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EDITED BY

Assoc. Prof. Dr. Zukifli, M. Pd
Universitas Islam Riau

*CORRESPONDENCE
Zainal Arifin
✉ zai_inal@yahoo.co.id

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Audiovisual-Based Learning for the Shoulder Stand Movement in Floor Gymnastics: An Implementation Study

Rio Wardhani¹, Zainal Arifin^{1*}, Ade Rahmat¹

¹Universitas PRGI, Pontianak, Indonesia.

ABSTRACT

Purpose of the study: The creativity of teachers in delivering Physical Education learning materials plays a crucial role in ensuring that students receive engaging and varied instruction, which in turn fosters their learning motivation. The primary objective of this study is to examine the effectiveness of using audiovisual media in teaching the shoulder stand movement within floor gymnastics. Furthermore, this study aims to assist students in mastering proper techniques, improving movement accuracy, and enhancing their learning motivation through the implementation of audiovisual-based learning media.

Materials and methods: This study employed a quasi-experimental method using a pretest-posttest one-group design. Data analysis was conducted through descriptive statistical techniques, providing an overview of the results based on the mean, standard deviation, as well as the highest and lowest scores. These statistical measures were used to describe the students' initial and final abilities in performing the shoulder stand movement.

Results: During the pretest process, the students' mean score was 67.19, categorized as fair, while the posttest mean score was 82.67, categorized as good. The population standard deviation in the pretest was 9.71, which is considered relatively high, whereas in the posttest it was 6.33, categorized as relatively low. These results indicate that the use of audiovisual media proved to be effective in helping students achieve a more consistent and comprehensive understanding of the shoulder stand movement.

Conclusions: The use of audiovisual media in learning the shoulder stand movement within floor gymnastics has been proven to have a positive effect on students' learning outcomes. The increase in the mean score reflects an overall improvement in students' abilities, while the decrease in standard deviation indicates that the students' learning results became more uniform and consistent. Therefore, audiovisual media is effective as a learning aid to enhance students' understanding of movement techniques and their skills in performing the shoulder stand in floor gymnastics.

Keywords

audio visual learning; shoulder stand; floor gymnastics.

INTRODUCTION

Activities related to teaching and learning are among the most effective ways to carry out the educational process and achieve the expected outcomes. According (Muzakki et al., 2024) physical education is taught in schools as part of the curriculum and is essentially an important component of the overall educational program. In line with this, activities associated with teaching and learning serve as one of the best approaches to implementing the educational process and attaining the desired results (Jasni et al., 2020).

Floor gymnastics is a type of exercise that requires the entire body to move. (Muhammad & Setyaedhi, 2022) the movement that explains an integrated combination with the waist supported by both hands on the shoulders is known as the shoulder stand position. This movement involves an agility response, performed on a mat without the use of any apparatus. The sequence of movements requires dexterity, precision, balance, and agility (Prasetya, 2016).

In delivering learning materials, a teacher needs the ability to develop, adapt, and present the content in an engaging manner. A professional teacher is able to focus on mastering the learning process through enjoyable and effective material delivery strategies (Gusmiati & Sulastri, 2023). This creativity is essential because physical education learning not only requires physical activity but also takes place in the classroom, thus demanding a variety of approaches to keep students motivated. A creative teacher is able to design learning materials that are enjoyable, interactive, and easy to understand. Jainiyah et al., (2023) it is emphasized that a teacher's role during the teaching and learning process plays a crucial part in determining students learning outcomes.

Floor gymnastics is among the sports activities that tend to be less popular among students at school. The series of movements involved in floor gymnastics demand courage, flexibility, and precise technique (Irham et al., 2024). School-aged children often perceive floor gymnastics as less engaging, as they tend to prefer activities that involve elements of play rather than

(Peraturan Menteri Pendidikan, Kebudayaan, Riset, Dan Teknologi Republik Indonesia Nomor 67 Tahun 2024 Tentang Fasilitasi Terhadap Organisasi Profesi Guru, 2024) A regulation was issued to facilitate teacher professional organizations, one of which aims to achieve professionalism through the main duties of educating, teaching, guiding, directing, and evaluating, as well as enhancing competence and upholding the values of religion, culture, science, and technology. This statement indicates that educators, including physical education teachers, must demonstrate innovation in the delivery of learning materials. Innovative teaching methods can indirectly create enjoyable and interactive learning experiences (Wicaksana et al., 2025).

Many teachers in remote areas still face limitations in implementing innovative teaching methods, such as the use of audio-visual media. The command style is among the most frequently observed teaching approaches. Consequently, students tend to feel bored during physical education classes, as they experience a lack of freedom and are required to follow a single, teacher-centered direction. Putri & Binawati, (2024) This indicates that ineffective learning often results from inefficient delivery of information, leading students to lose interest in the subject matter. However, through innovations such as the use of audio-visual media, students' motivation and enthusiasm to engage in the learning process can be significantly improved.

MATERIALS AND METHODS

Participants

The research subjects consisted of 27 active students from Grade X at SMAS Karya Budi Putussibau. This study was conducted in alignment with the school curriculum implemented in Grade X, by providing a treatment using audiovisual media in the learning of the shoulder stand movement.

Study Organization

The research would be more optimal if the method used aligns with the problem being investigated. This study employed a quantitative approach aimed at determining the effectiveness of using audiovisual media on students ability to learn the shoulder stand movement. The research design used was a quasi-experimental design with a pretest-posttest one-group design. This method was chosen to observe students skills before and after being given treatment using audiovisual media. The data collection techniques included: (1) direct observation of the testees ability to perform the shoulder stand movement during both the pretest and posttest; and (2) systematic assessment based on predetermined evaluation indicators. Therefore, this study used descriptive statistical analysis to provide a general overview of the data through the mean, standard deviation, and the highest and lowest scores, which describe the students' initial and final performance in executing the shoulder stand movement. The data collection instruments consisted of the following indicators: (1) initial and final position, (2) balance during the shoulder stand, (3) alignment of the legs and body while in the shoulder stand position, (4) smoothness of the transition from lying down to the shoulder stand position, and (5) students independence and confidence when performing the movement. Each indicator was assessed using a 1–5 rating scale.

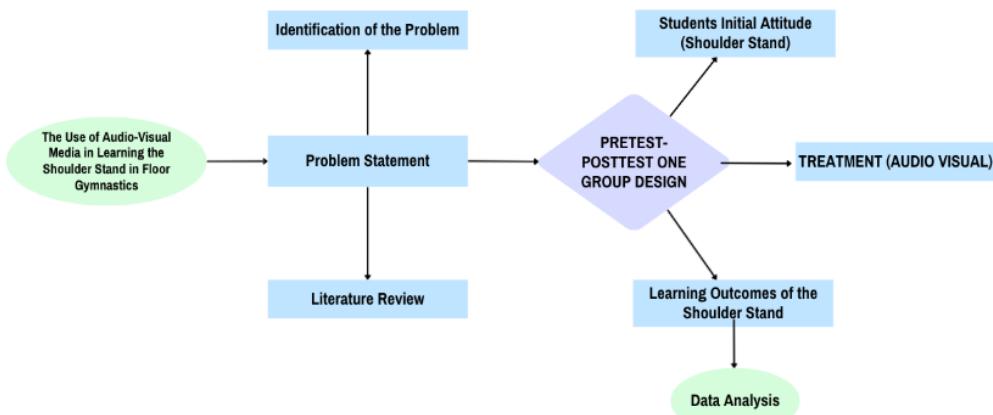


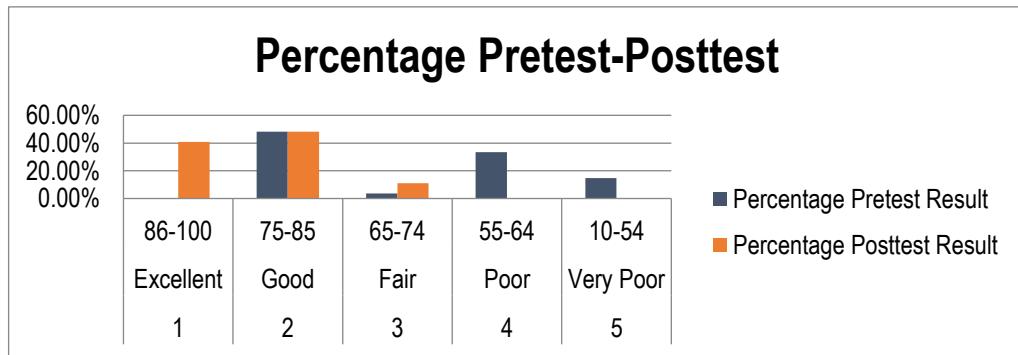
Figure 1. Research Flowchart

RESULTS

The study was conducted at SMAS Karya Budi Putussibau, involving a population of 27 active students from Grade X. The results of the research describe the students ability levels in performing the shoulder stand movement based on the data collected from the research site. The data are presented in the form of percentages, tables, diagrams, and score rankings. The following section provides a detailed description of the research findings:

Table 1. Percentage Value Pretest-Posttest

No	Category	Interval Value	Percentage	
			Pretest Result	Posttest Result
1	Excellent	86-100	0,00%	40,74%
2	Good	75-85	48,15%	48,15%
3	Fair	65-74	3,70%	11,11%
4	Poor	55-64	33,33%	0,00%
5	Very Poor	10-54	14,81%	0,00%
		Total	100%	100%



Picture 2. Pre-test and Post-test Results Chart

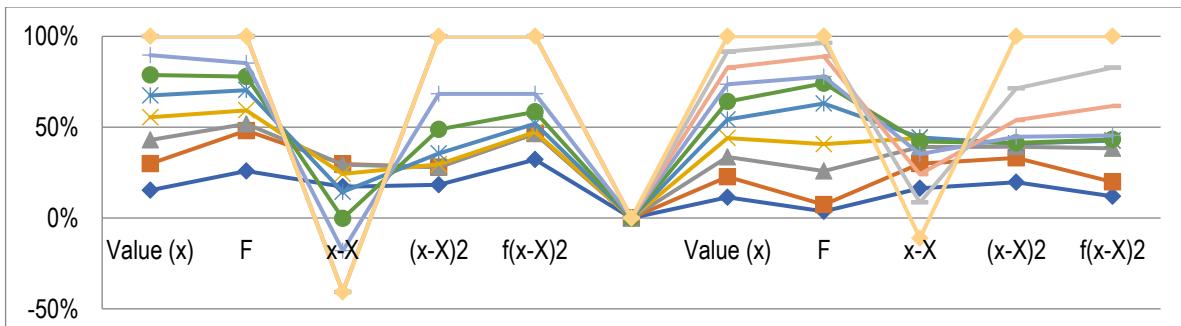
Table 1 and Figure 2 present data from 27 students who participated in the study. During the pretest stage, 0 students (0.00%) were categorized as excellent, 13 students (48.15%) as good, 1 student (3.70%) as fair, 9 students (33.33%) as poor, and 4 students (14.81%) as very poor. After being given treatment through audiovisual media that demonstrated understanding and the basic techniques of performing the shoulder stand, an improvement was observed in the posttest stage. Out of 27 students, 11 students (40.74%) were categorized as excellent, 13 students (48.15%) as good, 3 students (11.11%) as fair, and no students (0.00%) were categorized as poor or very poor. After identifying the mean scores and the proportion of students who showed improvement, the calculation of the standard deviation was carried out. The results are presented in the following tables and diagrams:

Table 2. Pretest and Posttest Squared Deviation

Pretest				Posttest			
Value (X)	f	X - X̄	(X - X̄)²	Value (X)	f	X - X̄	(X - X̄)²
78	7	10,81	116,90	94	1	11,33	128,40
75	6	7,81	61,00	92	1	9,33	87,10
67	1	-0,19	0,04	89	5	6,33	40,10
64	2	-3,19	10,20	86	4	3,33	11,10
61	3	-6,19	38,30	83	6	0,33	0,11
58	2	-9,19	84,50	81	3	-1,67	2,78
56	2	-11,19	125,20	78	1	-4,67	21,80
53	4	-14,19	201,40	75	3	-7,67	58,80
				72	2	-10,67	113,80
				69	1	-13,67	227,60
							186,80
							186,80

Table 3. Summary

Statistik	Pretest		Posttest	
	$\sum f(X - X̄)^2$	SD Population	2544,64	9,71
			1081,00	6,33



Picture 3. Comparison of Standard Deviation between Pre-Test and Post-Test

Based on the results of the descriptive analysis, Table 2 and Figure 3 show the calculation of the standard deviation and the mean scores of students in the pretest and posttest. It can be seen that the students' mean score increased from 67.19 to 82.67, while the standard deviation decreased from 9.71 to 6.33. The increase in the mean score indicates an improvement in learning outcomes, whereas the decrease in the standard deviation suggests that students' abilities became more homogeneous after the treatment was applied. Therefore, the use of audiovisual media proved to be effective in helping students understand the shoulder stand movement more thoroughly and evenly.

DISCUSSION

Floor gymnastics is one of the disciplines in physical education that focuses on developing students motor skills, balance, strength, flexibility, and confidence. Among the various movements, the shoulder stand is a fundamental skill that requires good coordination and body control. However, many students face difficulties in mastering this movement due to limited technical ability and a lack of self-confidence. In addition, the lack of variation or ineffective instructional methods from external factors, such as the

teachers delivery approach, also significantly affects the teaching and learning process. Therefore, a learning model that supports independent and repetitive practice is needed, in which audiovisual media serves as a potential solution that can be accessed anytime and helps students understand the technique step by step. The research results show an increase in the students mean score from 67.19 to 82.67, along with a decrease in the standard deviation from 9.71 to 6.33 among 27 students.

Speaking of media refers to something that can be seen and heard by the senses, thereby enhancing the quality of education. [Mubarok et al., \(2021\)](#) explaining the importance of audiovisual media is highly relevant in today's educational context, as it utilizes technological advancements that greatly assist teachers in delivering material during the teaching and learning process. Audiovisual media also helps students better understand the material through visualization, which makes learning more engaging and concrete. Furthermore, it supports teachers in presenting the content more effectively. However, some teachers still rely solely on textbooks without making use of audiovisual teaching aids ([Moneta & Kristiyandaru, 2022](#)). This has become a major obstacle for physical education teachers who do not utilize technology in the learning process. Through instructional videos, it is expected that students will be more receptive to and interested in the learning materials being presented ([Norma, 2021](#)).

Gymnastics is a physical exercise that is deliberately designed, systematically arranged, and consciously performed with the aim of shaping and developing an individual's personality in a harmonious manner. [Mikel & Ismaya, 2023](#) Floor gymnastics refers to movement skills performed on a flat surface or mat without the use of equipment. The movements in gymnastics are considered ideal when performed in well-coordinated sequences that involve physical components and motor skills. Floor gymnastics serves as a systematic form of physical exercise that includes selected movements and develops various physical aspects such as strength, speed, balance, flexibility, agility, and accuracy ([Sihab et al., 2023](#)). Floor gymnastics learning is always included in school physical education lessons. The basic movements taught include: (1) forward roll, (2) backward roll, (3) cartwheel, (4) bridge, (5) shoulder stand, (6) headstand, (7) handstand, and (8) tiger jump. Learning activities in this area are highly diverse, therefore, several types of floor gymnastics movements need to be taught and practiced ([Fadillah et al., 2021](#)).

Behavioral changes that occur as a result of the learning process represent learning outcomes. Learning outcomes are the results achieved by students after they have undergone learning experiences ([Andri et al., 2023](#)). The learning process must actively involve students in education. The most fundamental task in school-based education is the learning activity itself. This implies that the learning process experienced by students in school has a significant impact on their academic success. ([Telaumbanua & Harefa, 2024](#)) The objectives of learning depend on the learning process experienced by the students. Although opinions among education experts may vary, they essentially share the same underlying idea and goal. In the learning process, there are two essential components: the learning process itself and the learning outcomes ([Dindardiya & U.S, 2024](#)).

The shoulder stand is a component of floor gymnastics that aims to develop students core muscle strength, balance, and body control. This movement requires coordination skills, flexibility, and confidence to maintain a stable body position. In the learning process of the shoulder stand, students are guided through systematic stages of movement, starting from warm-up exercises, strengthening of the abdominal and back muscles, to mastering the techniques of support and balance. Teacher demonstrations, the use of learning media such as videos or sequential movement images, and repetitive practice are common approaches employed in instruction. Moreover, aspects of safety and confidence are emphasized, as students often face psychological barriers such as fear of falling or injury when attempting the movement. To achieve an effective and efficient learning process, reciprocal interaction between students and teachers is essential in creating an educational environment that enhances students learning outcomes ([Wibisono & Guntur, 2025](#)).

CONCLUSION

Based on the research findings, the use of audiovisual media in learning the shoulder stand movement within floor gymnastics has been proven to have a positive effect on students learning outcomes. This is evidenced by an increase in the mean score from 67.19 in the pretest to 82.67 in the posttest, along with a decrease in the standard deviation from 9.71 to 6.33. The increase in the mean score reflects an overall improvement in students abilities, while the decrease in the standard deviation indicates that students learning outcomes became more uniform and consistent. Therefore, audiovisual media is effectively used as an instructional tool to enhance students understanding of movement techniques and their skills in performing the shoulder stand in floor gymnastics.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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