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Improving Basic Cartwheel Movements Through Rubber Rope Media at Elementary School CIBOGO

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Abstract

This research was conducted based on the problem of many students at elementary school CIBOGO who have not mastered the basic movements of floor gymnastics cartwheels, this research attempts to apply learning that can foster students' interest and self-confidence in learning floor gymnastics cartwheels, the method used is to apply floor gymnastics cartwheel learning through rubber rope media. This research is a classroom action research with the research subjects of grade IV students of elementary school CIBOGO. The results of the study showed an increase in student learning outcomes after the implementation of learning through the rubber media from cycle I to cycle II. The results after implementing cycles I and II showed that student scores increased from the initial number of students who had completed only 17 students or 53.12% with the lowest score of 67.5. increased significantly to 28 students or around 87.5% of students who completed. And students who had not completed were 4 students or 12.5%. So it can be concluded that the method of learning floor gymnastics cartwheels through rubber rope media can improve student learning outcomes in learning physical education, health and sports, material floor gymnastics cartwheels.

How to Cite

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INTRODUCTION

Learning floor gymnastics cartwheels is a floor gymnastics movement that requires good coordination between hand and foot movements to produce perfect movements.(Iyakrus et al., 2022). However, based on recommendations and observations made by students who are teachers at elementary school CIBOGO, it shows that at the school there is a lack of mastery of basic cartwheel movements, which can result in injury when doing the movement.(Fatekhah 2024). To overcome this, researchers here use media in the form of rubber ropes to help form the student's body structure in doing the appropriate cartwheel movement. By stretching the rubber rope sideways with a height that can be adjusted to the student, students can learn gradually.(Oksyalia 2018). rubber rope is chosen as a medium because of its elastic nature when used to form movements, in addition to facilitating the formation of students' body structures, this media can also attract students' interest because the use of inner tube rubber is something new that makes students curious to try it. Therefore, research on improving basic cartwheel movements using rubber rope media is important considering that the media used can facilitate basic movements in cartwheel floor gymnastics in order to achieve a learning goal and materials that are easy to obtain(Iyakrus 2022)And it is hoped that this research can be a reference for physical education teachers in developing more effective and enjoyable teaching strategies for students.(Nadzifah et al., 2024). Thus, students can be more motivated and enthusiastic in participating in floor gymnastics activities, which will ultimately have a positive impact on their physical development and health.(Danuarta, 2024).

Research conducted by(Murtaqi 2018) from Universitas PGRI Banyuwangi researched on Efforts to Improve Learning Outcomes of Cartwheel Movements in Floor Gymnastics Through Gymnastic Ball Media, This research is a Classroom Action Research (CAR), This research was conducted with 24 subjects of class VIII students. The design of this research uses a cycle system containing planning, implementation of actions, observation, and reflection. The assessment instruments used in the study were the cartwheel movement assessment rubric (psychomotor aspect), CAR observation sheet (affective aspect) and cognitive aspect sheet. The results of this study showed an increase in learning outcomes from the subjects of 24 students by 5.3%. Then the research conducted by(Key, 2024)entitled review of the implementation of audio-visual media in learning floor gymnastics cartwheels, This research is included in the type of quantitative descriptive research with data collection techniques using closed questionnaires (structured), this study obtained results that showed that audio-visual media was effective in improving students' understanding and skills. Students find it easier to understand complex instructions and movements. Further research conducted by(Iii & Research, 2016)with the title of using rubber aids to improve cartwheel ability, The method used by the author in this study is the Classroom Action Research (CAR) method. In this study it can be concluded that the use of rubber aids can improve cartwheel ability in floor gymnastics learning. The next study conducted by(Tresnowati et al., 2021)with the title of correlation of arm muscle strength and leg muscle power with floor gymnastics skills, this study was conducted using quantitative methods with samples in this study were 21 active students of the physical education study program at the University of Muhammadiyah Pekalongan. With data collection techniques using one group pre-test post-test, the conclusion of this study shows that arm muscle strength and leg muscle power are positively correlated with cartwheel movement skills.

Responding to previous research, such as research conducted by(Murtaqi et al., 2018)The research only discusses how to improve learning outcomes using media in learning, but has not focused on media as a learning support to make learning effective and enjoyable. Furthermore, research conducted by(Key, 2024)which examines the implementation of audio-visual media in learning floor gymnastics cartwheels, in other words this study only discusses the application of media in learning with technology created to help students learn, not referring to the basic movements of learning floor gymnastics cartwheels itself. The research conducted(Iii & Research, 2016)Regarding the use of rubber aids to improve cartwheeling ability, rubber aids are mentioned here but it has not been explained in detail what kind of rubber to use and how to apply it. The last one is research from(Tresnowati et al., 2021) about the correlation of arm muscle strength and leg muscle power with floor gymnastics skills, here the researcher only focuses on the relationship between muscle strength and floor gymnastics skills and also has not detailed what type of floor gymnastics is meant. This study intends to answer the research question, about how influential the rubber rope media is in improving the basic movements of floor gymnastics cartwheels.

This study aims to answer the main question: Can the use of rubber rope media improve students' learning outcomes in basic floor gymnastics cartwheel movements?

Through this question, the study attempts to examine the effectiveness of rubber rope media as a visual and kinesthetic aid in the floor gymnastics learning process. The main focus is on improving motor skills, understanding of movement techniques, and students' self-confidence. The results of this study are expected to contribute to the development of more innovative and applicable learning strategies in physical education in elementary schools. And this study offers a new approach in learning floor gymnastics by utilizing rubber rope media as a visual, kinesthetic, and contextual aid that has not been the main focus in similar studies, especially in cartwheel movements at elementary school level.

METHODS

This research uses a mixed qualitative and quantitative method with a Classroom Action Research (CAR) design,(Leony Sanga Lamsari, 2019)states that CAR is an action research whose implementation can be seen, felt, and experienced, then the question arises whether the learning practices that have been carried out so far have high effectiveness. If with this analysis it can be concluded that certain learning practices such as: giving homework to students in class are not able to stimulate students to think and vice versa, then certain actions can be tentatively formulated to improve the situation through the CAR procedure.(Utomo et al., 2024).

Table 1. Participant Demographic Data

	Frequency	%
Gender		
Man	18	56.25
Woman	14	43.75
Age		
10 years	22	68.75
11 years old	7	21.87
12 years old	3	9.37
Mark		
Less than 7.5	19	59.37
7.5 to 8.0	10	31.25
8.0 and above	3	9.37

Flowchart learning Android-based mobile applications (Beno et al., 2022).

This research was conducted at elementary school CIBOGO in Physical Education learning, with the research subjects being 32 fourth grade students, consisting of 18 males and 14 females with their respective expertise and skills in each learning, seen from the observations and recommendations of KAMJAR (Teaching Campus) students who were on duty at the school during physical education learning, especially on the cartwheel floor gymnastics material.

The data collection technique used in qualitative research is a questionnaire or survey by providing a series of written questions to respondents to obtain accurate, objective and systematic information about research variables.(Sukendra & Atmaja, nd), thus allowing researchers to analyze and interpret data statistically, and obtain valid conclusions. In addition, in quantitative research, data collection is generally carried out through observation and documentation techniques, which allow researchers to collect accurate information about what is being studied.(Wahidmurni, 2017), thus strengthening the validity and reliability of research results.

In this study, data collection was carried out using several instruments designed to measure various aspects of the learning process. (Education & Semarang, 2015). First, Teacher Performance Assessment Instrument 1 is used as a tool to measure teachers' ability in planning learning. This instrument aims to see to what extent teachers can design effective learning that is in accordance with students' needs. Second, there is Teacher Performance Assessment Instrument 2, which is used to assess to what extent teachers can implement the learning plan that has been prepared. By using Teacher Performance Assessment Instrument 2, we can measure how well the implementation of learning in the classroom is in accordance with the planning that has been made. In addition, there is a student activity sheet, which functions to observe and record student involvement during the learning process. (Jurnal et al., 2016). This sheet specifically focuses on several important aspects, such as discipline, sportsmanship, and cooperation between students. Student activities during learning are very important to find out how active and involved they are in learning activities. Finally, there is an assessment sheet, which contains predetermined assessment criteria. In this assessment sheet, teachers will assess various aspects with a rating scale ranging from 1 to 4. This scale helps teachers provide a more objective assessment of student achievement in various dimensions of learning, including cognitive, affective, and psychomotor

aspects. By using these instruments as a whole, this study aims to obtain a more comprehensive picture of the quality of learning applied in the classroom, both in terms of planning, implementation, and student involvement.

The collected data will be analyzed using the SPSS application. First, a normality test is carried out to determine whether the data is normally distributed. If the data is normal, then a parametric statistical test will be used(Homogeneity & Test, 2020), such as the t-test. However, if the data is not normal, a non-parametric statistical test will be used, such as the Wilcoxon test. Furthermore, a linearity test is conducted to determine whether there is a significant relationship between the use of rubber rope aids and increased cartwheel skills. A simple linear regression test will also be used to see how much influence the rubber rope has on improving basic cartwheel skills. Finally, a significance test will be conducted to determine whether the results obtained are significant or not.

The validity and reliability of the instrument used to measure students' basic cartwheel movement skills is content validity.(Widyastuti, 2021), ensuring that the measuring instrument covers all aspects needed to measure cartwheel skills appropriately, while construct validity ensures that the use of rubber rope aids actually has an impact on improving these skills. To test reliability, this study used an inter-rater reliability test, which measures the consistency of assessments between different observers.(Ardiansyah et al., 2023), and test-retest reliability, which tests the consistency of measurement results at different times. By ensuring these two aspects, this study can guarantee that the data obtained is accurate and reliable to analyze the effect of rubber rope aids on students' basic cartwheel movement skills.

RESULTS AND DISCUSSION

This research was conducted in the 2024/2025 school year and the subjects used were fourth grade students of elementary school CIBOGO with 32 students in one class. The collaborators in this study were two people, namely Ahmad Fariz and Yana, who are teachers in physical education learning. The legality of these collaborators is proven by the level of education that is in accordance with the field they are engaged in, as well as quite a long teaching experience. The research lasted for three cycles which were preceded by the first action in the form of analyzing initial abilities (pre-test), and it was found that many students' scores had not reached the minimum completion criteria or were below average. Then continued by starting the cycle using the results of the scores that had been seen to have increased in the initial cycle, although not significantly(Rahmawati et al., 2023).

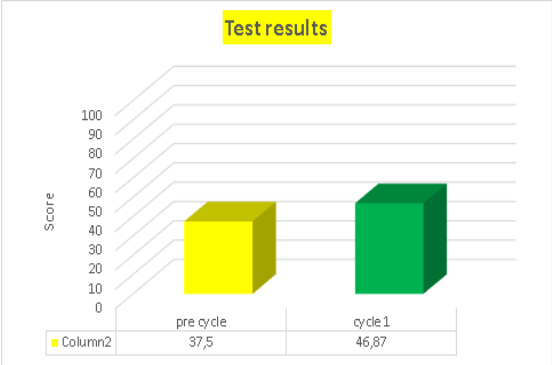
First Cycle

ResultsReflection shows that students have begun to master the skill of cartwheeling, but not optimally. During the learning process, there were still some children who were still hesitant to put their hands down when passing the rope, so they only jumped over the rope. After conducting a test at the end of cycle 1, it was concluded that there was an increase in cartwheel skills in the learning process.

Table 2. Test result

Aspect	Before action	After Action cycle 1
Number of students	32 students	32 students
Students complete	12 students (37.5)	15 students (46.87)
Students have not finished	20 students (62.5)	17 students (53.12)
Lowest value	57.5	67.5
(Minimum Completion Criteria)	75	75

Graduation chart



From the results of the discussion, it was decided to add several variations of learning with rope media and it was decided to continue the second cycle and a learning design was needed in the next cycle, to improve cartwheel skills and improve student learning outcomes in cartwheel floor gymnastics skills to 80% graduation.

Second Cycle

In the second cycle reflection by implementing the evaluation from the previous cycle, it

is known that there has been an increase in skills and courage from students in the core learning activities. There was even a student's statement, "Wow, it's fun to learn cartwheels through rope games," strengthening religious character values in this study is also no less important by implementing prayer before, during, and after learning in this way, it is hoped that it will improve good character in children.(Saepudin et al., 2023). The majority of students seemed happy during the learning process and the percentage of students seemed able to do cartwheels well. So that the learning objectives can be achieved well, compared to before being given action. Students' opinions during the cartwheel skills education learning process, students who stated that they were active were more than 90%, students who stated that they were creative were 90%, students who stated that they were brave were more than 95%, and students who stated that they were happy were almost 99%. This shows that students are very enthusiastic and have high spirits and have good expectations about the implementation of cartwheel skills physical education learning through rope games. Students who are happy with this learning process, the main reason is because the teacher teaches in a varied way, not boring. Then the teacher teaches the material clearly and enjoyably(Yulianingsih & Lumban Gaol, 2019). The subject matter is fun and full of games. The next reason for students is that learning is fun, teachers are fun, unique, teachers teach clearly, and the games played are different from usual. After the end of the learning, a cartwheel ability test was carried out and it turned out that many students were able to do it well so that the score could reach above the minimum completion criteria and reach the completion limit.

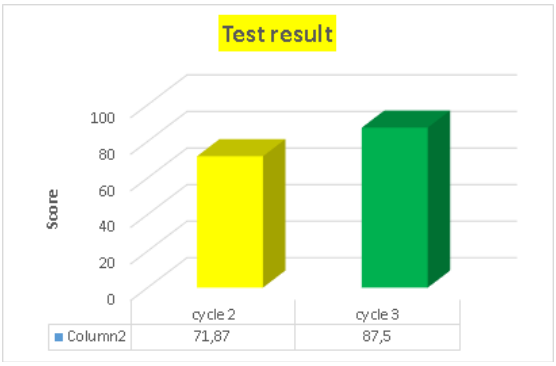
Thus, it is concluded that learning shows an increase in cartwheel skills, namely an increase from cycle one, namely students who have completed as many as 17 students or 53.12% and those who have not completed are as many as 15 students or 46.87% with the lowest score of 67.5. And after the second cycle of action, children who get a score of 75 and above or reach the minimum completion criteria became 23 students or if the percentage is 71.87% and students who have not reached the minimum completion criteria amounted to 9 students or 28.12%. So that in the second cycle it cannot be considered complete because it has not reached the specified target, namely achieving 80% completeness. And from the results of observations before the action obtained by collaborator observations and notes from researchers, it shows that there are still some students who have not participated actively, especially female students who do not like cartwheels. Learning has also not been able to improve students' skills and creativity as a whole to eliminate boredom, fear and new ways (finding new things) in learning(Rohayani, 2020). Only some students asked and some students had not done their best. But when given an explanation of how to do cartwheels with rope games, curiosity arose from the students and most of them seemed enthusiastic to continue learning. And made the spirit of students who had previously felt bored finally rise to try. So this research was continued to the next cycle, namely the third cycle to get the results desired by the researcher.

The Third Cycle

Table 3. Test result

Aspect	Cycle 2	Cycle 3
Number of students	32 students	32 students
Students complete	23 students (71.87)	28 students (87.5)
Students have not finished	9 students (28.12)	4 students (12.5)
Lowest value	65.5	79.5
Minimum Completion Criteria	75	75

Graduation chart



In this third cycle because the evaluation results in the second cycle were quite good so the researcher only adjusted a little from the obstacles that occurred in the second cycle by implementing competitive learning where the practices carried out were competed to encourage students to try their best. And after that was implemented, it got satisfactory results, namely from the previous cycle, students who achieved completion were 23 students or around 71.87%, now increasing to 28 students or around 87.5% of students who completed. And students who have not completed are

4 students or 12.5%. Thus, the researcher's goal is complete to improve basic floor gymnastics movements through rubber rope media in grade IV students of elementary school CIBOGO in physical education and sports learning.

From the results of field observations, several problems were found, including: (1) students' ability to practice floor gymnastics skills of cartwheels is still very low, this is also proven by the value of student learning outcomes in cartwheel skills, many of which are still below the minimum completion criteria, (2) students' courage in doing cartwheels is still very low because students are still afraid, lack confidence and are not used to doing the movement, (3) there are still many students who do not dare to do cartwheels because of a lack of knowledge about how to do the movement correctly. The teacher's learning model which lacks variation causes students to be uninterested in the learning, (4) basically the physical condition of students to do cartwheels is very good but because of the lack of knowledge in doing cartwheels, students feel afraid, lack confidence so that most of them feel unable to do cartwheel skills.

CONCLUSION

It can be concluded that the implementation of floor gymnastics learning through rubber rope media for fourth grade students at elementary school CIBOGO can improve students' basic movements effectively, as seen from the increase in student learning outcomes and the enthusiasm and enthusiasm of students during learning, although not immediately visible significantly, there is always an increase in each cycle, so the researcher decided to stop the research in the third cycle because the objective of this study has been achieved, namely by increasing up to 87.5% of student completion in basic floor gymnastics cartwheel movements, above the minimum completion criteria in physical education and sports learning.

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