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Research Article

The Effectiveness of Problem-Based Learning Strategies in the Creative Thinking Skills of Grade 12 Students in Contemporary Philippine Arts from the Regions

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ABSTRACT

This research study focused on examining the effectiveness of problem-based learning strategies in enhancing the creative thinking skills of Grade 12 students studying Contemporary Philippine Arts from the Regions. The study was conducted at the Senior High School section of Dolores Macasaet National High School, situated in Brgy. Pahinga Norte, Candelaria, Quezon Province. The participants in the study consisted of three sections from each of the three Grade 12 strands, all of whom were taught using problem-based learning methods. To facilitate the implementation of problem-based learning, the researcher created five self-made semi-detailed lesson plans covering the first five weeks of the third grading period. The research design utilized in this study was a pre-experimental one-group pre-test and post-test design. For data analysis, frequency and percentage were employed, along with mean and standard deviation calculations. Additionally, the Paired Samples T-test was utilized to compare the pre-test and post-test results. In contrast to traditional teacher-centered instruction, the problem-based learning approach adopted in this study involved presenting the problem to students first, making it a more student-centered method. This approach fostered a classroom environment that encouraged group work and collaboration, providing opportunities for students to engage in problem-based learning projects. The findings of the study revealed significant differences in the pre-test and post-test performance of the participants in terms of creative thinking skills, particularly in fluency, flexibility, originality, and elaboration, following the implementation of problem-based learning strategies.

Keywords: *Contemporary Philippine Arts from the Regions Subject, Creative Thinking Skills, Problem-based Learning Strategies*

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Introduction

Problem-based learning (PBL) is an instructional approach that involves presenting students with authentic problems, whether real or simulated, to promote their understanding of a subject matter and develop critical thinking skills. Unlike traditional methods like lectures or the Socratic method, PBL encourages active learning by engaging students in self-directed exploration of complex and open-ended problems. Instructors take on a facilitative role, guiding students through the learning process rather than delivering direct instruction. While initially designed for medical students as semester-long projects, PBL can be adapted to various disciplines and implemented as either long-term or short-term endeavors.

Problem-based learning (PBL) is an active learning approach that fosters deep thinking and promotes student ownership of the learning process. It achieves this by closely simulating real-life situations that students may encounter, thus enhancing their engagement and motivation.

As stated by Brandsford (2015), problem-based learning (PBL) is not merely a teaching strategy or method, but a curriculum design and implementation approach. Initially implemented in the field of medicine and later adapted to other disciplines, PBL revolves around the use of comprehensive and authentic problems that enable learners to acquire the knowledge, understanding, and skills outlined by the curriculum outcomes.

At its core, the curriculum itself serves as the foundation for independent learning in problem-based learning (PBL). By engaging students in problem-solving activities, it is believed that consistent exposure to relevant problems can facilitate the acquisition of a significant knowledge base, a deeper understanding of crucial concepts and principles, as well as the development of problem-solving and interpersonal skills that apply to their future professional paths (Killen, 2017).

Problem-solving is a dynamic and often perplexing process that can be challenging for students, but it also offers rewards. Students need to learn how to explore problems and recognize that making mistakes is just as valuable as finding the correct answers or solutions. Throughout this process, students must remain attentive to gauge whether they are progressing closer to or further from the problem's solution (Society Committee on Education, 2012). Enhancing and cultivating students' problem-solving skills is a crucial requirement for any educational system, ensuring their global competitiveness. The utilization of problem-based learning can enhance these skills by exposing students to real-life problems that necessitate problem identification, data gathering, the development of plausible solutions, and ultimately selecting the most effective solution (Dolmans, De Grave, Wolfhagen & Van Der Vleuten, 2015).

Although studies have shown that problem-based learning (PBL) is effective, its adoption in many Philippine high schools is not as common as conventional lecture-based approaches combined with problem-solving activities. A problem-based learning matrix was implemented as an addition to or substitute for the existing curriculum in a public high school to address this issue and further students' ability to solve problems. Therefore, the purpose of this study was to evaluate the effectiveness of problem-based learning in improving the problem-solving skills of Grade 12 students in a public high school in the Philippines by using a developed problem-based learning matrix.

Methods

Research Design

The pre-experimental research design, specifically the one-group pretest and post-test design, was employed in this study. In a pre-experimental design, either a single group or multiple groups are observed after the application of an agent or treatment expected to bring about change. The experimental design involves the careful manipulation of variables as a problem-solving approach. In this study, the respondents were divided into three strands (ABM, HUMSS, and TVL) to assess the effectiveness of problem-based learning strategies in the Grade 12 subject of Contemporary Philippine Arts from the Regions. The effectiveness of this variable was evaluated through a pretest conducted as a preliminary activity and a post-test conducted as a post-experimental activity.

Sampling and Ethical Considerations

In the Grade 12 population, consisting of six sections - ABM Comptrollers (43), ABM Executives (49), HUMSS Aristotle (52), HUMSS Confucius (51), TVL Ala Carte (40), and TVL Table d'Hote (41) - the researcher employed a stratified random sampling technique to select three subgroups from each strand. This approach allowed for the selection of a representative sample within each subgroup, resulting in a smaller unit of the sample. Stratified random sampling involves dividing the total sample size (276) into predetermined strata based on the size of each subgroup. From each stratum, individuals were randomly selected and sampled, and data were collected from each selected unit within the respective stratum which gave a total of 134 respondents. Stratified random sampling helps ensure that all subgroups within the population are adequately represented in the sample, which can lead to more accurate and reliable research results. It is particularly useful when there are known variations or differences within the population that are relevant to the research question.

Research Instruments

The researcher utilized a lesson plan for the experimental activity to assess the effectiveness of problem-based learning strategies. Two sets of tests were developed for the study. Part I consisted of a Pretest, which included 15 items for each component of creative thinking skills (fluency, flexibility, originality and elaboration) resulting in a total of 60 items. Part II comprised the Post-test, which also contained 60 items and measured the same skills among the respondents. To ensure content validity of the instruments, a Table of Specification for both the Pretest and Post-test was created as a basis for constructing the tests. The tests were then presented to teaching personnel from the Department of Education, including a Master Teacher in Mathematics and a Head Teacher majoring in Social Studies, for validation.

Data Analysis

In this study, several measures were employed to assess the creative thinking skills of participants. These measures included the calculation of frequency counts and the percentage distribution of respondents based on their creative thinking skills. In areas such as fluency, flexibility, originality and elaboration. This approach allowed to the researchers to gain insights into the distribution of creative thinking abilities within the participant group. Futhermore, the study incorporated a pre-test and post-test design to evaluate changes in creative thinking skills over time. Mean scores were calculated for both the pre-test and post-test assessments, providing a clear understanding of the average performance of participants in each phase of the study. This step served as a fundamental baseline for assessing the effectiveness of any interventions or treatments. To determine whether the observed changes in creative thinking skills were statistically significant, a paired or dependent t-test was applied. This statistical test compared the scores of individual participants in both the pre-test and post-test conditions. The results of this analysis helped the researchers ascertain whether the intervention had a substantial and statistically supported impact on the enhancement of creative thinking skills among the study's participants. In summary, these comprehensive measures and statistical tests collectively facilitated a robust assessment of the impact of the study's interventions on creative thinking skills.

Result and Discussion

In this chapter, the data obtained from the pretest and post-test scores of the respondents before and after the experiment are presented. The collected data has been analyzed and interpreted to provide answers to the research problem.

Table 2. Pre-test Results of the Respondents in Fluency

Score Range	f	%	Description
13-15	3	2.24	Excellent
10-12	54	40.30	Very Good
7-9	62	46.27	Good
4-6	15	11.19	Fair
0-3	0	0.00	Poor
Total	134	100	

Table 2 displays the results of the pretest in fluency for the respondents. The data reveals that the majority of the respondents, 62 individuals or 46.27%, obtained scores of 7-9 in the pretest for Contemporary Arts, which is considered good. A total of 54 respondents or 40.30% achieved a very good result with scores ranging from 10-12, while 15 individuals or 11.19% obtained a fair result with scores of 4-6. Furthermore, 3 respondents or 2.24% received excellent scores, while no one obtained poor grades.

Based on the pretest results, which showed a good level of performance, it can be inferred that even before the implementation of the strategy in the classroom, the respondents already possessed prior knowledge of the lesson content. They were able to generate ideas based on their existing knowledge and personal experiences. The high fluency scores in Part 1 of the materials can be attributed to the fact that the questions largely covered the elements and principles of art, which had been previously taught to the respondents during their junior high school or even elementary school years. The creative thinking level of the respondents in terms of fluency was mostly at an average or good level, indicating that they made an effort to understand and analyze the questions based on their own comprehension and perception.

Fluency, as defined by Henkel (2012), involves the generation of a large number of ideas or alternative solutions to a problem, emphasizing the importance of understanding rather than mere memorization of learned information. However, schools often tend to encourage students to seek a single correct answer rather than considering multiple possibilities, as noted by TeachersFirst (2016).

Table 3. Pre-test Results of the Respondents in Flexibility

Score Range	f	%	Description
13-15	1	0.75	Excellent
10-12	36	26.87	Very Good
7-9	58	43.28	Good
4-6	26	19.40	Fair
0-3	13	9.70	Poor
Total	134	100	

Table 3 presents the pretest results in flexibility, indicating that the majority of the respondents, comprising 58 out of 134 individuals or 43.28%, obtained scores of 7-9 out of 15 items, which is considered good. A total of 36 respondents or 26.87% achieved a very good score, ranging from 10-12 correct answers. Additionally, 26 respondents or 19.40% obtained fair scores of 4-6, while 13 individuals or 9.70% received poor scores ranging from 0-3. The least number of respondents, only 1 individual or 0.75%, obtained an excellent result with a score range of 13-15.

The findings suggest that most students performed at a good or average level in the pretest results for flexibility. However, there were also some who obtained fair and poor scores, which is understandable. as they had no prior knowledge of the subject matter. Another implication is that students may have been

confused in choosing the best answer among the given options, as they did not analyze the given situations and statements thoroughly during the pretest. Some students may have resorted to guessing the answers due to difficulty in decision-making. Furthermore, since it was a pretest, some students may have approached it casually, perceiving it as non-formal and not giving it their full attention. As a result, their ability to generate ideas from different perspectives or to perceive ideas from various angles may have been insufficient, as indicated by the pretest results.

Flexibility, as defined by Henkel (2012), pertains to the production of ideas that demonstrate a range of possibilities or different realms of thought. It involves the capacity to view things from diverse perspectives and utilize various approaches or strategies.

Table 4. Pre-test Results of the Respondents in Originality

Score Range	f	%	Description
13-15	8	5.97	Excellent
10-12	28	20.90	Very Good
7-9	52	38.81	Good
4-6	43	32.09	Fair
0-3	3	2.24	Poor
Total	134	100	

Table 4 displays the pretest results in originality, revealing that 52 respondents or 38.81% obtained a good score of 7-9 out of 15 items. Furthermore, 43 individuals or 32.09% achieved a fair score of 4-6, while 18 respondents or 20.90% obtained a very good score ranging from 10-12. Additionally, 8 individuals or 5.97% received an excellent score, correctly answering 13-15 items. There were also 3 respondents or 2.24% who obtained a poor grade, scoring 0-3.

The results demonstrate a positive implication of the pretest, with a majority of students achieving good grades even before the implementation of problem-based learning strategies. Students were able to showcase their originality by composing a four-line, four-stanza poem that addresses contemporary issues in society, conveying their thoughts, feelings, and potential solutions.

However, there was one student who received a poor score, accounting for 2.24% or 0-3 correct answers out of 15 items. This indicates that some students may have lacked confidence in expressing their ideas, possibly fearing that their answers were incorrect. Additionally, upon assessment, it was observed that although some respondents completed the poem, the content was not related to the main topic.

Originality, as noted by TeachersFirst (2016), is the pinnacle of creativity and is often fragile in school settings. Students may have "answers," but they may hesitate to express their original thoughts due to the fear of being judged as "weird" by their peers or deemed "inappropriate" by their teachers.

Table 5. Pre-test Results of the Respondents in Elaboration

Score Range	f	%	Description
13-15	0	0.00	Excellent
10-12	25	18.66	Very Good
7-9	45	33.58	Good
4-6	44	32.84	Fair
0-3	20	14.93	Poor
Total	134	100	

Table 5 presented the pretest results in elaboration, indicating that the majority of respondents (45 or 33.58%) achieved a good score of 7-9. Fair scores were obtained by 44 respondents (32.84%), ranging from 4-6. Moreover, 25 respondents (18.66%) obtained very good scores, while 20 respondents (14.93%) fell into the poor category.

These results suggested that although the students were able to elaborate on the given picture in the pretest and answered the questions, they had a limited understanding of how to interpret the picture or painting effectively. The respondents struggled to extrapolate ideas beyond their personal perception as they engaged in art criticism. Without a deeper understanding of the content or message of the artwork, their interpretations remained subjective. Evaluating artwork required a basis and formal judgment to provide more detailed elaboration on a particular topic or artwork. At that stage, before being exposed to the problem-based learning treatment, the students had limited details and struggled to elaborate on ideas, particularly in response to questions 56-60 in the Lesson Plan, which asked them to add or eliminate elements in the artwork and elaborate on their ideas. Many of them responded with statements like "there was no more thing that I wanted to add or eliminate because it was already complete."

Students had to use their knowledge and comprehension of the problem and its potential solutions in order to effectively solve particular problems. Environments that place a focus on solving.

Problems helped establish the connection between knowledge and application. A deeper comprehension of the material was made possible by the interaction between the problem and the application of knowledge. Students also had the chance to compare and assess how well they understood different subject areas through social negotiation with group members, which further improved their learning and comprehension of the material.

Table 6. Post-test Results of the Respondents in Fluency

Score Range	f	%	Description
13-15	78	58.21	Excellent
10-12	39	29.10	Very Good
7-9	16	11.94	Good
4-6	1	0.75	Fair
0-3	0	0.00	Poor
Total	134	100	

Table 6 presented the post-test results, which revealed the fluency of the respondents. The majority of the respondents (78 or 58.21%) achieved excellent scores ranging from 13-15. Furthermore, 39 respondents (29.10%) obtained very good scores ranging from 10-12, while 16 respondents (11.94%) obtained good scores ranging from 7-9. Only 1 respondent (0.75%) received a fair score ranging from 4-6, and no one received a poor grade.

After the implementation of the treatment, the majority of the respondents achieved excellent scores, indicating that the treatment was highly effective in enhancing fluency in creative thinking skills. There were also respondents who obtained good and very good scores, while only one student received a fair score, compared to the 15 students who had a fair score in the pretest. Importantly, no students received a poor score in both the pretest and post-test results. The comparative analysis of the pretest and post-test results suggests that the respondents learned and improved their fluency in creative thinking skills through problem-based learning.

Following the utilization of problem-based learning, almost all respondents were able to generate ideas and think of alternative solutions to the problems. They demonstrated the ability to define concepts, compare and contrast using graphic organizers, explain pictures during picture and video analysis activities, and summarize each topic discussed. The increase in the percentage of high scores

indicates that the students acquired and retained a significant level of understanding of the topics discussed, which is a positive outcome of the problem-based learning approach.

Fluency, as mentioned earlier, was all about generating ideas. It was a valuable skill to practice as it provided more options and increased the likelihood of finding viable solutions to problems. Additionally, the process of generating ideas often led to further idea generation, allowing the creative thinking process to flow naturally.

Table 7. Post-test Results of the Respondents in Flexibility

Score Range	f	%	Description
13-15	18	13.43	Excellent
10-12	31	23.13	Very Good
7-9	50	37.31	Good
4-6	26	19.40	Fair
0-3	9	6.72	Poor
Total	134	100	

Table 7 illustrated the post-test results for flexibility, indicating that the majority of the respondents (50 or 37.31%) achieved good scores ranging from 7-9 out of 15 items. Additionally, 31 respondents (23.13%) obtained very good scores ranging from 10-12, 26 respondents (19.40%) received fair scores ranging from 4-6, and 18 respondents (13.43%) attained excellent scores ranging from 13-15. Only 9 respondents (6.72%) obtained poor scores ranging from 0-3.

Based on the obtained results, it was evident that the respondents showed improvement in their creative thinking skills in terms of flexibility after the treatment. The percentage of respondents who achieved excellent scores increased from 0.75% in the pretest to 13.43% in the post-test. Additionally, the percentage of respondents who obtained poor scores decreased from 9.70% in the pretest to 6.72% in the post-test. These results indicated that the implementation of problem-based learning strategies effectively enhanced the respondents' flexibility in creative thinking.

Flexibility, similar to fluency, involved generating ideas that were different from each other. Thinking flexibly was a valuable skill as it allowed individuals to break free from conventional thinking patterns and come up with innovative ideas.

Following the utilization of problem-based learning strategies, students demonstrated a deeper understanding of the topic and were able to generate ideas from various perspectives. This was facilitated through group activities and brainstorming sessions, where students had the opportunity to exchange and discuss ideas. The interactive nature of these activities, including group reporting and class discussions, allowed students to showcase their understanding and presentation skills.

Flexibility, as mentioned earlier, was similar to fluency in that both involved working with ideas. However, while fluency focused on generating as many ideas as possible, flexibility emphasized generating ideas that were distinct from one another. Thinking flexibly was a valuable skill as it enabled individuals to generate entirely new ideas (Minds in Bloom, n.d.).

Table 8. Post-test Results of the Respondents in Originality

Score Range	f	%	Description
13-15	44	32.84	Excellent
10-12	52	38.81	Very Good
7-9	36	26.87	Good
4-6	2	1.49	Fair
0-3	0	0.00	Poor
Total	134	100	

Table 8 displayed the post-test results for originality, showing that the majority (38.81% or 52 respondents) achieved very good scores ranging from 10-12. Additionally, 44 respondents (32.84%) obtained excellent scores ranging from 13-15. Only 2 respondents (1.49%) received fair scores ranging from 4-6, and no one obtained poor scores ranging from 0-3.

From these results, it can be concluded that the originality of the respondents had improved. After the implementation of problem-based learning strategies, the respondents' level of creative thinking, particularly in terms of originality, increased. For example, they were able to create unique representations of the best features of their face, applying what they learned about the elements and principles of arts. They also composed songs, poems, and spoken word poetry about the Filipino-ness of Philippine Art, encouraging youth support for Philippine art.

In my personal assessment, when checking the students' answers in this section (originality) during the post-test, they were able to write their own slogans with creative designs as backgrounds, expressing promotion and preservation of arts from different regions of the Philippines. They met the grading criteria or rubrics for their original slogans. Many of them displayed creativity, even within the limited time given. This evidence indicates a significant positive effect of exposing the respondents to problem-based learning strategies.

Originality, fluency, flexibility, and elaboration are the four components that make up creative thinking abilities. An unusual, singular, and uncommon reaction is what defines originality. To think creatively, you must come up with original ideas (Moma, L., 2013). Additionally, originality entails coming up with novel or unusual ideas as well as synthesizing or rearranging data on a subject in a fresh manner (Henkel, 2012).

Table 9. Post-test Results of the Respondents in Elaboration

Score Range	f	%	Description
13-15	50	37.31	Excellent
10-12	39	29.10	Very Good
7-9	39	29.10	Good
4-6	6	4.48	Fair
0-3	0	0.00	Poor
Total	134	100	

Table 9 displayed the post-test results for elaboration, with the majority (37.31% or 50 respondents) obtaining excellent scores ranging from 13-15 out of 15 items. Additionally, both score ranges of 10-12 and 7-9 had the same number of respondents, with 39 (29.10%) in each category. There were no respondents who obtained a poor score of 0-3.

After the treatment, some respondents achieved excellent scores, while there were only a few who obtained fair scores, and no one received a poor score. The post-test results showed a significant improvement compared to the pre-test, where no excellent scores were obtained, and 14.93% of the respondents had poor scores. The results indicated that the respondents were able to interpret the pictures based on their own understanding and provide thorough elaboration on the elements and principles of art in Carlos Botong Francisco's painting, "Bayanihan." They were also able to analyze and evaluate the picture through art appreciation.

The application of problem-based learning (PBL) influenced the manifestation of elaboration, one of the four components of creative thinking abilities. It is safe to add details and embellishments to an idea that has already been accepted by authorities and peers, which supports the notion that elaboration is the easiest creativity skill for teacher-pleasers and the majority of students in the school culture (TeachersFirst, 2016). According to the study's findings, exposure to PBL significantly increased all indicators of elaboration as elements of creative thinking abilities. As a part of

creative thinking, elaboration entails strengthening concepts by adding more information to increase interest and comprehension of the subject (Henkel, 2012).

Table 10. Test of Difference in the Pre-test and Post-test Performance of the Respondents using the Problem-based Learning Strategies

	Pretest		Posttest		Mean Difference	t	df	Sig. (2-tailed)	Remarks
	Mean	SD	M	SD					
Fluency	9.04	1.98	12.35	2.15	-3.31	-13.669	133	0.000	Significant
Flexibility	7.72	2.56	8.53	3.17	-0.81	-2.770	133	0.006	Not Significant
Originality	7.84	2.63	11.00	2.30	-3.16	-13.896	133	0.000	Significant
Elaboration	6.58	2.73	11.10	2.85	-4.51	-18.112	133	0.000	Significant

Legend: N=134, M=Mean, SD= Standard Deviation p<0.05-Significant p≥0.05 Not Significant

From Table 10, the findings revealed a significant difference between the pre-test and post-test performance of the respondents in creative thinking skills (fluency, flexibility, originality, and elaboration) when using problem-based learning strategies, with a margin of error of 5% ($p < .05$).

The table shows the results of the test of difference between the pre-test and post-test for all four creative thinking skills. The p-values were 0.000 for fluency, originality, and elaboration, and 0.006 for flexibility. The average t-value for fluency was 13.669, flexibility had the lowest t-value of 2.770, originality had an average t-value of 13.896, and elaboration had the highest t-value of 18.112.

Problem-based learning influenced the manifestation of creative thinking skills in terms of fluency, flexibility, originality, and elaboration. The findings indicate that using problem-based learning strategies improved the performance of students in the subject of Contemporary Philippine Arts from the Regions.

Through problem-based learning, students learned to think outside the box by posing questions, exploring, brainstorming, collaborating, and finding solutions to problems. This approach allowed students to have a better understanding of the lessons compared to the traditional lecture-based teaching method.

This finding is supported by a study conducted by Ulger and Imer (2013) where they examined the effect of problem-based learning on 7th grade students' creative thinking ability in visual arts education. The study used a experimental pretest-posttest design with experimental and control groups. The experimental group received a 9-week problem-based learning experience, while the control group was taught using demonstration, lecture, and question-answer methods. The results showed that problem-based learning had a significant effect on students' creative thinking ability in visual arts education.

Problem-based learning (PBL) was a teaching style that encouraged students to take charge of their educational experience. It utilized real-world problems as the focal point of classroom instruction, promoting the development of problem-solving skills and conceptual understanding instead of mere memorization of facts.

PBL could be implemented in various academic subjects, such as social studies, literature, mathematics, and science. Effective problem-based learning strategies incorporated certain characteristics, including: (1) Challenging students to deepen their understanding of classroom concepts. (2) Encouraging students to make well-supported decisions (3) Establishing clear connections between current courses and existing knowledge (4) Fostering collaborative group work to address complex issues (5) Engaging students in solving open-ended problems through multiple stages.

Student-led learning empowered students to take an active role in their education, fostering innovation, creativity, open-mindedness, and logical thinking. It provided opportunities for hands-on, active collaboration with peers.

Several features of problem-based learning contributed to the enhancement of students' creative thinking skills: (1) Promotion of self-

learning: By placing students at the center of the learning process, problem-based learning encouraged them to take initiative and responsibility for their own learning. Through research and creative thinking, students developed skills that would benefit them in adulthood (2) High engagement: Rather than passively listening and taking notes, problem-based learning required students to be actively involved. They needed to apply critical thinking and think outside the box to solve problems (3) Development of transferable skills: The skills acquired through problem-based learning were not limited to a specific subject or classroom context. They could be applied across various academic disciplines and in real-life situations, encompassing leadership and problem-solving abilities (4) Improvement of teamwork skills: Many problem-based learning projects involved collaborative work among students to reach a solution. This teamwork approach challenged students to develop skills in collaboration, communication, compromise, and active listening (5) Encouragement of intrinsic rewards: In problem-based learning projects, the rewards surpassed a mere grade. Students experienced a sense of self-respect and satisfaction from solving a problem, creating an innovative solution, or producing a tangible outcome.

Conclusion

Based on the study's findings, it was concluded that a significant difference existed between the pre-test and post-test performance of the respondents in terms of fluency, flexibility, originality, and elaboration. Consequently, the null hypothesis of the study was not supported.

The study's findings revealed that the implementation of problem-based learning strategies in teaching Contemporary Philippine Arts from the Regions to Grade 12 Senior High School students at Dolores Macasaet National High School significantly improved their creative thinking skills in terms of fluency, flexibility, originality, and elaboration. Problem-based learning proved to be an effective instructional approach, encouraging active student engagement, critical thinking, and collaborative problem-solving. These results highlight the potential of problem-based learning in enhancing students' creative thinking abilities in the field of arts education. The findings suggest that educators and curriculum developers should consider integrating problem-based learning methodologies to foster creativity and critical thinking among students.

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