Journal Physical Health Recreation (JPHR)
Volume 6 Nomor 1 ; November 2025
https://jurnal.stokbinaguna.ac.id/index.php/JPHR
e-ISSN : 2747- 013X

The Effect Of Part And Whole Learning Model On Increasing Self Confidence In Learning Backward Roll Floor Gymnastics Of Students Of Class VII SMPN 4 Karawang Barat

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Abstract. The purpose of this study is to ascertain how the Part and Whole learning model affects students' self-confidence when learning floor exercises, particularly the backward roll method. The primary problem discussed is how students' lack of confidence in their ability to do floor exercise exercises, especially female students, impedes the efficacy of physical education instruction. This study employs a one-group pretest-posttest design, a quasi-experimental method, and a quantitative methodology. Purposive sampling was used to choose 40 students from SMP Negeri 4 Karawang Barat's class VII C to participate. A self-confidence questionnaire spanning four primary dimensions—self-belief, perseverance, hope, and social relationships—was used as the research tool. The average self-confidence score increased from 128.70 on the pretest to 136.90 on the posttest, according to the data. The paired sample t-test data analysis revealed a significant difference between the pretest and posttest outcomes, with a significance value of 0.000 < 0.05. Therefore, it can be said that the Part and Whole learning approach significantly and favorably increases students' confidence in their ability to acquire the backward roll in floor gymnastics.

Keywords*:* Part and Whole Model, Self-Confidence, Backward Roll, Floor Gymnastics.

1 Introduction

Education is a continuous process of human growth. In order to give children the chance to participate directly in a variety of learning experiences through physical activities, physical education, sports, and health education programs taught in schools are essential. Physical education serves as a medium to foster physical growth, psychological development, motor skills, knowledge and reasoning, appreciation of values (attitudes, mental and emotional development, sportsmanship, spirituality, and social awareness), and the cultivation of healthy living habits (sudarsinah, 2021). One of the materials commonly encountered in physical

education is floor gymnastics. Gymnastics is a series of movements involving physical actions performed systematically according to certain principles. Floor gymnastics is an important part of the physical education curriculum as it helps meet students' movement needs (Mabrur et al., 2021).

However, in practice, many students still face obstacles in participating in floor gymnastics lessons due to low self-confidence. Self-confidence is an essential aspect of personality that supports learning success, especially in practical subjects such as gymnastics (Mulya & Lengkana, 2020). A lack of confidence causes students to hesitate in performing movements, fear failure, and even be unwilling to try, which ultimately results in suboptimal learning outcomes.

In physical education classes, floor gymnastics is typically taught using the Direct Instruction method, which is teacher-centered. This method limits students' opportunities to move freely and fails to adequately meet their need for physical activity. According to Fauzi Antoni & Sudarso (2019) in (Pranoto et al., n.d. : 2024) the backward roll is one of the basic movements in floor gymnastics. In physical education, students learn how to perform the backward roll properly. This movement is performed by rolling backward with the body curled up, legs bent, knees attached to the chest, and the head tucked in. Although this technique has been introduced since elementary school, many students still struggle with it, often due to a lack of self-confidence.

To overcome this issue, physical education teachers need to implement innovative and adaptive teaching models. One such model is the *Part and Whole* learning model, which emphasizes mastering each part of a movement separately before performing the entire sequence (Candra et al., 2021). The *Part and Whole* method involves comprehensive skill training that encompasses all components of the targeted skill. According to Harsono (2017:133) in (Yunita et al., 2018). this approach encourages students to practice the entire movement sequence from the beginning. This model allows students to understand and master each segment of the movement, thereby boosting their confidence and willingness to try.

Previous research by (Friyadi, 2023) has shown that the Part and Whole model can improve learning outcomes in physical education. However, studies examining the impact of this model on increasing self-confidence—particularly in performing the backward roll in floor gymnastics—are still limited. Therefore, this study aims to analyze the effect of the *Part and Whole* learning model on the improvement of self-confidence among seventh-grade students at SMP Negeri 4 Karawang Barat in learning floor gymnastics.

2 Method

The study "The Effect of the Part and Whole Learning Model on Increasing Self-Confidence in Learning the Backward Roll Floor Gymnastics among Seventh Grade Students at SMP Negeri 4 Karawang Barat" uses a quantitative technique based on the topic and goals of the investigation. A positivist-based research methodology is known as quantitative research. Research on certain populations or samples is done using this method, where sampling procedures are typically done at random. Predetermined research tools are used for data gathering, and quantitative or statistical data analysis is carried out to test the developed

hypotheses (Sugiyono, 2017). Statistical techniques are commonly employed in quantitative research to gather numerical data from the study being conducted (Aiman et al., 2022).

The research method is a scientific way used by researchers to collect data. In accordance with the title "The Effect of the Part and Whole Learning Model on Increasing Self-Confidence in Learning the Backward Roll Floor Gymnastics among Seventh Grade Students at SMP Negeri 4 Karawang Barat", this study employs a quasi-experimental method. According (Abraham & Supriyati, 2022) a quasi-experiment is a type of experimental research that involves treatment, measurement of outcomes or effects, and the involvement of experimental units, but does not include random assignment in the formation of comparison groups to draw conclusions about changes caused by the treatment.

This study uses a quasi-experimental method with a One-Group Pretest-Posttest Design. Sugiyono (2019:114) states that the one-group pretest-posttest design is a type of quasi-experimental design that involves only one group, in which measurements are taken before and after the treatment. There is no comparison (control) group, so any changes observed are assumed to result from the treatment administered.

Tabel 1. Skema Pretest Posttest
Source : (Kholifah et al., 2020)

Pretest	*Treatment*	*Posttest*
O_1	X	O_2

O_1 = Pre-test conducted before the treatment is given
X = Treatment
O_2 = Post-test conducted after the treatment is given

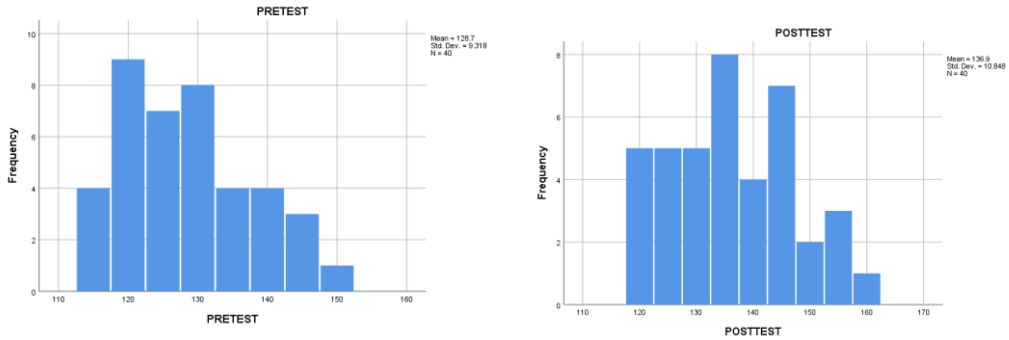
3 Result

1) Descriptive Statistic

In a research study, data management is a crucial and essential process. The self-confidence questionnaire data from students can be used to draw conclusions in this study, in accordance with the research problem, research questions, hypothesis, and research objectives. The data used for analysis consists of measurements taken before and after the treatment.

Tabel 2. Descriptive Statistic
Statistik Deskriptif *Self Confidence*
Source : Result of Data Processing Using SPSS 25 For Windows

Descriptive Statistics



Both figures present the measurement data. Students' self-confidence pre-test results indicate a mean score of 128.70, a standard deviation of 9.318, a minimum score of 115, and a maximum score of 150. The results of the post-test indicate a mean score of 136.90, a standard deviation of 10.848, a minimum score of 120, and a maximum score of 158.

2) Normality Test

The purpose of the normality test is to ascertain whether or not a dataset's distribution exhibits a normal distribution pattern. In order to do this, the current data is compared to a theoretical normal distribution with the same mean and standard deviation. Using the Shapiro-Wilk test findings in the Test of Normality table, the analysis was carried out using SPSS 25 for Windows. The normalcy test results from the SPSS 25 computation are shown in the following.

Table 2. Normality Test Results
Source: Processed Data Output from SPSS 25 for Windows
Test of Normality

	Shapiro-Wilk		
	Statistic	Df	Sig.
Pretest	.956	40	.123
Posttest	.958	40	.139

Here is the English translation with proper academic wording:
Decision Rule:
1. The data is regularly distributed if the significance value is greater than 0.05.
2. The data are not normally distributed if the significance level is less than 0.05.

According to the Shapiro-Wilk test results, the data are normally distributed because the significance values for the pre-test and post-test are 0.123 (> 0.05) and 0.139 (> 0.05), respectively. Consequently, it may be said that the pre-test and post-test data follow a normal distribution.

3) Homogeneity Test

To ascertain if the variances of many populations are equivalent or different, the homogeneity test is employed. Here is the decision rule: The variances of two or more data groups are homogenous (equal) if the significance value is greater than 0.05. On the other hand, the group variances are regarded as non-homogeneous (different) if the significance value is less than 0.05.

This is particularly observed in the Test of Homogeneity of Variances, specifically in the Based on Mean section of the SPSS 25 for Windows output, as shown below:

Table 3. Hasil Uji Homogenitas
Sumber : Hasil Pengolahan Data Komputer *SPSS 25 For Windows*

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Self Confidence	Based on Mean	1.346	1	78	.250
	Based on Median	.873	1	78	.353
	Based on Median and with adjusted df	.873	1	76.358	.353
	Based on trimmed mean	1.323	1	78	.254

A significant value of 0.250 was found for the pretest and posttest data of students' self-confidence based on the findings of the homogeneity test using SPSS under the Based on Mean section. It can be inferred that the variation between the samples is homogeneous as this value is higher than 0.05.

4) Paired Sample T-test

Hypothesis testing comes after fulfilling the prerequisites for the homogeneity and normality tests. The Paired Sample T-evaluate was used to evaluate the hypothesis based on the satisfaction of these requirements. This test's goal is to ascertain whether the conditions prior to and following the therapy differ significantly. The IBM SPSS Version 25 for Windows program was used by the researcher for this data analysis. The paired sample t-test calculation results are shown in Table 4.

Table 4. Paired Sample T-Test Results
Source: Processed Data Output from SPSS 25 for Windows.
Paired Sample T-Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	PRETEST - POSTTEST	-8.200	7.342	1.161	-10.548	-5.852	-7.063	39	.000

The paired sample t-test results showed that the significance value was 0.000. The Part and Whole learning approach significantly improved students' self-confidence between the pretest and posttest, as indicated by the sig. (2-tailed) value being less than 0.005.
Thus, it can be said that teaching seventh-grade students at SMP Negeri 4 Karawang Barat the Part and Whole model significantly boosts their confidence in their ability to perform backward roll floor gymnastics.

4 Discussion

The results of this study indicate that the implementation of the Part and Whole learning model had a positive impact on increasing students' self-confidence in learning backward rolls in floor gymnastics. Descriptively, the average self-confidence score increased from 128.70 (pretest) to 136.90 (posttest), representing an increase of 8.2 points. Inferential testing using a paired sample

t-test confirmed this finding (t = -7.063; p = 0.000), indicating a significant difference between before and after the treatment. This finding is relevant to the initial research problem, namely the low self-confidence of students (especially female students) when performing floor gymnastics movements, which impacts the effectiveness of Physical Education (PJOK) learning.

Theoretically, this increase in self-confidence can be explained through the mechanism of "mastery experience," which is the most powerful source of self-efficacy/confidence according to Bandura's theory. When students repeatedly successfully complete simpler parts of a movement, their "I can do it" belief increases, anxiety decreases, and their readiness to attempt the whole movement sequence increases. In the challenging context of backflips (involving flips, body coordination, and perceived fall risk), the part practice approach allows students to gradually build motor control, thus increasing safety and confidence before moving on to full sequence practice.

From a motor learning perspective, “part versus whole” practice is recognized as an important principle, chosen according to skill complexity. For complex skills or those with difficult parts, part practice can help master key components (e.g., chin position, back rounding, hand placement, hand thrust, and hip transition) before combining them into a complete movement. This part/whole principle also appears as one of the motor learning principles frequently discussed in systematic reviews of motor learning.

Furthermore, increased confidence may also be influenced by the quality of instruction/feedback during practice. Studies on backflip learning have shown that variations in verbal information/feedback can influence the effectiveness of backflip learning.

When Part and Whole is implemented with clear demonstrations, targeted feedback, and positive reinforcement, students' confidence is not only improved technical proficiency but also strengthened.

The findings of this study are consistent with the literature stating that the Part and Whole model supports the learning process of motor skills through gradual mastery. In the introduction, the manuscript emphasized that Part and Whole emphasizes mastery of movement parts before executing the complete sequence so that students understand and are better prepared to perform the complete movement.

At a broader theoretical level, the Optimal theory of motor learning explains that training conditions that increase motivation (expectancies/self-efficacy), support autonomy, and appropriate attentional focus will strengthen motor learning. Meta-analyses also demonstrate the superiority of external focus of attention over internal focus in motor learning. Although your study did not explicitly test “attentional focus,” Part and Whole can be combined with instructions that encourage focus on the effects of movement (e.g., “push off the mat with your hands until your hips lift”) and feedback on successful trials—practices that, according to Optimal theory, have the potential to contribute to increased self-efficacy and performance.

5 Conclusion

In order to provide reliable and meaningful results, this study intends to ascertain the degree to which the Part and Whole learning model influences the enhancement of students' self-confidence in learning the backward roll in floor gymnastics for seventh-grade students at SMPN 4 Karawang Barat. Eight meetings were held to conduct the study. The research sample was given a preliminary measurement (pre-test) during the first meeting. Students received treatment using the Part and Whole learning paradigm as an intervention during the learning

process from the second to the seventh meeting. To find out if the Part and Whole approach could boost students' confidence in their ability to learn the backward roll, the researcher administered a post-test during the last meeting.

According to the study's findings, learning backward roll floor gymnastics improved when the Part and Whole learning approach was applied over the course of eight sessions. The pre-test mean score was 128.70, and the post-test mean score was 136.90. The descriptive statistical computations indicate that the pre-test and post-test averages were significantly higher by 8.2 points.

The pre-test and post-test data were both found to be normally distributed after the normality test. The homogeneity test, which showed that the data were homogeneous, was the subsequent stage of data processing.

Additionally, a significant difference between the pre-test and post-test data was shown by the paired sample t-test calculation, which yielded a significance value of 0.000, where sig. (2-tailed) < 0.05. This indicates that there was a substantial difference between the average score prior to and following the treatment. The average score prior to treatment was lower than the average score following treatment, as indicated by the t-table's computed t-value of -7.063.

It is clear from the data analysis and hypothesis testing that the Part and Whole learning model significantly increases seventh-grade pupils at SMP Negeri 4 Karawang Barat's confidence in their ability to learn the backward roll in floor gymnastics. It is therefore anticipated that teachers would be able to use the study's findings as a guide to help students advance their skills and make valuable contributions to the larger community.

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