

## IMPLEMENTATION OF THE PROJECT BASED-LEARNING MODEL IN DANCE LEARNING: A STUDY OF COLLABORATION OF MIDDLE SCHOOL STUDENTS

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### ABSTRACT

This study aims to measure the level of student collaboration and the effectiveness of the use of the project-based learning (PjBL) model with junior high school students. The study implements the Classroom Action Research method in two cycles, using a qualitative and quantitative approach. Each cycle includes the planning, implementation, observation, and reflection stages. The subjects of the study consisted of 29 students of class VIII.9 and the subject teacher of Arts and Culture (Dance) at public middle school 27 Makassar. The focus of the study is the application of the PjBL model to increase student collaboration in learning arts and culture (dance). Data collection techniques include observation, interviews, field notes, tests, and documentation. Data were analyzed using qualitative and quantitative analysis techniques. The results of the study showed an increase in student collaboration skills during the two learning cycles. In Cycle I, the teacher's activity sheet in teaching using the PjBL model obtained an average score of 66.6 (sufficient category), while in Cycle II it increased to 92 (very good category). Student learning activities also increased, from an average score of 60 (sufficient category) in Cycle I to 85.45 (good category) in Cycle II. The level of student collaboration increased from an average value of 68.62 (sufficient category) in Cycle I to 89.72 (very good category) in Cycle II.

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## 1. INTRODUCTION

The implementation of a project-based learning model in dance learning to improve students' collaboration skills is based on a deep understanding of the importance of developing collaboration skills among students in the context of dance learning. Dance is not only about beautiful and expressive body movements but also about interactions between individuals that require skills to work together effectively in a team (Devereaux, 2017; Kassing et al., 2021). In an era where collaboration is the key to success in various fields of life, including arts and culture, it is important for dance

education to provide a strong foundation for the development of collaborative skills (Huddy, 2017; Winther, 2018; Gaunt & Treacy, 2020).

However, in practice, sometimes the more traditional learning approach in dance may not fully pay attention to or allow for the development of students' collaboration skills optimally (Biasutti & Habe, 2021; Borowski, 2023). Learning models that tend to focus on teacher instructions or individual exercises may not provide enough opportunities for students to truly engage in meaningful collaborative processes (Bloomberg, 2021; Toikka & Tarnanen, 2024). This can result in a lack of understanding of the importance of teamwork, a lack of skills in negotiating and sharing ideas, and a lack of appreciation for the contribution of each individual in a group.

Based on the results of the author's preliminary study on class VIII.9 students at public middle school 27 Makassar, it shows that student learning outcomes in the subject of arts and culture, especially dance, are still not achieving maximum results. This is because students are still less active and lack confidence when presenting their work. In addition, the learning model used to teach the material is considered less suitable for the students' characteristics. During the learning process, students often exhibit inactivity and fail to concentrate on the teacher's material. The indicators of the lack of student activity can be seen in the learning process in class; there are still many students who do not want to show their work and the lack of interest in student participation in the learning process due to lack of self-confidence. This is what causes students to be uninterested in learning arts and culture, especially dance art material, so that learners become passive and the final learning results are less than optimal.

The implementation of dance learning in improving the collaboration skills of junior high school students is inseparable from several challenges. Some of the challenges that are often faced are using less effective learning models, learning implementation that is still carried out conventionally, and limited time, facilities, and resources. Therefore, it is necessary to explore alternative learning models that can more effectively facilitate the development of students' collaboration skills in the context of dance. So an intriguing approach to consider is the project-based learning model. In this approach, students are challenged to work together on a complex dance project, where they need to collaborate in every stage of creating the work, from planning to performance (Zhang, 2022; Mughni & Sari, 2024).

Overall, the use of the PjBL model in dance learning in class VIII.9 at public middle school 27 Makassar can provide a deeper and more meaningful learning experience for students. With this model, students not only learn to dance but also understand the essence of dance itself and develop various important skills that will be useful in their future lives (Fadila et al., 2019; Pratiwi et al., 2019).

Through the implementation of project-based learning models in dance learning, it is expected that there will be opportunities for students to actively engage in collaboration, share ideas, and learn from each other (Pratiwi et al., 2019). They will learn to listen and appreciate views from various perspectives, as well as learn to work together in overcoming challenges and difficulties that may arise during the process of creating dance artworks. Thus, project-based learning models have the potential to not only

improve students' technical skills in dance but also to strengthen their collaborative skills, which are very necessary in everyday life and future careers.

The PjBL model also allows students to develop various other skills, such as teamwork, time management, and communication skills (Vogler et al., 2018; Hussein, 2021; Hasbi & Fitri, 2023; Mutanga, 2024). During the project process, students learn to work together with their group members to achieve common goals. They must also be able to manage their time well in order to complete the project on time (Chung et al., 2020; Li & Tu, 2024). In addition, students must be able to present their work in front of the class or even in front of a wider audience, which can increase their self-confidence (Li & Tu, 2024).

Because of the problems that already exist, teachers and researchers are working to create learning modules using the PjBL model that are based on and fit the needs of each student. This research aims to explore the potential impact of implementing a project-based learning model as an effective tool to enhance students' collaboration skills in dance learning. So, it is hoped that the results of this study will help make a dance learning model that is more open and effective, especially in the affective and psychomotor domains of students. The results will also hopefully improve students' learning experiences, preparing them to be collaborative members of society and make a difference in their fields and other areas of life.

## 2. METHOD

The method used in this study is classroom action research (CAR) with a qualitative approach. The population and sample in this study were students of class VIII.9 in a public middle school 27 in Makassar, consisting of 29 art students and culture subject teachers. Data collection techniques used were observation, interviews, field notes, documentation, and tests. We utilized qualitative analysis techniques, specifically data reduction, to analyze the data. Collecting and selecting data according to the focus of the problem, describing/presenting data: organize information meaningfully using narratives, graphs, or tables, then draw conclusions and verify the data. We base our conclusions on the descriptions of the data and its verification.

## 3. RESULTS AND DISCUSSION

### Results

#### **Implementation of Project Based Learning (PjBL) Learning Model for Students of in Dance Learning**

This study shows that the application of the project-based learning model in the subject of arts and culture (dance) in class VIII.9 at the public middle school 27 Makassar has succeeded in improving students' collaboration skills. This study uses the Classroom Action Research method, which consists of 4 main stages: planning, implementation, observation, and reflection. Each step of action in learning is designed according to the syntax of project-based learning, including problem presentation,

planning, scheduling, implementation, project monitoring, assessment, and evaluation. We apply this approach to aid students in comprehending the Nusantara dance material and enhancing their level of collaboration.

Re-entering the learning in the cycle, the teacher asked students to fill out a pre-test with a total of 5 questions followed by 29 students to measure the initial ability of the student's collaboration level. The results are used as a reference to assess improvements after learning, help teachers set focus, and assess the effectiveness of models such as Project-Based Learning in improving students' collaboration skills. The results were only 24.83% of those who achieved the collaboration level in class VIII.9 at public middle school 27 Makassar.

Next, the teacher gives a pre-test of the learning material according to the material in the Cycle I teaching module. The teacher asks students to fill out a pre-test with a total of 7 questions followed by 29 students to measure students' initial knowledge abilities. The results are used as a reference to assess improvements after learning, help teachers set focus, and assess the effectiveness of models such as Project-Based Learning in students' analytical abilities. The result is 34.8% of students who achieve the maximum score. Based on the pre-test for both the level of student collaboration and student ability analysis, researchers and teachers implement PjBL in cycle I; the implementation is as follows:

### ***Cycle I***

Activities carried out in Cycle I include the planning, observation, and reflection stages.

In the planning stage, the researcher prepared the following instrument preparations: 1) Creating a teaching module for Nusantara dance material using the PJBL model. 2) Creating observation sheets for teacher and student activities. 3) Preparing assessment sheets for students' level of collaboration. 4) Preparing learning tools and materials. 5) Creating student worksheets

Cycle I of the class VIII.9 arts and culture learning implementation stage took place over two days. We carried out the implementation after preparing the plan and learning steps, using the Project-Based Learning model. In the initial activity, the teacher initiated the learning process by adhering to traditional practices such as saying hello, praying before studying, checking student attendance, and assessing the students' physical and psychological readiness. The teacher introduced the "Nusantara dance" as the subject of study. The teacher provided learning motivation to students.

The teacher continued by asking students to divide into study groups and observe the slides she presented. Furthermore, the teacher explained the related material. The teacher provided an overview by demonstrating the basic dance movements that had been explained previously, and then the teacher asked students to practice them again. The teacher observes and provides input to students to pay more attention to the details of the movements, including tempo, strength, and the meaning behind the movements. Furthermore, students are asked to work on the LKPD that has been provided.

The final learning activity involves students presenting the outcomes of their discussions and collaboratively concluding the material they have learned. The teacher

motivates students and concludes the learning. Then the teacher invites students to pray together to end the learning activity.

Next, the observation stage of the abilities of teachers and students uses an instrument in the form of an observation sheet carried out by the teacher in the field of study. Analysis of teacher and student activities in implementing learning is one of the important elements in determining a learning activity. The results obtained from the observation sheet, namely the teacher's ability to manage learning using the Project-Based Learning model on Nusantara dance material, obtained an average score of 66.6, which is included in the sufficient category. It's enough for this cycle that teachers are in the sufficient category because subject teachers still can't show students how important it is to work together and form study groups that meet the needs of the project. In addition, learning is still conventional and does not focus on students. For example, teachers have not been able to invite students to conclude learning, and they have not been able to provide feedback opportunities to students regarding the application of the learning model being implemented.

The researcher observed student activities in the learning process with the application of the Project-Based Learning model in cycle I. The results obtained from student activities in learning with the application of the Project-Based Learning model on Nusantara dance material obtained a score of 60, which is included in the sufficient category. The sufficient category includes students because they consistently await teacher instructions during the learning process. This exemplifies the traditional approach to learning, which prioritizes the teacher over the students. So that students become passive during the learning process.

During the teaching and learning process in the Cycle I teaching module, the teacher asked students to work on the Student Worksheet, which was followed by 29 students to find out students' collaboration skills. The level of student collaboration in completing their group assignments using the Project-Based Learning learning model obtained an average score of 68.62, which is included in the sufficient category. The level of student collaboration is included in the sufficient category because, according to observations based on the specified indicators, students are still indifferent to their group friends and still work on assignments individually. Students are still unable to hold discussions within their groups, lack cooperation in their teams, and have not been able to adapt well to their group friends.

In addition, reflection is an activity to display again what has happened in each cycle in order to perfect the next cycle. Based on the results of the reflection stage analysis, the following are the improvements to the learning activities of cycle I in Table 1.

**Table 1.** Reflection on Learning Activities in Cycle I

No	Reflection	Findings	Repair
1	Teacher activities	<ul style="list-style-type: none"> <li>▪ Teachers have not mastered the syntax of learning using the PjBL model.</li> <li>▪ At the end of the learning, teachers still</li> </ul>	<ul style="list-style-type: none"> <li>▪ Teachers should attend more special training on PjBL, study the PjBL step guide independently, and try to implement it gradually, discuss with experienced</li> </ul>

No	Reflection	Findings	Repair
		conclude their own learning.	colleagues, and reflect after learning.
2	Students' activities	<ul style="list-style-type: none"> <li>Students are not yet able to collaborate well with their group members.</li> <li>Students are not yet able to conclude the learning material.</li> <li>Students have difficulty in presentations due to lack of confidence and lack of excellent communication skills.</li> <li>Dependence on teachers.</li> <li>Some students have difficulty generating innovative ideas for their projects.</li> </ul>	<ul style="list-style-type: none"> <li>Teachers should be able to involve students in concluding learning by guiding discussions or Q&amp;A to summarize the main points. Teachers can use concept maps or ask students to take turns conveying their conclusions independently. This helps students think more actively and understand the material better so that learning is not passive.</li> <li>Teachers should provide education related to the importance of collaborating with group members, providing group compositions with periodic group rotations, and always monitoring student performance. Instructors should offer collaborative project assignments to train student communication and cooperation, and they also need to give awards for student cooperation so that students are appreciated.</li> <li>Teachers should teach students to teach conclusion techniques, such as finding main points and important facts, and using tools such as concept maps. Teachers can provide examples of good conclusions, followed by practical exercises with simple materials. Group discussions are also effective for formulating joint conclusions, equipped with guiding questions such as "What is the essence of this material?" or "How is it applied?". Finally, evaluation and feedback from teachers help students improve their abilities gradually.</li> <li>Teachers need to train students' presentation skills by providing opportunities to speak in front of the class and providing constructive feedback to increase their confidence and communication skills. This will enable students to present the material and practice effectively over time.</li> </ul>

No	Reflection	Findings	Repair
			<ul style="list-style-type: none"> <li>Teachers should encourage students to find their own solutions before asking for help. Provide students with assignments that empower them to take the lead and solve problems on their own.</li> <li>Teachers can provide space for students to experiment and be creative. Invite students to share ideas in group discussions and inspire each other.</li> </ul>

### *Cycle II*

The activities in cycle II encompass the stages of planning, implementation, observation, and reflection. During the planning stage of cycle II, the focus is on enhancing the areas of weakness from the previous cycle, cycle I, through reflection and observation. Before conducting the research, the researcher, together with the model teacher, first prepared several research instruments, namely teaching modules, tools and materials, student worksheets, teacher and student activity observation sheets, and student collaboration level assessment sheets.

When cycle II started, the model teacher used a revised teaching module based on reflections from cycle I. They still used the Project-Based Learning (PjBL) model implementation, which has three stages: initial, core, and final activities. A revised teaching module based on reflections from cycle I was used during cycle II. In the initial stage, the teacher begins the learning process by greeting and inviting students to pray together, followed by checking the attendance and physical and psychological readiness of the students. Subsequently, the teacher presents the study material, specifically "Nusantara Dance."

In the core activity, the teacher asks students to pay attention to the slides displayed, then the teacher explains the related material and the project that will be worked on later. The teacher also gives students the opportunity to ask questions if there is something they do not understand. The teacher asks students to work in groups on the prepared LKPD and plan the project they will later display with their classmates. As a closing for the core activity, the teacher asks several students to present their LKPD and project plans.

The teacher and students collaboratively conclude the material they have learned at the end of cycle II. The teacher also provides students with the chance to share their thoughts on the lessons they have learned. In closing, the teacher provides learning motivation and invites students to read a prayer together before ending the lesson. Based on the results of observations in Cycle II through teacher and student activities, it is clear that learning in the classroom has increased compared to Cycle I after the implementation of project-based learning.

The observations of what the teacher did during the learning process with the PjBL model in cycle II gave an average score of 92, which is in the "very good" range. This

value has increased compared to Cycle I, which reached an average of 66.6 and is in the sufficient category. Based on this, we can say that the teacher's use of the Project-Based Learning (PjBL) model to guide students' learning of Nusantara dance material met the goal and followed the instructions set out in the teaching module. Furthermore, the researcher also observed student activities during the implementation of the PjBL model. Cycle II's student observations yielded an average value of 85.45, placing it in the good category. This value increased compared to the average in cycle I, which was 60, which was in the sufficient category. Why? Cycle II students worked well with peers, communicated well, and adapted well. The learning process until the final performance of the student project can be carried out well even though there are 2 students with special needs in the class. Category 2 students with special needs are still classified as mild special needs because students are still able to communicate and follow instructions from both their peers and teachers. So that the learning process with the PjBL model can be carried out well.

During the teaching and learning process, the researcher observed the level of student collaboration, with the participation of 29 students. The researcher observed the level of student collaboration using a previously designed collaboration level assessment sheet. In cycle II of the PjBL model implementation, the level of student collaboration went up a lot. It reached an average value of 89.72, which is in the "very good" category, compared to cycle I, where it was 68.62, which was in the "sufficient" category. The level of student collaboration in cycle II was included in the excellent category because students were able to show a satisfactory level of collaboration; all students had achieved the desired indicators where students were able to work together with their peers, were able to adapt to their group friends, were responsible for the tasks given, were able to deliberate for decision-making, and were able to communicate well in groups and with their subject teachers.

This time, in cycle II, the researcher also gave a post-test on how well the students worked together to see how well the students had learned after using the Project-Based Learning model. According to the level of student collaboration shown on the pre-test, the post-test results show how much the students' skills have improved and how well the learning model worked compared to the students' starting skills.

The researcher also gave a post-test to determine students' analytical skills on the related material with a total of 7 questions followed by 29 students. We conducted this post-test to evaluate the impact of the PjBL learning model on students' acquisition of analytical skills related to the material in class. The results showed that the average number of students who achieved the maximum score from the post-test results related to the Indonesian dance material was 24 students, and 5 students had not yet achieved the maximum score.

Furthermore, during the reflection stage, observations made during cycle II about how much collaboration there was between teachers and students during activities showed that using the Project-Based Learning learning model had made the teaching and learning process work well. Table 2 presents reflections on learning activities in cycle II.



**Table 2.** Reflection on Learning Activities in Cycle II

No	Reflection	Findings	Repair
1	Teacher activities	In Cycle II, there was a significant increase in the implementation of initial, core, and closing activities compared to Cycle I.	Teachers should change the dynamics of the learning model more often so that the level of student collaboration is increasingly trained by it, student learning outcomes in learning can be achieved, and teachers are expected to play a more active role in managing learning.
2	Students' activities	<ul style="list-style-type: none"> <li>▪ In the initial, core, and closing activities, cycle II showed an increase compared to cycle I.</li> <li>▪ The percentage of student collaboration levels in cycle II has increased significantly.</li> <li>▪ Student learning outcomes showed a significant increase; students were able to achieve maximum scores.</li> </ul>	The results of the study of student activities in cycle II showed an increasingly improved learning process, both in terms of collaboration levels and students' analytical abilities after the implementation of the PjBL learning model. Furthermore, we anticipate that teachers will enhance their ability to manage the class effectively.

### **Improvement of Students' Collaboration Skills After Implementing PjBL Learning Model in Dance Learning**

Project-based learning (PjBL) in this study has proven that PjBL is an effective learning model in developing and improving students' collaboration skills. In the context of dance learning, PjBL provides an intriguing learning environment for students to interact, create, and learn from each other.

#### ***Collaboration Skills Improvement Indicators***

Several indicators that show an increase in students' collaboration skills after the implementation of PjBL in dance learning include:

##### **1) Positive interdependence**

In PjBL dance, students depend on each other to create a complete dance work. Each member has an important role, from the choreographer to the music arranger, and the success of the project depends on the contribution of all group members.

##### **2) Interaction in learning**

During the learning process, students actively interact, exchange ideas, and provide feedback. The discussions that occur allow for the creation of richer and more diverse dance works.

##### **3) Individual responsibility**

Each student has responsibility for the tasks given. This encourages students to work independently and be responsible for their part in the group. For example, each student is responsible for the costume they wear.

4) Communication skills

PjBL requires students to communicate effectively, both in conveying ideas, giving instructions, and receiving criticism. These verbal and nonverbal communication skills are crucial in dance collaboration.

5) Group work skills.

Students learn to work together in groups, divide tasks, resolve conflicts, and achieve common goals. These skills are very useful in everyday life, including in the world of work later.

By achieving the indicators above, teachers and researchers are able to understand and measure the development of students' collaboration skills during the learning process using the PjBL model and provide constructive feedback.

***Factors That Influence Collaboration Skills Improvement***

Several influencing factors, including the following, support the improvement of students' collaboration skills in dance learning using the PjBL learning model.

- 1) The role of teachers in facilitating the student collaboration process, providing guidance, and creating a conducive learning atmosphere
- 2) Well-designed and challenging projects; this encourages students to work together effectively.
- 3) The formation of heterogeneous groups can enrich perspectives and improve the quality of student work results.
- 4) The evaluation carried out focuses on the collaboration process so that it will motivate students to continue to improve their skills.

The application of PjBL in dance learning has enormous potential in improving students' collaboration skills. By providing opportunities for students to work together in creating works of art, PjBL not only makes learning more intriguing and enjoyable for students but also prepares students to face challenges in the future. This was also agreed upon by the art and culture subject teacher for class VIII.9, who said that "before using the PjBL learning model in dance learning, students were less enthusiastic in their learning process, especially in practical learning. However, after implementing the PjBL learning model, students were more enthusiastic and active in the learning process both in theory and practice. Students collaborate well with each other, especially in class VIII.9, where there are ABK (special needs children) students. By using this learning model, ABK students can also participate in learning effectively. Before implementing the PjBL model, students lacked interaction with each other, leading to a situation where most students who face difficulties become overly dependent on teachers, thereby reducing the effectiveness of their learning..

In this study, the researchers utilized pre-tests and post-tests to aid teachers and researchers in monitoring the enhancement of students' collaboration skills, both prior to and following the implementation of PjBL. In the overall pre-test results, students can be categorized as carrying out learning individually and lacking collaboration; some students also only expect and wait for instructions from the teacher when completing assignments so that learning seems conventional and less cooperative. In contrast, the

post-test results show that after implementing PjBL, students' learning becomes more focused and their collaboration significantly increases, resulting in more effective learning. Using the PjBL model to teach dance has other benefits as well, such as making students more interested in learning and helping them develop 21st-century skills like critical thinking, creativity, and communication. Students also learn how to work together, which is very useful in the modern workplace where everyone needs to be able to do their job successfully.

### **Discussion**

This study aims to determine the effectiveness of the project-based learning (PjBL) model in improving the collaboration skills of class VIII.9 students in dance learning at Public Middle School 27 Makassar. We expect this study to contribute to the development of more effective dance learning practices through data collection and analysis. The discussion that follows addresses two primary issues: implementing PjBL and enhancing students' collaboration skills following the model's implementation.

#### ***Implementation of PjBL Learning Model on Students***

We studied how the PjBL learning model can be used to teach dance to students in class VIII.9 at Public Middle School 27 Makassar. The results showed that the model can get students involved in the whole process of making works, from planning and implementing them to evaluating them. This was done by using two learning cycles with the stages of planning, implementation, observation, and reflection in each cycle. The teacher acts as a facilitator who guides students in designing projects, providing feedback, and facilitating group discussions. Students actively brainstorm and divide tasks well. Students also face various obstacles, such as difficulties in synchronizing movements or time constraints, but managed to overcome them through group discussions and teacher assistance. This is also seen in the implementation of cycles I and II.

Additionally, observation sheets, which demonstrate increased motivation and enthusiasm in learning, also measure student involvement. Overall, the application of PjBL has succeeded in actively involving students in the learning process both to improve their ability to collaborate, think critically, and solve problems ([Anazifa & Djukri, 2017](#); [Gabuardi, 2021](#); [Aifan, 2022](#)).

#### ***Improving Students' Collaboration Skills***

The application of the PjBL model in dance learning has resulted in significant changes in students' collaboration skills. Previously, students tended to learn individually and were less active in interacting. However, after participating in learning with the PjBL model, students showed a significant increase in their ability to work together in groups. This can be seen by the increase in the average score on aspects such as the teacher's teaching ability using the PjBL model, student learning activities, and the level of student collaboration. In addition, the quality of the dance works produced also increased, indicating that students have been able to combine creative ideas from various group members. The active and enjoyable learning process, as well as proper

guidance from the teacher, has created a conducive environment for the development of students' collaboration skills (Richardson & Mishra, 2018; Lakkala et al., 2021).

The results of this study support the findings of previous studies, which show that PjBL is an effective learning model in improving students' social and academic skills (Chen & Yang, 2019; Susilowibowo & Hardini, 2019; Almulla, 2020; Ghosheh Wahbeh, 2021). The results of the study obtained regarding the increase in the level of student collaboration based on the observation sheet in each cycle showed an increase. In cycle I, the average level of student collaboration reached an average of 68.62, which is included in the sufficient category. Cycle II saw an increase in the average to 89.72, placing it in the very good category.

This increase proves that the implementation of the Project-Based Learning model on Nusantara dance material has succeeded in increasing the level of student collaboration and has succeeded in achieving all indicators. The increase in the level of student collaboration includes affective and psychomotor aspects. The affective aspect is improved through the development of attitudes, self-confidence, and students' interest in actively collaborating. Meanwhile, by providing educational facilities that support students in honing their skills to produce productive and innovative works, the psychomotor aspect becomes reality.

#### **4. CONCLUSION**

Based on the research and discussion that was done, it was found that using the Project-Based Learning learning model has made it easier for students in class VIII.9 at Public Middle School 27 Makassar to work together while learning martial arts and dance. The process of implementing the Project-Based Learning model for students went well and smoothly. The learning process shows a satisfactory implementation of the PjBL model; this can be seen in each activity sheet from both the teacher and student sides in the two cycles carried out. The teacher can apply the PjBL learning model, while students show a successful learning process. This proves that the PjBL learning model is effective in supporting the achievement of dance learning objectives.

The implementation of the project-based learning model in dance education has led to a significant improvement in students' collaboration skills. This increase can be seen in students' ability to work together in groups, share ideas, complete joint project assignments, and actively contribute to the projects being worked on. In the two learning cycles, students showed an increase in positive interdependence, excellent interaction in learning groups, individual responsibility, communication skills, and working skills in groups, which are the main indicators of collaboration skills. This proves that PjBL is an effective learning model for developing collaborative skills in dance learning.

To support the implementation of PjBL, teachers are advised to develop modules or learning guides that include implementation steps, activity sheets, and evaluation tools for student collaboration skills. In addition, it is recommended to conduct more specific follow-up research, such as measuring the influence of PjBL on communication skills or the long-term impact on student collaboration at the next level of education.

## REFERENCES

- Aifan, H. (2022). Implementing a project-based collaborative learning approach using PowerPoint to improve students' 21st-century skills. *E-Learning and Digital Media*, 19(3), 258-273.
- Almulla, M. A. (2020). The effectiveness of the project-based learning (PBL) approach as a way to engage students in learning. *Sage Open*, 10(3), 2158244020938702.
- Anazifa, R. D., & Djukri, D. (2017). Project-based learning and problem-based learning: Are they effective to improve student's thinking skills?. *Jurnal Pendidikan IPA Indonesia*, 6(2), 346-355.
- Biasutti, M., & Habe, K. (2021). Dance improvisation and motor creativity in children: Teachers' conceptions. *Creativity Research Journal*, 33(1), 47-62.
- Bloomberg, L. D. (2021). *Designing and delivering effective online instruction: How to engage adult learners*. Teachers College Press.
- Borowski, T. G. (2023). How dance promotes the development of social and emotional competence. *Arts Education Policy Review*, 124(3), 157-170.
- Chen, C. H., & Yang, Y. C. (2019). Revisiting the effects of project-based learning on students' academic achievement: A meta-analysis investigating moderators. *Educational Research Review*, 26, 71-81.
- Chung, C. C., Huang, S. L., Cheng, Y. M., & Lou, S. J. (2020). Using an iSTEAM project-based learning model for technology senior high school students: Design, development, and evaluation. *International Journal of Technology and Design Education*, 1-37.
- Devereaux, C. (2017). Educator perceptions of dance/movement therapy in the special education classroom. *Body, Movement and Dance in Psychotherapy*, 12(1), 50-65.
- Gabuardi, V. M. F. (2021). Project-Based Learning: boosting 21st century skills. *Revista estudios*, (43), 340-419.
- Gaunt, H., & Treacy, D. S. (2020). Ensemble practices in the arts: A reflective matrix to enhance team work and collaborative learning in higher education. *Arts and humanities in higher education*, 19(4), 419-444.
- Ghosheh Wahbeh, D., Najjar, E. A., Sartawi, A. F., Abuzant, M., & Daher, W. (2021). The role of project-based language learning in developing students' life skills. *Sustainability*, 13(12), 6518.
- Fadila, D., Suryana, Y., & Giyartini, R. (2019). Penerapan Model Project Based Learning Untuk Meningkatkan Kreativitas Gerak Tari Siswa Melalui Kegiatan Ekstrakurikuler Seni Tari. *Indonesian Journal of Primary Education*, 3(1), 9.
- Hasbi, M., & Fitri. (2023). Pre-Service Teachers with Courses in Problem-Based Learning in Mathematics. *ETDC: Indonesian Journal of Research and Educational Review*, 2(2), 51-60.
- Huddy, A. (2017). Digital technology in the tertiary dance technique studio: expanding student engagement through collaborative and co-creative experiences. *Research in Dance Education*, 18(2), 174-189.
- Hussein, B. (2021). Addressing collaboration challenges in project-based learning: The student's perspective. *Education Sciences*, 11(8), 434.
- Kassing, G., Jay-Kirschenbaum, D., & Jay, D. M. (2021). *Dance teaching methods and curriculum design: comprehensive K-12 dance education*. Human Kinetics Publishers.
- Lakkala, S., Galkienė, A., Navaitienė, J., Cierpiąłowska, T., Tomecek, S., & Uusiutti, S. (2021). Teachers supporting students in collaborative ways—An analysis of collaborative work creating supportive learning environments for every student in a school: Cases from Austria, Finland, Lithuania, and Poland. *Sustainability*, 13(5), 2804.

- Li, M. M., & Tu, C. C. (2024). Developing a Project-Based Learning Course Model Combined with the Think–Pair–Share Strategy to Enhance Creative Thinking Skills in Education Students. *Education Sciences*, 14(3), 233.
- Mughni, R. M., & Sari, E. F. (2024). The Influence of The Project Based Learning (PJBL) Learning Model Assisted by Videoscribe Media on The Creativity of Learning Dance Arts. *Jurnal Penelitian Pendidikan IPA*, 10(12), 10793-10798.
- Mutanga, M. B. (2024). Students' Perspectives and Experiences in Project-Based Learning: A Qualitative Study. *Trends in Higher Education*, 3(4), 903-911.
- Pratiwi, G. T. O. D., Masunah, J., & Nugraheni, T. (2019). Creation Dance Learning through Project Based Learning to Build Students Characters. In *International Conference on Arts and Design Education (ICADE 2018)* (pp. 162-164). Atlantis Press.
- Richardson, C., & Mishra, P. (2018). Learning environments that support student creativity: Developing the SCALE. *Thinking skills and creativity*, 27, 45-54.
- Susilowibowo, J., & Hardini, H. T. (2019). Effectiveness of project-based learning models to improve learning outcomes and learning activities of students in innovative learning. *KnE Social Sciences*, 82-95.
- Toikka, T., & Tarnanen, M. (2024). Understanding teachers' mental models of collaboration to enhance the learning community. *Educational Studies*, 50(6), 1114-1131.
- Vogler, J. S., Thompson, P., Davis, D. W., Mayfield, B. E., Finley, P. M., & Yasseri, D. (2018). The hard work of soft skills: augmenting the project-based learning experience with interdisciplinary teamwork. *Instructional Science*, 46, 457-488.
- Winther, H. (2018). Dancing days with young people: An art-based coproduced research film on embodied leadership, creativity, and innovative education. *International Journal of Qualitative Methods*, 17(1), 1609406918789330.
- Zhang, R. (2022). Design of an authentic project-based learning course using project management approach. *International Journal of Fashion Design, Technology and Education*, 15(1), 57-66.