PPSDP International Journal of Education
Volume 3 (2) 2024, 342-359
E-ISSN 2829-5196, P-ISSN 2830-3229

Improving the Learning Outcomes Bullet Repulsion Material Using Bullet Modification Media from Plastic Balls

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Article History: Received on 15 April 2024, Revised on 14 June 2024, Published on 02 July 2024

Abstract: The purpose of this study is to improve the learning outcomes of bullet rejection material using bullet modification media from plastic balls for Class XI Science students at SMA Negeri 1 Payaraman. The method used in this study is action research, which consists of two cycles, and each cycle consists of: planning, implementation, observation, and reflection. Based on the results of action research, bullet modification media from plastic balls can improve the learning outcomes of bullet rejection material for Class XI Science students at SMA Negeri 1 Payaraman. Furthermore, the researchers recommend 1) teachers who have the same difficulty can apply Bullet Modification Media from Plastic Balls to improve learning outcomes; 2) in order to get maximum results, teachers are expected to make more interesting and varied bullet modification media from plastic balls.

Keywords: Learning Outcomes, Learning Media, Modified Media

A. Introduction

Infrastructure is one of the strategic parts of achieving learning objectives. In other words, complete and incomplete learning infrastructure also affects the maximum and not maximum achievement of learning objectives. Complete facilities can make it easier for teachers to pursue certain targets that are their learning goals (Eze et al., 2018). Conversely, incomplete facilities will make it difficult for teachers to achieve their learning objectives (Abualoush et al., 2018). Such is the case with physical education and health learning at SMAN 1 Payaraman about the material "Basic Training and Techniques for Holding the Correct Bullet Resistance". In real conditions in schools, bullet media are only available in 2 pieces: 1 bullet for girls and 1 bullet for boys. While the average of each study group or class amounts to 15-20 people, when compared to the number of infrastructure facilities or bullet rejection media, the number of students is 1:10 for boys and girls. It is clear from the picture that the bullet-resistant learning process is ineffective and, consequently, that curriculum targets and learning outcomes are low and ineffective. This illustrates that learning outcomes must also be supported by adequate facilities, infrastructure,

and media. That is, the availability of learning facilities and media must be balanced with the number of students (Ahmed & Opoku, 2022). However, to overcome the problem of a lack of bullet rejection facilities, researchers are looking for solutions by using plastic balls so that the learning process about "bullet repelling" at SMAN 1 Payaraman can be carried out properly, and it is hoped that the learning results will also be maximized so that it is very helpful in physical education and health learning practices at SMAN 1 Payaraman for the 2022-2023 academic year.

This situation and condition have been going on for quite some time, and the school until now has not been able to meet the facilities or media for repelling the bullet to a sufficient extent or in ideal conditions, for example, with a ratio of 1:2 (1 bullet for 2 people). This is understandable because schools have very many needs, and almost all of them have a high level of urgency to be fulfilled by schools. So requiring schools to provide means of repelling bullets in accordance with ideal conditions is unrealistic and can further cause turmoil and a climate that is not conducive in schools (Ismail, 2023).

Therefore, it needs simple problem-solving and can be done by the teacher. Looking at the problem above, one common thought is that there is a substitute alternative medium for modifiers to replace bullets, which are quite expensive. The modifiable alternative media must be able to represent bullet characteristics and be cheap, widely available, or easily available (Sobarna, 2018). From several criteria for modifiative alternative media to replace bullets, it seems that plastic balls can be used as modifiative alternative media to replace bullets. In terms of shape, there are clearly similarities with bullet shapes; in terms of availability and price, plastic balls are very easy to get in traditional markets at very cheap prices (Funke et al., 2017).

From the problems mentioned above, researchers as well as class teachers are interested in conducting research entitled "Bullet Modification Media from Plastic Balls Can Improve Bullet Rejection Learning Outcomes in Class XI IPA SMAN 1 Payaraman for the 2022/2023 academic year." With the hope that the results of this class action research will be one way to improve the quality of learning at SMA Negeri 1 Payaraman, especially in physical education and health subjects, so as to achieve a Minimum Completion Criterion of 75.

B. Methods

This class action research was carried out at SMA Negeri 1 Payaraman, Ogan Ilir Regency, South Sumatra Province, in the 2022–2023 academic year, which is outside the city, about 65 km from the Regency city. SMA Negelri 1 Payaraman, Ogan Ilir Regency, South Sumatra Province, has almost complete facilities with a fairly crowded library, science laboratory, computer laboratory, and others. With a total of

30 teachers, permanent teachers consist of 10 male teachers, 20 female teachers, and 5 education staff.

The object of this research is Class XI Science Students of SMA Negeri 1 Payaraman, Ogan Ilir Regency, South Sumatra Province, in the odd semester 2022-2023 academic year, with 19 students consisting of 12 male students and 7 female students. This class action research was carried out for 3 months, from January to March 2022. This research on the material Bullet Repellent Material is taught. This research is planned for as many as two cycles, each with one meeting. This study used the design of classroom action research with cycles (S Arikunto, 2021).

Cycle I

This cycle discusses the subconcept of bullet-repellent material.

1. At this stage, preparations are made to carry out action planning by rounding up the syllabus, lesson plans, teacher and student observation sheets, student worksheets, and making evaluation tools in the form of practice.
2. Stages of implementation At this stage, the following is carried out:
    a. The teacher explained the material of Bullet Rejection Material classically.
    b. The teacher gives an example of the Bullet-Repelling technique well and correctly, while the students pay attention.
    c. The teacher appoints one of the students to try to practice how to resist bullets, while the students pay attention and ask if there is anything that is not understood.

Observation Phase
At this stage, observation of the implementation of actions is carried out. The aspect observed is the activeness of students and teachers in the learning process to roll over activity observation sheets and student and teacher responses. While the improvement of student learning outcomes is obtained from the value of student practice.

Reflection Stage
At this stage, an evaluation of the learning process in the first cycle is carried out and becomes a consideration for planning the next cycle.

The balance carried out if one component below has not been met is as follows:
which is carried out when nicknamed one component below has not been fulfilled as follows:

1. Students achieve individual completeness ≥ 75.
2. Classical completeness is achieved if ≥ 85% of all students achieve individual completeness taken from student learning outcomes tests.

Cycle II

The results of reflection and data analysis in cycle I are used as a reference in planning conclusion II by correcting weaknesses and shortcomings in cycle I. The stages passed are the same as in the stage I.

Data Collection Techniques
There are several data collection techniques applied in this PTK, namely:

1. Observations are made by the teacher concerned and a collaborator to record the behavior and activities of teachers and students during the learning process using observation sheets.
2. Learning outcomes tests to determine the level of student understanding.

The instruments used in this class action research consist of:

1. Test sheets and daily tests are used to find out student learning outcomes.
2. Student observation sheet to determine the level of student motivation.
3. A teacher's observation sheet to find out the learning activities carried out by the teacher

Data Analysis Techniques
The data from the next research is analyzed descriptively, as follows:
Test data on learning outcomes are used to determine student learning completeness or the level of learning success in the material. Bullet Repelling Material by using cooperative learning type of bullet modification media from plastic balls Minimum Completion Criteria individually if the student is able to achieve a score of 75. The completeness of the classics if the students who get a score of 75 is around 85% of the total number of students, and each is calculated by formula, according to (Suharsimi Arikunto, 2010) as a next:

$$P = \frac{\text{F}}{N} x\ 100\%$$

Where : P = Percentage
F = frequency of each activity
N = Number of all activities

C. Results and Discussion

At the planning stage, the teacher prepares actions in the form of appropriate learning implementation plans without using media in the bullet rejection material. In addition, the teacher also rounds the worksheet and compiles an observation sheet of teacher and student activities. Next, the teacher makes a test of the learning outcomes. Before the implementation of actions is carried out in class, teachers and

observers discuss observation sheets.

The action will be held on Tuesday, January 16, 2023. The learning activities carried out consist of three stages, namely preliminary activities, core activities, and closing activities. The time allocated for the preliminary activity is 10 minutes, while the time allocated for the core activity is 50 minutes, and the closing activity allocation is 20 minutes.

In the preliminary activity, the teacher carried out three activities, namely (1) greet and check student attendance; (2) do icebreaking in the form of warm-up exercises; and (3) explore student knowledge and relate it to the subject matter to be taught next. Icebreaking activities carried out by teachers.

The teacher explained in advance the material about bullet resistance. In this activity, the teacher then gave examples of how to hold bullets, throw bullets, and position postures after throwing. The teacher appoints one of the students to practice as exemplified by the teacher. While other students pay attention to what is exemplified by their friends. Students are given the opportunity to ask if they do not understand the movements that have been exemplified by their friends.

The final activities include: (1) conducting evaluations to determine student achievement after learning with lectures; (2) having students flashback about learning that has just been done; and (3) having students and teachers celebrate learning success by clapping happily.

The participation of Class XI IPA students in SMAN 1 Payaraman has increased in learning activities in the initial condition after learning without overthrowing Meldia. This can be seen from the learning outcomes and student responses to learning activities, even though there are still a few problems that arise during the learning activity process. With the problems that occur in the initial conditions, we and observers reflect on these problems so that they can be corrected in the first cycle, with the original hope that students will be able to improve their learning outcomes (Kristiantono, 2017).

Participation of Class XI Science students of SMAN 1 Payaraman in mathematics teaching and learning activities. This can be seen from the results of student learning under the initial conditions. In the initial condition without media from students nicknamed 19 students, there were 12 students, or 63.2%, who were complete, and those who were incomplete, there were 7 students, or 36.8%, who were incomplete, with an average score of 67.2. The data can be seen in table 1 below.

Table 1. Results of Assessment of Initial Condition Practices

No	Student Name	N 1	N 2	N 3	Average	Information
1	Andini K	50	50	50	50	Incomplete
2	Bella Siska	80	80	80	80	Complete
3	Beti lahirni	75	75	75	75	Complete
4	Devia Septiani	60	60	60	60	Incomplete
5	Donna Sisilia	75	75	75	75	Complete
6	Jalaludin A J	75	75	75	75	Complete
7	Kurniawan A P	50	50	50	50	Incomplete
8	Lemaroh S	75	75	75	75	Complete
9	Lia Kristiani	75	75	75	75	Complete
10	Loga Nanyu	75	75	75	75	Complete
11	Lusia E W	50	50	50	50	Incomplete
12	Mela Kristiani	75	75	75	75	Complete
13	Melisa A P	50	50	50	50	Incomplete
14	M. Abidin G	75	75	75	75	Complete
15	M. Raudatul A	50	50	50	50	Incomplete
16	Nuranissa	75	75	75	75	Complete
17	Tanti H	50	50	50	50	Incomplete
18	Uniyati	85	85	85	85	Complete
19	Chesia	75	75	75	75	Compete
	Sum	1275	1275	1275	1275	
	Average	67,2	67,2	67,2	67,2	
	Completeness				65,2%	Incomplete

Description : N 1 = Value
N2 = value of how to reject
N3 = Final Attitude Value

Reflection

The main purpose of this study was to find out the improvement of learning outcomes in the Bullet Rejection Material material by applying Bullet Modification Media from Plastic Balls. It turned out that the average value obtained was 67.2 and classically 63.2%. This matter is still far from expectations. Therefore, the reflections expressed will be focused on improving student learning outcomes on the bullet rejection material. In the initial condition, there was a lack of student understanding of the bullet rejection material. According to observers, there are several things that cause this to happen. First, students do not focus on filling in the worksheet, so there are certain parts of the content of the worksheet that are not filled in perfectly. Second, students do a lot of things outside the context of learning, such as playing with their friends. Third, some students have not been able to do the bullet rejection as given by the teacher during the test or evaluation at the end of the lesson (Ulum, 2013).

From the findings of these shortcomings, the researchers decided on a new strategy to reduce the causes of the lack of understanding of the students mentioned above, which will be applied to cycle I. For the first problem, the researcher assigned three students in each group to write the results of the activity so that the worksheets

were filled again. In this way, the collected data becomes complete so that students better understand the new grouping material in order to reduce the number of students who play with each other. In the third problem, the researcher provides a more detailed explanation of the bullet rejection material, especially for questions that are difficult or unable to be answered by the group in the discussion. In addition, for this third problem, the explanation is assisted by observers (Fitriyanto, 2017).

Description of Cycle 1 Results

Planning

At the planning stage, the teacher prepares actions in the form of a learning implementation plan that is appropriate to the learning method, media type, and bullet modification from plastic balls with bullet rejection material. In addition, the teacher also rounded the Kelrja Sheet and compiled an observation sheet of teacher and student activities. Next, the teacher makes a test of the learning outcomes. Before the implementation of actions is carried out in class, teachers and observers discuss observation sheets (Hasibuan, 2020).

Execution

The implementation of the first sikluls action was held on Thursday, August 10, 2017 from 07.00 to 08.20 WIB. The learning activities carried out consist of three stages, namely preliminary activities, core activities, and closing activities. The time allocated for the preliminary activity is 10 minutes, while the time allocated for the core activity is 50 minutes, and the closing activity allocation is 20 minutes. In the preliminary activity, the teacher carried out three activities, namely; (1) greet and check student attendance; (2) do icebreaking in the form of warm-up gymnastics; (3) explore student knowledge and relate it to the subject matter to be taught next. Icebreaking activities carried out by teachers. The teacher explained in advance the material about bullet resistance. In this activity, the teacher then gave examples of how to hold bullets, hit bullets, and position postures after throwing. The bullets used are plastic balls of children's toys that are easily available on the market. The teacher appoints one of the students to practice as exemplified by the teacher. While other students pay attention to what is exemplified by their friends. Students are given the opportunity to ask if they don't understand the movements that have been exemplified by their friends. The final activities of cycle I include: (1) conducting evaluations to find out student achievements after learning using bullet modification media from plastic balls; (2) having students practice bullet rejection according to the instructions given; and (3) having teachers give assessments; and (4) having students and teachers celebrate learning success by clapping happily (Munifa, 2016).

Observation

The participation of Class XI IPA students of Negeri 1 Payaraman High School increased in learning activities in cluster 1 after the application of bullet modification media from plastic balls. This can be seen from the learning outcomes and student responses to learning activities, even though there are still some problems that arise during the learning activity process. With the problems that occur in cluster I, we and observers reflect on these problems so that they can be corrected in conclusion II in the hope that all students can improve their learning outcomes. Participation of Class XI Science students of SMAN 1 Payaraman in teaching and learning activities of mathematics education This can be seen from the results of student learning in cycle I. Student learning outcomes in cycle I with the application of a learning model using Meldia Modified Bullets from Plastic Balls with a total of 19 students: there were 15 students, or 78.9%, who were complete and those who were incomplete; there were 4 students, or 22.1%, who were incomplete, and an average score of 75.3. The data can be seen in Table 2 below:

Table 2. Results of the First Cycle Practice Assessment

No	Student Name	N 1	N 2	N 3	Avarage	Description
1	Andini K	55	55	55	55	Incomplete
2	Bella Siska	85	85	85	85	Complete
3	Beti lahirni	80	80	80	80	Complete
4	Devia Septiani	75	75	75	75	Complete
5	Donna Sisilia	80	80	80	80	Complete
6	Jalaludin A J	80	80	80	80	Complete
7	Kurniawan A P	75	75	75	75	Complete
8	Lemaroh S	80	80	80	80	Complete
9	Lia Kristiani	80	80	80	80	Complete
10	Loga Nanyu	80	80	80	80	Complete
11	Lusia E W	55	55	55	55	Incomplete
12	Mela Kristiani	80	80	80	80	Complete
13	Melisa A P	60	60	60	60	Incomplete
14	M. Abidin G	80	80	80	80	Complete
15	M. Raudatul A	75	75	75	75	Complete
16	Nuranissa	80	80	80	80	Complete
17	Tanti H	60	60	60	60	Incomplete
18	Uniyati	90	90	90	90	Complete
19	Chesia	80	80	80	80	Complete
	Sum	1430	1430	1430	1430	
	Average	75,3	75,3	75,3	75,3	
	Completeness	78,9%	78,9%	78,9%	78,9%	Incomplete

Description : N1 = Prefix Value
N2 = value of how to reject
N3 = Final Attitude Value

Student Activities

The results of observers research on student activities during learning activities that apply the Bullet Modification Media model from Plastic Balls on Bullet Rejection

Material in Cycle 1 are an average of 3.00, meaning they are in the good category. To determine the students responses to the learning activities they underwent using bullet modification media from plastic balls, questionnaires were used, which were given to students after the entire learning process was completed. The results of the questionnaire of student responses to the cooperative learning type of Bullet Modification Media from Plastic Balls are shown in Table 3 below, which is a summary of the results of the questionnaire about the responses of 19 students to the Bullet Modification Media from Plastic Balls applied during the Bullet Rejection. During the material learning activity, students generally gave positive responses happily; they also felt happy with the worksheets used, the classroom atmosphere, the way the material was presented by the teacher, and the learning model they received. During the learning activities, students also felt happy because they could express their opinions, and they felt mutual benefits with a cooperative learning model type of bullet modification media from plastic balls.

Table 3. Student Responses to Learning Bullet Modification Media from Plastic Balls

No	Description	Student Feedback			
		Happy		No Thread	
		F	%	F	%
1.	How do you feel during Follow this learning activity?	19	100	0	0
		Happy		No Thread	
		F	%	F	%
2.	How do you feel about:				
	a. Subject matter	19	100	0	0
	b. Worksheets	18	94,7	1	5,3
	c. Learning Atmosphere	18	94,7	1	5,3
	How the material is presented by the teacher	19	94,7	0	0
		Easy		Difficult	
		F	%	F	%
3.	What do you think Following this lesson	15	78,9	4	21,1
		Benefits		No Benefits	
		F	%	F	%
4.	Is this learning beneficial for kamul?	19	100	0	0
		New		Not New	
		F	%	F	%
5.	Is this new service new to you?	19	100	0	0
		Yes		Not	
		F	%	F	%
6.	Do you want another subject using Media Modification Bullets from plastic balls?	19	100	0	0

Information: F = Frequency of student response to learning Using Bullet Media from plastic balls
N= Number: 19 people

Teacher Activities

Data from observations of teachers' ability to manage cooperative learning activities of the type of Bullet Modification Media from Plastic Balls are shown in Table 3. Learning management with the application of the Bullet Modification Media from Plastic Balls learning model in the Bullet Rejection subject matter in Cycle I is 3.00, which means it is included in the good category. The data can be seen in the table below.

Table 4. Learning Outcome Data Rolls Plastic Ball Modification Media

No.	Observed aspects	Score	Observation
		Cycle I	Description
1.	Preparation	3,00	Good
2.	Introduction	3,00	Good
3.	Main activities	3,00	Good
4.	Cover	3,00	Good
Average		2,84	Good

Information :

0	-	1,49	=	Not good enough
1,5	-	2,49	=	Enough
2,5	-	3,49	=	Good
3,5	-	4,0	=	Excellent

Reflection

The main purpose of this study is to determine the improvement of learning outcomes in bullet rejection material by applying a cooperative learning model of the bullet modification media type from plastic balls. Therefore, the reflection presented will be focused on improving student learning outcomes on bullet rejection material. In cycle 1, there is a lack of student understanding of the bullet rejection material. According to observers, there are several things that cause this to happen. First, students do not focus on filling in the worksheet, so there are certain parts of the content of the worksheet that are not filled in perfectly. Second, students do a lot of things outside the context of learning, such as playing with their group of friends. Third, one or two groups were unable to well answer the questions given by the teacher during the evaluation at the end of the lesson.

From the findings of these shortcomings, researchers make new strategies to reduce the causes of students' lack of understanding mentioned above, then will be applied to cycle II. For the first problem, the researcher assigned three students in each group to write the results of the activity so that the worksheets were filled all in. In this way, the collected data becomes complete so that students better understand the matelri of the new grouping, in order to reduce students who play

with each other. While the third problem, the researcher provides a more detailed explanation of the Bullet Rejection Material, especially for questions that are difficult or unable to be answered by the group in the discussion. In addition, for this third problem, the explanation is assisted by observers.

Synclusion II data description

Planning
At the planning stage, the teacher prepares actions in the form of a learning implementation plan in accordance with the learning method of media type bullet modification from plastic balls by correcting deficiencies in cycle I of the bullet rejection material material. In addition, the teacher also rounds the student worksheet and compiles an observation sheet of teacher and student activities. Next, the teacher makes a test of the learning outcomes. Before the implementation of actions is carried out in class, teachers and observers discuss observation sheets.

Execution
The implementation of cycle II actions was held on Thursday, August 31, 2017 from 07.00 to 08.20 WIB. The learning activities carried out consist of three stages, namely preliminary activities, core activities, and closing activities. The time allocated for the preliminary activity is 10 minutes, while the time allocated for the core activity is 50 minutes, and the closing activity allocation is 20 minutes.

In the preliminary activity, the teacher carried out three activities, namely in preliminaru activities, teachers carried out three activities, namely. (1) greet and check student attendance; (2) icebreaker in the form of warm-up; (3) explore student knowledge and relate it to the subject matter to be taught; and (4) warm-up activities carried out by the teacher. Through core activities design activities so that students can experience the process of finding, naming and presenting. To be able to find related to Bullet Modification Media from Plastic Balls, the teacher first divides students into 7 groups and each group consists of 2-3 students. The teacher explains more about the student's assignment before the assignment is done so that the student does not become confused. In addition, during the discussion, the teacher goes around the group to supervise the students' work while occasionally commenting on the students' work. The representative of each group then read out the results of the group discussion. Students from other groups will be asked their opinions regarding the answers of the group being presented. If there is a mistake, the teacher first asks fellow students to make corrections. Students who find the right group and present well get praise from the teacher, while students who have not done their best are motivated and given sovereignty. The activities at the end of cycle II include: (1) conducting evaluations to determine student achievement after learning with the Plastic Ball Bullet Modification Media strategy; (2) having students

flashback about the learning that has just been done; and (3) having students and teachers celebrate learning success by clapping happily.

Observation
Student Learning Outcomes
The participation of Class XI IPA SMAN 1 Payaraman students increased in learning activities in the second cycle after the application of a cooperative learning model using bullet modification media from plastic balls. This can be seen from the learning outcomes and student responses to learning activities, even though there are still a small number of problems that arise during the learning activity process. Participation of Class XI IPA SMAN 1 Payaraman students in teaching and learning activities of mathematics education This can be seen from the results of student learning in cycle II. Student learning outcomes in cycle II with Bullet Modification Media from Plastic Balls: with a total of 19 students, there were 17 students, or 89.5%, who were complete, and those who were incomplete, there were 2 students, or 10.5%, who were incomplete, and an average score of 81.5. The data can be seen in Table 5 below.

Tabel 5. Results of Practice Assessment in Conclusion II

No	Student Name	N 1	N 2	N 3	Average	Information
1	Andini K	60	60	60	60	Incomplete
2	Bella Siska	90	90	90	90	Complete
3	Beti lahirni	85	85	85	85	Complete
4	Devia Septiani	80	80	80	80	Complete
5	Donna Sisilia	85	85	85	85	Complete
6	Jalaludin A J	85	85	85	85	Complete
7	Kurniawan A P	80	80	80	80	Complete
8	Lemaroh S	85	85	85	85	Complete
9	Lia Kristiani	85	85	85	85	Complete
10	Loga Nanyu	85	85	85	85	Complete
11	Lusia E W	65	65	65	65	Incomplete
12	Mela Kristiani	85	85	85	85	Complete
13	Melisa A P	75	75	75	75	Complete
14	M. Abidin G	85	85	85	85	Complete
15	M. Raudatul A	80	80	80	80	Complete
16	Nuranissa	85	85	85	85	Complete
17	Tanti H	75	75	75	75	Complete
18	Uniyati	95	95	95	95	Complete
19	Chesia	85	85	85	85	Complete
	Sum	1550	1550	1550	1550	
	Avarage	81,6	81,6	81,6	81,6	
	Completeness	89,5%	89,5%	89,5%	89,5%	Complete

Description: N 1 = Prefix Value
N2 = Value of How to Reject
N3 = Final Attitude Value

Student Activities

The results of observer research on student activities during learning activities that apply the Meldia model of bullet modification from plastic balls on bullet repellent material in cycle 1 are an average of 3.00, meaning they are in the good category. To determine the students' response to the learning activities they underwent using bullet modification media from plastic balls, questionnaires were used, which were given to students after the entire learning process was completed. The results of the questionnaire of student responses to the cooperative learning type of Bullet Modification Media from Plastic Balls are shown in Table 6. Below is a summary of the results of the questionnaire about the responses of 19 students to the cooperative learning model of the bullet modification media type from plastic balls applied during the learning activity of the bullet rejection material. Students generally give positive responses during learning activities happily. They also feel happy with the worksheets used, the classroom atmosphere, the way the material is presented by the teacher, and the learning model they just received. During the learning activities, students also feel happy because they can express their opinions, and they feel they benefit from the cooperative learning model type of Bullet Modified Media from Plastic Balls.

Table 6. Student Response to Learning with Bullet Modification Media from plastic balls

No	Description	Student Feedback			
		Happy		Unhappy	
1.	How do you feel during	F	%	F	%
	Follow this learning activity?	19	100	0	0
		Happy		Unhappy	
		F	%	F	%
2.	How do you feel about:				
	a. Subject matter	19	100	0	0
	b. Worksheets	19	100	0	0
	c. Learning Atmosphere	19	100	0	0
	How the material is presented by the teacher	19	100	0	0
		Easy		Difficult	
		F	%	F	%
3.	What do you think Following this lesson	19	100	0	0
		Benefits		No Benefits	
		F	%	F	%
4.	Is this learning beneficial for kamul ?	19	100	0	0
		New		Not new	
		F	%	F	%
5.	Is this new service new to you?	19	100	0	0
		Yes		Not	
		F	%	F	%
6.	Do you want another subject using Media Modification Bullets from plastic balls?	19	100	0	0

Teacher Activities

Data from observations of teachers' ability to manage learning activities using Bullet Modification Media from Plastic Balls are shown in Table 7. Learning management with the application of Bullet Modification Media from Plastic Balls in the Bullet Rejection subject matter in Cycle II is 3.25, which means it is included in the good category. The data can be seen in the table below.

Table 7. Learning Management Research Data using Bullet Modification Media from Plastic Balls

No.	Observed aspects	Score Cycle I	Observation Description
1.	Preparation	4,00	Very Good
2.	Introduction	3,00	Good
3.	Main activities	3,00	Good
4.	Cover	3,00	Good
Average		2,84	Good

Information:

0	-	1,49	=	not good enough
1,5	-	2,49	=	Enough
2,5	-	3,49	=	Good
3,5	-	4,0	=	Excellent

Reflection

The main purpose of this study is to determine the improvement of learning outcomes in bullet rejection material by applying a learning model to roll-over bullet modification media from plastic balls. Therefore, the reflection presented will be focused on improving student learning outcomes on the bullet rejection material.

In cycle 1, there is a lack of student understanding of the bullet rejection material. According to observers, there are several things that cause this to happen. First, students do not focus on filling in the worksheet, so there are certain parts of the content of the worksheet that are not filled in perfectly. Second, students do many things outside the context of learning, such as playing with their group of friends. Third, one or two groups were unable to properly answer the questions given by the teacher during the evaluation at the end of the lesson.

From the findings of these shortcomings, researchers develop new strategies to reduce the causes of students' lack of understanding mentioned above, which will then be applied to cycle II. For the first problem, the researcher assigned three students in each group to write the results of the activity so that all worksheets were filled in at first. With the deceptive method, the data that has been pulled becomes more flexible so that students better understand the new grouping material, in order to reduce the number of students who play with each other. In the third problem, the researcher provides a more detailed explanation of the bullet

rejection material, especially for questions that are difficult or unable to be answered by the group in the discussion. In addition, for this third problem, the explanation is assisted by observers.

Learning Outcomes

The results showed that the learning results of evaluating the initial condition of Class XI IPA students of SMAN 1 Payaraman for Bullet Rejection Material using Bullet Modification Media from Plastic Balls obtained an average initial condition value of 67.1, with the highest score being 85, there was 1 person, and the lowest score being 50, there were 6 people, with a learning certainty of 63.2% and an incomplete 36.8%. The results showed that the learning outcomes of Class XI Science students of SMAN 1 Payaraman in Cycle 1 for Bullet Rejection Material with Bullet Modification Media from Plastic Balls obtained an average value of 73.2, with the highest value being 90, there was 1 person, and the lowest score was 55, there were 6 people, with a learning certainty of 78.9% and the incomplete 21.1%.

While in conclusion II for the Bullet Toak Material material, the average value of cycle II was 81.6, with the highest value being 95, there was 1 person, and the lowest score was 60, there was 1 person with 89.5% learning completeness and 8.7% incomplete. Students who do not complete both cycles I and II are the same students. This is because these students basically have no intention to learn and often do not enter school. Based on student learning outcomes data from cycles I and II, it shows an increase in the learning outcomes of Class XI Science students at SMAN1 Payaraman for the 2022–2023 academic year, showing an increase in student learning outcomes on the same material, namely Reject Bullets. This is because cycles I and II showed an increase in student learning outcomes on the same material, namely reject bullets. This is because in cycles I and II, we have applied learning using bullet modification media from plastic balls.

Student Activities

Student activities during the learning activities that apply bullet modification Media from plastic balls to the bullet rejection material, according to the observer's assessment, are included in the original good category of student activity aspects. The student activities assessed by observers are aspects of student activity: listening to and paying attention to the teacher's explanation, cooperation in groups, working using teaching aids, student activity in discussions, presenting the results of discussions, concluding material, and students' ability to answer questions from the teacher. Based on the results of the assessment that has been carried out, the most dominant student activities are carried out, namely working together to do worksheets and disputing. This shows that students work together and are responsible for getting good results. This is in accordance with Candradewi et al. (2020), which states that cooperative learning encourages students to work in study

groups and take responsibility earnestly until the completion of individual and group tasks.

Learning Media Modified Bullets from Plastic Balls
The teacher's ability to manage the cooperative learning model type of bullet modification media from plastic balls according to the results of the observer's assessment is included in the good category for all aspects. This means that overall teachers have good abilities in managing bullet modification media from plastic balls on bullet repellent material. This is in accordance with the opinion of Franklin & Harrington (2019) that teachers play an important role in managing teaching activities, which means teachers must be creative and innovative in designing learning activities in the classroom so that student interest and motivation in learning can be increased.

Student Response to Learning Using Bullet Modification Media from Plastic Balls
Based on the results of the questionnaire of students' responses to the cooperative learning model of the type of bullet modification media from plastic balls applied by the researcher, students felt happy with the subject matter. Worksheets, learning atmosphere, and how the material is presented by the teacher. According to students, with the cooperative learning model of Meldia Modified Bullets from Plastic Balls, it is easier for them to understand the subject matter; the interaction between teachers and students and interactions between students are created better with discussions; while students' displeasure with the cooperative learning model of the Bullet Modification Media type from Plastic Balls is due to the rather noisy learning atmosphere in the classroom. All students (100%) have learned to participate in the preparation of Pellulrul Modification of Plastic Balls. Students felt that the whole subject matter was rolling Meldia Pellulrul Modification of Plastic Balls, and students felt that modern cooperative learning rolled Meldia Pellulrul Modification of Plastic Balls was beneficial for them.

D. Conclusions

Based on the results of the study, by applying the cooperative learning model of bullet modification media from plastic balls, the following conclusions can be drawn: The use of bullet modification media from plastic balls can improve the learning outcomes of bullet rejection material for Class XI Science students in SMAN 1 Payaraman.

E. Acknowledgment

I am grateful to the head of the SMAN 1 Payaraman and all those who have assisted me in the making of this paper.

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