

The development of creativity-based learning activities to enhance theatrical production skills of Thai 7th graders

Anucha Maneethip¹, Titiworada Polyiem²

^{1,2} Faculty of Education, Mahasarakham University, Thailand

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ABSTRACT

This study aimed to (1) develop creativity-based learning (CBL) activities to enhance grade 7 students' skills in theatrical production design and management based on the 70/70 efficiency criterion; (2) compare the students' performance in theatrical production design with the 70 percent proficiency benchmark after participating in the CBL activities; and (3) investigate the students' satisfaction with the implemented CBL activities. The research employed a quasi-experimental design using a one-group posttest-only format. The sample consisted of 34 students from grade 7/3 at Thakhonyang Pittayakhom School, Maha Sarakham province, Thailand, during the second semester of the 2024 academic year. The sample was selected using cluster random sampling with the classroom as the sampling unit. The research instruments included: (1) creativity-based learning activity plans, (2) an evaluation form for theatrical production design and management, and (3) a student satisfaction questionnaire. Data were analyzed using percentage, mean, standard deviation, and hypothesis testing through a one-sample t-test. The findings revealed that the learning plans achieved an efficiency, students' theatrical production scores were significantly higher than the benchmark, and overall satisfaction was rated at a high level. The study contributes to the growing body of research supporting the integration of creative pedagogies in subject areas where performance and design are central.

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Corresponding Author:

Titiworada Polyiem
Faculty of Education
Mahasarakham University
Thailand
Email: titiworada.p@msu.ac.th

1. INTRODUCTION

Thailand, a nation renowned for its diverse and vibrant cultural heritage, offers an ideal context for nurturing theatrical production skills among students (Malikhao, 2017; Rotheray, 2021). Traditional Thai performance arts such as khon, likay, and shadow puppetry are emblematic of the country's historical identity (Virulrak, 1999). They also serve as powerful educational tools that integrate creativity, collaboration, and critical thinking (Schoonmaker, 2014; Tiranasar, 2004). In this cultural aspect, the development of theatrical production skills in schools—especially among lower secondary students—holds significant educational value. To illustrate, these skills encompass planning, coordination, storytelling, visual design, and expressive communication, all of which align with the goals of holistic and 21st-century education (Ariani & Mirdad, 2015). Instructing these abilities enables students to engage more deeply with their cultural roots while cultivating transferable competencies essential for both academic success and future careers in the creative industries.

In detail, theatrical production skills encompass a wide range of competencies that extend beyond mere performance to include the planning, coordination, and execution of various elements essential to a stage production (Beckley, 2014). In educational contexts, these skills are increasingly recognized as multidisciplinary, drawing upon students' abilities in communication, collaboration, creativity, and problem-solving (Zaghoul, 2020). Several scholarly sources affirm that theatrical production can be effectively assessed through six core components: (1) scriptwriting, which reflects the student's capacity to craft coherent and expressive narratives; (2) atmosphere, involving the mood, tone, and audience engagement created by the performance; (3) performers, which evaluates acting skills, stage presence, and the ability to collaborate on stage; (4) lighting, color, and sound design, highlighting technical proficiency and the creative integration of sensory elements; (5) set design, which examines how physical space and props contribute to the storytelling process; and (6) costume design, which reflects cultural relevance, character representation, and visual impact. These components are widely supported by established frameworks in drama education and performance assessment (Educational Theatre Association, 2023; Washington State Office of Superintendent of Public Instruction, 2019; Velissaris & Rivera-Villicana, 2019; O'Toole, 1992; Boal, 1993). Collectively, the components offer a comprehensive understanding of theatrical production as a process that fuses artistic expression with organizational and design-thinking skills, making it highly suitable for promoting 21st-century learning outcomes in Thai education.

Despite the pedagogical potential of drama education, the teaching and learning of performing arts in many Thai classrooms have not yet achieved the desired level of effectiveness (Choeirod, 2025). A significant challenge lies in the wide variation in students' abilities; while some learners naturally engage with the subject, others—particularly those with limited prior experience or confidence in performance-based tasks—tend to disengage, resulting in decreased motivation and limited skill development over time (Niyomsuk & Polyiem, 2022).

This is particularly evident among lower secondary students, who often lack a systematic understanding of the processes involved in theatrical production. Their involvement is typically confined to surface-level acting rather than meaningful participation in planning, evaluation, or design, thereby reducing drama activities to performance-only tasks that fail to enhance learning. Observations from classroom implementation in a northeastern Thai secondary school further support these concerns, revealing that many Grade 7 students exhibited limited confidence, creativity, and willingness to participate in drama-related tasks. This absence of creative engagement often disrupted subsequent phases of the learning process, especially in the design and coordination aspects of theatrical production.

To address these challenges, creativity-based learning has emerged as a promising pedagogical approach that aligns well with the objectives of performing arts education. CBL emphasizes student-centered learning through experiential, exploratory, and collaborative activities that stimulate

imagination and innovation (Pettongma, 2024; Phuangphae, 2017; Phumdandin & Wongchantra, 2023; Samaniego et al., 2024). Rather than relying on rote performance or teacher-led demonstrations, CBL encourages learners to take ownership of their learning process by engaging in problem-solving, idea generation, and tangible creative output (Phumdandin & Wongchantra, 2023). This approach is particularly suitable for theatrical production, as it requires learners to synthesize diverse elements—such as narrative development, visual design, and group coordination—into a cohesive performance (Phuangphae, 2017).

A growing number of studies demonstrate the effectiveness of Creativity-Based Learning (CBL) in enhancing students' higher-order competencies. For instance, Meeplat (2020) proposed a CBL framework for undergraduate computer education, emphasizing exploratory and student-driven learning tasks to develop creativity in digital learning contexts. However, they also noted that most existing studies are concentrated at the higher education level, with minimal empirical evidence from basic education settings. Despite these promising developments, the application of CBL in art-related subjects—especially performing arts—remains significantly underexplored. None of the reviewed studies focus specifically on drama, theatrical production, or related disciplines at the lower secondary level, despite creativity being central to these areas. This lack of research is particularly striking in educational contexts like Thailand, where rich cultural traditions and expressive arts form a natural foundation for creative development.

The absence of CBL research in these domains suggests a missed opportunity to harness its potential in nurturing both artistic expression and 21st-century competencies in younger learners. To respond to the rational and gaps in literature, This study aimed to: Develop creativity-based learning activities to enhance the theatrical production skills of Grade 7 students and evaluate their effectiveness based on the 70/70 criterion, compare students' performance in theatrical production design after participating in the CBL activities with the benchmark of 70 percent proficiency, and examine students' satisfaction with the creativity-based learning activities implemented in the context of drama education.

2. METHOD

2.1 Research Design

This study employed a quasi-experimental research design using a one-group posttest-only format to investigate the effectiveness of creativity-based learning activities in enhancing the theatrical production skills of Grade 7 students. The CBL intervention was implemented through a structured set of learning activity plans specifically designed to promote students' skills in theatrical production design and management. Data were collected after the implementation to assess student performance and satisfaction.

2.2 Participants

In this study, 34 Grade 7 students in a public School in Maha Sarakham Province, Thailand were selected. The school serves a diverse student population from rural and semi-urban communities. The class included students with mixed academic abilities. The participants were selected using cluster random sampling, with the classroom serving as the unit of selection. All selected students had enrolled in the regular performing arts curriculum, including the drama module focused on theatrical production. Ethical considerations were strictly observed in the conduct of this study.

2.3 Research Instruments

2.3.1 Creativity-Based Learning Activity Plans

The core instructional tool in this study was a set of 10 creativity-based learning activity plans developed to enhance students' theatrical production skills in alignment with 21st-century educational goals. The activity plans were designed based on the principles of creativity-based learning, which

emphasize hands-on experiences, student-centered exploration, and collaborative problem-solving. The activities in the lesson plan can be exemplified in Table 1.

Table 1 The learning processes in CBL activity plans

Process	Activity
Stimulus and Inspiration	Introducing students to themes or problems through short videos, role-plays, or performances;
Exploration and idea generation	Allowing students to brainstorm, sketch, or discuss potential dramatic concepts;
Group planning and design	Guiding students through script writing, scene layout, and character assignment;
Rehearsal and practice	Encouraging refinement through peer feedback and teacher support
Performance and reflection	culminating in live or recorded performances followed by reflective discussions.

For example, in one lesson titled "Creating a Community-Based Storyline", students were prompted to develop a short performance based on a local folk tale. They worked in small groups to adapt the story into a script, designed stage sets using recycled materials, and collaboratively managed lighting and sound to enhance the scene's mood. The activity not only encouraged creative expression but also required students to practice planning, coordination, and visual storytelling.

Before classroom implementation, all 10 activity plans were reviewed by five experts in curriculum and instruction and performing arts education. Their evaluation focused on content accuracy, age-appropriateness, clarity of objectives, and alignment with creativity-based learning principles. The overall mean score from the expert review was at very high levels ($\bar{x} = 4.84-4.90$).

2.3.2 Theatrical Production Design Evaluation Form

The second instrument was a rubric-based evaluation form developed to assess students' performance in theatrical production design after engaging in creativity-based learning activities. Its purpose was to provide a structured and objective framework for evaluating the quality of students' work in live drama productions. The instrument was adapted from Phuwiphadawan's (2001) framework for performance assessment in Thai dramatic arts and comprised six key components: (1) script, (2) atmosphere, (3) performers, (4) lighting, color, and sound, (5) set design, and (6) costumes. Each element was rated using a rubric with clearly defined behavioral indicators. The evaluation form was reviewed by five experts in performing arts and curriculum design to ensure content validity. The reliability of the instrument was confirmed through statistical ($\alpha = 0.93$).

2.3.3 Student Satisfaction Questionnaire

A student satisfaction questionnaire was designed to measure learners' attitudes toward the creativity-based learning activities implemented in the study. The questionnaire consisted of 25 items constructed using a 5-point Likert scale. The items were developed to assess various aspects of the learning experience, including the clarity of instruction, relevance of content, quality of instructional materials, classroom atmosphere, learner engagement, and perceived benefits of the activities. The questionnaire was evaluated to be with content validity ranges 0.71-0.92. The trial phase of the questionnaire resulted in appropriate item discrimination, and the reliability of the entire instrument was found to be acceptable ($\alpha = 0.98$).

2.4 Data collection and data analysis

Data collection was conducted during the second semester of the 2024 academic. The implementation began after the development and expert validation of the creativity-based learning activity plans. Over the course of ten instructional sessions, students participated in a series of learning activities designed to enhance their theatrical production skills. During this period, the researcher served as the instructional facilitator, guiding students through experiential, collective, and reflective drama-based tasks. Following the completion of the instructional intervention, two sets of data were collected: (1) performance scores using the theatrical production design evaluation form, and (2) student responses to the satisfaction questionnaire.

The data were analyzed using both descriptive and inferential statistics. First, the efficiency of the CBL activity plans was calculated using the E_1/E_2 formula, where E_1 refers to the percentage of students' average scores during the learning process, and E_2 refers to the percentage of students' post-performance scores. The expected efficiency criterion was set at 70/70. Percentage, mean, and standard deviation—were used to analyze by student satisfaction levels and performance results. Finally, a one-sample t-test was employed to compare students' mean performance scores in theatrical production design against the 70 percent benchmark. Statistical significance was determined at the .05 level.

3. RESULT AND DISCUSSION

The effectiveness of the creativity-based learning activity plans was evaluated using the E_1/E_2 efficiency formula, in which E_1 represents the percentage of students' average scores during the learning process and E_2 represents their average post-performance scores. The expected standard of effectiveness was set at 70/70.

Table 2. The effectiveness of creativity-based learning activities

Efficiency component	N	Full score	Total score	Mean	S.D.	Percentage
Process Efficiency (E_1)	34	100	2989.2	87.92	1.84	87.92%
Product Efficiency (E_2)	34	100	685	83.95	1.81	83.95%
Overall Efficiency (E_1/E_2)						87.92/83.95

The results in Table 2 indicates that the creativity-based learning activity plans designed to enhance theatrical production skills achieved an efficiency score of 87.92/83.95, which exceeds the predetermined benchmark of 70/70. The process efficiency (E_1) score of 87.92% reflects students' average performance during the learning activities, while the product efficiency (E_2) score of 83.95% represents their performance on the final theatrical production task. The findings can be interpreted to confirm that the CBL activities were effective both during instruction and in producing desired learning outcomes.

Table 3 shows that the students achieved a mean score of 83.95 with a standard deviation of 1.81 on the theatrical production performance task. The one-sample t-test yielded a t-value of 10.79 with a p-value of 0.000, indicating a statistically significant difference from the benchmark score of 70%. The finding affirms the effectiveness of the CBL approach in enhancing learners' practical and creative performance in drama education.

Table 3. Comparison of students' performance with the 70% proficiency criterion

Assessment component	N	\bar{x}	S.D.	t	df	p	Interpretation
Theatrical production performance	34	83.95	1.81	10.79	33	0.000*	Significantly higher than 70%

As shown in Table 4, the overall mean satisfaction score was at a high level (4.00, S.D. = 0.20). Individual items also consistently received high average scores, with the highest ratings found in instructional clarity, content relevance, and fairness of assessment.

Table 4. Student satisfaction with the CBL activities (n = 34)

No.	Item Description	\bar{x}	S.D.	Interpretation
1	The teacher clearly explained each learning activity	4.41	0.56	High
2	The content was up-to-date and relevant	4.35	0.49	High
3	The lessons were clear and easy to understand	4.44	0.50	High
4	The content was practical and applicable	4.38	0.49	High
5	The content difficulty was appropriate for Grade 7 students	3.82	0.90	High
6	The videos used were varied and interesting	4.15	0.82	High
7	The worksheets were visually appealing and well-sized	3.79	0.81	High
8	The text on worksheets was clear and easy to read	3.91	0.79	High
9	Worksheet difficulty was suitable for Grade 7 students	4.06	0.85	High
10	The teacher encouraged group and individual work	3.47	1.21	High
11	The learning activities were fun and interesting	3.56	0.86	High
12	The teacher allowed students to ask questions	3.62	1.26	High
13	The teacher used a variety of teaching methods and media	3.97	0.90	High
14	The teacher provided guidance and care to all students	4.35	0.49	High
15	The teacher encouraged information-seeking from various sources	4.06	0.81	High
16	The activities promoted group harmony	4.09	0.79	High
17	The activities helped students adapt and live harmoniously with others	3.94	0.92	High
18	The activities improved skills in researching from various sources	4.00	1.10	High
19	Students were aware of the performance assessment criteria in advance	3.88	0.98	High
20	The classroom environment supported learning	3.74	0.93	High
21	The assessment matched the learning objectives	3.91	0.90	High
22	Students were satisfied with the group work outcomes	4.03	0.80	High
23	Students were involved in the performance assessment process	3.88	0.88	High
24	Students felt happy during the lessons	3.97	0.76	High
25	The teacher evaluated students fairly	4.15	0.82	High
Overall		4.00	0.20	High

These results reflect that students not only benefited academically from the creativity-based learning activities but also experienced them as meaningful, engaging, and supportive of their creative expression and teamwork. Such findings reinforce the value of applying creativity-based approaches to performing arts education at the lower secondary level.

The results of this study demonstrate that creativity-based learning is effective in developing theatrical production skills among Grade 7 students. The instructional plans exceeded the established efficiency criterion of 70/70, and students' post-intervention performance scores were significantly higher than the benchmark. Through active participation in tasks such as scriptwriting, set design, and

group coordination, students were able to apply multiple skill sets—cognitive, artistic, and interpersonal—in a unified context. It could be interpreted that CBL offers a holistic pedagogical approach that develops subject-specific abilities and supports broader educational goals such as critical thinking, creativity, and collaborative learning.

The study's findings are consistent with previous research that highlights the benefits of CBL in various subject areas. Meeplat (2020) demonstrated how CBL enhanced creativity in computer education. The current study fills this gap by applying CBL specifically to theatrical production in a lower secondary context, confirming that the model is adaptable across disciplines and suitable for the expressive demands of performing arts education. This approach not only fosters creativity but also promotes collaboration among students, allowing them to engage deeply with the material. By integrating CBL into theatrical production, educators can create a more dynamic and interactive learning environment that encourages students to take ownership of their artistic expression.

In addition to cognitive and skill-based benefits, the use of CBL also contributed to positive psychological outcomes for students. The high satisfaction ratings indicate that learners felt more engaged, motivated, and confident when given opportunities to express themselves creatively and collaborate with peers. These outcomes align with findings by Zimmermann & Mangelsdorf (2020), who noted the emotional and psychological benefits of creative movement and expression in learning environments. In the current study, students' willingness to participate, take creative risks, and accept peer feedback reflects a supportive atmosphere that fosters emotional growth and self-awareness.

4. CONCLUSION

This study was conducted to develop creativity-based learning activity plans aimed at enhancing the theatrical production skills of Grade 7 students and to examine the effectiveness of these plans in terms of learning outcomes and learner satisfaction. The findings revealed that the learning plans achieved an efficiency, students' theatrical production scores were significantly higher than the benchmark, and overall satisfaction was rated at a high level. The study contributes to the growing body of research supporting the integration of creative pedagogies in subject areas where performance and design are central.

The implications of these findings extend to both pedagogical practices and educational policy. From an instructional perspective, CBL offers a promising alternative to traditional, performance-only drama teaching by engaging students in deeper, process-oriented learning that develops cognitive, social, and emotional competencies. On the policy level, these results support the inclusion of creativity-based methods in national curricula, especially in arts and culture-related subjects, where Thai cultural identity and 21st-century skills can be developed simultaneously.

However, the design of the study that assigned a one-group posttest-only without a control group restricts causal interpretation of data. The sample was also limited to one classroom in a single school, which may limit the generalizability of the findings. Future research should consider comparative experimental designs, larger and more diverse samples, and mixed-method approaches to explore the deeper cognitive and emotional processes students experience during creativity-based learning. It is also recommended that future studies examine how CBL can be adapted to other performing and visual arts subjects and how it may influence long-term learning motivation and creative thinking skills.

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