THE EFFECT OF PROJECT-BASED LEARNING AND EXPERIENTIAL-BASED LEARNING MODELS IN STUDENTS’ INTERPERSONAL COMMUNICATION AND COGNITIVE SKILL

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ABSTRACT

The objectives of the research are to find out whether there is a significant effect of students’ interpersonal communication and cognitive skill, and whether there is an interaction occurred among the variables. To achieve the objectives of the research, it was carried out by applying quantitative research method with factorial design 2X2. English Department students of UMN Alwashliyah who took Rhetoric subject was selected as the population, then, two classes with 40 students for each were chosen as the sample of the research by applying random purposive sampling. All the data found was analyzed by using normality test through one sample Kolmgorov Smirnov, and also be tested through one way anova to investigate the homogeneous with Sig > 0.05 Then, all the data found would be analyzed by using multivariate anova (manova) with sig < 0.05 and futher analysis would be used SPSS 22 IBM for Windows. Based on the finding of the research, it could be concluded that students’ interpersonal skill taught by model collaboration significantly affect to the students’ interpersonal communication skill with one of the highest indicator obtained “open” 94 was higher than class experimental class II 80.67. In addition, there was an interaction implementing project-based learning and experiential-based learning models with Sig 0.000 < 0.005. It could be indicated that interactive learning process that did not only make students more confidently to practice their interpersonal communication skill but it also built up students’ character since interpersonal communication skill always approaches to character building.

Keywords : Project-Based Learning, Experiential-Based Learning, Interpersonal Communication, Cognitive Skill

INTRODUCTION

1.1 Background of the Research

Currently, EFL students are highly demanded to have good communication skill in order to face the sophisticated digital ages at the moment in which the successful career depends on the way people communicate with others correctly. Hence, an adequate interpersonal communication skill with English skill does not only show the intelligence but it also shows the inner character. In other words, the collaboration between interpersonal communication and English skill will absolutely bring anyone in this highly competitive life to achieve the success. Yet, EFL students’ communication skill is extremely low in which there are two factors affecting; the difficulty of constructing the idea appropriately, the lack of practice and the insufficient theoretical knowledges related to communication skill. Based on the curriculum, English Department students...
of UMN Alwashliyah have some practical subjects related to interpersonal communication skills, one of them is Rhetoric which is studied in semester VI. Specifically, Rhetoric discusses about the art of persuasion that specifically aims to persuade the listeners through the systematic communication skill. Through Rhetoric subject, the students have the opportunity to improve the interpersonal communication skill either theoretically or practically. Theoretically, the students will have some knowledge about communication process, constructing the topic, the goals of communication, and the relationship between speaker/writer and listener/reader during the communication. While, practically the students have the opportunities to practice what they have learnt in advance in which the lecturers have the student organize the topic, and present the topic appropriately. In addition, Rhetoric subject also offers the student to build up the soft skills, for instance, if the students have a good understanding about the subject, they will surely improve both self-confidence and self-awareness in everyday communication.

However, based on the observation previous class that have studied Rhetoric only focus on theoretical elements, and use the language for political matters such for; oracy, or campaign in which it unfortunately leads to the lack of practice and those materials are unapplicable for English students as those kind of materials are too far to apply in their daily communication. It is undeniable that students’ communication skill is very low in which most students only have the basic theory of communication knowledge that have been taught in previous semester, meanwhile, there are many kinds of innovative teaching learning process can be implemented in Rhetoric subject, for instance; persuasive speech in political speech can be changed into creating short advertisement video, or directing the inspirational video, hence, the students still get the essence of Rhetoric which is the art of persuasion either theoretically and practically.

In order to overcome the real fact occurred, the lecturer urgently needs to create an innovative teaching model which are expected to improve students’ interpersonal communication skill and cognitive skill. In this case, an implementation of project-based learning model are not only very appropriate to meet students’ necessary but it will also let the students has a very joyful learning process since all the materials are taken based on the fact, concept, and principle occurred in the daily life. In addition, project-based learning The implementation of project-based learning usually is applied in science class, so this research attempt to apply it in English class. In short, an innovative teaching models lead to a very specific learning objectives in which the students in this research are asked to create a short video advertisement that aims to persuade the viewers or listeners to change their minds, and the students are asked to share their own experiences during video making, and the video will be evaluated by other students. Overall, the collaboration of project-based learning and experiential learning covers two aspects expected, namely; a significant effect of students’ interpersonal communication, and cognitive skills.

1.2 The Objectives of the Research
Related to background of the research, the objectives of the research can be stated as follows;
1. To investigate whether there is a significant effect of students’ interpersonal communication and cognitive skill taught by implementing the collaboration of project-based learning and experiential-based learning.
2. To investigate whether there is an interaction between models collaboration with students’ interpersonal communication and cognitive skills.

1.3 Review of Literature
Downing (in Eskrootchi, 2010:237) stated that that through Project-based learning, the students’ metacognitive would be productively activated, then, Warlick (in Tiantong, 2013:206) the students are involved in any kind of activities individually, so the students have an opportunity to enrich their own skill that comes along with their own real logical idea, hence, Lindawati (2013) argued that Project-based learning lets
the student complete the case, and involve the students in a whole activities. Moreover, Thomas and Beak (in Maulany, 2013:32) viewed that Project-based Learning is completing the certain problem in certain time arranged comprehensively in order to allow the students to explain all the phases, to communicate the process, and to produce a well-arranged project in accordance with the steps planned in advance. In addition, some researches related in this research have been conducted by some experts; Kusumwati (2012) found out that project-based learning significantly affects to the students’ mathematic skill, and the students are more active in completing the task. Then, the research by Lindawati, Fatmariyanti, and Maftukhin (2013) concluded that project-based learning significantly improve students’ creativity in any each cycles of physic class. In order to achieve the aims of project-based learning in Rhetoric class, the syntaxis must be followed, namely; orientation, deciding the idea of video, collecting the data needed, crearing and designing the video, performing the video, and taking note.

Furthermore, experiential learning model is cognitive-based learning stated by Dewey, Lewin and Piaget in which this model allows the students to have learning process through practice, perception, cognitive, and behavior. McCharty (2010:132). Azizi (2013:114) argued that experiential learning model directly invites students to share a certain concept they have in accordance with the materials taught. Furthermore, Bandura (in Mughal 2011:28) stated that through experiential learning model, the students who are in the same class, same level, same atmosphere have an opporturnity to interact with each other, so everything they communicate surely is easier to understand. Previous research conducted by Warsito (2015:1) concluded that implementing experiential model learning increases both students’ achievement and students’ mastery on certain learning materials. In other words, implementing model experiential learning treat the students to be able to present what they have learnt and what they have undertaken during video making. Since the students bring off the concept of the video and overcome all problems occured as long as video accomplishing, the students are able to communicate their own idea, thus the interpersonal communication surely will occur in which there is an communication process between students with their own project and students with their argument that evaluates other projects. The experiential learning has seven phases, namely; orientation, group discussion, identifying the problem, observation, conceptualization, experimentation, and concluding the experience.

It is believed that the collaboration between project-based learning and experiential learning model affect to the students’ interpersonal communication and cognitive skills. As Novian (2014:2) argued that during teaching learning process interpersonal communication may be used to recognize both strengthness and weakness, so it is absolutely being an stimulus for creating the more conducive teaching learning process. Then, Irianta (2013:21) the problems occured during studying would be solved easily during the interaction through interpersonal communication. in other words, gaining interpersonal communication is expected to create the more dynamic interaction in the English classroom so the students absolutely can construct their own knowledge, develop the confidence, and share the idea accurately. Majib, and Rochman (2014:196) stated interpersonal communication is the process which involves two or more people who have an intention to exchange the information, and to achieve the purpose of communication itself.

Besides, the improvement of students’ interpersonal communication skill leads to cognitive skill improvement that can be identified throught students’ achievement in studying Rhetoric. Undertanding and mastering theoretical of communication will help the students to increase the cognitive skill. Cognitive skill is an important aspect in teaching learning process. The successful of learning is normally seen from the cognitive skill achieved. In other words, cognitive skill is dominantly measured to investigate whether the learning outcome achieve or not. According to taxonomy Bloom, there are six levels of cognitive skill, namely; knowledge (C1), comprehension (C2), application/implementation (C3), Analysis
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(C4), Synthesis (C5), and evaluation (C6). Related to the taxonomy Bloom, the lecturers are highly expected to be able creating an innovative teaching process so that the students can solve the problems found and achieve the higher level. Based on the explanation above, the implementation of project-based learning and experiential-based learning appropriately increase both students’ interpersonal communication and cognitive skill. In short, the students will master the interpersonal communication skill through Rhetoric subject theoretically and practically, hence, all students’ matters in communicating with English are comprehensively solved.

RESEARCH METHOD

This research was carried out by applying quantitative research method in Universitas Muslim Nusantara (UMN) Al Washliyah Medan. The sample was taken by random purposive sampling in which there were two classes chosen with 40 students for each class; experimental class I taught by implementing the collaboration between project-based learning and experiential learning model, and experimental class II taught by implementing project-based learning. Then, factorial design modified from design true experimental was used as seen in table 1.

### Table 1. Factorial Design with True Experimental

<table>
<thead>
<tr>
<th>MP</th>
<th>Teaching Models (X)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE</td>
<td>Project Based Learning and Experiential Learning</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interpersonal Communication (Y)</th>
<th>X1,Y</th>
<th>X2,Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Skill (O)</td>
<td>X1,O</td>
<td>X2,O</td>
</tr>
</tbody>
</table>

Then, technique of collecting data for interpersonal communication was undertaken through questionnaire with Likert scale in which the questionnaire was designed with each indicators related. While, the data for cognitive skill was taken from the final examination test designed by the researcher. All the data found would be analyzed with normality test through one sample Kolmgorov Smirnov, and also be tested through one way anova to investigate the homogeneous with Sig > 0.05. Then, all the data found would be analyzed by using multivariate anova (manova) with sig < 0.05 and further analysis would be used SPSS 22 IBM for Windows in order to measure each questionnaire score.

Finding and Discussion

Based on analysis data, it was found that all the data were distributed normally with Sig > 0.05. Firstly, for interpersonal communication it was found that Sig 0.102 > 0.05 for experimental class I and Sig 0.200 > 0.05 for experimental class II, then, for creativity it was found that sig 0.151 > 0.05 for experimental class I, and sig 0.123 > 0.05 for experimental class II. Moreover, all the data was homogenous with $F_{0.05}$ obtaining was 4.01 as shown in table 2.
Table 2. Levene’s Test of Equality of Error Variances

<table>
<thead>
<tr>
<th></th>
<th>F</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpersonal communication</td>
<td>3.467</td>
<td>1</td>
<td>58</td>
<td>.200</td>
</tr>
<tr>
<td>Cognitive</td>
<td>2.491</td>
<td>1</td>
<td>58</td>
<td>.103</td>
</tr>
</tbody>
</table>

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + experimental class

Clearly, the table above showed that $F_{\text{table}} > F_{\text{observed}}$, for interpersonal communication with $F_{\text{table}}$ was $4.01 > F_{\text{observed}}$ 3.467, and, for cognitive skill was obtained $F_{\text{table}}$ 4.01 > $F_{\text{observed}}$ 2.491 as well. Based on data analysis, it was found that all research problems formulated have been answered comprehensively.

Furthermore, based on data analysis, it was found that students taught by model collaboration had a better interpersonal communication skill. This fact was showed in graph 1 as seen below.

Graph 1. The difference among students’ interpersonal communication skill
The graph above clearly shows that there are five indicators of interpersonal communication skills, namely: open, empathy, supporting, positive, and fair. Based on the table, “positive” with 94 was higher indicator achieved by students taught by implementing collaboration between project-based learning and experiential learning model. While, the higher indicator achieved by students taught by non-collaboration models was open with 80.67. The data analyzed showed that students taught by using model collaboration had more dynamic and interactive in communication process which was presenting their own project in front of the audience, and the students also was being more interactive with other students for discussing the video materials. In addition, students taught by model collaboration had empathy in which they were likely helpful to solve the others’ problems, they did not want to let their friends working by themselves, in other words, as long as they were ready to help other students who face the obstacle, teaching learning process went very well. Absolutely, this situation makes all the students were very excited discussing practicing their communication skill without feeling reluctant as all students support each other, they would not think about intelligence level during delivering their own idea, they would support other students who had difficulty in presenting the idea, otherwise, other students who seemed more reluctant never felt down, they would be more motivated seeing other performances. Last, this situation caused fairness, the students did not think the project was kind of competition yet the though the project completed was very helpful for them for organizing the idea to speak. In other words, communication was being very smooth because two reason; they had their own idea taken from their own project, and they respected each other during speaking up.

Furthermore, through implementing project-based learning and model experiential learning also affected to students’ cognitive skill. It could be seen from the data analysis in which there was an interaction occurred between students’ interpersonal communication and cognitive skills with Sig <0.005 in which the data obtained was 0.000,. In other words, Sig 0.000 < 0.005 in which hypothesis was accepted. Clearly it was showed in table 3.

Table 3. Tests of Between-Subjects Effects

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpersonal communication * cognitive skill</td>
<td>.000</td>
<td>.000</td>
<td>11</td>
<td>37.19</td>
<td>8.05</td>
<td>.068</td>
</tr>
<tr>
<td>Experiment class</td>
<td>409.17</td>
<td>7</td>
<td>11</td>
<td>2.05</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

In addition, the improvement of students’ cognitive skill taught by implementing model collaboration was also visualized in graph 2.
The graph above clearly shows that students’ achievement taught by implementing model collaboration was higher with 84.31 than students taught by project-based learning. It was argued that students were more challenging to understand either practical or theoretical learning materials because they were really aware that Hence, the students would be easier to implement their knowledge if they had understood enough the theoretical materials.

The finding of the research was constant with previous research conducted by Azizi, Susanto and Pambudi (2013) concluded that experiential learning significantly affected to the students’ achievement. Another research in advance conducted by Maulany (2013) also found that students’ speaking skill was more highly higher through the implementing project-based learning. Through collaboration project-based learning and experiential learning model, there were many aspect achieved successfully in which it did not only increase the cognitive aspect, but it also enriched soft skill aspects affecting to their communication with English. As Eskrootchi, and Oskcronchi in the research dealing with project-based learning pointed out that the teaching learning process would be more active and the students followed the classroom activities interestingly. In other words, then, based on the anlaysis it was also interpreted that students whose better interpersonal communication skill would think more creatively. In this research, the students were successfully created a very creative short video containing the persuasive text in English, and they were also able to share what they had done with their classmates by using English. In short, it was interpreted that the more creative the easier to communicative with others.

CONCLUSION

Based on finding and discussion, it could be concluded that students’ interpersonal skill taught by model collaboration; project-based learning and experiential-based learning models significantly affect to the students’ interpersonal communication skill with one of the highest indicator obtained “open” 94 was higher than class experimental class II 80.67.

Besides, there was significant affect to the students’ cognitive skill that can be seen through the differences students’ learning outcome obtained by students taught project-based learning and experiential-based learning was higher with 84.31 than student taught by using conventional model with 72.92.

In addition, there was an interaction implementing project-based learning and experiential-based learning models with Sig 0.000 < 0.005. In conclusion, the collaboration of teaching models lead to the great changes to the teaching learning process both for lecturers and students since there
is an interactive learning process that does not only make students more confidently to practice their interpersonal communication skill but it also build up students' character since interpersonal communication skill always approaches to character building.

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