Research Article

What Is Special About the "Create" Activity on RADEC? Student Creative Product Description

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Abstract.
In teacher education, especially in the artistic fields like dance, developing creativity is essential. This study explore the impact of the read, answer, discuss, explain, and create (RADEC) learning model on the creativity of prospective elementary school teachers in creating dance. Using an explanatory mixed-methods approach, the study examined how the RADEC model influenced students' creativity and the creative dance produced. Seventy-three students from the Primary School Teacher Education program at IKIP Siliwangi participated. Data were collected through a creative thinking test, observation sheets, and a creativity assessment rubric, and were then analyzed descriptively. The results showed that the RADEC model significantly enhanced students' creativity, with the "create" phase being particularly effective. The students' dance products met the expected creativity criteria. This study highlights the importance of applying the RADEC model in teacher education to better prepare students for teaching and creating innovative art.

Keywords: creativity, dance, RADEC learning model, teacher education

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1. INTRODUCTION

In the 21st century, creativity has become an essential skill across various fields (1). Creativity is often associated with success (2) as it is the key to innovation (3). Through innovation driven by creativity, solutions can be found for increasingly complex human problems. Creativity not only facilitates the creation of new products or services but also paves the way for more efficient and adaptive approaches to global challenges, such as climate change, digital transformation, and economic uncertainty.

Creativity, which has proven to be a major driver of innovation across sectors, also plays a crucial role in the context of education (4). Amid the rapid changes of modern times, education must not only prepare students with foundational knowledge but also

equip them with creative skills (5) that enable them to adapt and thrive in a constantly evolving world. It is essential for educational systems to adapt methods and curricula that foster creativity, as creative skills will form the foundation for future success.

Dance, as an art form that involves bodily expression, movement, and emotion, offers a highly potential space for developing students' creativity from an early age. In elementary schools, dance education serves not only as a means of introducing children to the arts but also as a tool to stimulate their imagination and creativity (6). Through dance, students learn to express themselves uniquely, combining bodily movements with music and imagining their own choreography. This not only develops motor skills and coordination but also aids children in thinking creatively, working collaboratively in groups, and learning to overcome challenges in creating and performing art (7). Dance education that provides students with the freedom to explore and innovate also boosts their self-confidence and nurtures an appreciation for cultural diversity and artistic expression (8). Thus, dance education in elementary schools becomes a vital means of fostering creative skills that support students' holistic development, both cognitively and emotionally (9). Even at the elementary school level, dance contributes holistically to cognitive, psychomotor, and affective domains (10).

However, despite the great potential of dance as a means of developing creativity, the factual conditions in many elementary schools indicate that art education, including dance, is still not maximized in achieving this goal (7). Many teachers still rely on traditional teaching methods that emphasize movement repetition and choreography imitation, rather than providing opportunities for students to explore and innovate. This is often due to a lack of training or experience among teachers in designing creative dance lessons, as well as limited resources on teaching models that can foster student creativity.

One solution to overcome this limitation is to provide opportunities for prospective teachers to gain experience in creating creative dance through higher education. To achieve this, university curricula need to be designed in such a way as to develop students' creativity, one approach being the application of innovative teaching models that encourage critical thinking. One model considered effective for this purpose is the Read, Answer, Discuss, Explain, and Create (RADEC) model. The RADEC model is designed to enhance student engagement and higher-order thinking skills through a series of systematic stages, ultimately leading to the creation of original and innovative works (11). The RADEC teaching model is particularly relevant in the context of creativity

education (12,13) for dance, as the “Create” stage provides students with the opportunity to express themselves and develop creative ideas.

Previous research on the RADEC model has shown its effectiveness in enhancing creative thinking. The RADEC teaching model has had a significant impact on the creative thinking skills of elementary school students (14), junior high school students on topics such as the separation of mixtures and electricity (12), high school students on colloid topics (15), prospective elementary school teachers (16), and has sparked creative ideas from junior high school students about global warming (13). However, studies specifically exploring the contribution of the “Create” stage in RADEC to creativity in dance remain limited, if not entirely absent. This study aims to fill this gap by addressing the following questions: (a) What is the impact of the RADEC teaching model on the creative thinking ability of students in developing creative dance? (b) How creative are the dance products produced by students through the application of the RADEC teaching model?

2. METHODOLOGY

This study focuses on the impact of the RADEC teaching model on the creative thinking ability of prospective elementary school teachers in creating creative dance and describes the dance products they produce. Therefore, the research employs a mixed-methods approach. The study begins with a quantitative approach, specifically a quasi-experimental design, followed by a qualitative approach in the form of a case study. Thus, the design used is an explanatory sequential mixed-methods design (17). The subjects of this study were 73 prospective elementary school teachers at IKIP Siliwangi who were enrolled in the Arts and Dance Education course during the odd semester of 2021. These participants were selected using convinience sampling (18). Data were collected using a creative thinking test, participatory observation sheets, and a rubric for assessing the creativity of dance products. All instruments underwent expert and empirical validity testing. The creative thinking test data were analyzed using t-tests after conducting prerequisite tests, while data related to the process and factors influencing creativity were analyzed thematically. The analysis of the dance products was conducted both descriptively and quantitatively, focusing on the creativity aspects of concept, technique, expression, and the creative use of space and props, with each aspect rated on a scale of 1-4.

3. RESULTS AND DISCUSSIONS

3.1. The Impact of the RADEC Model on Students' Creativity

TABLE 1: Analysis of Creative Thinking Data.

	Min. Score	Max. Score	Mean	Std. Dev.	Wilcx. Test	n-gain
Pretest	25	89	60,1	73	0.000	0.62
Postest	57	97	86.3	86.3		

Table 1 shows that the RADEC teaching model significantly influences students' creative thinking about dance concepts. This finding is consistent with other studies that demonstrate the RADEC teaching model enhances students' creative thinking (12,14,16,19–21). Therefore, it can be concluded that the application of the RADEC model is effective in fostering the development of creative thinking through innovative learning.

The improvement in students' creative thinking through the application of the RADEC teaching model is due to the active and participatory nature of the learning process. RADEC actively engages students in every stage of the learning process (11,22). Through the activities of reading, answering, discussing, explaining, and creating, students are not only passively receiving information but are also involved in processing and applying knowledge. Specifically for creative thinking, the RADEC model trains students' creative thinking from the Read stage to the final stage (13,16,23).

Another factor is the collaboration and discussion that takes place. The Discuss and Create stages in the RADEC model allow students to share perspectives and receive feedback. This collaboration broadens their thinking and introduces new ideas that can stimulate creativity. As pointed out, the Discuss stage serves as a forum for agreeing or disagreeing with answers in small groups (24), meaning it not only generates correct answers but also fosters active communication among students (12,25). Meanwhile, in the Create stage, students engage in discussions, collaborate, express various thoughts and creative ideas, and independently create projects within their groups (16). The third factor is the opportunity for knowledge application during the Create phase. Students are asked to apply their knowledge in new contexts and generate original products or solutions (11). This process requires them to think beyond conventional boundaries and connect different concepts, which can stimulate creative thinking.

3.2. Creativity of the Creative Dance

The evaluation of the creativity of students' creative dance focuses on the aspects of concept creativity, technique, expression, as well as the use of space and props. Below is the assessment of the creative dance from 14 teams.

Table 2: Analysis of Creative Dance.

	Concept Creativity	Technique	Expression	Space and Props
Average	57.1	60.7	66,1	75.0

Referring to Table 2, the results show that all aspects received a sufficiently good average score, indicating that the RADEC teaching model facilitates the development of students' creative dance. The RADEC model effectively engages students, provides opportunities for idea exploration, and supports the creation of more creative and applicable products. This supports the view that teaching strategies influence creativity (26–28).

Specifically, in the RADEC model, the Create stage is one of the key phases in developing creativity (29). Based on observational results, the Create stage has unique features that contribute to the creativity of the developed products. First, in the Create stage, students are asked to choreograph a creative dance with a specific theme relevant to elementary school education. Prior to this, concepts and ideas for the creative dance to be developed were stimulated starting from the Answer stage. In this way, students apply the knowledge and concepts they have learned (30) in a new context or situation. As noted, the RADEC model ends with students creating based on the understanding of the concepts they have mastered (31). Second, throughout the creative dance project in the Create stage, students have the freedom to experiment and develop new ideas when designing and practicing movements, music, props, and so on, in accordance with the project targets they have set. This demonstrates that the Create stage enhances project design skills (25) by providing room for exploration (31) using various approaches and methods, which often lead to innovative ideas. Third, the Create stage involves group collaboration, where students discuss, collaborate, express various thoughts, share creative ideas, and independently create projects within their groups, as well as present them (16). This activity allows for the exchange of ideas and perspectives, which broadens thinking and generates more creative solutions. The realization of ideas in this stage trains students to think, collaborate, and communicate

(11). This collaboration fosters creative performance and nurtures creative thinking (32). Finally, the Create stage facilitates the evaluation process (13,15). In this stage, students are given the opportunity to revise and improve the dances they have developed.

The study reveals varied scores across different aspects of students' creative dance. The *concept creativity* aspect received the lowest score, suggesting students struggled to produce truly original or innovative concepts. Originality is a key component of creativity (33), and this limitation may stem from students' limited experience and knowledge (1,34), as creativity is built upon existing knowledge and perspectives. The *technical* aspect received a better score, indicating that students have a basic understanding of dance techniques, though improvements in movement precision and execution are still needed. Technical mastery requires repeated practice and intensive supervision (35), highlighting the importance of practical activities in fostering creativity (26). The *expression* aspect scored higher, showing that students were more successful in expressing ideas and emotions through their dance. This is likely due to emotional involvement and the understanding of nonverbal communication in dance (36), where emotionally engaged students tend to produce stronger expressions (8).

The *use of space and props* received the highest scores, demonstrating students' creativity in utilizing these elements. Mastery of space and props is more tangible and easier to achieve compared to emotional expression or technical execution (37, 38). Practical exploration within the RADEC model fosters this creativity (11,13). A limitation of this study is its focus on the RADEC model's impact on dance creativity without considering other factors, such as individual experience, cultural background, or the role of extended practice.

4. CONCLUSION

The RADEC teaching model positively impacts students' creativity in producing dance works, with the "Create" stage being the most influential in fostering original expression through movement and space. Despite some technical shortcomings, the dance products displayed high creativity, combining expressive and innovative elements relevant to elementary school education. Overall, the RADEC model effectively promotes both creative and practical thinking in art creation. This study highlights the model's potential to enhance creativity in teacher education, preparing students to foster innovation in their teaching. Future research should focus on improving technical training within the

RADEC model and explore its application in other art disciplines to further develop both creative and technical skills.

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