Increasing the Results of Bullet Rejection Skills Using the Jigsaw Learning Method

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Abstract ←

This study aims to evaluate the impact of using the Jigsaw learning method in improving students' shot put skill outcomes. The Jigsaw method is applied in a classroom environment to facilitate group collaboration, where students are given the responsibility to learn a particular aspect of the shot put technique and then teach it to the rest of the group. The study involved observation of the learning process, evaluation of skill progress, and analysis of student responses using the PTK (class action research) method to students SMK Tamansiswa, Mojoagung, Kab. Jombang, with a total of 38 students. The results showed a significant improvement from the pre-cycle which was complete 5 students with 13.2%, incomplete 33 students and 86.8%. In cycle 1, 13 students with 34.2% were complete, while 25 students with 65.8% were incomplete. In cycle 2 100%, in students' in-depth understanding of the shot put technique, increased collaboration between students, and higher learning motivation. These results highlight the potential of the Jigsaw method as an effective approach in improving classroom skills in the sport of shot put. This study provides a foundation for further integration of collaborative learning methods in the context of teaching sport in schools.
Keywords: Skill Result, Shot Put, Jigsaw Learning Method

INTRODUCTION

The Jigsaw Method is a cooperative learning approach in which students work in small groups to learn specific material and then share their knowledge with other group members. Students as well as teachers have a higher level of achievement in topics taught through the Jigsaw method based on cooperative learning (Karacop, 2017). In the context of shot put skills, the application of the Jigsaw method could have interesting implications.

Cooperative learning of the Jigsaw strategy is attractive to teachers, because it seems easy to implement and follows a teaching structure (Cochon Drouet et al., 2023). The sport of shot put tests the strength to push a bullet as far as possible, namely pushing the bullet with just one hand, which also requires speed and body coordination to create maximum power when pushing (Mulyadi & Putra, 2020). Using this method, students will be able to work together to learn different aspects of shot put skills, such as basic techniques. Exploring the role of jigsaw models for teachers of content knowledge of pedagogical assessment (Halimah & Sukmayadi, 2019). Factors influencing results, or strategies to improve performance. The shot put technique consists of a standing throw followed by more technical skills with acceleration of the body and equipment using a sliding or rotation method followed by a "power" position and release (Orhan et al., 2021). After learning certain parts, they will then teach that information to the rest of the group.

The application of the Jigsaw method in learning shot put skills can improve collaborative skills by students learning to work together in small teams and appreciating the contribution of each member in understanding the topic as a whole. This method is cooperative learning in providing understanding of new material and skills (Kusuma, 2018). An important goal of cooperative learning is to teach students social skills, cooperation and collaboration (Wulandari & Jariono, 2022). By learning certain sections and teaching them to others, students can have a deeper understanding of shot put skills. The collaboration and communication required in the Jigsaw method can help students develop social skills. This type of learning model can increase student motivation and learning outcomes (Yani et al., 2022). Reduces competition between students because they depend on each other's information and contributions. The use of learning technology, namely the application of technology used more specifically, namely in the classroom environment (Irwanto, 2019). The results of applying the Jigsaw method to the results of shot put skills will depend on how the method is implemented in a specific learning context, how teaching is carried out, and how the response is. students towards this approach.

The purpose of applying the Jigsaw learning method to shot put skills can vary depending on the learning context and the needs of students at Tamansiswa Vocational School, Mojoagung, Jombang Regency. Shot put is the right method to provide for learning so that all students are mobile, active and have fun (Haryanto, 2022). Several

goals may be achieved through applying the Jigsaw method in learning, to improve students' technical skills in shot put, such as correct body position, effective throwing technique, and increasing strength and stability when throwing. Students are required to understand how to carry out movements from the beginning to the end of the basic shot put technique (Putratana & Hariyanto, 2022). Increased shot put learning is obtained by comparing the observation scores with the initial test before the action (Candra & Setiawan, 2020) Provides a broader and deeper understanding of various aspects of shot put skills, from basic techniques to factors that influence results.

The potential benefits of the jigsaw method on shot put skills include a holistic understanding of students in gaining a comprehensive understanding of shot put skills because they learn various aspects and parts of these skills. Gender influences learning outcomes when using the Jigsaw method (Amedu, 2015). This encourages good communication, teamwork, and appreciation for the contributions of each group member. Reducing the competitive pressure of learning and teaching each other, students feel more comfortable and open to learning new skills. To determine the effect of using appropriate methods in an effort to improve student learning outcomes (Erfiani & Neno, 2018). Learning materials use student encouragement to express opinions and manage information with the aim of directly improving communication skills from the material being taught (Schiff, 2019).

METHOD

The research method provided is Classroom Action Research (PTK) which is applied in learning so that the research method is collaborative action research carried out by researchers and teachers collaboratively with a total of 38 students at Tamansiswa Vocational School, Mojoagung, Jombang Regency. Apart from solving certain problems in the classroom, experienced directly by teachers and students, the aim of this PTK is to encourage the growth of academic culture and increase teacher professionalism. This research uses quantitative research conducted in a cycle format. Quantitative research begins with assessing the results of pre-cycle skills, then continues with providing treatment and assessing the results of cycle I skills. Next, the researcher collects data by taking notes while analyzing the data.
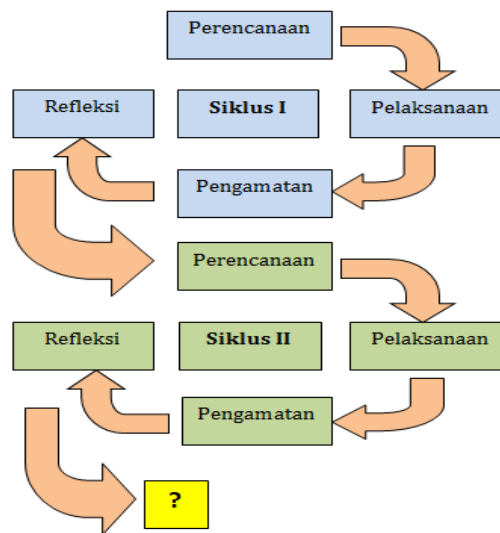
Figure 1. Scheme of Action Steps

The action steps taken in this research include: (1) Planning. (2) Implementation of Actions. (3) Observation. (4) Reflection. This research uses two cycles, each cycle consisting of 2 lessons. The first steps are as follows

1. *planning*

Planning is the initial stage of action or process where problems are formulated and programmed systematically to achieve goals in order to achieve results. At the design stage of this research, the researcher carried out several activities, namely as follows:

a) Create a game design, to serve as a guideline for making basic shot put movements in the shot put game using cooperative learning and students make bullet replicas. Students become more active in moving and students' self-confidence appears because learning starts from the simplest things first.

b) Develop shot put learning instruments using game technology,

c) Discuss the movement design by interviewing experts.

2. Implementation of Actions

Action refers to what the researcher does to promote improvements or changes that are implemented guided by an action plan. In conducting this research, researchers created and implemented:

a) Learning the basic movements of the shot put through cooperative learning that has been designed and. next to be implemented.

b) In implementing the design through cooperative learning, the researcher becomes an observer, recording research activities (observer) that occur in the field, while one of the sports teachers at the school acts as the implementer of the action/teaching.

3. Observation

Observation is the researcher's activity of observing practice questions, especially in learning basic throwing movements at Tamansiswa Mojoagung Vocational School, Jombang Regency. The purpose of observation is to monitor learning activities and analyze problems related to the research focus.

At this observation stage, information related to the research object being observed is recorded in field notes, which are used to develop an action plan for this research. In this study, one of the researchers' plans was to plan the basic repulsion movements in the Crocodile Hole game. In accordance with the limitations of the problem studied in this work, a design oriented towards cooperative learning was created.

4. Reflection

Reflection is a step that occurs after the implementation stage. In this phase the researcher reviews, visualizes, and evaluates the results or responses to activities recorded in field notes. The reflective phase is a very important part of action research. The consultation that is highlighted is the researcher's self-assessment as an observer and the results or changes resulting from the implementation of cooperative learning of basic throwing movements with the aim of improving basic throwing movements.

This reflection process is also accompanied by instructions. If based on the results of the action reflection it is concluded that the problem has been resolved, then the action research stage is considered sufficient. However, if the results of cycle I reflection still contain problems or new problems emerge, then the classroom action research will continue with cycle II research.

RESULTS AND DISCUSSION

The results of the shot put skill scores for Tamansiswa Mojoagung Vocational School students, Jombang Regency, starting from pre-cycle, cycle 1 to cycle 2 consisting of maximum, minimum and average scores are as follows:.
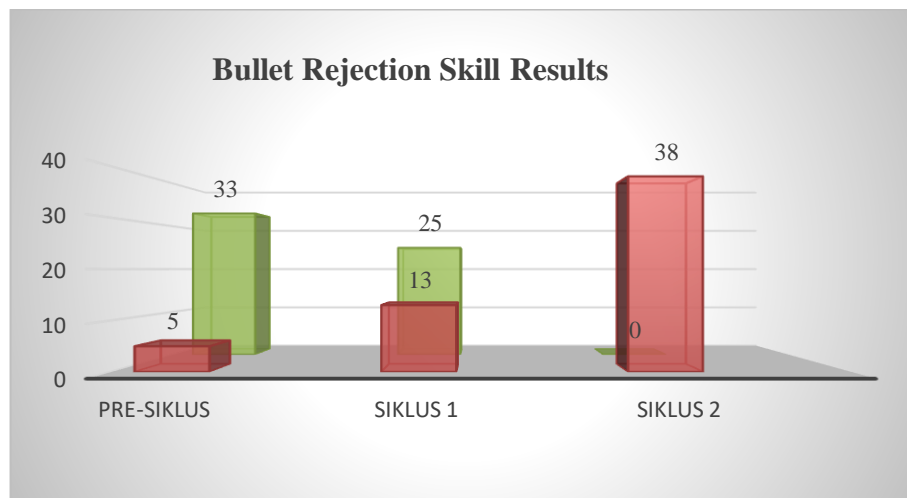
Table 1. Bullet Rejection Skill Result Value

	N	Nilai Minimum	Nilai Maximum	Mean
Pre-Cycle Shot Put Skill Results	38	65	84	73.03
Results of Bullet Rejection Skills Cycle 1	38	65	84	75.05
Cycle 2 Skills Results	38	76	85	78.92
Valid N	38			

In table 1 it can be seen that from the 38 students used as research objects, the minimum pre-cycle score was 65 and the maximum was 84 with an average of 73.03. Cycle phase 1 has a minimum score of 65 and a maximum of 84 with an average of 73.05. Then in cycle 2 the minimum score was 76 and the maximum was 85 with an average of 78.92.
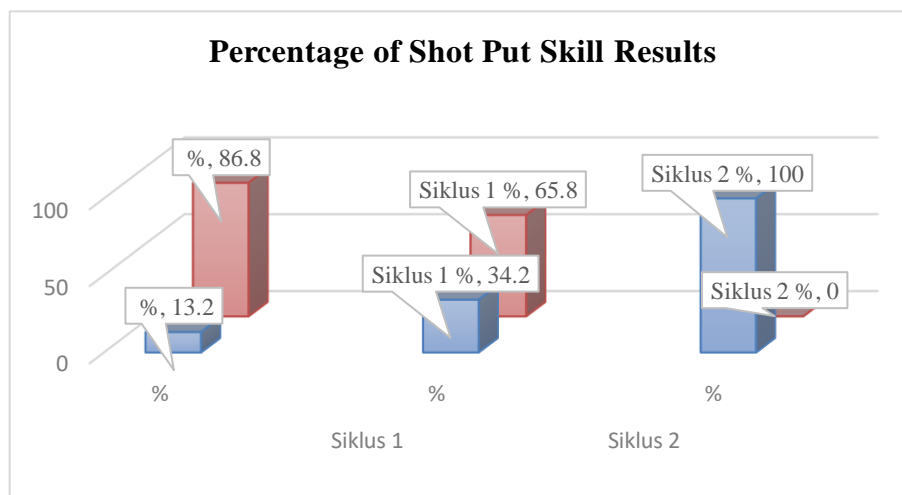
Table 2. Percentage Results of Bullet Rejection Skills

No	category	KKM	Pre-Siklus		Siklus 1		Siklus 2	
			F	%	F	%	F	%
1	complete	>75	5	13,2	13	34,2	38	100
2	not complete	<75	33	86,8	25	65,8	0	0
Total			38	100	38	100	38	100

The results from table 2 show the skills results of a total of 38 students who completed and did not complete the percentage of the KKM category. The results of the pre-cycle were 5 students completed with 13.2%, 33 students incomplete and 86.8%. In cycle 1, 13 students completed with 34.2%, while 25 students did not complete and 65.8%. In cycle 2, 100% of students completely completed the learning.

Diagram 1. Results of Bullet Rejection Skills

Diagram 2. Percentage of Bullet Rejection Skill Results

The Jigsaw learning method is a strategy that involves cooperation between students in mastering certain material. Jigsaw activities were introduced to encourage interaction and collaboration with peers in learning (Bhandari et al., 2017). In the context of improving skill results in shot put learning shows a significant increase. Shot put learning media with modification tools can also increase students' interest in participating in learning activities (Fitriyanto, 2017) Shot put suggests that performance may be more related to measures of muscle strength and/or power than to improvement.(Hirsch et al., 2016). This can be seen from the results of students' skills which continue to increase from pre-cycle, cycle 1 to cycle 2. To increase student motivation to be more active in learning, repetition needs to be carried out at each stage of implementation. (Bangun & Syahputra, 2018). This learning method shows that collaborative learning methods can improve

students' skills in receiving learning material to achieve learning outcomes (Suardana, 2019).

Through the division of tasks and responsibilities, students work together to master various aspects of shot put technique. Applying tool modifications in shot put learning at school helps in improving learning outcomes (Ali, 2023). Each group is responsible for a specific part of the technique, and they then share their knowledge with the other groups. Students have the opportunity to understand deeper details of the actions carried out by teachers in cooperative learning (Darmawan & Pd, 2018). Students not only learn from teachers, but also from their classmates. Students have more active participation because each group member has an important role in understanding and teaching the material to other group members. This can increase student involvement in learning.

Appropriate learning strategies make it easier for students to understand learning concepts in a fun way (Hadiawati et al., 2023). Development of social skills, such as the ability to communicate, collaborate, and solve problems together. Students can provide feedback to each other, refine their understanding of shot put technique, and refine their skills through multiple viewpoints.

CONCLUSION

Through this method, students learn to communicate, share information, and understand the perspectives of group friends. This can improve students' social skills. focus on information sharing and group responsibility, students tend to understand the material more deeply because they are responsible for teaching each other. A more detailed teaching and learning process as well as the use of peer-teaching, students can improve their skills in shot put technique. Increases learning motivation because students feel they have a responsibility to teach the material to their friends, which can increase their self-confidence and motivation. Appreciation of diversity and understanding the different points of view of each group member, helps in developing greater tolerance and understanding.

THANK-YOU NOTE

PPG lecture, don't forget a thousand thanks to Insan Budi Utomo University as LPTK who has helped a lot in the research process activities.

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