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# The Implementation of Project Based Learning by Using Digital Comics to Enhance Students' Creativity and Critical Thinking in Writing Recount Text

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**ABSTRACT**

*In the context of 21st-century education, English language instruction is expected to promote not only linguistic proficiency but also higher-order thinking skills, particularly creativity and critical thinking. Writing recount texts remains a challenging task for many EFL students, as it requires the ability to generate ideas, organize events chronologically, and reflect meaningfully on past experiences. This study investigates the effect of implementing Project-Based Learning (PBL) supported by digital comics on students' creativity and critical thinking in writing recount texts. The research employed a quasi-experimental design involving two eighth-grade classes at SMP Negeri 5 Jepara, consisting of an experimental group and a control group. The experimental group received instruction through PBL integrated with digital comics, while the control group was taught using conventional teaching methods. Data were collected through pre-tests and post-tests and analyzed using quantitative statistical techniques. The results reveal that students who participated in PBL activities using digital comics demonstrated significantly greater improvement in creativity and critical thinking compared to those taught through traditional instruction. The findings suggest that the integration of PBL and digital comics creates an engaging and student-centered learning environment that effectively supports idea development, reflective thinking, and creative expression in writing recount texts. Therefore, this instructional approach can be considered an effective strategy for enhancing EFL students' writing skills and higher-order thinking abilities.*

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## INTRODUCTION

In recent years, educational paradigms have increasingly emphasized the importance of developing higher-order thinking skills alongside academic knowledge. The rapid advancement of digital technology and globalization has transformed the skills required for students to succeed in the 21st century (Dari et al., 2023). Among these skills, creativity and critical thinking are considered essential competencies that enable learners to adapt to complex problems, analyze information critically, and generate innovative ideas. Consequently, modern education is no longer focused solely on content mastery but also on

cultivating learners' cognitive, metacognitive, and creative capacities (Satria & Muntaha, 2022).

In the context of English as a Foreign Language (EFL) learning, writing is regarded as one of the most demanding language skills. Writing requires learners to integrate multiple components simultaneously, including vocabulary knowledge, grammatical accuracy, text organization, coherence, and appropriate language use. Unlike receptive skills such as listening and reading, writing obliges students to actively produce language and construct meaning in a structured manner. As a result, many EFL students experience difficulties in writing, particularly at the junior high school level where learners are still developing basic linguistic competence (Yustika & Iswati, 2020).

One genre that poses significant challenges for students is recount text. Recount texts require students to retell past events chronologically, clearly, and meaningfully. To write an effective recount text, students must be able to select relevant experiences, organize events logically, apply correct past tense forms, and reflect on their experiences through re-orientation. These processes demand not only language proficiency but also creativity in expressing ideas and critical thinking in organizing and evaluating content. However, many students struggle to generate ideas, maintain coherence, and present their experiences in an engaging way (Rambung et al., 2023).

Despite these challenges, writing instruction in many EFL classrooms still relies heavily on traditional, teacher-centered approaches. In such classrooms, teachers often dominate the learning process by explaining text structures, providing examples, and assigning writing tasks without sufficient opportunities for student exploration and interaction. Writing activities are frequently limited to textbook exercises and individual tasks, which may lead to passive learning and reduced student motivation. As a result, students often perceive writing as a monotonous and stressful activity rather than a meaningful form of communication (Werth et al., 2022).

The limitations of traditional writing instruction highlight the need for innovative and student-centered teaching strategies that can actively engage learners while fostering higher-order thinking skills. One instructional approach that has gained increasing attention is Project-Based Learning (PBL). PBL emphasizes learning through meaningful projects that require students to investigate real-world problems, collaborate with peers, and produce tangible outcomes. By placing students at the center of the learning process, PBL encourages autonomy, responsibility, creativity, and critical thinking (Freddy H Istanto, 2002).

The integration of digital technology further enhances the effectiveness of Project-Based Learning. In particular, digital comics offer a powerful multimodal medium that combines visual and textual elements to support learning. Digital comics allow students to represent ideas visually while simultaneously developing written language skills. The process of creating digital comics requires students to plan narratives, select relevant content, organize events, and evaluate their work critically. Thus, digital comics not only make learning more engaging but also promote creativity and critical thinking (Wilkin, 2014).

Given these considerations, this study investigates the implementation of Project-Based Learning using digital comics to enhance students' creativity and critical thinking in writing recount texts. Conducted in an Indonesian junior high school context, this study seeks

to provide empirical evidence on the effectiveness of this instructional approach and contribute to the development of innovative EFL writing pedagogy.

Although several studies have discussed the benefits of Project-Based Learning and digital media in language learning, limited research has specifically examined the combined use of PBL and digital comics in improving students' creativity and critical thinking in writing recount texts, particularly at the junior high school level. Most previous studies tend to focus on general writing achievement or student motivation, without deeply analyzing higher-order thinking skills. Therefore, there is a need for further investigation to fill this research gap and provide more focused evidence on how this approach supports students' cognitive development.

In the Indonesian EFL context, students often face challenges due to limited exposure to English outside the classroom and a lack of engaging learning media. These conditions make it difficult for students to express ideas creatively and think critically when writing. By integrating PBL with digital comics, students are expected to experience a more meaningful learning process that allows them to actively explore ideas, collaborate with peers, and express their experiences in a structured and interesting way. This approach is believed to help students overcome writing difficulties and improve their overall learning experience.

Based on these issues, this study aims to examine the effect of Project-Based Learning using digital comics on students' creativity and critical thinking in writing recount texts. The findings of this study are expected to provide practical insights for English teachers in designing more engaging writing instruction. In addition, the results may serve as a reference for future researchers who are interested in innovative teaching strategies for EFL writing classrooms.

## LITERATURE REVIEW

### 1) Project-Based Learning (PBL)

Project-Based Learning is a student-centered instructional approach in which learners acquire knowledge and skills by engaging in projects over an extended period. PBL is grounded in constructivist learning theory, which emphasizes that learning occurs when students actively construct knowledge through experience, interaction, and reflection. Rather than passively receiving information, students in PBL environments are encouraged to explore problems, ask questions, and apply knowledge in meaningful contexts (Savery & Duffy, 1995).

One of the key characteristics of PBL is its focus on real-world relevance. Projects are designed around authentic problems or tasks that mirror real-life situations, making learning more meaningful and motivating for students. In addition, PBL promotes collaboration, as students often work in groups to plan, execute, and present their projects. Through collaboration, students develop communication skills, social responsibility, and the ability to consider multiple perspectives (Medel-Añonuevo et al., 2001; Prayogi, 2020).

Previous studies have demonstrated that PBL has a positive impact on students' engagement, motivation, and academic achievement. More importantly, PBL has been shown to enhance higher-order thinking skills such as creativity, critical thinking, and problem-

solving. By engaging students in inquiry-based tasks and reflective activities, PBL encourages learners to analyze information, evaluate solutions, and generate original ideas. In the context of EFL writing, PBL provides opportunities for students to use language as a tool for communication and expression rather than merely as an academic exercise.

### 2) Digital Comics in Language Learning

Digital comics are a form of multimedia learning that integrates images, text, symbols, and visual narratives. With the advancement of digital technology, comics can now be created using various online platforms and applications, such as Canva, Pixton, and Storyboard That. These tools enable students to design characters, settings, and dialogues easily, making comic creation accessible even to novice users (Lamba & Madhusudhan, 2022).

In language learning, digital comics have been found to increase student motivation and engagement. The visual nature of comics helps reduce cognitive load and supports comprehension, particularly for learners with limited language proficiency. By combining visual cues with textual information, digital comics provide contextual support that facilitates vocabulary acquisition, grammar usage, and text comprehension (Abaddi, 2025).

Furthermore, creating digital comics requires students to engage in critical thinking processes. Students must decide which events to include, how to sequence them, and how to represent them visually and linguistically. This process involves analysis, evaluation, and synthesis of information. At the same time, digital comics stimulate creativity by allowing students to experiment with visual design, storytelling, and language expression. Therefore, digital comics serve as an effective medium for integrating creativity and critical thinking in EFL writing instruction.

### 3) Creativity and Critical Thinking in Writing

Creativity and critical thinking are closely related cognitive skills that play a crucial role in writing. Creativity in writing refers to the ability to generate original ideas, express thoughts imaginatively, and present information in engaging ways. Creative writers are able to explore diverse perspectives, use language flexibly, and produce unique texts (Hanipah et al., 2023).

Critical thinking, on the other hand, involves the ability to analyze information, evaluate ideas, and make reasoned judgments. In writing, critical thinking is reflected in the logical organization of ideas, coherence of arguments, and relevance of content. Students who think critically are able to select appropriate information, structure texts effectively, and reflect on their experiences meaningfully (Bell, 2010; Mishra & Koehler, 2020).

In writing recount texts, both creativity and critical thinking are essential. Students must creatively recall and describe past experiences while critically organizing events in chronological order and reflecting on their significance. Instructional approaches that explicitly foster these skills are therefore necessary to improve students' writing performance and overall learning outcomes.

## RESEARCH METHODS

This study employed a quantitative approach using a quasi-experimental design to examine the effect of Project-Based Learning integrated with digital comics on students' creativity and critical thinking in writing recount texts. The research design involved two groups, namely an experimental group and a control group. Both groups were administered a pre-test and a post-test to measure students' creativity and critical thinking abilities before and after the treatment (Sugiyono, 2022). The experimental group received instruction through Project-Based Learning supported by digital comics, while the control group was taught using conventional teaching methods. This design was selected to allow a comparison of learning outcomes between students who experienced the innovative instructional approach and those who received traditional instruction.

The participants of this study consisted of 63 eighth-grade students at SMP Negeri 5 Jepara. The students were divided into two intact classes, with one class assigned as the experimental group and the other as the control group. The selection of participants followed the existing class arrangement to maintain the natural learning environment and avoid disrupting regular classroom activities. This approach ensured that the research was conducted under realistic instructional conditions.

To collect the research data, this study utilized writing tests as the primary research instruments. Pre-test and post-test writing tasks were designed to assess students' ability in writing recount texts. Writing assessment rubrics were developed to evaluate students' performance in terms of grammar, text organization, coherence, and the key elements of recount texts. In addition, specific assessment rubrics were employed to measure students' creativity and critical thinking as reflected in both their written recount texts and the digital comics they produced during the learning process.

The data collection procedure was conducted in several stages. Initially, both the experimental and control groups were given a pre-test to identify students' initial levels of writing ability, creativity, and critical thinking. Following the pre-test, the experimental group participated in learning activities using Project-Based Learning integrated with digital comics over two instructional sessions, while the control group received instruction through conventional teaching methods. At the end of the treatment period, a post-test was administered to both groups to measure any changes in students' learning outcomes. In addition to the test results, document analysis was carried out on students' written recount texts and the digital comics created during the learning process to support the quantitative data.

The data obtained from the research were analyzed using quantitative statistical techniques. Descriptive statistics were applied to summarize and describe students' scores from the pre-test and post-test. Furthermore, inferential statistical analysis, particularly an independent sample t-test, was conducted to determine whether there were statistically significant differences in creativity and critical thinking outcomes between the experimental and control groups. This analysis was used to evaluate the effectiveness of Project-Based Learning supported by digital comics in enhancing students' creativity and critical thinking in writing recount texts.

| Group | Pre-Test | Treatment | Post-Test |
|---|---|---|---|
| Experimental | Writing recount text | PBL with digital comics | Writing recount text with digital comics |
| Control | Writing recount text | Conventional method | Writing recount text |

## RESULTS AND DISCUSSION

### Results

This section describes the research findings based on the students' pre-test and post-test scores in both the experimental and control groups. The results illustrate students' creativity and critical thinking skills in writing recount texts before and after the learning process.

#### 1) Pre-Test Results

Prior to the implementation of the treatment, a pre-test was administered to both the experimental and control groups to identify students' initial levels of creativity and critical thinking in writing recount texts.

**Table 1.** Pre-Test Mean Scores of Experimental and Control Groups

| Group | Mean Score | Standard Deviation |
|---|---|---|
| Experimental Group | 62.45 | 6.87 |
| Control Group | 61.98 | 7.12 |

The data presented in Table 1 indicate that the mean scores of the experimental and control groups were very close prior to the treatment. The slight difference in mean scores, accompanied by relatively similar standard deviations, suggests that both groups possessed comparable levels of creativity and critical thinking in writing recount texts at the outset of the study. This similarity implies that the two groups were statistically and academically balanced, making them suitable for further comparison in examining the effect of the instructional treatment.

#### 2) Post-Test Results

After the experimental group received instruction through Project-Based Learning integrated with digital comics, a post-test was conducted for both groups to measure changes in students' performance.

**Table 2.** Post-Test Mean Scores of Experimental and Control Groups

| Group | Mean Score | Standard Deviation |
|---|---|---|
| Experimental Group | 81.72 | — |
| Control Group | 69.34 | — |

As shown in Table 2, the experimental group demonstrated a substantial increase in mean score compared to their pre-test results. In contrast, the control group showed a more

moderate improvement. The higher post-test mean score achieved by the experimental group indicates that students who participated in Project-Based Learning supported by digital comics developed stronger creativity and critical thinking skills in writing recount texts than those who were taught through conventional instructional methods.

### 3) Gain Score Analysis

To further examine the magnitude of improvement in each group, gain scores were calculated by subtracting the pre-test scores from the post-test scores.

**Table 3.** Mean Gain Scores of Experimental and Control Groups

| Group | Mean Gain Score |
|---|---|
| Experimental Group | 19.27 |
| Control Group | 7.36 |

The results in Table 3 reveal a clear difference in learning progress between the two groups. The experimental group achieved a considerably higher gain score than the control group, indicating that students exposed to Project-Based Learning with digital comics experienced more meaningful development in creativity and critical thinking. This finding suggests that the instructional approach not only improved performance but also accelerated students' cognitive growth in writing recount texts.

### 4) T-Test Results

To determine whether the observed difference in post-test scores between the experimental and control groups was statistically significant, an independent sample t-test was conducted.

**Table 4.** Independent Sample T-Test on Post-Test Scores

| Statistic | Value |
|---|---|
| t-value | 5.87 |
| Sig. (p) | 0.000 |

The statistical analysis presented in Table 4 shows that the significance value (p = 0.000) is lower than the standard alpha level of 0.05. This result indicates a statistically significant difference between the post-test scores of the experimental and control groups. Therefore, it can be concluded that Project-Based Learning integrated with digital comics had a significant positive effect on enhancing students' creativity and critical thinking in writing recount texts.

## Discussion

The findings of this study demonstrate that students in the experimental group showed significantly greater improvement in creativity and critical thinking compared to those in the control group. The substantial increase in post-test scores indicates that the implementation of Project-Based Learning using digital comics was effective in enhancing students' writing performance (Bell, 2010).

The improvement can be attributed to several factors. First, the PBL framework required students to actively engage in the learning process by planning, designing, and producing digital comics. This process encouraged students to think critically about the content of their recount texts, including selecting relevant events, organizing them chronologically, and reflecting on their experiences. Such activities align with the core principles of critical thinking, including analysis, reasoning, and reflection.

In addition, the use of digital comics within the PBL framework allowed students to transform abstract ideas into concrete visual representations, which supported deeper understanding and idea development. By visualizing characters, settings, and sequences of events, students were better able to clarify their thoughts before translating them into written texts. This process helped reduce cognitive difficulty in writing and enabled students to evaluate and revise their ideas more effectively. Consequently, students became more confident in expressing their experiences creatively while maintaining logical structure, which further strengthened the integration of creativity and critical thinking in their recount writing.

Second, the use of digital comics provided a creative and visually engaging medium that motivated students to express their ideas more freely. Students were able to combine visual elements with written text, which helped them develop ideas before translating them into written recount texts. This multimodal approach reduced students' anxiety toward writing and enhanced their creativity by allowing them to experiment with storytelling, characters, and visual design.

In contrast, students in the control group, who were taught using conventional methods, showed only moderate improvement. Their learning activities were mostly limited to textbook-based exercises and individual writing tasks, which offered fewer opportunities for collaboration, creativity, and critical reflection.

These findings are consistent with previous studies indicating that Project-Based Learning enhances students' higher-order thinking skills and that digital comics serve as effective learning media in EFL contexts. The results confirm that meaningful, student-centered learning environments supported by digital technology can significantly improve students' creativity and critical thinking in writing recount texts.

Moreover, the implementation of Project-Based Learning using digital comics created opportunities for students to collaborate and exchange ideas during the learning process. Through group discussions and peer feedback, students were exposed to different perspectives that encouraged them to reconsider and refine their own ideas. This social interaction supported the development of critical thinking, as students learned to justify their choices, evaluate peers' work, and make improvements based on constructive input. Collaboration also fostered creativity by allowing students to combine ideas and develop more engaging and meaningful recount texts.

In addition, the integration of digital technology aligned well with students' learning preferences in the digital era. The use of digital comics increased students' motivation and engagement, making writing activities more enjoyable and less intimidating. When students were actively involved in creating digital products, they demonstrated greater responsibility for their learning and showed increased confidence in expressing ideas in English. This

positive learning atmosphere contributed to sustained engagement and deeper cognitive processing, which ultimately enhanced both creativity and critical thinking in writing recount texts.

## CONCLUSION

Based on the findings and discussion presented in this study, it can be concluded that the implementation of Project-Based Learning (PBL) integrated with digital comics has a significant positive effect on students' creativity and critical thinking in writing recount texts. Students who were taught through PBL using digital comics demonstrated substantially higher improvement compared to those who received conventional writing instruction.

The significant increase in post-test scores in the experimental group indicates that this instructional approach effectively supports students in generating ideas, organizing events chronologically, and reflecting meaningfully on past experiences. The integration of visual elements and textual narration in digital comics encouraged students to think critically during the planning and writing processes while simultaneously fostering creative expression.

Furthermore, the student-centered nature of PBL promoted active engagement, collaboration, and learner autonomy, which are essential components of 21st-century learning. By involving students in meaningful projects, the learning process became more contextual, motivating, and reflective. Therefore, Project-Based Learning using digital comics can be considered an effective pedagogical strategy for enhancing EFL students' writing skills, creativity, and critical thinking at the junior high school level.

Based on the conclusions above, several recommendations are proposed as follows:

1. **For Teachers**
   English teachers are strongly encouraged to integrate Project-Based Learning combined with digital comics into EFL writing instruction, particularly for recount texts. This approach can create a more engaging and interactive learning environment, foster students' creativity, and enhance critical thinking skills. Teachers are also advised to provide clear guidance, scaffolding, and assessment rubrics to support students throughout the project process.
2. **For Students**
   Students are encouraged to actively utilize digital tools as learning media to express ideas creatively and reflect critically on their learning experiences. The use of digital comics can help students develop confidence in writing, improve idea organization, and enhance motivation toward English writing tasks.
3. **For Future Researchers**
   Future studies may explore the application of Project-Based Learning using digital comics in other text genres, such as narrative, descriptive, or argumentative texts, as well as in other language skills, including speaking, reading, or listening. Further research may also employ different research designs, such as mixed-methods or longitudinal studies, to gain deeper insights into students' learning processes and long-term impacts.

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