995.

[8] D. Kokotsaki, V. Menzies, and A. Wiggins, "Project-based learning: A review of the literature," *Improv. Sch.*, vol. 19, no. 3, pp. 267–277, 2016, doi: 10.1177/1365480216659733.

[9] A. Pnueli, In transition from global to modular temporal reasoning about programs, in: K.R. Apt (Ed.), Logics and Models of Concurrent Systems, Springer, Berlin, Heidelberg, 1984, pp. 123–144. DOI: https://doi.org/10.1007/978-3-642-82453-1_5

[10] B. Meyer, Applying "Design by Contract", Computer 25(10) (1992) 40–51. DOI: https://doi.org/10.1109/2.161279

[11] S. Bensalem, M. Bogza, A. Legay, T.H. Nguyen, J. Sifakis, R. Yan, Incremental component-based construction and verification using invariants, in: Proceedings of the Conference on Formal Methods in Computer Aided Design (FMCAD), IEEE Press, Piscataway, NJ, 2010, pp. 257–256.

[12] H. Barringer, C.S. Pasareanu, D. Giannakopolou, Proof rules for automated compositional verification through learning, in Proc. of the 2nd International Workshop on Specification and Verification of Component Based Systems, 2003.

[13] M.G. Bobaru, C.S. Pasareanu, D. Giannakopoulou, Automated assume-guarantee reasoning by abstraction refinement, in: A. Gupta, S. Malik (Eds.), Proceedings of the Computer Aided Verification, Springer, Berlin, Heidelberg, 2008, pp. 135–148. DOI: https://doi.org/10.1007/978-3-540-70545-1_14