Kinestetik : Jurnal Ilmiah Pendidikan Jasmani 9 (2) (2025)
Kinestetik : Jurnal Ilmiah Pendidikan Jasmani
https://ejournal.unib.ac.id/index.php/kinestetik/index
DOI : 10.33369/jk.v9i2.41700

Implementation Of Differentiated Learning Based On Learning Needs To Improve Learning Outcomes Of Floor Gymnastics Front Roll On Students

Dandi Erianta*[1], Lokananta Teguh Hari Wiguno[2], Anang Marzuqi[3]

[1,2]Teacher Professional Education, Physical Education, Malang State University, Indonesia
[3]Physical Education, Elementary school Laboratorium University Of Malang, Indonesia

Article Info

Article History :

Received : May 2025
Revised : June 2025
Accepted : June 2025

Keywords:

Differentiated Learning
Forward Roll
Inclined Plane Mattress

Abstract

Forward roll is part of the floor gymnastics movement that must be mastered by students during the learning process. Therefore, the purpose of the study is to improve the forward roll movement by implementing differentiated learning based on learning needs and implementing modifications to learning media in the form of inclined plane mats. This study applies the Classroom Action Research (CAR) method, with the research subjects being 27 students of grade IV ilingual Elementary school Laboratory University Of Malang. Observation and testing are the main techniques in the data collection process. The instrument used is an assessment rubric on the skill/psychomotor aspect in forward rolls. The analysis technique uses descriptive statistics with a percentage formula. The results of the classroom action research in cycle I showed that 16 students or 59% completed, and in cycle II showed that 25 students or 93% were declared complete in the psychomotor domain. So it can be concluded that the application of differentiated learning based on needs and the use of media modifications in the form of inclined plane mats can improve learning outcomes in the form of forward roll abilities through cycle II (two).

*Corresponding email :
dandi.erianta.2431619@students.um.ac.id

ISSN 2685-6514 (Online)
ISSN 2477-331X (Print)

INTRODUCTION

Physical education, sports, and health are components of learning that must be delivered in schools. The importance of this lies in providing students with the opportunity to participate directly in various activities in the learning process. According to (Widodo, 2018); (Herlambang, 2017); (Anam, 2019); & (Mustafa, 2021) said As an integral part of overall education, physical education, sports, and health involve physical activities needed as a tool or way to help students learn. Physical activities are well designed and adjusted to educational goals. Elementary and middle schools require individual physical education, sports, and health subjects (Law No. 20 of 2003).

According to the Ministry of Education and Culture (Kemendikbud, 2014), physical education is a means to improve physical growth, motor skills, knowledge and reasoning, mental attitude, emotional, sportsmanship, social, and healthy lifestyle habits. All of this helps create a balance between mental growth and physical quality. In addition (Irdyandiwa & Maksum, 2019) states that physical education learning is a type of physical activity learning to change a person's physical, mental and emotional qualities.

Floor gymnastics is included in the category of gymnastics, where the activity or learning process takes place on the floor. In other words, the floor and mat are used as a support base when the body falls (Titting et al., 2016) (Ashidqy et al., 2023); & (Septiana et al., 2022) When learning floor gymnastics, there are several things to keep in mind, namely using a mat or safe place, placing the mat on a flat surface away from danger, placing the mat near a wall or other object, or placing it near anything that could be dangerous (Sinuraya & Hendrawan, 2020).

Floor gymnastics has great physical, mental, and social benefits. The physical benefits of floor gymnastics are that it can develop physical components and motor skills (Amanda & Bahfen, 2024)**.** This activity develops several components such as: Muscle endurance, flexibility, coordination, and balance. When rolling forward, the body must remain in a rounded position. Gymnastics requires thinking about improving skills. Therefore, adjustments and critical thinking skills of students are very necessary, one way is through the development of mental abilities (Oksyalia et al., 2018). Forward roll or front roll is one type of floor gymnastics exercise. Forward roll is a movement of rolling forward with a rounded body position, so that when doing it, the body must be formed into a circle (Prasetyo, 2022).

In reality, what each person encounters is different. Each student must have unique and diverse learning abilities. Every teacher must realize that each student is unique and different from other students. This means that the learning process must pay attention to talents, interests, learning motivation, learning profiles, social situations, and others (Koerniantono, 2020); (Dwi Cahyo et al., 2023); (Tayeb, 2017); &

(Herlambang, 2017). The learning method of implementing differentiated learning is one of the learning methods that can improve learning outcomes (Purnawanto, 2023). Therefore, a teacher can apply a method with differentiated learning as one way to improve learning outcomes, especially in PJOK.

Differentiated learning is a series of decisions taken by teachers based on the needs of students (Amalia et al., 2023). Learning skills refer to the ability to understand the material being taught. Students can feel overwhelmed by assignments that are tailored to their level of readiness. However, with adequate support and a conducive learning environment, they can master new knowledge. Every student has different interests in various topics. Their learning profiles are influenced by their culture, language, learning style, and background (Marantika et al., 2023).

Therefore, when differentiated learning is implemented, all learners feel accepted, respected, and encouraged to learn as confidently and comfortably as possible while in class. This raises the expectation that the material and teacher's abilities will improve learners work together to achieve common success. Based on the description above, differentiated learning means respecting the diversity of children and their individuals by implementing learner-centered activities and using different approaches to content, processes, and promotional tools. The initial data obtained with an average value of 61.6. Based on the initial data with an average value of Class IV of Elementary school Laboratorium University of Malang of 61.6, it shows that the learning outcomes of students on the forward roll floor gymnastics material can be said to be incomplete, out of 34 students, only 4 (12%) students got results above the KKM.

The data shows that fourth grade students of Elementary school Laboratorium University of Malang still face problems with forward rolling motion. Thus, the learning process, especially the implementation of strategies, needs to be improved to achieve more effective learning objectives. This study aims to examine the effectiveness of the implementation of differentiation learning strategies in improving the learning outcomes of fourth grade students at Elementary school Laboratorium University of Malang.

METHODS

This research adopts the Classroom Action Research method, which is designed to improve the quality of learning by improving the conditions of teaching and learning interactions in the classroom (Saputra et al., 2021). This research process consists of two stages and uses the Classroom Action Research method (Syaifudin, 2021). Type of research where teachers conduct research, action, reflection, action, and reflection to solve problems. This PTK is carried out by teachers who use effective and efficient approaches, methods, models, and learning strategies when teaching. Planning, implementation,

observation, and reflection are the four stages of PTK study preparation. The following figure shows the classroom action research process:

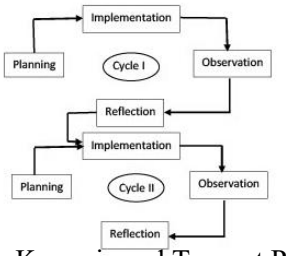

Figure 1. Kemmis and Taggart PTK step procedure model
(Saputra et al., 2021, p. 25)

Sampling Procedures

Students of class IV Bilingual Elementary school Laboratorium University of Malang are the subjects in this classroom action research. The number of students is 27 people, 14 of them are male and 13 of them are female. In class IV Bilingual Elementary school Laboratorium university of Malang. Grade IV students of Elementary school Laboratorium Uuniversity of Malang became the subjects of this PTK in semester II and the end of the 2024/2025 academic year.

Materials and Apparatus

This research instrument uses assessment or evaluation on the skill aspect in floor gymnastics material, namely forward rolls. Using an assessment rubric sheet with an assessment grid that has a KKM score of 80 which is the student's learning completion which is the school's completion. This is in accordance with the fulfillment of school needs and meets student learning outcomes. To describe the previous data analysis, this study uses descriptive statistics to measure the percentage of learning outcome completion in each cycle.

Procedures

The learning process that has been carried out by students is only focused on delivering material and does not pay attention to the needs of students. Therefore, differentiated learning is very effective to use because this learning pays attention to learning needs, interests, and learning characteristics of students that vary, requiring a differentiated learning approach, which not only assesses learning products (such as assignments or exams), but also pays attention to the process and material taught.

The research topic is floor gymnastics forward roll. This classroom action research (CAR) has two cycles, starting from the pre-cycle, cycle 1, then continued with Cycle 2 which lasts for 2 months. Tuesday, February 20, 2024, is the date of the pre-cycle implementation. Cycle 1 is carried out on Tuesday, February 27, 2024, and Cycle 2 is carried out on Tuesday, March 5, 2024.

Design or Data Analysis

The data obtained were analyzed using quantitative data analysis techniques. The benchmark for student completion scores was seen from the completion of the final score after performing the forward roll movement. Initial data was conducted by conducting a diagnostic test before entering cycle 1 in the classroom action research. The criteria for completing the forward roll movement assessment were seen from the ability of students to perform the forward roll movement, which was seen and

assessed from 5 aspects, namely the initial position, body rolling movement, body roll, final position and overall movement coordination.

The application of differentiated learning in its assessment, students will be classified into 3 groups, namely beginners, half able, and proficient, where each group has its own assessment reference according to the ability of each individual. After the assessment is carried out using the assessment rubric, the final results will be seen and presented to see the passing score in providing learning in the study.

RESULT

Based on the research that has been done and obtained results in the form of forward roll ability using an inclined plane mattress and implementing differentiated learning for students. The data can be seen in table 1 below.

Table 1. Initial results/diagnostic test results before treatment was given

No	Results	Psychomotor Aspects
1	Completed	10 learners (37%)
2	Not Completed	17 learners (63%)

Table 1 above is the result of the initial test or diagnostic test of forward roll ability measured from the realm of ability/psychomotor aspects. Based on the results of the initial test, it showed that 5 students completed and 22 students did not complete. There are several obstacles encountered in the learning process which can be seen in general, namely caused by internal factors of the students. Feelings of shame or lack of self-confidence, and most are still afraid of injury are the problems encountered. Students experience a sense of not daring because the forward roll movement has a risk of injury, which is often found in the bending of the neck if the movement is not done correctly (Ashidqy et al., 2023).

Table 2. Forward roll capability after I (one) cycle

No	Results	Psychomotor Aspects
1	Completed	16 learners (59%)
2	Not Completed	11 learners (41%)

Table 2 above is the result of the forward roll ability test after cycle I which consists of psychomotor aspects. Cycle I shows that 16 students were declared complete and 11 students were declared incomplete. There are obstacles that occur in cycle I, namely: 1) The anxiety of students and their hesitation in doing this forward roll, 2) Limited learning time, 3) Students pay less attention to the explanation when the teacher gives examples of movements, 4) Lack of cooperation and frequent teasing of other students who cannot do it. This can be the reason why some students are not optimal in doing the forward roll movement. Thus, the implementation of cycle II is very important to repeat, and the following are the results of cycle II:

Table 3. Forward roll capability after II (Two) cycles

No	Results	Psychomotor Aspects
1	Completed	25 learners (93%)
2	Not Completed	2 learners (7%)

Table 3 above is the result of the forward roll ability test after cycle II which consists of psychomotor aspects. Cycle II data shows that 25 students were declared complete and 2 students did not complete. Several obstacles in the learning process are certainly encountered without

exception in doing the forward roll movement. In cycle II, the teacher's role is more dominant, the teacher provides more detailed explanations and provides repeated examples. In doing the forward roll movement, the teacher also provides additional media, namely paper clamped between the student's chin and chest, motivation is also given to students so that they have confidence in doing the forward roll movement. The results of the comparison of the actions taken in this study can be seen in the diagram below.

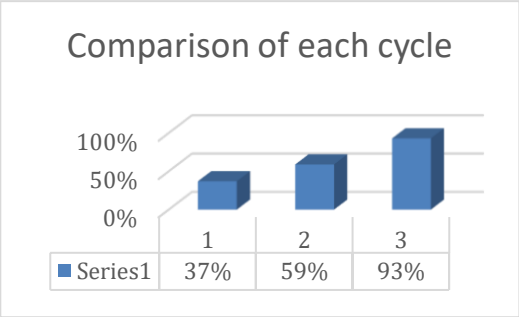

Figure 1. Bar chart comparing learning outcomes for front rolls in cycles I and II

DISCUSSION

Initial assessment or diagnostic test is conducted to find out the problems that occur and exist in a forward roll floor gymnastics learning process. The main problem in the learning process is located in the learning media and the use of inappropriate learning strategies. So that the results of the diagnostic test only 10 students can be declared complete in the psychomotor domain.

The solution to the problem was carried out by using a modification of learning media, namely using an inclined plane mat and the application of differentiated learning strategies based on needs. The forward roll ability assessment data consisted of aspects of psychomotor abilities. Cycle I showed that 16 students were declared complete and 11 were incomplete. There were changes after using an inclined plane mat and implementing differentiated learning. There were several obstacles that occurred where if seen in outline, the influencing factors came from within the students. The risk of injury when doing a forward roll is one of the factors that causes students to be reluctant to do the movement.

Cycle II data shows that 25 students passed and 2 students failed. In cycle II, the teacher's role is more dominant, the teacher provides more detailed explanations and provides examples repeatedly. In doing the forward roll movement, the teacher also provides additional media, namely paper clamped between the student's chin and chest, motivation is also given to students so that they have the courage to do the forward roll movement. The role of the teacher is very important in convincing students to be able to do the forward roll movement so that learning outcomes can be achieved. The efforts that have been made in cycle II showed maximum results, this success can be influenced by the use of modified eye media and implementing differentiated learning strategies. This can be used as a reference in learning front roll floor gymnastics.

In addition to the use of learning media modifications, the selection and application of learning strategies can be done by the role of teachers in helping

students achieve success in learning forward roll movements. Differentiated learning strategies are the approach strategies used. Differentiated learning is learning that emphasizes that each individual has different interests, potentials and talents (Kurniawaty et al., 2022); (Stavrou, 2024); (Handa, 2016); & (Pozas et al., 2022). Differentiated learning creates a classroom environment that has a variety of diversity by providing more opportunities for students to realize their thoughts, process ideas and improve the learning outcomes of each student according to the maximum limits of their abilities (Safarati & Zuhra, 2023); (Santoso et al., 2022); & (Ardiawan et al., 2024).

Motor skills greatly support the success of the learning process of students in the floor gymnastics material (Komaini et al., 2024); (Parlina et al., 2021); & (Potdevin et al., 2018). This is because learning the backward roll movement is relatively complicated, so it requires the application of methodological principles that are in accordance with the basic psychomotor stages, in line with the psychomotor skills needed in the movement (Invernizzi et al., 2020). In general, gymnastics requires strength, agility, endurance, and body flexibility (Septiana et al., 2022); (Hes & Asienkiewicz, 2022); & (Kumagai et al., 2023). Physical condition also plays an important role in supporting the success of students when participating in learning. Therefore, before starting floor gymnastics material, it is better to prepare the muscles that are most used in the sport.

CONCLUSION

The results of the research that have been successfully conducted show that the application of differentiated learning based on needs to improve the learning outcomes of floor gymnastics forward rolls, and using inclined plane mat media can improve students' abilities through II (two) cycles. The details of success are as many as 25 students completed or 93% after the cycle was carried out. It is very necessary to have updates and developments in modifying learning media and the application of learning strategies that of course must be adjusted to the needs and abilities of students. In this way, the learning process can run more effectively and make it easier for students to achieve the goals set by the teacher.

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