



The Effect Of The Problem Based Learning Model On The Ability Of Front Roll Floor Gymnastics Movement

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Abstract

The purpose of this study was to determine the improvement of students' movement abilities in the front roll floor gymnastics material at MAN 1 Kuningan. The research method used was a quantitative method, with a One Group Pretest Posttest design. This study involved 24 students of class XI MAN 1 Kuningan. Data collection was carried out through observation, interviews, documentation and practical tests. The results of the study showed that the Problem Based Learning model was declared effective and could improve the front roll floor gymnastics movement ability. The level of effectiveness was proven by the n-gain test which was quite effective. This indicates that the Problem Based Learning model was declared feasible and effective in improving the front roll floor gymnastics movement ability.

Keywords: PBL, Floor Gymnastics, Forward Roll

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INTRODUCTION

Physical Education, Sports, and Health is an educational process through physical activities. The objectives achieved are comprehensive, encompassing the psychomotor, cognitive, and affective domains. In other words, through physical activities, children are guided to learn in accordance with their development and growth, resulting in behavioral changes that involve not only physical but also intellectual, emotional, and social aspects (Farida & Supriyono, 2024).

One of the factors for successful learning is the learning model. Learning models are a crucial part of classroom learning. There are several reasons why learning models are important in the classroom: (Albina et al., 2022) The use of appropriate learning models supports a continuous learning process, thus achieving educational goals. Very useful information can be obtained through education by using learning models for students. The learning process requires a variety of learning models. This can increase students' enthusiasm for learning and prevent them from getting bored. Considering the differences in students' learning habits, characteristics, and personalities, it is necessary to develop differentiated learning models.

Gymnastics is a physical activity that helps optimize children's growth and development. Gymnastic movements are well-suited for emphasis in physical education programs, especially as they require physical demands such as muscle strength and endurance throughout the body. Furthermore, gymnastics also contributes significantly to the development of fundamental movements, particularly in terms of effective and efficient body coordination, which is essential for physical activity in other sports (Ilham & Muzaffar, 2023).

Definition: Floor gymnastics is a branch of competitive gymnastics. It is performed on a mat-covered floor without the use of any other equipment. The floor area used for gymnastics competitions is 12 x 12 square meters, with an additional one meter on each side for safety reasons. This series of exercises includes: forward rolls, backward rolls, headstands, handstands, and springboard rolls (Malang & Keolahragaan, 2018).

Floor gymnastics is a popular competitive sport, popularly known in the community and internationally. Besides being a competitive sport, floor gymnastics is also an educational sport developed in the curriculum of schools and universities. "Senaman" is a direct translation of the English word "gymnastics." Gymnastics is used to demonstrate physical activities that require a wide range of movement, so it is necessary to wear tight clothing (body press). Based on its characteristics and movement structure, gymnastics can be considered a suitable physical activity for use as a physical education tool, as it is considered to influence the quality of motor development and physical quality (Zulbahri et al., 2020). According to (Olahraga et al., 2024), there are several types of floor gymnastics typically learned in schools. Other floor gymnastics topics include back rolls, cartwheels, candle poses, forward rolls, and others.

The problem-based learning model emphasizes the process where students are fully involved in discovering the content they are learning and connecting it to their daily lives. Problem-based learning can encourage students to construct their own knowledge, develop higher-level skills, foster student independence, and increase self-confidence. Implementing this model can significantly impact student learning outcomes (Janah et al., 2018).

Problem-Based Learning (PBL) is a curriculum and learning process. The curriculum is designed with problems that require students to acquire essential knowledge, enabling them to develop problem-solving skills, develop their own learning models, and develop the ability to participate in teams (Rika Widianita, 2023). The Problem-Based Learning (PBL) process uses a systemic approach to solving problems or addressing challenges that will be needed in everyday life. Problem-based learning is a learning approach that presents contextual problems, stimulating students to learn in a classroom that implements problem-based learning, where students work in teams to solve real-world problems (Khakim et al., 2022).

Based on interviews and observations at MAN 1 Kuningan, students in the front roll floor gymnastics lesson have not yet mastered the appropriate forward roll movement and are still unable to practice the front roll floor gymnastics movement from the beginning to the end correctly. This problem can affect students' movement abilities in the front roll floor gymnastics. According to (Zahra et al., 2023), there is an improvement in basic gymnastics techniques through the Problem-Based Learning (PBL) model. The PBL model engages students in solving contextual problems. In the context of floor gymnastics, students can face and solve challenges and problems presented by the teacher.

The purpose of this study is to apply the Problem-Based Learning model to the front roll floor gymnastics to improve students' movement abilities in the front roll floor gymnastics. By implementing the Problem-Based Learning model, researchers hope it will have an impact on students' movement abilities, student understanding, and more interactive learning..

METHOD

This research was conducted using a quantitative method where quantitative is a research that emphasizes testing theories by measuring variables, research using the implementation of data analysis using statistical methods. This quantitative research uses a deductive approach aimed at testing hypotheses (Berlianti et al., 2024). The design of this research is One Group Pretest Posttest which was conducted in July 2025 at MAN 1 Kuningan, the population and sample in this study were XI A MAN 1 Kuningan with a total of 24 students. Data collection techniques in this study were carried out through observation, interviews, practical tests (pretest posttest), and documentation. Data analysis techniques in this study were statistical prerequisite tests in the form of normality and homogeneity tests, hypothesis tests, and N-Gain tests.

RESULTS AND DISCUSSION

Result

Based on research conducted in class XI A MAN 1 Kuningan, the results were obtained in the following table.

Table. 1. Pretest Posttest Result

Value	Skore	Category
Pretest	59,2	Enough
Posttest	83,3	Good

The table above shows that the pretest, or floor gymnastics learning without the PBL model, obtained an average score of 59.2, categorized as "Sufficient." Furthermore, the posttest, or learning with the PBL model, obtained an average score of 83.3, categorized as "Good."

To compare the pretest and posttest results, or the results of learning using the PBL model, on the forward roll floor gymnastics movement ability, an N-Gain test was conducted using SPSS Version 27.

Table. 2. N-gain Test Results

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
NGain	24	.29	1.00	.6275	.23319
Valid N (listwise)	24				

Based on the output, it shows that the N-Gain test results obtained an average N-Gain score of 0.6275. The N-Gain score is in the Medium category. So it can be concluded that there is an increase in the ability of front roll floor gymnastics movements with the Problem Based Learning learning model in class XI A MAN 1 Kuningan. These results are in line with relevant research that one of the learning models that can be applied is Problem Based Learning (PBL). PBL emphasizes that learning is a process that involves problem solving and critical thinking in real contexts. Through PBL, students gain experience in dealing with real problems, and emphasizes communication, cooperation, and existing resources to formulate ideas and develop reasoning skills. In addition, the PBL model can improve students' movement abilities in cognitive, affective, and psychomotor aspects (Dhiana Putra et al., 2023).

Discussion

Based on the research results, the average pretest score was 59.2, falling within the "poor" category. Therefore, it can be concluded that the pretest results for the forward roll gymnastics ability of class XI A before being treated using the Problem-Based Learning model were in the "sufficient" category. Meanwhile, the learning outcomes of class XI A students at MAN 1 Kuningan after being treated using the problem-based learning model on the forward roll gymnastics ability of class XI A MAN 1 Kuningan after being treated using the problem-based learning model, the average score was 83.3, falling within the "good" category.

Based on the pretest and posttest results, an N-gain test was conducted to determine the effectiveness of the treatment on the forward roll gymnastics ability. The results obtained after the N-gain test, calculated using SPSS, showed an average N-gain score of 0.6275, which is categorized as "moderate." The N-gain percent value was 62.75, which is categorized as "quite effective."

This research is supported by relevant previous research. According to Asriningsih et al., the influence of the PBL learning model and learning interest on the floor gymnastics learning outcomes of fifth-grade students at SD Negeri 3 Kampung Baru is due to several factors. First, the Problem-Based Learning model can assist students in learning. The learning process using Problem-Based Learning provides students with the opportunity to ask questions if they encounter difficulties related to the material presented. Learning activities that engage students can facilitate learning (Kiabeni et al., 2021).

In line with previous research, according to Fatima et al., the Problem-Based Learning model has an effect on the learning outcomes of eleventh-grade students in the Forward Roll Gymnastics class at SMK Widya Praja Ungaran. The average pretest learning outcome was 69.32 and the average posttest learning outcome was 79.09, resulting in a 14.10% increase in students' learning outcomes and learning motivation after being exposed to the Problem-Based Learning model (Sukma Fatima & Utvi Hinda Zhannisa, 2021).

In addition, this research is also in line with previous research, namely Yani and Abdu Model Problem Based learning is applied in floor gymnastics learning which is used as a solution to the problem of lack of student interest in participating in the learning process. In the first cycle, the number of students who completed was 20 students with a percentage of 74.07% and students who did not complete were 7 students with a percentage of 25.93%. With a total of 27 students and an average final score of 77.96. From this data, it can be seen that there was an increase in student interest and learning outcomes, namely 9 students (33.32%), so that the percentage of incompleteness also decreased, namely from 59.25% to 25.93%. (Prima, 2023).

CONCLUSION

Based on the results of the data analysis obtained from the pretest and posttest scores of class XI A students of MAN 1 Kuningan using the problem-based learning model, it was concluded that the pretest results of the forward roll floor gymnastics movement ability before being given treatment using the problem-based learning model, the average score of students

was 59.2, thus the ability of the front roll floor gymnastics movement before using the problem-based learning model was included in the "poor" category. Meanwhile, the posttest results of the front roll floor gymnastics movement ability after being given treatment using the problem-based learning model, the average score of students was 83.3, thus the ability of the front roll floor gymnastics movement after using the problem-based learning model was included in the "good" category. The use of the problem-based learning model has proven to be quite effective in improving the ability of the front roll floor gymnastics movement compared to conventional learning. This is evidenced by the results of the N-gain test score of 0.6275 which is categorized as "moderate" while in the N-gain form the obtained score was 62.75 which is categorized as "quite effective".

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