



RADEC Model in Dance Learning to Improve Student Learning Outcomes

**Nadia Zahrattunnisa A¹, Juju Masunah², Beben Barnas³*

Dance Arts Education Study Program, Faculty of Art and Design Education, Indonesian University of Education

*Correspondence: E-mail: nadiazhraa18@gmail.com, jmasunah@upi.edu, barnas@upi.edu

ABSTRACT

The importance of learning outcomes that are the target of learning in cognitive, affective, and psychomotor aspects. Learning outcomes are one of the abilities possessed by students after receiving learning experiences that will result in changes in behavior. However, student learning outcomes in dance learning in cognitive, affective, and psychomotor aspects in class VIII-B of SMP Laboratorium Perpilot UPI Bandung are low. The purpose of this study is to improve student learning outcomes using the RADEC learning model. This study uses the Classroom Action Method (CAR) with a quantitative approach. This CAR adapts the Kemmis and McTaggart model, each cycle of which consists of four stages, namely planning, implementation, observation, and reflection. This study was conducted in three cycles. The participants in this study were 21 students in class VIII-B. Data collection techniques were carried out by means of observation, testing, reflection, and literature studies. Data analysis was carried out descriptively quantitatively by calculating the average class value. The results of this study indicate that the application of the RADEC learning model increased the average value of 6 students who completed (29%) who achieved a score of 63 in the initial condition to 21 students (100%) completed with a score of 94 in the third cycle. These results indicate an increase in student learning outcomes in dance learning from the initial condition that did not use the learning model and then changed to using the RADEC learning model.

ARTICLE INFO

Article History:

Submitted/Received 21 July 2024

First Revised 11 Aug 2024

Accepted 15 Nov 2024

First Available online 01 Mar 2025

Publication Date 15 Mar 2025

Keywords:

*RADEC Model, Defense Results,
Dance Art Education*

1. INTRODUCTION

Bloom(1956)revealing learning outcomes can be classified based on the characteristics of cognitive, affective, and psychomotor aspects. Improving learning outcomes for students together with teachers has the responsibility to guide, encourage, and enable students to learn more actively and creatively. Likewise in the process of learning dance, learning outcomes are an important component of competencies that are the target of education in general, emphasized by Masunah and Narawati (2012)that dancing aims to improve students' attitudes, mindsets, and motor skills to lead to maturity. Students are not to become dancers, but rather are directed towards the desired creative process that provides a positive effect on the development of artistic sense and innovative attitudes, and increases the desire to recognize dance art.

Based on the researcher's experience as a teacher through the P3K course at the UPI Bandung Pilot Laboratory Junior High School, in practice not all students in dance learning get satisfactory learning outcomes, one of which is in class VIII-B. The pre-cycle learning outcomes of class VIII-B students in the cognitive, affective, and psychomotor aspects with the specified Minimum Completion Criteria (KKM) of 75, are still not satisfactory for some students. However, it was found that 6 out of 21 students had obtained KKM even though 15 students had not obtained KKM. This means that 29% of students obtained KKM and 71% of students had not obtained KKM. Based on the results of the reflection, this was caused by teacher factors in selecting learning components, especially learning models that were not yet relevant. In fact, an effective learning model is very important to encourage active student participation so that student learning outcomes increase. A learning model was found that had advantages in increasing student learning achievement (Sopandi et al. 2021) namely the RADEC model (Read, Asswer, Discuss, Explain, Create).

Some of the previous research that has been conducted is research on student learning outcomes using the RADEC learning model by Andini and Fitria (2021) on thematic material in Elementary Schools (SD), the research conducted Nurjannah, et al (2023) researching the ability to think creatively in science material in grade V of elementary school, the research conducted Amar (2022) researching learning outcomes on thematic materials. The relevance of the three previous studies is one advantage of the RADEC model which is used to support the importance of improving student learning outcomes. However, the novelty of the differences in this study is the level of junior high school students to be studied, the purpose of this study is to improve learning with Classroom Action Research (CAR), applying the RADEC model to dance subjects, different research locations, and different objects.

Bloom who said that learning outcomes are divided into three categories: cognitive (knowledge), affective (attitude), and psychomotor (skills). Bloom said, these domains consist of students' abilities in information, attitudes, and skills that must be developed in a balanced way to assess student progress and achieve established standards (Bloom, 1956 ; Ulfah & Arifudin, 2021).

Dance learning is relevant to Bloom's theory which is a reflection of overall behavioral changes in students, including cognitive, affective, and psychomotor domains. From the lowest level to the most complex level. This makes it possible to achieve dance learning goals through various methods, such as performance tests, observations, and others. For cognitive and psychomotor domains, the results can be obtained through written, oral, and action tests. Meanwhile, for the affective domain, learning outcomes can be obtained through questionnaires or observations.

Based on the results of the researcher's reflection, the causal factor of low learning outcomes is that teachers still use learning models that are not yet relevant. The researcher intends to improve learning by solving problems using the RADEC learning model. According to Handayani, et al (2019), the RADEC model can be a strategy to improve student learning outcomes.

The purpose of this research is to analyze the initial conditions of learning outcomes before using the RADEC model, describe the implementation of the RADEC model learning process and analyze the improvement of student learning outcomes in dance learning using the RADEC learning model in class VIII of SMP Laboratorium Perpilotan UPI Bandung.

2. METHODS

Classroom Action Research (CAR) will be used in this study as its design. Through self-reflection, Classroom Action Research conducted to improve student learning outcomes and teacher performance quality are the two main objectives of this study (Hafidzoh Rahman, et al, 2021). This PTK model is modified from the Kemmis and McTaggart model, the actions are Planning, Implementation, Observation, and Reflection (Suhardjono 2009). Participants in this study were colleagues, namely art and culture teachers at SMP Laboratorium Percontohan UPI Bandung who contributed to data collection. While the subjects in this study were 21 people, namely students of class VIII-B SMP Laboratorium Percontohan UPI, 10 boys and 11 girls. This class is the focus of the dance art learning research.

Data collection conducted by means of observation by peers aims to find out how good students are during learning activities and how good the teacher's performance is through teacher and student performance sheets. Data collection in observations is in the form of tests (pre-learning questions), and observations (Badaruddin et al. 2024 ; Badaruddin, Masunah, and Milyartini, 2024). After that, the researcher conducted a reflection based on the data that had been collected in each cycle to correct deficiencies or weaknesses which included analysis, synthesis, and evaluation of findings from behavioral observations that had been conducted (Suhardjono, 2009). Data analysis was carried out to compile the data, which was carried out from the beginning of the research to the end (Komalasari, et al., 2022). The type of quantitative data that can be evaluated descriptively is used in this study (Risnaini et al. 2023 ; Erni et al 2023). In addition, using descriptive statistics for data processing related to addition, calculating average values, and determining the percentage of students who get dance learning outcomes. Criteria for giving numbers on a scale of 1-100 for assessing student learning outcomes (Pure, 2018 ; Sari et al., 2021).

3. RESULTS AND DISCUSSION

3.1 Initial Conditions in Dance Arts Learning to Improve Student Learning Outcomes

In the learning activities of dance art material of the Nusantara group dance (Indang dance) in class VIII-B, the main problem found is to improve student learning outcomes in the cognitive, affective, and psychomotor domains so that they can gain knowledge, improve social interaction, and be confident in dance skills that can be useful for the future of students. Therefore, the dance teaching process needs to be improved.

Based on the research findings of class VIII-B of UPI Pilot Laboratory Middle School, it shows that student learning outcomes in the initial conditions were very low, with an average class score of 63. The number of students who achieved learning completion in their class was 6 students (29%), while those who had not completed it were 15 students (71%).

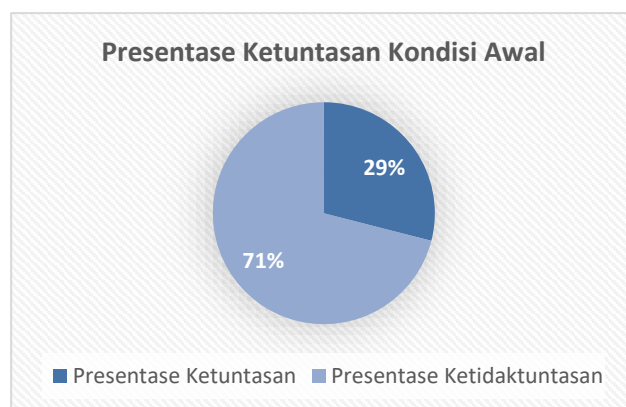


Figure 1.Percentage of Student Learning Outcome Completion Initial Conditions

Based on the graphic data above, it shows that the problem of teaching activities is more centered on teachers (teacher centered) which tends to apply the traditional model (lecture). As a result, students face several learning conditions that must be addressed immediately, both those related to cognitive, affective, and psychomotor aspects that can affect learning outcomes.

3.2 Implementation of the Learning Process Using the RADEC Model for Class VIII Students in Improving Learning Outcomes

1) First Meeting: Explanation of the History and Movements of the Indang Dance

In the implementation of cycle I learning improvement carried out on March 18, 2024, the teacher used the RADEC model in improving teaching observed by observers or colleagues. The learning process in the classroom begins with core activities that follow the steps or syntax of the RADEC learning model (Read, Answer, Discuss, Explain, Create), starting with students answering pre-learning questions via Google Form. This activity aims to measure how well students do the reading stage (Read stage) before the lesson begins, as shown below.



Figure 2. Pre-learning Work Before Learning & Pre-learning Work Before Learning
(Doc. Nadia, 2024)

The next stage, students watch and observe the video of the mass group indang dance. After watching the video, the teacher gives questions (Answer stage) to students and explains the history of the indang dance. The teacher guides students in carrying out the task to discuss (Discuss stage) in creating (Create stage) the mass group indang dance as a class by demonstrating the basic movements of the indang dance through the video. After students demonstrate the basic movements of the Indang dance in groups, students combine the movements of the Indang dance in a mass group as a class with the guidance and direction of the teacher as in the picture above. After that, students present (Explain stage) the results that have been discussed in the Indang dance movements in front of the class and the teacher reflects by asking questions to students to help improve the next step.

Reflection in cycle I, there was an improvement in teacher teaching during class, and student learning outcomes increased when using the RADEC model. Thus, students are still in the introduction stage to the application of the RADEC model whose learning activities are required to participate actively and learning outcomes have not reached the expected completion standard. Therefore, it is necessary to improve learning in cycle II.

2) Second Meeting: Explanation of Costumes, Music and Movements of the Indang Dance

In cycle II which was implemented on Monday, April 29, 2024.



Figure 3. Pre-Learning Work & Students Present Discussion Results
(DOC. Nadia, 2024)

In the core activities of cycle II, the teacher begins by giving pre-learning questions before the learning materials of cycle II are explained in detail. Figure 2 above illustrates students working on pre-learning questions to measure the extent to which they read

(Read stage), search for information and understand the learning materials at home. After that, students appreciate photos and videos showing costumes and accessories of the Indang dance, which is then followed by a question and answer session (Answer stage) between the teacher and students. Next, students hold a discussion (Discuss stage) with their respective group members to practice the basic movements of the Indang dance. In this cycle II, students will practice until the 4th minute using musical accompaniment. Before starting, the teacher directs students to move chairs and tables to the back or side of the class so that the space to move becomes wider.

Figure 3 above illustrates one of the groups presenting the results of the discussion on the indang dance movements in groups, while the teacher directs students who are not presenting to correct and fix inappropriate movements. At the explain stage, there are students who provide corrections and correct the movements that have been presented in front. The student corrects Jeefa's hand movements, which bend every time her hands move, and corrects the position of Naufal and Ardjuna's movements which are too low to touch the floor when bending their bodies forward. From this activity, students understand the basic movements of the indang dance. This helps students to combine (Create stage) the basic movements of the indang dance in mass groups or in class so that they become uniform.

Next, the teacher opens the opportunity to voice their opinions regarding the lessons that have been done. In addition, the teacher reinforces the learning material, namely the regional group dance of the archipelago (indang dance) which has been studied in cycle I and cycle II. In the closing activity, the teacher provides information related to the material that will be discussed in the next meeting. Assigns students to find information about the material that will be studied in the meeting next week and prepare to display the Create stage by practicing the indang dance movements. In addition, the teacher gives the task of making the indang dance head accessories that have been observed through the cycle II learning video. Reflection in cycle II, all indicators in the assessment criteria of cognitive, affective, and psychomotor aspects began to increase. However, improvements need to be made so that students obtain maximum learning outcomes in achieving success indicators. Therefore, improvements need to be made to learning in cycle III.

3) Third Meeting: Mass Group Indang Dance Performance

In cycle III which was implemented on May 6, 2024, before entering the core learning activities, students followed the teacher's instructions to work on pre-learning questions via Google Form first which had been sent via the WhatsApp group. An overview of working on pre-learning questions in cycle III is below.



Figure 4.Pre-Learning Questions Work & Mass Group Indang Dance Performance
(DOC. Nadia, 2024)

In the core activities of implementing learning in cycle III, there are differences with the previous cycle, namely students performing a mass group indang dance from the Create stage in the RADEC model that has been made by students, namely the mass group indang dance. Before the presentation, the teacher directs students to prepare themselves, including changing their practice clothes and preparing their presentation. After changing clothes, students are directed to the field. In cycle III, researchers strive for students to be able to perform confidently in the outdoor environment. After being in the field, students are asked to practice in groups for 30 minutes to better prepare their performance. Researchers and colleagues prepare media such as laptops and speakers to support student performances in the field. The teacher then returns to the field to guide students in preparing for the performance after preparing the learning media.

During the practice, some students expressed nervousness. The teacher did not ignore this and continued to provide motivation so that students felt confident when performing. When the presentation began, the teacher appreciated the students' work. Students showed confidence when performing the indang dance movements in a mass group. This can be seen from the expressions of students who smiled while dancing. After the presentation was finished, the teacher evaluated, corrected and corrected mistakes made by students for improvement. The following shows the appearance of the Create stage in the RADEC model when performing the indang group dance in a mass group, as follows:

In the closing activity, after the material has been delivered, the teacher invites students to applaud together. The teacher then concludes the learning outcomes. As a closing meeting, the teacher reviews the material that has been discussed during the teaching and learning improvement process in class VIII-B. The teacher emphasizes that the exercises given can improve students' motor skills and will be useful provisions and experiences for students in the future. Furthermore, the learning activity ends with a prayer after learning and greetings.

Reflection on cycle III, so that students can actively participate in dance education and increase their self-confidence, teachers are able to manage the class effectively. In addition, the results of the training in the ability to dance the Indang dance in the RADEC create model stage, namely combining Indang dance movements in mass groups, showed an increase in the ability to perform uniform movements. In the performance of the RADEC create model stage, the results of the Indang dance training were very good and

the presentation was sufficient.

3.3 Final Learning Outcomes of Grade VIII Students After Being Given Learning Using the RADEC Model

1) Cycle I Results

In cycle I, learning improvements using the RADEC model have been proven to improve student learning outcomes in dance learning. Obtained from 21 students of class VIII-B of UPI Pilot Laboratory Middle School There were 13 students (62%) who successfully achieved the KKM, while 8 students (38%) were still unsuccessful. The lowest score range was 60 and the highest was 100. Eleven students obtained scores higher than the KKM, two students obtained scores equal to the KKM, eight students obtained scores lower than the KKM. The average score in cycle I showed that the three components of the cognitive, affective, and psychomotor assessment criteria with a total average class score of 79 out of 63. Below is a graph of the percentage of student learning outcomes completion in cycle I:

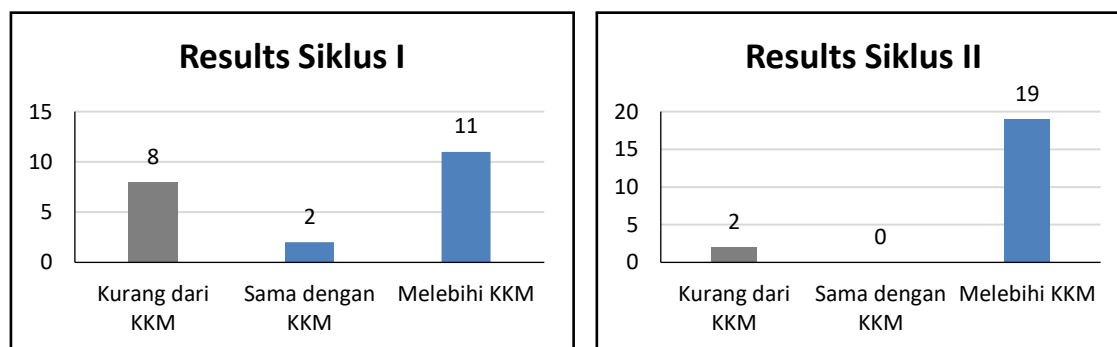


Figure 5. Cycle I Value Acquisition & Cycle II Value Acquisition
(DOC. Nadia, 2024)

This has slightly improved from the initial condition. Learning activities based on the RADEC model still have some shortcomings because students are still not used to the RADEC model. This is evident that the average value of the three assessment aspects still needs to be improved so that the learning outcomes of dance material for regional dance groups in the archipelago (Indang dance) can be better.

2) Cycle II Results

In cycle II, learning outcome data stated that as many as 19 students (90%) successfully completed exceeding the KKM, while only 2 students (10%) had not completed. In addition, there was a significant increase in the average value of the assessment criteria in three aspects, namely cognitive, affective, and psychomotor, which if totaled from the three aspects reached an average class value of 89, higher than cycle I, which was 79. The following is a graph of the percentage of completion of cycle II:

However, in cycle II it has not yet achieved the success indicator, namely students presenting the Create stage that has been made. Based on this, researchers will maximize learning improvements in cycle III which will be an indicator of student learning success.

3) Cycle III Results

In cycle III of the material on regional dance groups in the archipelago (Indang dance)

by implementing the RADEC learning model, it was concluded that the improvement in learning was successful because all students had met the KKM for Arts and Culture of 75, the percentage of completion set exceeded 85% and even 100% and the average class score was 94 as can be seen in the graph below:

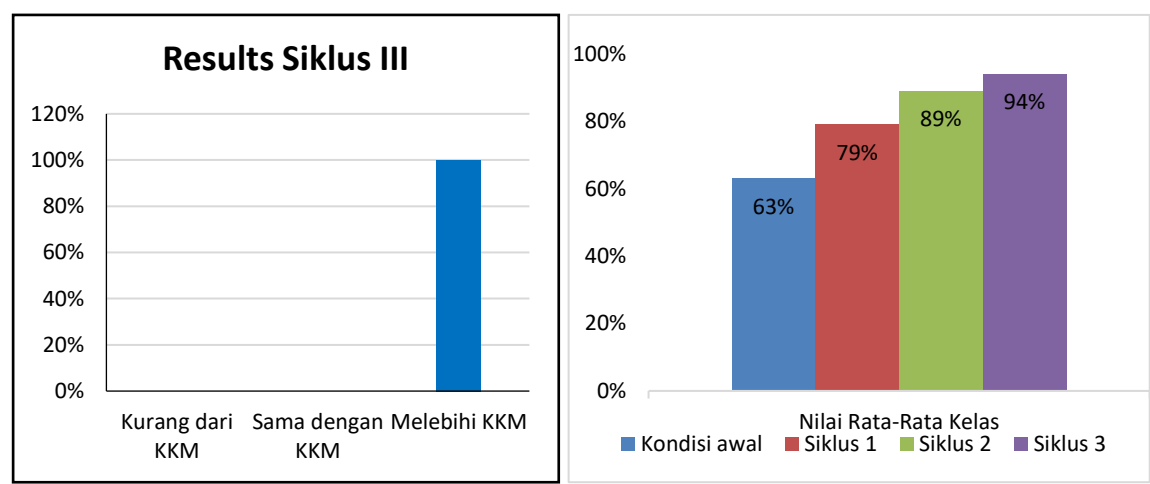


Figure 6 .Cycle III Value Acquisition & Average Value Siklus
(DOC. Nadia, 2024)

By implementing the RADEC learning model, the material on regional dance groups in the archipelago (Indang dance) has been proven to be able to improve three assessment criteria, namely cognitive, affective, and psychomotor. Thus, learning becomes more meaningful. Learning outcomes can be remembered longer by students. Because all indicators and competency achievement targets have been met, the researcher stopped improving learning.

3.4 Discussion

Based on the findings of the cycle I action, the researcher reflected on himself that the use of the RADEC learning model in its activities had not yet succeeded in achieving the student success indicators. This can be seen clearly from the results of the cycle I action which had an average class score of 79 where the percentage of student completion showed that 11 students had achieved a score above the KKM, 2 students were the same as the KKM with a total of 13 students (62%) and those who were still below the KKM were 8 students (38%), this increased slightly from the initial conditions. Because, students are still not used to the change in learning strategy from lectures to the RADEC learning model, where the RADEC model requires independent learning activities to understand the material to be studied by reading, and students are active in class. This is in accordance with (Sopandi, 2017; Andini & Fitria, 2021 ; Amar, 2022) that the RADEC learning model during the learning process has enough time to learn independently on the subject matter without requiring help from others and can achieve student abilities if they get encouragement or help from others. Based on the problems of cycle I actions, it turns out that the RADEC model still cannot improve student learning outcomes. Therefore, learning improvements are carried out in cycle II by paying attention to the shortcomings in cycle I.

From the findings of the cycle II action, students began to recognize and become accustomed to the RADEC model. This shows the results of the cycle II observation which saw an increase in the percentage of student completion which had exceeded the KKM by 19 students (90%) and there were 2 students (10%) who were still below the KKM. However, it has not yet reached the success indicator which displays the final results in the create stage of the RADEC model. This was stated by Sopandi (2021) that the create stage is the creation of work through working on a project that will be displayed in the final results of their learning. In addition, some students were still chatting with their friends when the learning process was taking place, this should have been able to condition the students in the teaching and learning process. The researcher conducted a cycle II evaluation because it was to measure the extent to which student learning outcomes had improved. This is in line with Hopkin and Antes in (Agustin, 2017), evaluation is a process that involves continuous examination to gather information about the level of change experienced by students, as well as to make decisions about the picture of students and the effectiveness of the program. Because cycle II has not yet achieved the success indicator. So the researcher decided to improve learning and maximize the success indicator in cycle III.

Based on the findings of cycle III actions, researchers in cycle III optimized improvements and deficiencies that experienced an increase in student learning outcomes in the three domains, namely cognitive, affective, and psychomotor aspects. This can be seen from the percentage of student completion which reached a score of 100% from 21 students who had achieved above the KKM with an average class score of 94. This cycle III means that it has optimized the success indicators where students display the RADEC create model stage. However, in the process, some students are still not confident in displaying it in the field. Teachers need to pay more attention and strengthen motivation to students to be confident. This is in accordance with C. Iwanda (2023) that teachers function as facilitators, giving students more opportunities to develop. Based on the results obtained in cycle III, the researcher decided to stop improving learning in cycle III because learning outcomes had increased from the average value of the initial observation class from 63 to 94 at the end of the cycle. To make it easier to see the percentage of average learning outcomes in the initial conditions, cycle I, cycle II, and cycle III, the researcher presents the data in the form of a graph as follows figure 6.

Based on the graph above, the application of the RADEC learning model shows an increase in the average value of student learning outcomes related to the Indang dance material. The initial average value was 63 before the RADEC model was applied. After the application of the RADEC model, the average class value increased to 94. This value is an assessment of the assessment criteria, namely cognitive, affective, and psychomotor. Assessment of these three aspects contributes to improving the learning outcomes of dance learning. As explained by (Rusman, 2017; Hunaepi et al., 2014; Fitri Kuriniati, 2023) that students' experiences in the cognitive, affective, and psychomotor domains shape their learning outcomes.

It is proven that the RADEC learning model has advantages in developing cognitive, affective, and psychomotor aspects in a balanced manner, thus providing a more meaningful learning experience. In addition, the RADEC model encourages students to be

active, critical, and able to understand learning concepts better (Nurmitasari et al., 2023 ; Andini & Fitria, 2021 ; Nurjannah et al., 2023). According to Sopandi in (Handayani, et. al., 2019) the RADEC model also motivates students to think critically, express creative opinions, and provides opportunities to learn the material through pre-learning tasks. Also agree with (CNS Iwanda, et al., 2022 ; Sopandi et al., 2021) that the RADEC model has advantages that are tailored to the material and needs of students.

4. CONCLUSION

This study can be concluded that the RADEC model can improve student learning outcomes. This is proven through three cycles of research with a learning process using regional dance group material (Indang dance). The range of values between the initial conditions of the cognitive, affective, psychomotor aspects reached an average value of 63 increasing to 94 with a difference of 31. This success is supported by the ability of teachers in terms of dance and dance learning seen from the learning process that has been carried out using the RADEC model from cycle one to cycle three. Therefore, it is recommended for teachers to master the field of dance.

5. AUTHORES'NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

6. REFERENCES

- Agustin, Reni Nurafiantini. 2017. "Implementation of Social Inquiry Model to Improve Learning Outcomes of Nusantara Creative Dance in Grade VIII J Students at SMP Negeri Cimahi."
- Amar, Halim. 2022. "The Influence of the Read Answer Discussion Explain and Create (Radec) Model on Thematic Learning." *Socioeducation* 11 (1): 121–29.
- Andini, Selfi Rahmi, and Yanti Fitria. 2021. "The Influence of the RADEC Model on Thematic Learning on Elementary School Students' Learning Outcomes." *Basicedu Journal* 5 (3): 1435–43. <https://doi.org/10.31004/basicedu.v5i3.960>.
- Badaruddin, Saian, Defty Alsri, Muhammad Akbar, and Lazuardi Suherman. 2024. "The Muang Jong Ritual Ceremony of the Sawang Coastal Community on Belitung Island" 13:65–78. <https://doi.org/10.24036/js.v13i3.130721>.
- Badaruddin, Saian, Juju Masunah, and Rita Milyartini. 2024. Two Cases of Dance Composition Learning Using Technology in Dance Education Study Program in Indonesia. Atlantis Press SARL. https://doi.org/10.2991/978-2-38476-100-5_70.
- Bloom, Benjamin. 1956. *Taxonomy of Educational Objectives*. New York: David Mckay Co.
- Erni Haera Nisa, Ayo Sunaryo, Saian Badaruddin. 2023. "INSTAGRAM SOCIAL MEDIA TO IMPROVE STUDENTS' INTEREST IN EXTRACURRICULAR DANCE ART." *Ringkang: Study of Dance Art and Dance Art Education* 4 (2): 333–43.
- Fitri Kuriniati, Tatang Taryana and Saian Badaruddin. 2023. "Folk Dance Learning for Foreign Students." *Ringkang: Study of Dance Arts and Dance Arts Education* 3 (3): 528–36.
- Hafidzoh Rahman, Nafsiah, Annisa Mayasari, Opan Arifudin, and Indah Wahyu Ningsih. 2021. "The Effect of Flashcard Media in Improving Students' Memory in Arabic Vocabulary Material." *Tahsinia Journal* 2 (2): 99–106. <https://doi.org/10.57171/jt.v2i2.296>.

- Handayani, H., W. Sopandi, E. Syaodih, I. Suhendra, and N. Hermita. 2019. "RADEC: An Alternative Learning of Higher Order Thinking Skills (HOTS) Students of Elementary School on Water Cycle." *Journal of Physics: Conference Series* 1351 (1).<https://doi.org/10.1088/1742-6596/1351/1/012074>.
- Hunaepi, Taufik Samsuri, and Maya Afrilyana. 2014. *Direct Learning Model*. Mataram: Duta Pustaka Ilmu.
- Iwanda, Cut. 2023. "The Influence of the RADEC Learning Model on the Learning Achievement of Cultural History of Students at MTS Pembangunan UIN Jakarta."
- Iwanda, Cut Nurhasanah Salsabila, Hanifah Nuh Malika, and Muhammad Aqshadigrama. 2022. "RADEC as an Innovation in Islamic Religious Education Learning Models Post Covid-19 Pandemic in Elementary Schools." *Wahana Pendidikan Scientific Journal*, December 2022 (24): 430–40.
- Kamilah, Anisa Sahertina, Heni Komalasari, and Ria Sabaria. 2022. "Dance Learning During the Pandemic with Multimedia-Based Inquiry Learning Model." *Ringkang* 2 (1): 198–207.
- Masunah, and Narawati. 2012. *Arts and Arts Education*. Bandung: P4ST UPI.
- Murni, Hayatul. 2018. "Efforts to Improve Civics Learning Outcomes Through the Think Pair Share Cooperative Learning Model." *Efforts to Improve Civics Learning Outcomes Through the Think Pair Share Cooperative Learning Model* 16 (3): 298–307.
- Nurjannah, Ani, Maharani Oktavia, and Puji Ayurachmawati. 2023. "Implementation of the Read, Answer, Discuss, Explain, Create (Radec) Model on Students' Creative Thinking Skills in Science Learning in Grade V of Elementary School." *Didactics: Scientific Journal of PGSD STKIP Subang* 9 (3): 447–55.<https://doi.org/10.36989/didaktik.v9i3.1409>.
- Nurmitasari, Siyam, Anasufi Banawi, and Dinar Riaddin. 2023. "The Effectiveness of the RADEC Learning Model in Improving Student Learning Outcomes in Science Subjects." *DWIJA CENDEKIA: Journal of Pedagogical Research* 7 (2).<https://doi.org/10.20961/jdc.v7i2.75780>.
- Risnaini, Siti, Nur Kosasih, Saian Badaruddin, Winda Meirilani, Dance Arts Education, and Design Education. 2023. "Short Dance Movie " Renung " as a Media for Self-Introspection in Increasing Moral Values."
- Rusman. 2017. *Learning and Teaching Oriented to Educational Process Standards*. Jakarta: Prenadamedia Group.
- Sari, Erlina, Iis Aprinawati, and Rizki Ananda. 2021. "Implementation of Think Talk Write Model to Improve Elementary School Students' Effective Sentence Writing Skills." *Edumaspul: Jurnal Pendidikan* 5 (2): 250–62.<https://doi.org/10.33487/edumaspul.v5i2.2036>.
2021. *RADEC Learning Model: Theory & Implementation in Schools*. Bandung: UPI PRESS.
- Suhardjono, Supardi. 2009. *Strategy for Compiling Classroom Action Research*. Yogyakarta: ANDI Offset.
- Ulfah, Ulfah, and Opan Arifudin. 2021. "The Influence of Cognitive, Affective, and Psychomotor Aspects on Student Learning Outcomes." *Al-Amar Journal (JAA)* 2 (1): 6.