

Effect of Using Whiteboard Animation in Project-Based Learning on Indonesian EFL Students' English Presentation Skills across Creativity Levels

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Abstract

Technology has big roles in this 4.0 era. It can be applied effectively in the teaching and learning process. This article examines the effect of applying whiteboard animation in project-based learning (PjBL) on English as a Foreign Language (EFL) students' English presentation skills, investigates whether the English presentation skills of EFL students who were taught by using whiteboard animation in PjBL differ significantly across creativity levels, and finds out whether there is interaction or not between the use of whiteboard animation and the students' creativity levels on their English presentation skills. Fifty Indonesian vocational high school students from two intact classrooms were involved and randomly assigned to experimental and control groups by quasi-experimental design and factorial research design. The quantitative data were gathered from both groups through pre-test and post-test. The analysis showed that students who were taught through whiteboard animation in PjBL significantly outperformed those who were trained by using conventional media. It was also found that students' creativity levels (little-c and mini-c) did not affect their English presentation skills. Then, there was no interaction between whiteboard animation in PjBL and students' creativity levels on their English presentation skills. The findings of the study are expected to be useful for other English teachers especially those who want to apply the same method of teaching in order to achieve the students' capacity for critical thinking, communication, collaboration, and creativity.

Keywords: creativity levels (little-c & mini-c), EFL students, English presentation skills, project-based learning, whiteboard animation

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Introduction

The 21st-century era is frequently seen as the technological age (Budhwar, 2017). Technology has a significant impact in various fields, including education. Accordingly, current research in education points towards the effect of technology use in education (Cloete, 2017). To realize the technological advantages entirely in our education system, educators must make effective technical use in their practice and provide real learning experiences (U.S. Department of Education, 2017). Besides, English teachers, in particular, should enhance students' speaking skills and consider the context and enhance communication in English (Ali & El-Henawy, 2015). One approach that implements the role of students and teachers in an appropriate structure and helps to build many skills is the project-based approach to education (Işık & Gücüm, 2013). Project-based learning (PjBL) is an integrated approach designed to draw students' attention to real issues in learning and teaching in the classroom. (Blumenfeld et al., 1991; Goodman & Stivers, 2010).

The researchers would like to implement the new media, whiteboard animation, in the teaching and learning process. This media challenges the students' capacity to think critically, communicate, collaborate, and to be creative which are in line with the characteristics of 21st century students. Hence, this study aims to analyze the students' English presentation skills after being taught by using whiteboard animation in PjBL as the final product of technology incorporation into English learning. Unlike traditional animations, whiteboard animations can creatively represent ideas without relying on narrative behavior (Türkay, 2016). In particular, it was assigned to the students to create a presentation on whiteboard animation by including various project components such as texts, images, sound, and moving animations.

Literature Review

Project-Based Learning

PjBL is a creative learning approach, which teaches many performance methods in the 21st century (Bell, 2010). Students learn and collaborate to study and build projects that represent their knowledge through inquiry. Trisdiono et al. (2019) stated that the teachers believe the model of project-based learning will strengthen the skills of students. Hence, ChanLin (2008) referred to the technological convergence into project-based learning that requires a strong commitment to actual scenarios. Students have to engage in different actions.

Some studies have been carried out to show the value of project-based learning with a priority on the speaking ability of students (Winasih et al., 2019). Ali and El-Henawy (2015) have carried out work to improve English oral skills by using PjBL. Research has depicted that students are indeed very optimistic about the advantages and the use of PjBL. Their verbal communication skills have also shown significant development. Practitioners are encouraged to use PjBL as an alternative way of teaching English for Specific Purposes (ESP), especially at the undergraduate level (Wahyudin, 2017). Furthermore, Astawa et al. (2017) added that the teacher's enthusiasm and satisfaction in teaching are encouraged by PjBL.

The related literature highlights the teacher's role in the integration process of teaching environments with information and communication technology (ICT), including many different dynamics that need to be examined multi-dimensionally (Pilten et al., 2017). Furthermore, Eskrootchi and Oskrochi (2010) declared that computer simulation modeling could be easily

integrated into PjBL, but it involves a detailed plan and implementation. Teachers need pedagogical content knowledge that relates to understanding of how students learn from technologically-infused materials.

Creativity Levels

Hidayah et al. (2015) conducted research that tried to examine the increase in PjBL theoretical approach student creativity. The study result could be inferred that a project-based contextual learning method may be suggested for productive learning to improve creativity.

Kaufman and Beghetto (2009) created four creative categories to demonstrate the complexities of the different levels and types of creativity. The two primary grades for schools are little-c and mini-c creativity. Little-c creativity is all about “acting in every day with versatility, intelligence, and innovation” (Craft, 2005, p. 43), making something new with originality and sense (Richards, 2007). Mini-c is characterized as a modern interpretation of experiences, behavior, and events that are significant personally (Beghetto & Kaufman, 2007). Mini-c is the type of creativity that teachers and parents can cultivate. It arises when someone displays “flexibility, creativity, and innovation” (Craft, 2005, p. 19).

Presentation Skills

Presentation skills refer to the qualities that improve the speakability in public (Widyastuti & Mahaputri, 2015). It is strengthened by Al-Nouh, Abdul-Kareem, and Taqi (2015) that oral presentation skills are recognized as one of the primary skills for higher education and future employment. In the view of many scholars, verbal communication is not merely a message from the speaker to the listener; it also represents both the subject and the focus of his message (AL-Masadeh & AL-Omari, 2014).

Joughin (2007) stated that the oral presentation could be viewed from three perspectives: the presentation as a transfer of other people's ideas to a neutral audience with a low level of anxiety; the presentation as an imparting to the student's meanings the content learned from others' views; and the presentation as an opportunity to be questioned and defended by convincing the audience. Sivadjati (2016) discovered those issues. These problems were classified into several groups: personal characteristics (speech, problem memorization, anxiety, expectations of teachers), an awareness of the subject, the organization of ideas and interest of the student; grammar issues; and external issues (time problem).

Whiteboard Animation

It is an increasingly common form of media in education. Karthigesu and Mohamad (2020) stated that interactive whiteboard (IWB) works as an alternative tool for teaching reading comprehension. Although recent studies into the creation of whiteboard animations are interesting, Turkey (2016) argues that learner interactions with this form of animation are not appropriately understood. Li et al. (2019) noted that whiteboard animation, an enticing learning device, consists of a series of manual images with voice-over storytelling that convey complex and abstract concepts. From their research, it was concluded that the whiteboard animation is a powerful and stimulating resource for fluent teaching in the GE (General Education) course. Bradford and Bharadwaj (2015) asserted that video products of whiteboard animation could be a sustainable and

culturally appropriate way of transmitting research results in storytelling formats for indigenous communities.

Conventional Media

It is no doubt that the advent of digital media technology presents a major challenge to conventional media survival (Auwal, 2016). In terms of its meaning, relationship and distinction, the concept of 'conventional media' was argued by so many academics (Umar et al., 2019). In recent years, Rajendran and Thesinghraj (2014) informed that the dynamics of access to information has changed significantly. Since the new media exists, Hisham (2019) discovered attacks against traditional media have been growing. Therefore, the new media (re)written stories have an impact on particular conventional concepts very extensively (Odun & Utulu, 2015).

Method

Design and Subjects of the Study

This study used a factorial quasi-experimental design since students cannot be chosen allegedly as study subjects. The study was carried out in Bangkalan Regency, East Java, Indonesia, with 50 students from the twelfth grade of vocational high school. The students were placed by chance in the experimental ($n = 26$ students with 25 females and 1 male) and the control groups ($n = 24$ students with 21 females and 3 male) out of two whole classrooms. Both student groups were homogenous in their English presentation skills before the study was conducted. The independent variable in this study was the teaching method (whiteboard animation in PjBL vs conventional media in PjBL), and the dependent variable was the students' English presentation skills. The level of creativity was also used as the moderating variable to separate students in smaller groups: little-c and mini-c students in the experimental and control groups.

The Procedure of the Study

The procedures of the study for both experimental and control groups are shown in Table 1.

Table 1. *The General Procedure of Teaching Activity of Experimental and Control Groups*

Session	Experimental Group	Control Group
1	Pre-test administration: English presentation skills test.	Pre-test administration: English presentation skills test.
2	<ul style="list-style-type: none"> Students were provided with lessons on the news items text and exercises. They were introduced to whiteboard animation in PjBL and asked to work individually but collaboratively to think of the importance of news item text in the modern world. (Stage 1) 	<ul style="list-style-type: none"> Students were provided with lessons on the news items text and exercises. They were introduced to conventional media in PjBL and asked to work individually but collaboratively to think of the importance of news item text in the modern world. (Stage 1)

	<ul style="list-style-type: none"> They were also asked to prepare a project and schedule a proposal. (Stages 2 & 3) 	<ul style="list-style-type: none"> They were also asked to prepare a project and schedule a proposal. (Stages 2 & 3)
3	<ul style="list-style-type: none"> Students were requested to apply their draft orally. The teacher gave their oral presentations feedback. They revised their news item text, and like the project, were guided to make whiteboard animation based on their news item text. They continued working on their whiteboard animation outside the class period. (Stage 4) 	<ul style="list-style-type: none"> Students were requested to apply their draft orally. The teacher gave their oral presentations feedback. They revised their news item text, and like the project, were guided to make the conventional media based on their news item text. They continued working on their conventional media outside the class period. (Stage 4)
4	<ul style="list-style-type: none"> The students present their whiteboard animation individually using an LCD projector. The students' presentations and projects of whiteboard animation were scored by the English teacher and the raters using a scoring rubric for speaking and creativity. (Stage 5, continued) 	<ul style="list-style-type: none"> The students present their conventional media individually using an LCD projector. The students' presentations and projects of traditional media were scored by the English teacher and the raters using a scoring rubric for speaking and creativity. (Stage 5, continued)
5	<ul style="list-style-type: none"> The remaining students presented their whiteboard animation. (Stage 5) The students were asked to share their opinion about the whiteboard animation project implementation. (Stage 6) 	<ul style="list-style-type: none"> The remaining students presented their conventional media. (Stage 5) The students were asked to share their opinion about the traditional media project implementation. (Stage 6)
6	Post-test administration: English presentation skills test and distribution of creativity questionnaires.	Post-test administration: English presentation skills test and distribution of creativity questionnaires.

As Table 1 shows, there were six sessions to the study. Pre-test and post-test administration were used for the first and last sessions. In the second to fifth sessions, the experimental group students were taught using the whiteboard animation in PjBL while the control group students were taught utilizing the traditional media in PjBL. The PjBL was conducted at six stages: (1) formulating the key questions; (2) outlining the project plans; (3) determining a timetable; (4) asking the students to track and monitor the project progress; (5) evaluating the assessment result, and (6) showing the experiences of the evaluation (Harun, 2006).

The Instruments of the Study

There are four instruments used in the study. First, creativity tests which required the students to make whiteboard animation and the conventional media in the form of presentation. The researchers used two kinds of creativity rubric with four items in each. Second, a self-reported questionnaire was used to know they are in the levels of little-c or mini-c creativity. The researchers use 30 items of questionnaires that are answered by using a 5-point scale (strongly disagree, disagree, unsure, agree, and strongly agree). Then, the last is the English presentation skills test which required the students to present the whiteboard animation and conventional media project itself orally. Here, the researchers use an oral presentation checklist to measure the students' evaluation on their English presentation skills .

To reach the construct validity, this research used English presentation skills test which requires students to perform speaking and scoring scale was utilized to assess the quality of students' speaking performance. The validity of the questionnaire was achieved by involving the variable of mini-c and little-c creativity to get the accurate result of students' creativity levels. On the other hand, content validity was obtained through the decision of involving news item text which was considered suitable to meet the aim of the study. The theoretical validation also acquired from the expert validation to validate the instruments used in this research. In this case, the validation of the English presentation skills test was performed by an ELT lecturer who has expertise in language teaching and learning. Moreover, the creativity test and creativity questionnaire were validated by another ELT lecturer to check the wording and the result of the translation of the questionnaire.

Then, by applying the interrater scoring technique in which three raters assessed the result of students' English presentation skills test to see the consistency of those scores, this study is considered to serve the evidence of reliability. Hence, this interrater scoring technique can verify the preciseness of presentation skills test scores. Moreover, the SPSS 26 program was utilized to calculate the reliability of the creativity questionnaire.

Data Collection and Analysis

The data on the students' English presentation skills were gathered from the test scores collected from both pre-test and post-test, before and after the treatment, respectively. The students' English presentation skills were assessed through three scoring rubrics in which the first scoring rubric was adapted from Brown (2001) containing several presentation skills checklist which evaluates the content and delivery of the presentation. Second, instead of scoring the aspect of grammar, vocabulary, comprehension, fluency, pronunciation, and task mentioned in Brown (2001: 406-407), for the third aspect, the researchers decided to include the subcategories of oral proficiency scores taken from Brown (2004). The scores of pre-test and post-test have been used to demonstrate students' improvements in the English presentation skills. The tests were also utilized to show the difference in the abilities of the students in little-c and mini-c subgroups of English presentation skills . Data on the students' creativity level were obtained by spreading a questionnaire to the experimental and control groups. The questionnaire was proposed by Kumar and Holman (1997) and applied in developing the students' creativity based on their expression, action, originality, diversity, and illumination within the teaching and learning process. Thirty (30) questionnaire items were arranged to represent variables of little-c and mini-c creativity levels,

namely: creativity as an individual and creativity as a product (little-c) and creativity as a process (mini-c). Based on the questionnaire data, the students were classified into little-c or mini-c students.

The data in the form of pre-test and pos-test as primary data and the questionnaire as secondary data were analyzed quantitatively. The first step was analyzing the result of the pre-test score, then continued to analyze the result of the post-test score and the result of the creativity questionnaire. To determine the result of the research, preliminary statistical analysis of pre-test scores from the both groups of experimental and control were performed to ensure that the requirement of the assumption of normality of the distribution and homogeneity of the scores was fulfilled. Normality testing was conducted to know whether the scores of English presentation skills were normally distributed by using Kolmogorov-Smirnov testing. On the other hand, the homogeneity test was conducted to find information about equality and homogeneity of the subjects in both groups by using Levene Statistic testing. If the two of these statistical assumptions were fulfilled, the independent t-test could be used to test the hypothesis of the next data to answer the research questions.

The criterion of acceptance and rejection of the null hypothesis is set at the .05 level of significance. If the result of the analysis by means SPSS 26 program shows that the obtained significant level (p -value) is higher or equal to the level of significance .05, there is not enough evidence to reject the null hypothesis, meaning that the null hypothesis is accepted. Conversely, when the p -value is smaller or equal to the level of significance .05, there is enough evidence to reject the null hypothesis, meaning that the null hypothesis is rejected.

Results

The study results are summarized in the order of the answers to the three research questions.

The Difference in English Presentation Skills of Students Taught Using Whiteboard Animation in PjBL and those Taught Using Conventional Media

The review of the pre-test scores on the experimental and control groups was carried out to assess the outcomes of the investigations to ensure that the criterion of presumption of homogeneity and normality of the distribution of the scores. The Kolmogorov-Smirnov test results demonstrated that the students' English presentation skills in the two groups were above 0.05 significance level. The values were also homogeneous because the Levene's test showed that the pre-test results of both classes ($p = .781$) were more than 0.05.

Because there was no breach of the normality and homogeneity of both groups' pre-test results, a parametric statistical analysis of separate t -test samples was used to analyze the discrepancy in the students' English presentation skills. The findings of independent samples t -test in pre-test presentation skills between the groups are displayed in Table 2.

Table 2. Comparison of Pre-test Scores of the Experimental and Control Groups

Score	Group	N	M	SD	t-value	p-value	Description
Pre-test	Experimental	26	73.808	7.349	0.287	0.775	Not significantly different
	Control	24	74.458	8.663			

Note. $t = 2.010$ ($p < .05$) on the t -table

Table 2 demonstrates the comparability of pre-test results for the experimental and control groups. The mean of the experimental group is comparable $M = 73.808$ to that of the control group $M = 74.458$ at $t = .287$ which is smaller than $t = 2.010$, and the $p = .775$ is higher than 0.050 level of significance. Thus, it can be concluded that the students' English presentation skills in the experimental and control groups were not significantly different. The findings were thus contrasted by using independent samples t -test for the post-test scores for both groups and described in Table 3.

Table 3. Comparison of Post-test Scores of the Experimental and Control Groups

Score	Group	N	M	SD	t-value	p-value	Description
Post-test	Experimental	26	81.462	7.495	6.874	0.012	Significantly different
	Control	24	75.750	12.553			

Note. $t = 2.010$ ($p < .05$) on the t -table

Table 3 depicts that the average of the experimental group students $M = 81.462$ is above the standard of the control group students $M = 75.750$. In addition, the discrepancy in the English presentation skills of the experimental and control groups after being subjected to treatment is apparent, as t -value ($t = 6.874$) which is greater than t -table (2.010), and a p -value ($p = .012$) which is less than 0.050 level of significance. Therefore, the null hypothesis that the use of whiteboard animation in PjBL has no effect on EFL students' English presentation skills could be rejected. In other words, the treatment of whiteboard animation in PjBL positively affected the English presentation skills of the experimental group students, indicating an improvement over the English presentation skills of the control group students, who were taught using traditional media.

The Difference in Presentation Skills of the Little-c and Mini-c Students Taught Using Whiteboard Animation in PjBL and those Taught Using Conventional Media

Since the analysis of the data to address the first research question revealed that the students' English presentation skills taught using whiteboard animation by PjBL and taught using traditional teaching media differed significantly, the study proceeded to test the assumption on the second research question. The null hypothesis notes that the English presentation skills for little-c and mini-c students who were taught by using whiteboard animation in PjBL did not differ substantially. The second hypothesis was also tested using an independent samples t -test. Based on data analysis, the questionnaire of creativity levels administered to 26 experimental group students, 17 little-c students, and 9 mini-c students were found to be in attendance. Besides, 11

little-c students and 13 mini-c students were found to be in the control group. Table 4 shows the outcomes of the post-test scores between little-c and mini-c students in the experimental and control groups.

Table 4. Comparison of Post-test Scores of the Little-c and Mini-c Students in the Experimental and Control Groups

Score	Group	N	Creativity Levels	N	M	SD	t-value	p-value	Description
Post-test	Experimental	26	Little-c	17	80.824	8.487	0.589	0.562	Not significantly different
			Mini-c	9	82.667	5.385			
	Control	24	Little-c	11	78.909	10.858	1.141	0.266	Not significantly different
			Mini-c	13	73.077	13.671			

Note. $t = 2.010$ ($p < .05$) on the t -table

Table 4 portrays that, in the experimental group, though the mean score for little-c students ($M = 80.824$) is lower than that of the mini-c students ($M = 82.667$), the English presentation skills for little-c and mini-c students in the experimental group were not significantly different since the t -value on the t -test ($t = .589$) was lower than the t -value on t -table ($t = 2.010$), and the p -value ($p = .562$) is greater than 0.05 significance level. Similarly, in the control group, the English presentation skills of little-c and mini-c students did not differ substantially although the mean of little-c students ($M = 78,909$) was more than mean of mini-c ($M = 73.077$). For, the t -value on the t -test ($t = 1.141$) was lower than the t -value of the t -table ($t = 2.010$), and its significance level ($p = .266$) was greater than the 0.05 significance level.

Therefore, the null hypothesis that the English presentation skills of little-c and mini-c students taught using whiteboard animation in PjBL had no significant difference is failed to be rejected. This suggests that the English presentation skills of little-c and mini-c students taught through whiteboard animation in PjBL do not substantially vary. It also indicates that the levels of creativity, particularly little-c and mini-c, did not contribute to the improvement of students' English presentation skills.

The Interaction Between the Use of Whiteboard Animation in PjBL and the Students' Creativity Levels on the Students' English Presentation Skills

To see the relationship on the use of whiteboard animation in PjBL with the students' creativity levels to achieve the students' English presentation skills, two-way ANOVA was employed with SPSS 26 to deal with the third research question. The significance level used was $p < .05$. A description of the two-way ANOVA result is shown in Table 5.

Table 5. Result of the Interaction between the Use of Whiteboard Animation in PjBL and Students' Creativity Levels

Source	df	Mean Square	f	Sig.	Description
Whiteboard Animation in PjBL	1	391.827	3.750	0.059	No Significant Difference
Creativity Levels	1	47.111	0.451	0.505	No Significant Difference
Whiteboard Animation in PjBL* Creativity Levels (Interaction)	1	174.411	1.669	0.203	No Significant Difference

As displayed in Table 5 the column factor p -value for the whiteboard animation in PjBL was 0,059, which is greater than the 0.05 significance level. This suggests that the significant values were higher than the 0.05 level of significance. That means that there was no substantial difference in the students' English presentation skills taught using whiteboard animation in PjBL. In addition, the row factor p -value for the creativity levels (little-c and mini-c) was 0.505, which is greater than the 0.05 significance level. This indicates that the students from little-c and mini-c did not differ significantly. Moreover, the interaction p -value for the use of the whiteboard animation in PjBL and the creativity levels was 0.203, which is greater than the 0.05 significance level. This means that there was no significant interaction between the use of whiteboard animation and students' creativity levels on their English presentation skills. The use of whiteboard animation in PjBL does not substantially impact on the English presentation skills of little-c and mini-c students. Therefore, the null hypothesis that there is no interaction between the use of whiteboard animation and students' creativity levels could not to be rejected.

Discussion

The findings have been presented in this section by referring to the three research questions and discussed in light of the existing theories and relevant research studies.

The Difference in Students' English Presentation Skills Taught Using Whiteboard Animation in PjBL and those Taught Using Conventional Media

The results indicate a significant improvement in the presentation skills of the students who were trained using whiteboard animation in PjBL over those who were taught utilizing traditional media. Such a finding is in line with a similar study conducted by AL-Masadeh and AL-Omari (2014) that demonstrated the successful use of a project-based program to improve not only students' oral performance as a whole but to improve their oral performance on each aspect of oral capacity (i.e., mechanics, culture, social regulations, and function). Similar findings were also obtained through the quasi-experimental research carried out by Winasih et al. (2019) who found that the use of PjBL in Indonesia has improved EFL students' level compared to the students who were not experienced in PjBL. Likewise, Wahyudin (2017) proved that the students who have been educated through PjBL had outperformed students who have been educated through PPP (which is presentation, practice, and production). PjBL also has a high impact on comprehension and fluency, but the growth of student performance is less than comprehension and fluency in terms of vocabulary, grammar, and accent.

Moreover, the use of PjBL in the learning process has a surprisingly positive effect on the students' speaking performance. They were motivated to be creative and collaborative. It is also consistent with research conducted by Astawa et al. (2017), which have shown that PjBL has a significant impact on the speakability of students. The students found that PjBL improves motivation, trust, creativeness, self-directed learning, and collaborative learning. Ali and El-Henawy (2015) carried out similar research success intending to see if project-based learning could benefit high school students in Port Said. The study findings revealed that student expectations about the advantages and effectiveness of PjBL were indeed highly positive. They had the joy of breaking the draw of traditional approaches, of being autonomous, self-organized, inspired, and imaginative. Their oral communication skills have also significantly grown.

Applying whiteboard animation as a project-based technology for oral presentation in this study has provided genuine assistance in generating new ideas for students, exploring their current knowledge, and interacting in an interesting way to accommodate their news item text. Whiteboard animation is one of the most common interactive teaching tools for educational media. In this study, Türkay (2016) found that the positive effect of whiteboard animation was retention, participation, and enjoyment. One of the reasons is that whiteboard animation provides students with a first-person experience of the involvement that models and facilitates both the building of awareness and the sense of interaction that fosters engagement (Pedra, Mayer, & Albertin, 2015, as cited in Türkay 2016). Then, Karthigesu & Mohamad (2020) have shown that by engaging whiteboard integration allows teachers to modify their software to make learning a language more enjoyable, engaging and energetic. Furthermore, based on the students' perception on the research conducted by Li et al. (2019), the contents of whiteboard animation are interesting, animated and allowing the students to understand the details.

The Difference of English Presentation Skills across Creativity Levels Students Taught through Whiteboard Animation in Project-Based Learning (PjBL)

Concerning the second research question, the result of this study revealed that no significant difference was made in the English presentation skills of little-c and mini-c students who were taught using whiteboard animation in PjBL. The two most important groups for schools from four stages of creativity proposed by Kaufman and Beghetto (2009) are little-c and mini-c creativity. Nothing has been clarified that little-c is more effective and has been more flexible in verbal communication or vice versa.

Such a finding of this study could be seen as a contrast to the result of the research conducted by Hidayah et al. (2015) who showed that the model of the project-based contextual learning approach is efficient learning to enhance creativity. The growth in creativity has not only been seen in the general interest, but it is also expressed in the values of each aspect of creativity, such as fluency, versatility, originality, and elaboration. The faith of the students to make a presentation and assert a motivation to work during the learning was reassured by improved fluency. PjBL has been used to affect the creativity of the students in developing their presentation skills. When a student did a project using exceptional materials as loops, versatility emerged. Then, students of originality emerged as they maximized their creativity and expanded the creation of the project as far as they wanted to try new things. It can be inferred from the result that the use of

unique materials in the project will lead students to use English creatively in their presentation skills.

The Interaction between the Use of Whiteboard Animation in Project-Based Learning (PjBL) and the Students' Creativity Levels on the Students' English Presentation Skills

The last issue was to evaluate the relationship between the use of Whiteboard animation in PjBL and students' creativity levels in their English presentation skills. The results of the findings show that the use of whiteboard animations in PjBL has no interaction with the students' creativity levels related to their English presentation skills.

The results of this study have shown that mini-c has better presentation skills in the experimental group than little-c students. Nonetheless, little-c students in the control group had better performance than mini-c students in their English presentation skills. Such findings applied to particular literature. Richards (2007) said little-c requires practical action and can be built for a long time. When students pursue their discipline purposefully, then scholarly-age students will operate at the little-c level. Infrastructure was created by the Internet for little-c to prosper. Websites like Youtube, Instagram, and Etsy encourage creative people to share information and work. Mini-c creativity may characterize the achievement of a learner in discovering different ways to tackle the mathematical problem. It could also mean that establishing a new connection between their knowledge and a new piece of information enables them to understand the topic more fully. That is why in the experimental group, the mini-c students were stronger even though the number of them was lower than the little-c students. They could find various methods to complete their project and focus more on their creative process to achieve it. They collected information, took photos, and found news on the web-based on a project for a whiteboard animation. Thus, the experimental-group students obtained mini-c creativity characteristics.

In contrast, little-c students in the control group achieved better than mini-c students, while their number was close to that of mini-c students. Without the use of whiteboard animation, students from the control group were taught with the traditional PowerPoint media. Most of the little-c students created something new that had originality and meaning (Richards, 2007). This is why little-c students in the control group assumed that they were innovative with their products. They felt they were experts in PowerPoint, so they did not need a piece of information and expertise to complete their project. They then considered themselves to create a new project which uses a PowerPoint to achieve originality, value, creativity, versatility, and intelligence. Thereby the characteristics of little-c were proposed by the control group students.

Conclusions

This article has addressed the findings of the investigation of the effect of the use of whiteboard animation in PjBL on Indonesian EFL students' English presentation skills across creativity levels. It is concluded that the English presentation skills between the students who were taught by using whiteboard animation in PjBL and those taught by using conventional media differ significantly. The treatment of whiteboard animation in PjBL showed that their English presentation skills were better than those in the control group. The presentation skills provided by whiteboard animation learning activities for the experimental group in PjBL have proven effective as compared to conventional teaching media in the control group so that students can improve the English

presentation skills despite their insecurity about expression and impairment of language. The results also showed no significant difference in the use of whiteboard animation in PjBL between the little-c and mini-c students. Little-c and mini-c students had an equal opportunity to improve their presentation skills test because there was not enough proof that the levels of creativity impaired the English presentation skills. This is possible because of the influences of the language classroom environment, intake, and performance of students, motivation, and culture. Therefore, other potential variables could be further found in the maximization of students' ability in their English presentation skills, instead of considering the student level of creativity. In addition, there is no connection between the use of whiteboard animation in PjBL and the students' levels of creativity with their English presentation skills. This indicates that the use of whiteboard animation was not affected by the creativity levels of little-c and mini-c students.

It should be better for English teachers who plan to conduct the same research should be able to add more meetings in their research so that the students will be more comprehend in using whiteboard animation, have more time in designing the project, and have adequate time to overcome the occurrence of the possible obstacles. By recognizing the students' needs in the process of teaching and learning, it will assist English teachers to understand and employ the factors that will influence their ability in presentation skills. To make the learning succeed, English teachers should implement another method which suits to the students' needs including the choice of technology. It is claimed that it can help students improve the experience of presenting in English, discover technology by offering different types of speaking activities in English, and some technological tools. By integrating the methods or approaches in teaching and learning process with technology, it can elaborate the students' capacity to think critically, communicate, collaborate and create something new which has originality ideas with a very creative quality ideas.

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