

Integrating Project Based Learning (PBL) in Education 4.0 to Produce Higher Order Thinking Skills (HOTS) For Students in English Classes

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ABSTRACT

The key to successful learning lies in methods designed in learning that involve students learning knowledge and skills through project-based learning with structured processes, complex questions and authentic assignments carefully designed through the use of technology. Thus, the learning method is very appropriate with the integration of PBL in education 4.0. This study aims to produce HOTS students in learning English. Research data were collected using questionnaire, interview and observation instruments. The results showed that, (1) there was a significant effect of integrating PBL in education 4.0 on HOTS, (2) there was an effect of HOTS on English learning, and (3) integrating PBL in education 4.0 together influenced HOTS in English class.

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INTRODUCTION

PBL learning is a learning model that involves a project in the learning process. Projects that students work on can be in the form of individual or group projects to increase the creativity, enthusiasm, and high-order thinking skills of students in the project. Based Learning (PBL) is a student-driven approach to learning. Students pursue knowledge by asking questions that have aroused their natural curiosity (Bell, 2010: 39). This opinion is similar, according to (Thomas 2000) Project-based learning or PBL is defined as a learning model that gives students the opportunity to learn by doing projects. Project Based Learning links a lot of students' thinking abilities, so that they are multi intelligence because students use the various intelligences they have so that students are able to think critically, creatively, collaboratively, and communicatively in carrying out projects carried out on the completion of English projects well. Indirectly, the use of PBL also encourages students to master the knowledge needed to complete projects well. This knowledge can be in the form of results which are then used for presentation. these results are obtained through logical, critical, and systematic thinking.

However, not all learning achievements in English classes can be actualized by PBL. Therefore, another way is needed to actualize these learning outcomes by keeping up with the times in education 4.0. Education 4.0 is a response to the need for IR4.0 where humans and technology are aligned to enable new things in learning. Education 4.0 serves the needs of society in the 'innovative era' according to changing behavior with

special characteristics of parallelism, connectivism, and visualization (Goldie, 2016). This learning management can help to develop students' abilities by applying new technology, which will help students to develop according to changes in the era of global competition. (Sinlarat 2016) states that learning management in this era is a new learning system, which allows students to learn to grow with knowledge and skills for a lifetime, not only knowing how to read and write. (Dunwill 2016) said that technological advances are constantly changing and changing teaching methods and setting the learning process. There will even be more changes in the learning process, especially in completing assignments where students will use software or applications to collaborate in completing group and individual assignments, students will complete assignments or projects easily through social media platforms.

Based on the description above, it is very possible for Education 4.0 to be collaborated with Project-based learning. Thus, all learning outcomes in English classes are expected to be realized through the implementation of PBL-Education 4.0. The learning outcomes contain higher-order thinking skills. Thus, it can be said that the integration of PBL in Education 4.0 is strongly suspected of increasing students' Higher Order Thinking Skills (HOTS) in English classes. According to (Heong, et al, 2011) higher order thinking is using thinking broadly to find new challenges. Higher-order thinking requires a person to apply new information or knowledge that he has and manipulate information to reach possible answers in new situations. HOTS or high-level thinking skills to process information obtained by involving creative and critical thinking processes in the cognitive domain (analysis, evaluation, and creation), as well as in dealing with a particular situation or problem that requires a solution. Techniques for optimizing students' HOTS in English are realized through methods such as using Cartoon Story Maker, Ted-Ed, Storybird and Kahoot.

The purpose of this research is to optimize Higher Order Thinking Skills (HOTS) for students learning English in English classes by integrating Project Based Learning (PBL) in Education 4.0.

RESEARCH METHOD

This study uses qualitative methods, and uses a case study research design. (Creswell, 2010: 4), qualitative research are methods to explore and understand the meaning that a number of individuals or groups of people ascribe to social or humanitarian issues. The research was carried out through 3 stages in data collection, the first is observation here. We conducted this research in one semester at the FKIP of Ibn Khaldun University, Bogor. In the second stage, we conducted a questionnaire on December 5, 2019, and in the third stage, we conducted an interview on December 9, 2019. The case study is a qualitative research approach used to understand an issue or problem using a case (Creswell, 2007:73)

In the first stage, in this first stage, we make observations because with this technique we can collect relevant data. We can observe the conditions of student interaction in learning English by using several applications such as Cartoon Story Maker, Ted-Ed, Storybird, and Kahoot. In the second stage, we collected 8 respondents from class 5A English Education. The eight respondents are no strangers to using questionnaires, we tried to provide a number of questions to obtain relevant information. The third stage, namely the interview stage. Before conducting the interview, we asked the respondent first about the English project, in this interview we asked several questions related to the project's English material such as writing, speaking, and reading with answers in the form of the respondent's opinion. The type of interview that we use is a persuasive interview, which is to influence the way a respondent thinks, feels, or acts. Interview is a technique of collecting data by collecting the data needed to answer the research problem formulation (Juliansyah Noor, 2011: 138).

RESEARCH RESULTS AND DISCUSSION

Observations, questionnaires and interviews as a way of collecting data that we did, became the final stage in this research. First we make observations, because with this technique we can collect relevant data. We can observe the conditions of student interaction in learning English by using Storybird, Cartoon Story Maker, Ted-Ed, and Kahoot.

From the observations it can be seen that students work on material in the form of Storybird, Cartoon Story Maker, Ted-Ed, and Kahoot applications in English classes so they can optimize English material projects, especially in Writing, Reading, and Speaking where students have not been able to optimize language learning English well now they are starting to practice to find new things in English projects by using applications to facilitate learning and increase creativity, collaborative and critical thinking.

In Phase 2 we asked 7 questions in the form of a questionnaire related to the Integration of Project Based Learning (PBL) in Education 4.0 to Produce Higher Order Thinking Skills (HOTS) for Students in English Classes. The eight questions include;

1. Do you like English assignments in the form of projects using applications (Storybird, Cartoon Story Maker, Ted-Ed, and Kahoot)?

From the results of the 1st statement questionnaire percentage diagram, it shows that almost all students like the project method in the form of an application in English class. Only 1 respondent did not like the English assignment in the form of a project using an application.

2. What do you do when you have difficulty using the application in working on the English project?
 - a. Ask a teacher/friend?
 - b. Search for yourself on google?
 - c. Doing what he can?

This is explained by the results of the questionnaire in question 2 by stating that respondents revealed that 62% of students worked on English projects using the application by asking teachers/friends. Some respondents chose to complete an English project using Google 38%, and no one chose to work on an English project using the application as best they could.

3. When the English project was done using the application, did you learn or discover something new?

The results of the 3rd questionnaire show that out of the eight respondents, they chose to get new things when working on an English project using an application.

4. Are there any strategies for using the application that you learned in working on an English project?

The results of the 4th questionnaire also have the same relationship, namely students have a positive response to the use of applications that use strategies to complete English projects to the fullest.

5. Do you analyze concepts and ideas before you work on projects in the application?

The results of the 5th questionnaire obtained that students carried out analyzes and ideas before working on projects in the application, although only 1 respondent felt that they had not used the analysis of previous concepts and ideas in working on projects using the application.

6. Do you develop the ideas you have in working on English projects using the application?

The results of the 6th questionnaire obtained that students developed the ideas they had made to work on projects in the application to the fullest, although only 1 respondent felt they had not developed previous ideas in working on projects using the application.

7. Do you implement project completion using applications in other classes?

From the results of the 7th question questionnaire percentage stated that half of the respondents chose to apply English projects using applications in other classes, and there were half of the respondents who stated that they did not apply English projects in other classes.

After the observation and questionnaire stages, namely the 3rd stage, the final stage with data collection, we conducted interviews to collect this research data. I asked 3 questions related to the integration of Project Based Learning (PBL) in Education 4.0 to produce Higher Order Thinking Skills (HOTS) for students. in English Class.

Respondent 1. Do you feel active, collaborative, and easy to do English projects using the application? Explain briefly!

"Yes, here me and my group are working on a writing project using Storybird, we work together by making interesting templates according to the material we want to divide the task to complete this task easily and quickly. convey it, and we divide the task to complete the task this easily and quickly."

Respondent 2. How can the application (Cartoon Story Maker) help understanding in speaking class? Explain briefly!

"Yes, because Cartoon Story Maker can make it easier for us to come up with ideas that we want to make in the form of dialogue so we can imagine situations in Cartoon Story Maker and also make it easier for us to arrange the ideas we have made systematically so that the topics we will say in speaking well done."

Respondent 3. What do you do in utilizing the project using the application?

"My group and I do self-development by analyzing Storybird and Ted-Ed in doing reading and writing because in the application there are various programs that make our project look interesting such as giving voice, video and other templates, collaborating with friends in the application is so that I can create new things that make me enthusiastic about learning in English class."

The results of the interview data above explain that students feel active, creative, collaborative and think critically in moving English projects using applications and students always upgrade their knowledge by evaluating the results of their projects with friends in class. Students also apply the use of projects using these applications in other classes in order to get maximum results.

CONCLUSION

The integration of Project Based Learning (PBL) in education 4.0 greatly influences learning activities in English classes because without this integration, there is no high-level thinking ability for students in English classes. Therefore, integrating PBL in education 4.0 is able to improve students' high-level thinking, which includes; think critically, creatively, communicatively, innovatively and collaboratively in English class.

Thank-you note

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