THE APPLICATION OF PROJECT-BASED LEARNING (PBL) IN EMPOWERING ENGLISH PERFORMANCE AND BASIC ENTREPRENEURSHIP

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ABSTRAK. Tujuan dari pembuatan purwarupa miniatur kapal sebagai bentuk penerapan Project-Based Learning (PBL) adalah untuk meningkatkan kemampuan berbahasa Inggris mahasiswa secara menyeluruh. Mahasiswa semester satu jurusan Perkapalan tertantang untuk membuat sebuah purwarupa miniatur kapal yang mengkombinasikan pengetahuan dasar desain pembuatan badan kapal, 4 keahlian bahasa, dan pengetahuan dasar kewirausahaan sehingga mereka dapat memaksimalkan kemampuan-kemampuan tersebut secara seimbang. Bagaimana para mahasiswa tersebut meningkatkan kemampuan bahasa Inggris yang memperkuat kemandirian belajar dan pemahaman dasar-dasar kewirausahaan? PBL sebagai salah satu metode pembelajaran diterapkan dalam peneliatan ini dan hasil pembelajaran tersebut adalah penilaian dari hasil penulisan laporan akhir, presentasi, kesimpulan, dan purwarupa miniatur kapal yang dibuat. PBL sangat penting untuk mempertajam kemampuan mahasiswa dalam berbahasa Inggris. Pembimbingan melalui on-line, pengamatan dalam pembuatan laporan dan purwarupa miniatur kapal dan kolom penilaian diterapkan dalam proses pembelajaran PBL ini. Hasil akhir penelitian menunjukkan pemahaman teori pembuatan desain badan kapal, pemahaman penulisan laporan secara benar, kemampuan berbahasa Inggris yang baik, dan pemahaman dasar-dasar kewirausahaan. Elemen-elemen tersebut diterapkan secara bertahap dan berkesinambungan sehingga PBL dapat meningkatkan kemampuan mahasiswa semester satu jurusan Perkapalan Fakultas Teknik universitas Hang Tuah, Surabaya dalam empat keahlian berbahasa Inggris.

Keywords: *miniatur kapal, PBL, 4 keahlian berbahasa*

INTRODUCTION

English as an international language may be used in any levels of needs from education to offices settings for welcoming Asian Community Era in 2015. Lundine (2013) states that, in 2015, Global Market Era will open an opportunity for foreign employees with qualification to have jobs in Indonesia without holding green visa. On the other hand, stakeholders will also enhance the needs of workers with high capability and additional competence such as soft skills, foreign languages, and cultural awareness or understanding of overseas networks. The preparation for this era in the Indonesian education system includes the teaching of English as a foreign language, especially teaching of English for specific purposes (ESP).

During the ESP teaching-learning process, the ESP materials should ensure the learning process of the four language skills. The reading material in ESP for Naval Architecture, for instance, discusses the newest battle ship design of *Kelewang*. ESP students analyze and discuss the ship design to match with the theories they have learned, and thus 'the missing link' between formal theory and the stakeholders' needs will be bridged. Fellag (2006:xiii) states that by having excellent speaking competence, the students are able to express their own opinions and personal life experiences. The examples of their experiences are enhancing the knowledge by reading books, designing the prototype, learning entrepreneurships, presenting the projects, etc. Thomas (2000) states that Project-Based Learning (PBL) can accelerate the students' English performance, especially speaking skill because they have to present their final project, a ship prototype, based on their original idea.

Some of PBL elements are *voice* and *choice*, *critique* and *revision*, and *public audience* that maximize the students' competencies in four language skills. First, **Voice** and **Choice** means that the students are allowed to make some choices about the products to be created, how

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they work, and how they use their time, with the teacher's guidance and their age level and PBL experience. Second, *Critique* and *Revision* means that the project includes processes for students to give and receive feedback on the quality of their work that lead them to make revisions or conduct further improvement.Third, *Public Audience* means that students present their work to other people. In addition, PBL focuses on the *'knowledge, thinking, doing, and the context for learning'* so they actively use what they know to explore, negotiate, interpret, and create.

The spirit of entrepreneurship can be started at the early age by the students by learning to elevate the motivation in doing it because the future is full of uncertainty (Poerwati 2013:115). Here, the students learn its processes, so in the coming years, the students can start their own business and improve their self-esteem in conducting the business. Poerwati (2013:116) continues that the college students are not well-prepared for jobs and still immature in their mind-set. They have to create their own jobs, and not 'wait for' the jobs. She emphasizes that the 2013 curriculum must have the vision of 'entrepreneurship' for its future graduates that they can open their own business based on the knowledge and experience they gained during their study time.

The curriculum of 2013 applied in Indonesia includes PBL in its content so this method of learning enhances students' creativity and original idea that leads to a solid work of three group members. At the end, they have to present their ship prototype miniature. Hallows (2006:46) states that the improvement of the students' English performance will be maximized by learning some expressions of starting their opinion politely such as '*I think...*' and '*In my opinion*, ...'. Here, the students will recognize and be aware of others' culture, and they will use those expressions correctly in different time, place and partners to talk to. Their knowledge will help to socialize with others, improving their EQ, and the stakeholders will know that the students can express their own idea using those knowledge and polite expressions. Through their presentation, they learn to study independently to create the

prototype, make its making procedures, prepare the job description of its members, prepare the content of the presentation, and prepare the marketing strategy. PBL is applicable for deepening students' IQ and EQ because by deepening the knowledge and the way in socializing with others.

Every graduate must have a willingness and ability to work in their field, so they can improve themselves and their society by conducting entrepreneurship (Poerwati 2013:116). Thus, IQ and EQ must be enhanced globally. Thus the learning process at college can be implemented in the community, and the steps in starting a business or becoming an entrepreneurship can be conducted by those graduates well. Tennant (2012:27) states some expressions used as the terms of entrepreneurship such as '*It has...* (the characteristics of the items)..,' *We sell...* (the name of the products),' *Our products have*…(the benefit of the products)," etc. Therefore, PBL is applicable to sharpen the students' understanding on how to make an accurate marketing strategy for the ship prototype miniature created without any hesitance in presenting the strategy in both languages; Indonesian and English.

Project Based Learning

Project Based Learning is one of the teaching methods that enhance students' knowledge and skills by working for an extended period of time to investigate, deepen the knowledge, respond to a complex tasks or problems, create a solution, and present it to audiences (Thomas, 2000). There are several elements in PBL including:

a. **Significant Content:** **"**At its core, the project is focused on teaching students important knowledge and skills, derived from standards and key concepts at the heart of academic subjects." In this study, students were encouraged to use the theory of making the ship miniature and its design and learned the simple format of final report.

b. **21st century competencies:** **"**Students build competencies valuable for today's world, such as problem solving, critical

thinking, collaboration, communication, and creativity/innovation, which are explicitly taught and assessed." Here, students tried to collaborate with their group members, discussed the plan, created the miniature, etc.

c. **In-Depth Inquiry:** "Students are engaged in an extended, rigorous process of asking questions, using resources, and developing answers."In this research, the students could ask many questions related to their project. They could ask the correct pronunciation to rectify their utterances.

d. **Driving Question:** "Project work is focused by an open-ended question that students understand and find intriguing, which captures their task or frames their exploration." By making a ship miniature, the students deepened their exploration on how to make a good architecture, so the ship was in balance in its size and angles.

e. **Need to Know:** "Students see the need to gain knowledge, understand concepts, and apply skills in order to answer the Driving Question and create project products, beginning with an Entry Event that generates interest and curiosity." Here, the students were motivated to increase their interest and curiosity on building the miniature, so they knew from the beginning the procedures of ship design making that started from the artificial one.

f. **Voice and Choice:** "Students are allowed to make some choices about the products to be created, how they work, and how they use their time, guided by the teacher and depending on age level and PBL experience." In this study, the students were allowed to choose the types of the ship miniature for example passenger ship, yatch, oil tanker, etc., so they learned first the characteristics of the ship and created the ship based on those characteristics.

g. **Critique and Revision:** "The project includes processes for students to give and receive feedback on the quality of their work, leading them to make revisions or conduct further inquiry." In this research,

the students were given an input on the content of the presentation based on the format learned. They revised the report, so its quality was improved.

h. **Public Audience:** "Students present their work to other people, beyond their classmates and teacher."In this research, the students had to present their project in front of their classmate since the learning process was still in the class, and they were at their first semester.

PBL as the core of the topic discussed was implemented as careful as possible since the steps would influence the success level of learning. English performance was emphasized in every step, so the learning processes took a longer time to have a maximum result.

Research Method

Classroom Action Research is a research conducted in a classroom where the learning activities are recorded continuously, so the result of the learning process can be deduced based on the recorded data (Ary, 1990). The research was conducted at the language laboratory of Hang Tuah University from November, 2013 to January, 2014. PBL was conducted for assessment of students' English performance as their final project grade. The research took 7 meetings, and the subjects were 20 first semester students of Naval Architecture Department of Engineering Faculty, Hang Tuah University.

The steps of PBL were:

a. Grouping: the purpose is for collecting ideas from the members of the group, for making decision for the type of the ship that became the miniature. Three persons were chosen ws for maximizing the job description in the making of the final project or the material of the presentation.

b. Learning the report format was the second step taken. This data were sent to their emails. Then, they discussed it with the group.

Presentation Report
I.   **The Introduction→** The reason you make the project, the function of the project/ the advantages of making the project
II.   **The Reference→** Textbooks which support the making of the project (theories applied for running the project)
III. **The Product→** The name of the project, the materials/ingredients, The procedures of making it, the price of each item, the overall expenses of the project, the selling price
IV.   **The Market Plan→** The way to market it, the location/places to sell it
V.   **The Performance→** The way it works/ the real project design
VI.   **The Conclusion→** Does the project work well? Their lackness?

Note: **The report is written in MsWord, 1.5 in space, 12 in font, Times New Roman, written in 3 pages or more.**

Power Point Presentation
Slide 1: Names of the member, Picture of the Project & the name of the project
Slide 2: Introduction & Reference
Slide 3: The Product
Slide 4: The Market Plan

Note: The data of slide 1, 2 & 3 are the summary of the presentation report.

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c. The learning of the content focused on the discussion in the group, and its result can be consulted with the lecturer to find correct terms and vocabularies that were apt with their field.

d. Introducing to basic entrepreneurship was very crucial because the students would learn how to introduce their product, start the steps of marketing, calculate the expenses, and decide the selling price of the product. The spirits of having main plans, positive attitude, risk taking, take logical steps and face the condition happened were the basic attitude for becoming an entrepreneur.

e. The preparation of the presentation and the prototype was in the form of printed report, the prototype and the Power Point presentation. The printed report was collected to the lecturer, the prototype was displayed in front of the class to show the order of the ship miniature making, and the Power Point presentation was to guide the content of the presentation. The final report used complete sentences, so the students knew the correct sentences.

f. Revision was conducted as the input of students' work. On-line guidance, face to face, callings, or text messages was allowed to do to improve the quality of the final report, and the students' self-esteem would be high before presenting their project in front of their friends.

g. The presentation of the project was conducted by all members of the group in balance and each person explained the comprehended parts chosen. Three members would explain *Introduction* and *Reference*, *Product* and *Market Plan*, and *Performance* and *Conclusion.* Every member maximized their competence, so the final grade would be very high.

RESULT

The improvement of English performance can be measured from the students' pronunciation, content, fluency, accuracy and correct intonation on introduction, the materials of the prototype, the procedures of making the prototype, marketing plan, the benefit of the presentation and the conclusion.

The results from the observation were presented below.

No	Activity	The Result of the Observation
1	Grouping	**The Result of the Observation** The students had a stronger relationship in the group, and they discussed the type of the ship miniature based on their original idea. Some preliminary questions given to prove their relationship such as; **a. Why do you choose (...) and (...) as your partners?**

		b. Did they work well in the group? **c. Do you have any differences in ideas or opinion?** In this stage, the students were given a chance to express their opinions that might be different from others, so the lecturer could give a solution if there was a problem from the beginning of the cooperation in creating the prototype of ship miniature.
2	The learning of the report format	The format of the final report in the implementation of PBL was the simple format of full-paper presentation. Thus, they learned the format as early as possible and wrote the content of each part correctly. In addition, entrepreneurship was introduced, so chapter IV and V were changed to meet the content of basic entrepereneurship. I. **The Introduction**→The reason you make the project, the function of the project/the advantages of making the project II. **The Reference**→ Textbooks which support the making of the project (theories applied for running the project) III. **The Product**→ The name of the project, the materials/ingredients, the procedures of making it, the price of each item, the overall expenses of the project, the selling price IV. **The Market Plan**→ The way to market it, the location/places to sell it V. **The Performance**→ The way it works/ the real project design VI. **The Conclusion**→ Does the project work well? What are their lacknesses? **The Result of the Observation** The student asked about the format of paper writing actively because the terms were new for them. The revision also was conducted to enhance the quality of the paper.
3	Learning the Content of the Presentation	In this stage, the content of the presentation was discussed with the students, so the questions about the terms used would be comprehended by them. For example, the term '*references'* was the source of the data based on the textbook read. Thus, the students had to choose several theories that would be applied in the making of the ship prototype miniature. **The Result of the Observation** I. The Introduction →The reasons you make the project, the function of the project/ the advantages of making the project II. The Reference → Textbooks which support the making of the project (theories applied for running the project). The students found out the theories in designing the ship and its balance structure, so the ship would stand up well in both sides. Thus, they applied the theories correctly. III. The Product →The name of the project, the materials, the procedures of making it, the price of each item, the overall expenses of the project, the selling price IV. The Market Plan →The way to market it, the location/places to sell it. The students were given a basic knowledge on the spirit of entrepreneurship, effective ways in becoming an entrepreneur, ways in marketing, and ways the find strategic location to market the products based on the discussion result. V. The Performance → The way it works/ the real project design The students prepared the materials of the ship prototype and the blue print of the ship design together, and they explained in details how the tools work or solve the problems emerged. VI. The Conclusion →Does the project work well? What are their lacknesses? The students gave the complete report on the prototype made, problems emerged, its strength, and its lacknesses. Therefore, they could revise the final report and its project. In fact, they found out that before selling the products, they had to make trial and error, and found the basic checking of the products, so the customers would not give any complains to the seller.

4	Introduction to Entrepreneurship	**The Result of the Observation** The students were trying so hard to learn the basic entrepreneurship from the spirit of becoming an entrepreneur, mental development, small scale marketing, networks, modality, high risk, and location for doing it. After that, the students asked a lot of questions and ideas were improved in the group.
5	The Preparation of the Presentation and the Prototype	**The Result of the Observation** In this stage, the students were given a chance to have the outline of the final report, and they could ask many questions about their report and their ship prototype. They asked specific terms in the field of ship architecture such as '*propeller*'to state a '*fan*' below the ship body.
6	The revision	**The Result of the Observation** The students who had sent their report via email to the lecturer were given an input such as the sentence pattern, vocabulary, terms, diction, punctuation, and the content of each part. In this stage, the groups were called one by one to have an overview, so they could revise the paper by discussing it in the group. If the ship chosen was the passenger ship, they had to explain its main function, the parts of it, and the crucial equipment in the ship, so they created additional tiny artificial tools attached in the ship miniature based on the correct reference of passenger ship making.
7	The presentation	**The Result of the Observation** The result of the presentation was excellent since they showed deep understanding on how to write the final report well. The content of the paper reached the score range of 76 since the content and the format were correct. The challenge was each member had to train another member to have correct pronunciation and intonation and high fluency. They were given 15 minutes of preparation before presenting their final report. In the presentation, they collected the printed report, showed the prototype of the ship miniature, and displayed the Power Point data to guide them. Eventually, they presented their works with high self-esteem, showed their project, and even asked the first turn to present their work. Thus, PBL for empowering students' English performance was accomplished well.

DISCUSSION

The improvement of speaking competency that focused on the knowledge and independence can be conducted through the application of PBL. Then, PBL was implemented step by step from the first semester to the seventh semester that was deepened on the understanding of the terms used and the application at each step. Thus, the steps of the PBL with high impact on the students' English performance were: grouping, learning the format of the report, learning the content of the presentation, the introduction to entrepreneurship, the preparation of the presentation and its prototype, the revision of the report, and the presentation. Most of the groups prepared their presentation and their ship prototype miniature well. The explanation of the presentation was followed by pointing out the ship prototype miniature parts, so the lecturer knew that they were truly creating the miniature. The result was excellent since the students were enthusiastic in presenting their miniature, handing in the report, and stating the procedures of making it. One of the examples of the paper collected was attached as an appendix to show the final result of the final report writing.

CONCLUSION

The implementation of PBL took a longer time because it emphasized an accuracy in conducting it in order to have the highest impact on the students' learning. Thus, the final presentation will have a significant role in the improvement of students' English performance. The students eventually had high self-esteem in presenting their ship prototype miniature in balance between three-members of the group and they helped each other in uttering correct pronunciation when they presented their project. Therefore, the learning process using PBL revealed students' best English performance, the four skills of language, and it accelerated students' knowledge, skills, and basic implementation on entrepreneurship that led to the success of learning

in motivating students in performing well-learnt English.

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The Appendix

INTRODUCTION

The reason we make this model because it is easy and simple but it has an elegant concept and it attracts us to make this ship model.

If we install a motor there so this ship can run fast because it supports the design and this ship has *fine stabilizer* on her hull.

The profit in the making process was it did not need a long time, just 2 weeks because it has easy and simple design.

Hidro B 20130210030
Arthur A 20130210038
Brian Al 20130210041

Name of this ship is "ASLAN" took from the word "ASLANT" the meaning is oblique because there any fault of technical in beginning. Finally, this ship model is oblique.

The book that supported the making of the ship was *Buku Sekolah Elektronik (BSE) Teknik Konstruksi Kapal Baja* by Education National Department, after that we see the video how to make ship from youtube. Base on the theory, from my experience, we analyse all data.

The design of this ship was based on our imagination from the references read, and this ship was made with the true scale.

CONCLUSION

This ship was based on the performance and its quality, and it supported the selling price, soif it has high quality, then the ship miniature will be more expensive.

MARKETING PLAN & SELL
- Product will post on social media and blogs. To social media, we are using facebook, twitter, and instagram.

- Product will be delivered to the subscribers by goods delivery service.

- Shipping costs will be charged to the subscribers.

TOOLS		MATERIALS
Cutter		Plywood 2,3 mm
Cutter blade		G Glue
Plywood saw		Sanpolac putty
Eye of Plywood saw		Paper tape
Sandpaper no. 2 ½		Sheet of metal
Sandpaper no. 1		Chain Neckklace
Sandpaper waterproof		thick carton
Metal Scissors		Black Flat Pilox
Metal Ruler		White Pilox
Mechanical Pencil		Blue Pilox
Mechanical Pencil content		Yamaha Orange Pilox
		White Skotled
		Light Black Skotled
		Thootpick
		Paper
		Glue paper
		LolyPop candi
		Pen
		Alfabet's Stikers

Tools & Material

How to Make it
1. Find the reference from another ship

2. make design with computer
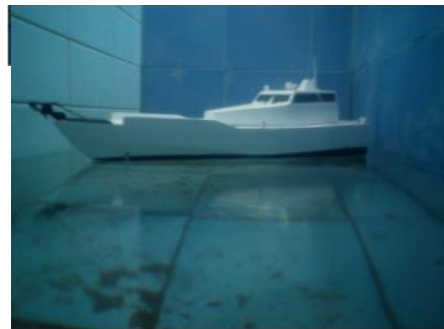
3. Fabrication

4. Assembly

5.

Painting Primer

6. Outfitting

7. Sea

Trial

8. Finishing