

# Comparative analysis of creative thinking at SMPN 2 Pangsid

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## ABSTRACT

*This study aims to analyze the comparative creative thinking abilities of students at SMPN 2 Pangsid by applying the Experiential Learning model as an intervention. The research used a quantitative approach with a pretest-posttest design. The sample consisted of 20 students from two classes (7A and 8A), selected purposively based on specific criteria. The research instrument was a creative thinking test assessing four main indicators: fluency, flexibility, originality, and elaboration. The results revealed a significant improvement in students' creative thinking scores after the implementation of the Experiential Learning model. Class 7A showed a higher and more stable average score increase compared to class 8A. The Independent Sample t-Test confirmed a significant difference in posttest results between the two classes, despite no significant difference found in the pretest scores. These findings indicate that the Experiential Learning model is effective in enhancing students' creative thinking skills, especially through active involvement and meaningful real-life learning experiences.*

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## **INTRODUCTION**

Education plays a vital role in shaping human beings into individuals who are not only intelligent but also have good morals, responsibility, and creativity. According to Law No. 20 of 2003, education is a conscious and planned effort to create a learning environment where students actively develop their potential. Through education, students are guided to become independent individuals with strong character, self-control, and the skills needed to face challenges in life. In the era of globalization and the 21st century, education demands students to master various skills, especially critical and creative thinking. Learning is no longer teacher-centered but must shift towards student-centered approaches. Students are expected to find information independently, think critically, and develop creative solutions to various problems they face both in academics and in daily life.

Creative thinking is one of the higher-order thinking skills that every student must possess. It is the ability to produce new, original, and useful ideas that can solve problems in innovative ways. Creative thinking includes several key aspects: fluency, flexibility, originality, and elaboration. These aspects train students to see problems from different perspectives, develop various alternative solutions, and express ideas in a detailed and unique manner. However, in reality, not all schools and teachers pay sufficient attention to developing students' creative thinking abilities. Many teachers still apply convergent teaching methods that dominate classroom activities with lectures and memorization. This traditional method often limits students' opportunities to express their ideas freely, resulting in lower levels of creativity among students. To address this issue, appropriate learning models are needed that can actively involve students in meaningful learning experiences. One such model is Experiential Learning, which emphasizes learning through direct experience. Experiential Learning encourages students to engage in concrete activities, reflect on their experiences, form concepts, and apply what they have learned in different contexts. This process stimulates students to think critically and creatively.

SMPN 2 Pangsid was chosen as the research site because observations showed that students' interest in learning and their creative thinking skills still need improvement. By applying the Experiential Learning model, it is expected that students will be more motivated to think creatively, participate actively in class, and develop innovative solutions to problems they encounter during learning activities.

This research aims to conduct a comparative analysis of the creative thinking abilities of students in grades 7 and 8 at SMPN 2 Pangsid. By comparing the two grade levels, the researcher hopes to identify differences in the development of creative thinking skills and the factors that contribute to these differences. The results will provide valuable insights for teachers to design more effective strategies to foster creativity in the classroom. Creative thinking is a crucial competency for students in facing the demands of the 21st century. By implementing appropriate learning models such as Experiential Learning, schools can create learning environments that support students in becoming creative, critical, and independent thinkers. This study is expected to contribute to the improvement of creative thinking development, particularly in English learning at SMPN 2 Pangsid.

## **Literature Review**

Creative thinking is one of the most essential higher-order thinking skills required in 21st-century education. It is not only about producing new ideas but also about combining and modifying existing ideas to create solutions that are original, useful, and relevant. According to Weisberg (2006), creative thinking refers to processes that generate creative products, meaning that individuals must actively use their cognitive abilities to innovate and solve problems. Theories about creativity emphasize various perspectives. The classic "4P" model—process, product, person, and press—explains

creativity as an interaction of mental processes, the creative output produced, the individual characteristics, and the environmental factors that support creativity. Kozbelt, Beghetto, and Runco (2010) later expanded this model by adding persuasion and potential, arguing that creativity develops over time and requires supportive interactions between individuals and their contexts. In the school context, creative thinking involves students' abilities to produce original ideas, adapt flexibly to new challenges, and elaborate details to improve their work. Cropley (in Haylock, 1997) highlights that creativity in education is closely related to divergent thinking, where students generate multiple and diverse ideas in response to open-ended questions or problems.

The benefits of creative thinking for students are significant. Research shows that students with high creative thinking skills are better problem solvers, more adaptable, and more confident in expressing their ideas. According to Syamina et al. (2021), creative thinking can also enhance students' engagement in learning, making the process more meaningful and enjoyable. Several key characteristics define creative thinkers. They are curious, open to new ideas, and willing to take intellectual risks. Sund (in Slameto) states that individuals with high creativity tend to ask many questions, seek new knowledge actively, and persist in solving challenging problems. Moreover, they demonstrate flexibility in thinking, originality in ideas, and elaboration in developing concepts. In practice, developing creative thinking requires supportive teaching methods. However, Beghetto (2010) noted that many teachers' convergent teaching practices limit opportunities for students to think creatively. This is why experiential and student-centered learning models are recommended to replace teacher-centered approaches that prioritize memorization and rigid instruction.

Previous research supports the use of innovative learning models to foster creativity. For instance, Werdiningsih (2019) found that the Discovery Learning model improved students' creative thinking, activeness, and self-confidence. Similarly, Mukti and Soedjoko (2021) demonstrated that Problem Posing learning based on open-ended problems enhanced students' creative skills, especially when aligned with their learning styles. Based on these theories and research findings, this study employs the Experiential Learning model to improve students' creative thinking at SMPN 2 Pangsid. The model's emphasis on direct experience, reflection, and active experimentation aligns with the characteristics and needs of creative learners. By comparing different classes, this study seeks to provide empirical evidence on how creative thinking develops and how learning interventions can be optimized to help students reach their full creative potential.

## **Research Methods**

This study applies a quantitative research design to analyze the comparative creative thinking abilities of students at SMPN 2 Pangsid. Quantitative research is appropriate because it allows systematic, planned, and structured investigation to test hypotheses using numerical data that can be statistically analyzed (Sugiyono, 2011). The type of research design employed is a pretest-posttest design with comparative analysis. This design enables the researcher to measure students' creative thinking skills before and after the implementation of the Experiential Learning model, and to compare the results between different classes to see whether significant differences exist. The variables in this study consist of an independent variable and a dependent variable. The independent variable is the learning treatment that uses the Experiential Learning model, while the dependent variable is the students' creative thinking ability, which is measured through a structured test covering aspects such as fluency, flexibility, originality, and elaboration.

The population in this research includes all students of SMPN 2 Pangsid, specifically those in grades 7 and 8. The total number of students is distributed across several classes with both male and female students. This population provides a diverse sample to analyze variations in creative thinking abilities. A purposive sampling

technique was used to select a sample of 20 students from two classes—10 students each from classes 7A and 8A. The selection was based on specific criteria such as academic achievement, class participation, and involvement in creative tasks. This approach ensures that the sample represents different levels of creative thinking ability.

The research instruments consist of observations, pretests, treatments, and posttests. Observation is conducted at the beginning to identify students' initial conditions. The pretest measures students' initial creative thinking skills. The treatment, which is the application of the Experiential Learning model, aims to improve these skills through direct and meaningful learning experiences. After the treatment, a posttest is conducted using the same indicators and structure as the pretest to ensure consistency. The data from pretests and posttests are then processed using quantitative analysis techniques. Descriptive statistics such as mean scores and standard deviation are calculated, followed by inferential statistics to test for significant differences. Data analysis is carried out using SPSS software, which facilitates normality tests, descriptive analysis, and an Independent Samples t-Test to compare scores between classes and test the research hypothesis. The results are expected to reveal whether the Experiential Learning model effectively improves students' creative thinking skills and whether differences exist between the two grade levels studied.

## **Results and Discussion**

The purpose of this study was to analyze and compare the creative thinking abilities of students in grades 7 and 8 at SMPN 2 Pangsid after being taught using the Experiential Learning model. The results were obtained through pretest and posttest assessments covering the four aspects of creative thinking: fluency, flexibility, originality, and elaboration. The descriptive analysis showed that there was an improvement in the average scores of students in both classes after the treatment. Class 7A demonstrated a higher and more consistent increase than class 8A, indicating that the Experiential Learning model had a positive effect on students' creative thinking abilities.

The mean pretest score for class 7A was 56.80, which increased to 91.40 in the posttest. Meanwhile, class 8A's mean score improved from 58.80 to 83.90. The improvement shows that both groups benefited from the experiential learning activities but to different extents. The standard deviation for class 7A decreased from 7.857 to 3.836 after the treatment, showing more uniform results among students. In contrast, class 8A's standard deviation increased from 5.514 to 7.233, indicating more varied posttest results within the group. The normality test confirmed that both pretest and posttest data were normally distributed, meeting the assumption for further parametric analysis. This supports the validity of using the Independent Samples t-Test to compare the results between the two groups.

The results of the Independent Samples t-Test revealed that there was no significant difference between the pretest scores of the two classes (Sig. 0.518 > 0.05), confirming that students' initial creative thinking abilities were relatively similar. However, the posttest results showed a significant difference between the two groups (Sig. 0.010 < 0.05). The mean difference of 7.5 points suggests that the Experiential Learning model was more effective for class 7A than for class 8A.

Overall, these findings indicate that the Experiential Learning model positively influenced students' creative thinking abilities, especially when learning activities were conducted in ways that matched students' grade levels and classroom contexts.

### **Example Table: Mean and Standard Deviation**

<b>Class</b>	<b>N</b>	<b>Pretest Mean</b>	<b>Pretest Std. Dev.</b>	<b>Posttest Mean</b>	<b>Posttest Std. Dev.</b>
7A	10	56.80	7.857	91.40	3.836

Class	N	Pretest Mean	Pretest Std. Dev.	Posttest Mean	Posttest Std. Dev.
8A	10	58.80	5.514	83.90	7.233
<b>Total</b>	20	57.80	6.685	87.65	6.823

## DISCUSSION

The significant increase in students' creative thinking scores indicates that the Experiential Learning model was effective in developing students' ability to generate and elaborate ideas. This supports Kolb's theory that learning through experience enhances high-order thinking skills. The improvement was more consistent in class 7A than in class 8A. This may be due to differences in age, motivation, or the learning environment that influenced how students engaged with experiential activities.

The higher posttest scores in class 7A suggest that younger students may respond better to hands-on learning when properly facilitated. This aligns with Beghetto's (2010) argument that supportive environments and open-ended tasks help overcome barriers to creativity in the classroom. The decrease in standard deviation for class 7A indicates that students' performance became more homogeneous after the treatment. This means that the learning model not only raised the average scores but also helped weaker students improve.

On the other hand, the increase in standard deviation for class 8A implies that the treatment affected students differently within the group. Some students showed significant improvement, while others might have faced challenges in adapting to the experiential approach. These findings highlight the importance of adapting experiential learning activities to the developmental stage and characteristics of each class. For example, older students may need more complex tasks or different facilitation strategies to maximize their creative potential. The results are consistent with previous studies, such as those by Werdiningsih (2019) and Mukti & Soedjoko (2021), which showed that innovative learning models like Discovery Learning and Problem Posing Learning can effectively enhance students' creativity.

In summary, the discussion suggests that while the Experiential Learning model has proven effective, its success depends on how well it is implemented and tailored to students' needs. Teachers are encouraged to create flexible and engaging learning environments that continuously support the development of students' creative thinking skills.

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