



## The Application of a Scientific Approach using the TGT Type of Cooperative Learning Model to Improve the Learning Outcomes of Throwing and Catching Balls in Ball Kasti Games

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### ABSTRACT

The study aims to improve the learning outcomes skills of throwing and catching the ball in the fourth-grade students at State Elementary School 202 Balleanging in Ujungloe subdistrict in Bulukumba district by applying the cooperative learning model of TGT type in physical education and sports to 17 fourth grade students, consisted of 10 male students and 7 female students. This study is a Classroom Action Research which was conducted in 2 cycles, that each cycle has 2 meetings and is designed through 4 stages, namely Planning, Implementation, observation, and Reflection. Then, the aspects observed in the learning process are Spiritual, Psychomotor, Affective, and Cognitive. Before conducting the research, Preliminary Observations Was conducted and the data were obtained descriptively by using the percentage of learning completeness technique based on the Minimum Completion Criteria (KKM) = 75. The results of the study reveal that the percentage of completeness of students in (Pre-cycle) is only 1 student who completes with a percentage of 5.88%, (cycle I, meeting 1) 4 students completed with a percentage of 23.52%, (cycle I, meeting 2) 6 students completed with a percentage of 35.29%, (cycle 2, meeting 1) 6 students completed with a percentage of 70.58%, (cycle 2, meeting 2) 17 students completed with a percentage of 100%. Therefore, in conclusion, the improvement of the learning outcomes skills in throwing and catching a ball in the fourth-grade students at State Elementary School 202 Balleanging in Ujungloe subdistrict in Bulukumba district by implementing the cooperative learning model of TGT type can increase significantly.

**Keywords:** Scientific; Cooperative; TGT; Throwing; Catching; Ball Kasti.

### INTRODUCTION

The ball kasti game is a fun sport and has been known for a long time by Indonesians long before the Japanese colonial era. This sport is usually done by girls or boys both in the village and in the city (Pawestri, 2013). The ball kasti game is one of the games in which there are elements of overall education that involve physical activity as well as fostering a harmonious and balanced mental, social and emotional development

to get it all, it is necessary to carry out interactions and learning processes that are following educational goals (Benediktus, 2016). In ball kasti, the dominant movements are catching, throwing, hitting, running and dodging. All these movements are coordinated in a ball kasti game. The purpose of this game in addition to getting fun there is also an element of physical health and cooperation between individuals and groups (Nurhasnah, 2019). By mastering the technique of catching, throwing, and hitting the ball well, the goal of this ball kasti game is achieved. To obtain the correct quality of throwing, catching, and hitting techniques, students must learn and train as well as possible (Willy, 2016). Therefore, the ball kasti game is included as a form of small ball game. Physical education can be carried out following the guidelines, aims and objectives contained in the 2013 Curriculum.

Balleagging State Elementary School 202 is located in the province of South Sulawesi, Bulukumba Regency. The location of the school is at Balleanging Village, Ujung Loe District, Bulukumba Regency, and the learning process has used the K13 curriculum. In terms of facilities and infrastructure, this school has 6 classrooms, besides that this school also has an office, library, bathroom/WC, prayer room, principal's room, teacher's room and UKS room. The existing KKM for State Elementary School 202 Balleagging is 75.

Based on the results of the researcher's observations conducted on September 5, 2019, at State Elementary School 202 Balleanging, Ujungloe District, Bulukumba Regency, it can be seen that when students are playing ball kasti, they face many difficulties such as techniques and regulations, so that students play poorly or do not master the technique. What students have not mastered is the technique of throwing and catching the ball. Of the 17 total fourth grade students at State Elementary School, 202 Balleanging were assessed from three aspects of the assessment, namely, Spiritual (KI-1), Affective (KI-2), Cognitive (KI-3), and Psychomotor (KI-4). The problems found are that there are still many students who do not understand the basic techniques of throwing and catching the ball in the ball kasti game, the lack of attention of students during the learning process, when throwing and catching the ball students cannot distinguish the position of the feet when throwing and catching. For students when playing based on the data the author obtained, I as a physical education teacher for fourth-grade students at State Elementary School 202 Balleanging, Ujungloe District, Bulukumba Regency, as many as 17 students, only 1 student can throw and catch ball kasti properly and correctly. While 16 students have not been able to do the technique of throwing and catching ball kasti properly and correctly.

The results of observations on the fourth-grade students of State Elementary School 202 Balleanging obtained the overall average value of students for each aspect of the assessment, namely spiritual attitude (KI-1) = 74.7; Affective (KI-2)=52.94; cognitive attitude (KI-3)=28.23; and Psychomotor Attitude (KI-4) = 55.71. Seeing some of the problems that occur in the description above, the researcher took the initiative to improve the ability of student learning outcomes by applying learning according to the characteristics of students, this is what must be raised to be able to bridge the desires of teachers and students. To solve the above problems in the physical education learning process, learning steps are needed that are considered to provide innovation in teaching and learning activities that aim to make students more active.

The scientific/scientific approach refers to investigative techniques on phenomena or symptoms, acquiring new knowledge, or correcting and integrating previous knowledge (Bahriah et al., 2014). The scientific approach is a learning process designed in such a way that students actively construct concepts, laws or principles through the stages of observing (to identify or find problems), formulating problems, proposing or formulating hypotheses, collecting data with various techniques, analyzing data, draw conclusions and communicate the concepts, laws or principles found. Lazim, (2013). From these two understandings, it can be concluded that the scientific/scientific approach is a learning technique that places students into active subjects through scientific stages to be able to construct new knowledge or combine it with previous knowledge. The scientific/scientific approach is proven to be more effective in learning compared to traditional learning. The scientific/scientific application as intended includes observing, asking, reasoning, gathering information, trying/communicating and forming a network (5M) to express scientific skills in the application of a scientific approach (Kemendikbud, 2013). In connection with the above opinion regarding the application of scientific learning, it can be concluded that the application of scientific learning changes the learning paradigm from the centre to the teacher (teacher-centred) to become student-centred (Ramadhana, 2016).

The cooperative learning model is one of learning that places students as learning subjects (student-oriented) (Riski Nugroho, 2013). With a democratic atmosphere where mutual learning provides greater opportunities for empowering students' potential to the fullest. Cooperative learning with the term cooperation learning is a learning system that provides opportunities for students to work together with other students in structured tasks (Isjoni, 2013). Cooperative learning is a learning strategy that involves the participation of students in a small group to interact with each other (Setiawan et al.,

2020). Cooperative learning is a learning model where the system learns and works in small groups of 4-6 people collaboratively so that it can stimulate students to be more passionate about learning (Isjoni, 2013; Asih, 2018). Based on some of the opinions that have been put forward, it can be concluded that cooperative learning is based on the idea that students work together in group learning and at the same time each is responsible for the learning activities of their group members (Prananda & Hadiyanto, 2019) so that all group members can master the subject matter well. The emphasis of this approach is to activate students in learning through collaboration between students in a group learning atmosphere (Puspitasari, 2018).

The Team Game Tournament (TGT) model is a cooperative learning model that places students in study groups consisting of 5 to 6 students who have different abilities, gender and ethnicity or race (Jaya et al., 2016). a cooperative learning model that is easy to apply, involves all students without having to have a difference in status. This learning model involves the role of students as peer tutors, contains elements of games that can stimulate the spirit of learning and contain reinforcement (Sembiring et al., 2020). Learning activities with games designed in the TGT model of cooperative learning allow students to learn more relaxed in addition to fostering responsibility, honesty, cooperation, healthy competition, and learning involvement. The Team Game Tournament (TGT) model is that students are formed in groups to help each other in understanding the material and doing assignments as a group and combined with the competence between members (Wildani & Gazali, 2020). TGT is a cooperative learning model that is easy to apply, involves the activities of all students without any status differences, involves the role of students as peer tutors and contains elements of play and reinforcement (Sukmawan & Sudarso, 2013). TGT is a type of cooperative learning that places students in study groups consisting of 5 to 6 students who have different abilities, gender, and ethnicity or race (Rusman, 2014) Based on some of these opinions, it can be concluded that the Teams Games Tournament (TGT) is a cooperative learning model that contains an academic tournament involving the activities of all students who have the ability, regardless of gender and ethnicity or race in forming a group to help each other in understanding the material provided to foster a sense of responsibility, honesty, cooperation, healthy competition and learning engagement (Danang Setiawan, 2017). The key to this type of TGT is that students can learn to be more relaxed in addition to fostering responsibility, honesty, cooperation, healthy competition, and learning involvement (Wahyudi et al., 2018). This means that students must have courage, discipline, confidence, thoroughness, and positive and interdependent cooperation to obtain information and be

able to solve the problems given (Dosinaen et al., 2020). Therefore, in the TGT type cooperative learning model, it is necessary to arrange a good learning order so that students are actively involved. Thus, it is hoped that the application of the TGT type of cooperative learning model can overcome problems in class IV at State Elementary School 202 Balleanging, Ujunglœ District, Bulukumba Regency.

## METHOD

The approach used in this research is a qualitative research approach, where data collection is done naturally and the data obtained are in the form of words and pictures. And the type of research used is Classroom Action Research. In general, there are four stages of classroom action research, namely: planning, implementation, observation, and reflection. The design used in this study is the design of Suharsimi Arikunto. Thus the design can be seen in Figure 1 below:

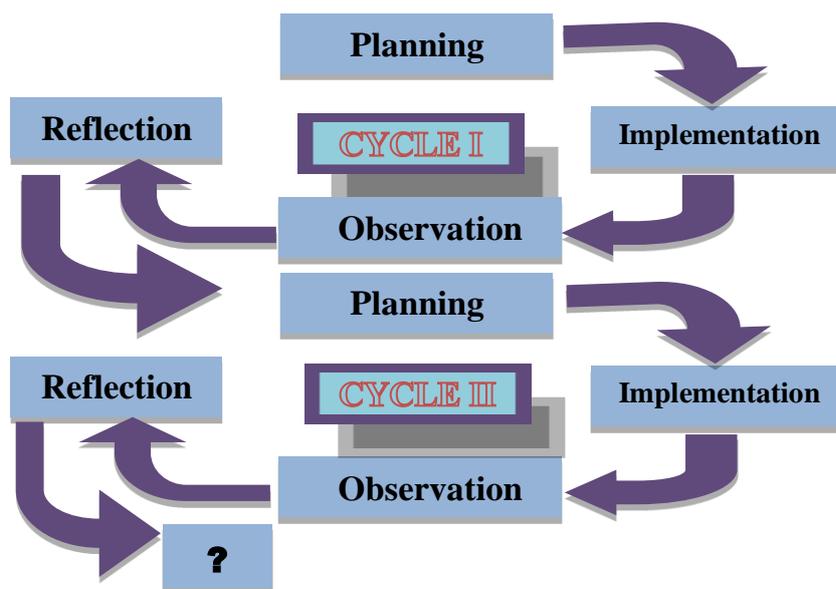


Figure 1.  
PTK Flow Chart

The data collected on the ability to throw and catch ball kasti used in this study refers to the psychomotor, affective, and cognitive assessment tests in throwing and catching ball kasti games. Therefore, the subjects in this study were elementary school students aged 9-12 years with physical abilities that were still developing and learning ball kasti, the researchers modified the instrument to suit the characteristics of the research subject. The forms of instruments that will be tested on students in this study include several aspects, namely: Spiritual Aspects (KI-1), Affective Aspects (KI-2), Cognitive Aspects (KI-3), and Psychomotor Aspects (KI-4).

Work indicators in data collection on Spiritual attitude assessment can be seen in Table 1. below:

**Table 1.**  
 Spiritual Attitude Assessment

No	Observation Aspect	Score		
		0	1	
A.	<b>Spiritual attitude assessment</b> Respect and appreciate the religious teachings espoused	<b>Indikator</b> 1. Pray before doing the lesson 2. Pray after doing the lesson		
<b>Maximum Score = 2</b>				

Work indicators in affective data collection can be seen in Table 2 below:

**Table 2.**  
 Affective aspect assessment

No	Aspects Observations	Score	
		0	1
<b>Affective Aspect Assessment</b>			
1	Bravery		
2	Discipline		
3	Accuracy		
4	Honesty		
5	Cooperation		
6	Confidence		
7	Actively ask		
8	Actively communicate		
9	A good listener		
10	Issuing opinions		
<b>Maximum score = 10</b>			

Work indicators in collecting data on psychomotor aspects can be seen in Table 3 below:

**Table 3.**  
 Psychomotor Aspect Assessment

No	Rated aspect	Score				Total
		1	2	3	4	
1	<b>Beginning Attitude</b> a. Forward view b. The body position is sideways with the left foot in front and the right foot behind c. Then open your feet as wide as possible					
2	<b>Implementation</b> a. Slightly bend the right leg, and keep the left leg straight b. Take a hand stance by holding the ball lifted to the back of the head or holding the ball above the shoulder c. Then swing your arms and throw the ball upfront so that the ball soars high and can reach the desired distance and					

No	Rated aspect	Score				Total
		1	2	3	4	
3	aim at the target <b>Final Movement</b> a. After throwing, stand with feet parallel and shoulder-width apart, knees slightly bent b. The view is fixed on the direction of the ball, the hand is parallel to the head and the elbow is slightly bent c. Open your fingers with your palms facing the ball and get ready to catch the ball					
<b>Amount</b>						
<b>Maximum Score = 36</b>						

The data collected in each observation activity from the implementation of the CAR cycle was analyzed descriptively using the percentage technique to see trends that occur in learning activities. In this study, the analysis was carried out in classifying the data obtained through observation. Observations are then presented, after which the learning mastery is calculated using simple statistics. To calculate the percentage of mastery learning used the following formula:

$$P = \frac{\sum \text{Students who have finished studying}}{\sum \text{Student}} \times 100\%$$

**Information :**

$\sum$  = Amount  
 P =Percentage

Indicators of success in this assessment are presented in the form of conversion in table 4 below:

**Table 4.**  
 Assessment of learning outcomes at State Elementary School 202 Balleagging, Ujungloe District, Bulukumba Regency. K13 (KKM)

No	Value range	Category	Criteria
1	85 – 100	Very well	Complete
2	75 – 84	Good	Complete
3	65 – 74	Enough	Not Complete
4	55 – 64	Less	Not Complete
5	0 – 54	Less once	Not Complete

## RESULTS AND DISCUSSION

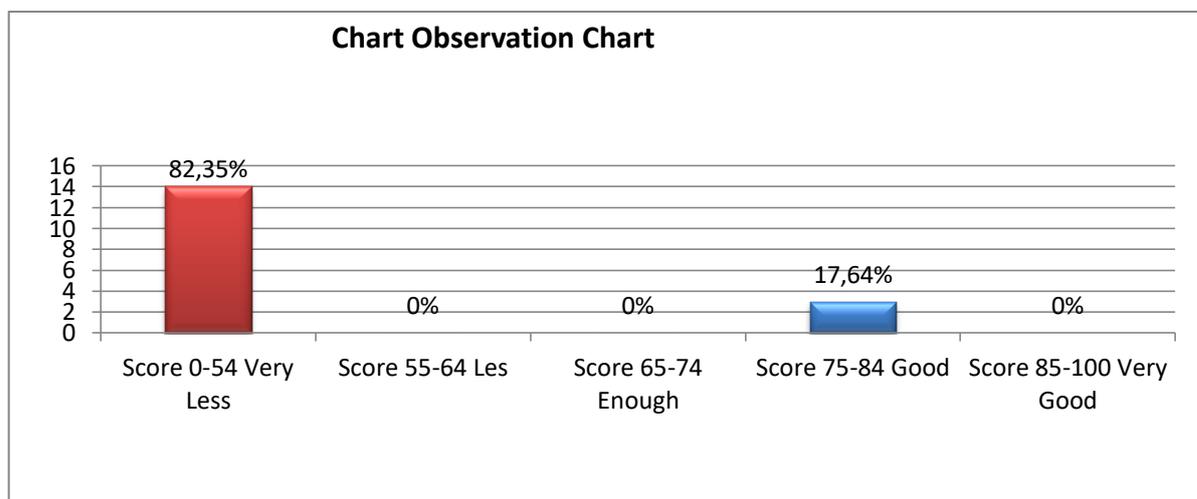
### Initial Condition Description (Pre-Cycle)

Based on the summary of the Preliminary Observation Results, from 17 fourth grade students at State Elementary School 202 Balleagging, Ujungloe District, Bulukumba Regency, all of them attended the initial observation activity. And among them, there are 10

male students and 7 female students. From the initial observation data that has been carried out, it is concluded that 3 students get a complete score in ball kasti learning, especially the basic techniques of throwing and catching the ball.

**Table 5.**  
 Results of Initial Observation Data on Basic Techniques Throwing and catching ball kasti for fourth-grade students at State Elementary School 202 Balleanging, Ujungloe District, Bulukumba Regency

No.	Value Range	Criteria	Information	Frequency	Percentage
1	85 – 100	Very good	Complete	0	0%
2	75 – 84	Good	Complete	3	17,64%
3	65 – 74	Enough	Not Complete	0	0%
4	55 – 64	Less	Not Complete	0	0%
5	0 – 54	Very Less	Not Complete	14	82,35%
<b>Amount</b>				<b>17</b>	<b>100%</b>



**Figure 2.**  
 Graph of Preliminary Observation Results

Based on the table above, it can be concluded that 82.35% of students have not achieved the Minimum Completeness Criteria score, which is 75. The results of this study are field observations regarding student learning outcomes in ball kasti learning by applying an intuitive approach using a cooperative learning model of TGT type for fourth-grade students at State Elementary School 202 Balancing. Ujungloe District, Bulukumba Regency. Therefore the researchers applied treatment to student learning outcomes, namely test results in the form of knowledge of ball last game material on cognitive aspects and tests for work on psychomotor aspects, while non-test results were obtained from observation of attitudes on affective aspects. Physical education learning in ball kasti games with the application of a scientific approach using the TGT type

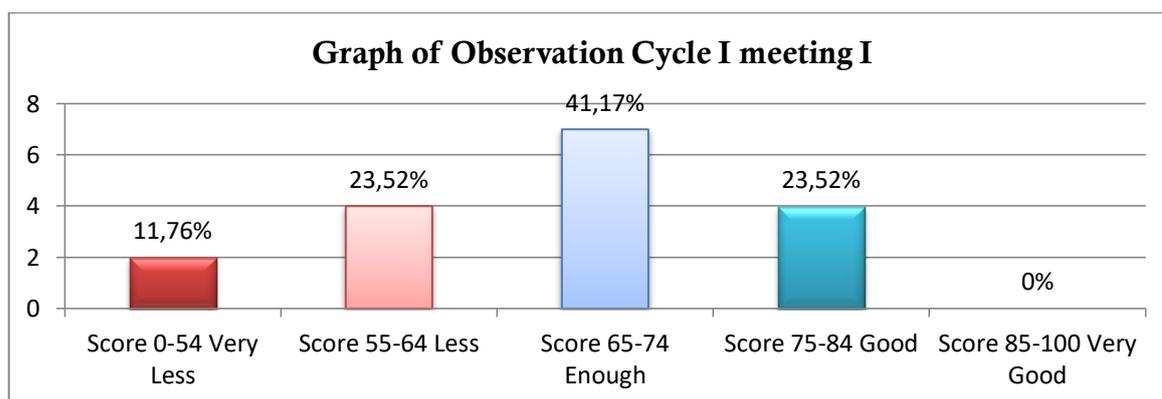
cooperative learning model was carried out in 2 meetings, namely, cycle I and cycle II, having stages of planning, implementation, observation, and reflection.

### Description of Research Results (Cycle I Meeting I)

Data Results Cycle I (Meeting 1) Basic Techniques of Throwing and Catching the Ball for Fourth Grade Students of State Elementary School 202 Balleanging, Ujungloe District, Bulukumba Regency

**Table 6.**  
Data Results Cycle I (Meeting 1)

No.	Value Range	Criteria	Information	Frequency	Percentage
1	85 - 100	Very good	Complete	0	0%
2	75 - 84	Good	Complete	4	23,52%
3	65 - 74	Enough	Not Complete	7	41,17%
4	55 - 64	Less	Not Complete	4	23,52%
5	0 - 54	Very Less	Not Complete	2	11,76%
<b>Amount</b>				<b>17</b>	<b>100%</b>



**Figure 3.**  
Graph of Cycle I Results (Meeting 1)

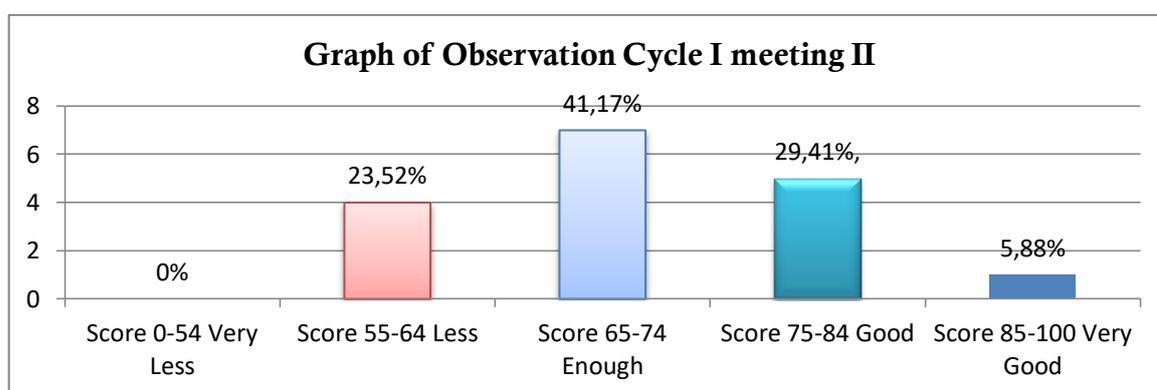
Based on table 7 and Figure 3 shows that the results of learning basic techniques of throwing and catching balls for fourth-grade students at STATE ELEMENTARY SCHOOL 202 Balleanging, Ujungloe District, Bulukumba Regency, there are 4 students (23.52%) good criteria, there are 7 students (41.17%) sufficient criteria, there are 4 students (23.52%) with poor criteria, and there are 2 students (11.76%) with very poor criteria. So, it can be concluded that in the first cycle (meeting 1) there were 4 students (23.52%) who finished studying and 13 students (76.47%) who did not complete their studies.

### Description of Research Results (Cycle I Meeting II)

Data Results Cycle I (Meeting 1I) Basic Techniques of Throwing and Catching the Ball for Fourth Grade Students of State Elementary School 202 Balleagging, Ujungloe District, Bulukumba Regency.

**Table 8.**  
 Data Results Cycle I (Meeting 1I)

No.	Value Range	Criteria	Information	Frequency	Percentage
1	85 - 100	Very good	Complete	1	5,88%
2	75 - 84	Good	Complete	5	29,41%
3	65 - 74	Enough	Not Complete	7	41,17%
4	55 - 64	Less	Not Complete	4	23,52%
5	0 - 54	Very Less	Not Complete	0	0%
<b>Amount</b>				<b>17</b>	<b>100%</b>



**Figure 4.**  
 Graph of Cycle I Results (Meeting II)

Based on table 8 and the graph above shows that the results of learning basic techniques of throwing and catching balls for fourth-grade students at State Elementary School 202 Balleanging, Ujungloe District, Bulukumba Regency, there is 1 student (5.88%) in very good criteria, there are 5 students (29.41%) in good criteria, there are 7 students (41.17%) insufficient criteria, there are 4 students (23.52%) in poor criteria. And there are 2 students (11.76%) in very poor criteria. So, it can be concluded that in the first cycle (meeting 1) there were 6 students (35.29%) who finished studying and 11 students (64.70%) who did not complete their studies.

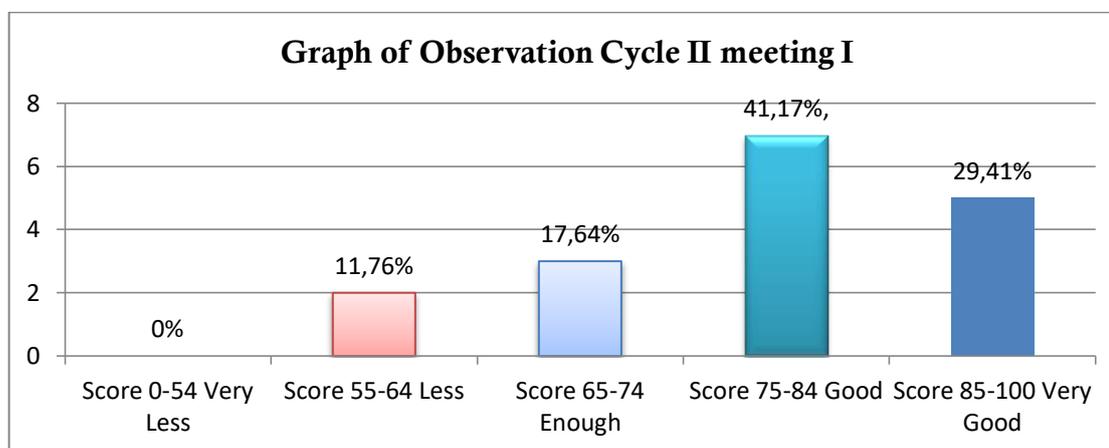
### Description of Research Results (Cycle II Meeting I)

Data Results Cycle II (Meeting I) Basic Techniques of Throwing and Catching the Ball for Fourth Grade Students of State Elementary School 202 Balleanging, Ujungloe District, Bulukumba Regency.

**Table 9.**  
 Data Results Cycle II (Meeting I)

No.	Value Range	Criteria	Information	Frequency	Percentage
1	85 - 100	Very good	Complete	5	29,41%
2	75 - 84	Good	Complete	7	41,17%

No.	Value Range	Criteria	Information	Frequency	Percentage
3	65 - 74	Enough	Not Complete	3	17,64%
4	55 - 64	Less	Not Complete	2	11,76%
5	0 - 54	Very Less	Not Complete	0	0%
<b>Amount</b>				<b>17</b>	<b>100%</b>



**Figure 4.**  
 Graph of Cycle II Results (Meeting I)

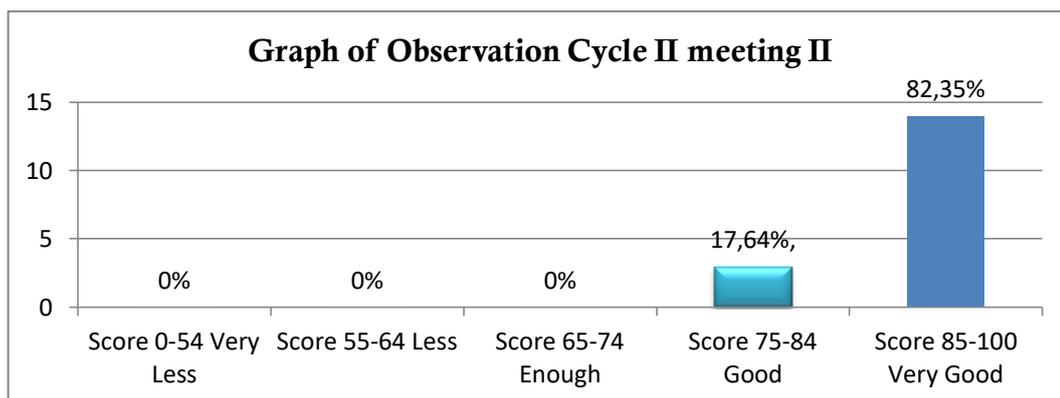
Based on table 4.32 and the graph above shows that the results of learning the basic techniques of throwing and catching balls for fourth-grade students at STATE ELEMENTARY SCHOOL 202 Balleanging, Ujungloe District, Bulukumba Regency, there are 5 students (29.41%) in very good criteria, there are 7 students (41.17%) in good criteria, there are 3 students (17.64%) insufficient criteria, there are 2 students (11.76%) in poor criteria. So, it can be concluded that in the second cycle (meeting I) there were 12 students (70.58%) who finished studying and 5 students (29.41%) who did not finish studying.

#### Description of Research Results (Cycle II Meeting I)

Data Results Cycle II (Meeting II) Basic Techniques of Throwing and Catching the Ball for Fourth Grade Students of State Elementary School 202 Balleagging, Ujungloe District, Bulukumba Regency.

Table 10.  
 Data Results Cycle II (Meeting II)

No.	Value Range	Criteria	Information	Frequency	Percentage
1	85 – 100	Very good	Complete	14	82,35%
2	75 – 84	Good	Complete	3	17,64%
3	65 – 74	Enough	Not Complete	0	0%
4	55 – 64	Less	Not Complete	0	0%
5	0 – 54	Very Less	Not Complete	0	0%
<b>Amount</b>				<b>17</b>	<b>100%</b>



**Figure 5**  
 Graph of Cycle II Results (Meeting II)

Based on table 10 and the graph above shows that the results of learning the basic techniques of throwing and catching balls for fourth-grade students at State Elementary School 202 Balleanging, Ujungloe District, Bulukumba Regency, there are 14 students (82.35%) in very good criteria, there are 3 students (17.64%) in good criteria. So, it can be concluded that in cycle II (meeting II) all students obtained learning outcomes with complete categories.

### Comparison of Learning Outcomes of Basic Techniques of Throwing and Catching Ball Kasti Cycle I and Cycle II

**Table 11.**

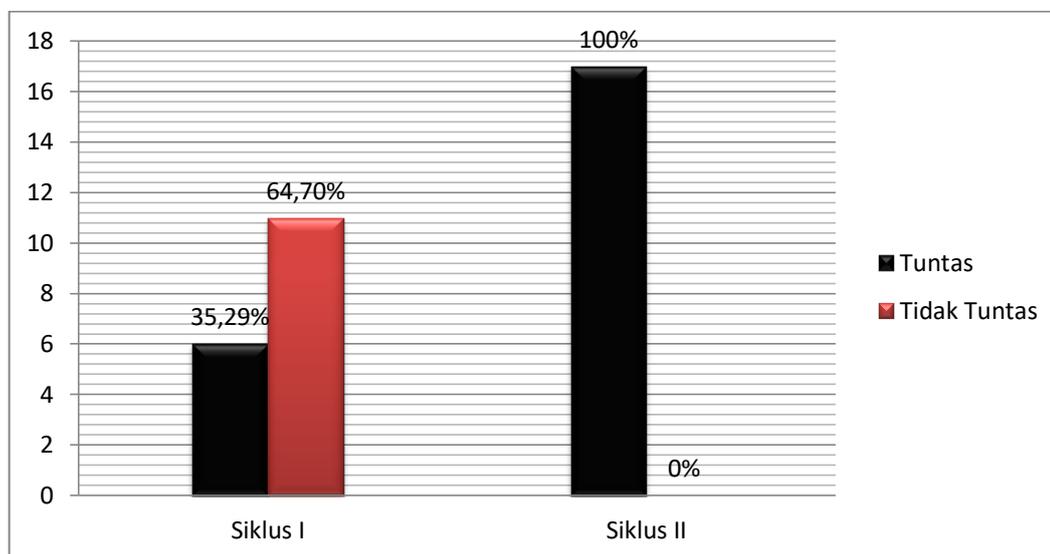
Summary of the comparison of learning outcomes in cycle I and cycle II for fourth grade students at State Elementary School 202 Balleagging, Ujungloe District, Bulukumba Regency

No.	Value Range	Criteria	Information	Frequency	Percentage
1	96 – 100	Very good	Complete	0	0%
2	86 –95	Good	Complete	1	5,88%
3	76 – 85	Enough	Complete	5	29,41%
4	0 <75	Less	Not Complete	11	64,70%
<b>Amount</b>				<b>17</b>	<b>100%</b>

Based on tables 11, the comparison of learning outcomes of basic throwing and catching techniques in cycle I and cycle II above shows an increase in the value of learning outcomes by 18.83%. In Cycle I showed that the results of learning the basic techniques of throwing and catching the ball of fourth-grade students at State Elementary School 202 Balleagging, Ujungloe District, Bulukumba Regency, there were 6 students (35.29%) who finished studying and 11 students (64.70%) who did not complete their studies.

While in Cycle II, it was shown that the results of learning the basic techniques of throwing and catching the ball for fourth-grade students of State Elementary School 202

Balleagging, Ujungloe District, Bulukumba Regency, there were 17 students (100%) who completed learning. That is, in the second cycle, all fourth-grade students in the assessment of learning outcomes of basic techniques of throwing and catching balls in ball kasti learning were declared complete.



**Figure 6.**  
Comparison Graph of Learning Outcomes Cycle I and Cycle II

The picture above shows that the fourth-grade students of State Elementary School 202 Balleagging, Ujungloe District, Bulukumba Regency, in the first cycle 6 students completed with a percentage of 35.29% and 11 students who did not complete with a percentage of 64.70%. While in the second cycle 17 students completed with a percentage of 100%. This means that in cycle II all students get learning outcomes in the category of all complete.

## Discussion

### Comparison of Learning Outcomes of Basic Techniques of Throwing and Catching Ball kasti Cycle I (meeting I and meeting II)

Comparison of the results of learning the basic techniques of throwing and catching balls for fourth-grade students at State Elementary School 202 Balleanging, Ujungloe District, Bulukumba Regency through the application of a scientific approach using the TGT type cooperative learning model in cycle I (Meeting I) reached 23.52% of students who completed learning totalling 4 students, while the first cycle (Meeting II) increased to 35.29%, meaning that 6 students finished studying.

There is an increase in the value of learning outcomes by 4.4%. In Cycle I (Meeting I) showed that the results of learning the basic techniques of throwing and catching balls

for fourth-grade students at State Elementary School 202 Balleanging, Ujungloe District, Bulukumba Regency, there were 4 students with a percentage (23.52%) who completed learning and 13 students with a percentage (76, 47%) who did not finish studying. While in Cycle I (meeting II) showed that the results of learning the basic techniques of throwing and catching balls for fourth-grade students of State Elementary School 202 Balleanging, Ujungloe District, Bulukumba Regency, there were 6 students with a percentage (35.29%) who completed learning. and 11 students with a percentage (64.70%) who did not finish studying.

From some of the explanations above, it can be concluded that the fourth-grade students of State Elementary School 202 Balleanging, Ujungloe District, Bulukumba Regency in the first cycle (Meeting I) 4 students completed with a percentage of 23.52% and 13 students who did not complete with a percentage of 76.47%. While in the first cycle (Meeting II) 6 students completed with a percentage of 35.29% and 11 students did not complete with a percentage of 64.70%.

#### **Comparison of Learning Outcomes of Basic Techniques of Throwing and Catching Ball kasti Cycle II (Meetings I and II)**

Comparison of learning outcomes of basic techniques of throwing and catching balls for fourth-grade students at State Elementary School 202 Balleanging, Ujungloe District, Bulukumba Regency through the application of a scientific approach using the TGT type cooperative learning model in cycle II (Meeting I) 12 students have completed learning with a percentage of 70.58%, while the second cycle (Meeting II) increased to 100%, meaning that 17 students had completed their studies with a percentage of 100%.

The results of learning the basic techniques of throwing and catching the ball in the second cycle (Meetings I and II) above showed an increase in the value of learning outcomes by 11.13%. In Cycle II (Meeting I) showed that the results of learning the basic techniques of throwing and catching balls for fourth-grade students at State Elementary School 202 Balleanging, Ujungloe District, Bulukumba Regency, there were 12 students with a percentage (70.58%) who completed learning and 5 students with a percentage (29, 41%) who did not finish studying. While in Cycle II (meeting II) showed that the results of learning the basic techniques of throwing and catching balls for fourth-grade students of State Elementary School 202 Balleanging, Ujungloe District, Bulukumba Regency, there were 17 students with a percentage (100%) who had completed learning.

From some of the explanations above, it can be concluded that the fourth-grade students of State Elementary School 202 Balleanging, Ujungloe District, Bulukumba

Regency, in the second cycle (Meeting I) 12 students completed with a percentage of 70.58% and 5 students who did not complete with a percentage of 29.41%. While in cycle II (Meeting II) 17 students completed with a percentage of 100%. This means that all fourth-grade students of State Elementary School 202 Balleagging, Ujungloe District, Bulukumba Regency who perform the basic techniques of throwing and catching the ball are declared complete.

### **Comparison of cycle II (Meetings I and II)**

Based on the comparison of the results of learning the basic techniques of throwing and catching the ball in the second cycle (Meetings I and II) above, it can be seen that there is an increase in the value of learning outcomes by 11.13%. In Cycle II (Meeting I) showed that the results of learning the basic techniques of throwing and catching balls for fourth-grade students at State Elementary School 202 Balleang, Ujungloe District, Bulukumba Regency, there were 12 students with a percentage (70.58%) who completed learning and 5 students with a percentage (29, 41%) who did not finish studying.

In the comparison of learning outcomes above, it can be concluded that the fourth-grade students of State Elementary School 202 Balleang, Ujungloe District, Bulukumba Regency in cycle II (Meeting I) 12 students completed with a percentage of 70.58% and 5 students who did not complete with a percentage of 29.41%. While in cycle II (Meeting II) 17 students completed with a percentage of 100%. This means that all fourth-grade students of State Elementary School 202 Balleagging, Ujungloe District, Bulukumba Regency who perform the basic techniques of throwing and catching the ball are declared complete.

In the research during the second cycle of the 17 fourth grade students of State Elementary School 202 Balleagging, Ujungloe District, Bulukumba Regency, there were 17 students (100%) who had completed their studies. This means that all students have reached the KKM score. Based on observations and reflections during cycle II, the value of learning outcomes for basic techniques of throwing and catching balls for fourth-grade students of State Elementary School 202 Balleagging, Ujungloe District, Bulukumba Regency has reached the predetermined success indicator, namely 75% of students who meet the KKM score = 75 or more. Thus, this research does not need to be continued to the next cycle stage.

Therefore, in this study, it can be concluded that students' learning outcomes of throwing and catching ball kasti can be significantly improved by applying a scientific

approach using the TGT type cooperative learning model for fourth graders at State Elementary School 202 Balleanging, Ujungloe District, Bulukumba Regency.

## CONCLUSIONS AND SUGGESTIONS

### Cycle I (Meetings I and II)

The results of learning the basic techniques of throwing and catching balls for fourth-grade students at State Elementary School 202 Balleanging, Ujungloe District, Bulukumba Regency through the application of a scientific approach using the TGT type cooperative learning model in cycle I (Meeting I) 4 students have completed learning with a percentage reaching 23.52%, while in the first cycle (Meeting II) 6 students finished studying with the percentage increasing to 35.29%. While in Cycle I (meeting II) showed that the results of learning the basic techniques of throwing and catching balls for fourth-grade students at State Elementary School 202 Balleanging, Ujungloe District, Bulukumba Regency, there were 6 students with a percentage (35.29%) who completed learning. and 11 students with a percentage (64.70%) who did not finish studying.

### Comparison of the cycle I (Meetings I and II)

Based on the comparison of the results of learning the basic techniques of throwing and catching the ball in the first cycle (Meetings I and II) above, it can be seen that there is an increase in the value of learning outcomes by 4.4%. In Cycle I (Meeting I) showed that the results of learning the basic techniques of throwing and catching balls for fourth-grade students at State Elementary School 202 Balleanging, Ujungloe District, Bulukumba Regency, there were 4 students with a percentage (23.52%) who completed learning and 13 students with a percentage (76, 47%) who did not finish studying.

Based on the learning outcomes in the first cycle (meetings I and II) it can be concluded that the fourth-grade students of State Elementary School 202 Balleanging, Ujungloe District, Bulukumba Regency in the first cycle (Meeting I) 4 students completed with a percentage of 23.52% and 13 students who did not complete with percentage 76.47%. While in the first cycle (Meeting II) 6 students completed with a percentage of 35.29% and 11 students did not complete with a percentage of 64.70%.

In the research during the first cycle of the 17 fourth grade students of State Elementary School 202 Balleanging, Ujungloe District, Bulukumba Regency, there were 6 students (35.29%) who completed their studies and 11 students (64.70%) who did not complete their studies. Based on observations and reflections during the first cycle, the

value of learning outcomes for basic techniques of throwing and catching balls for fourth-grade students at State Elementary School 202 Balleagging, Ujungloe District, Bulukumba Regency has not yet reached the predetermined success indicator, namely 75% of students who meet the KKM score = 75 or more. Thus, this research needs to be continued to the next cycle stage, namely, cycle II.

### **Cycle II (Meetings I and II)**

The results of learning the basic techniques of throwing and catching balls for fourth-grade students at State Elementary School 202 Balleanging, Ujungloe District, Bulukumba Regency through the application of a scientific approach using the TGT type cooperative learning model in cycle II (Meeting I). 12 students completed learning with a percentage of 70.58%. While in Cycle II (meeting II) showed that the results of learning the basic techniques of throwing and catching balls for fourth-grade students of State Elementary School 202 Balleagging, Ujungloe District, Bulukumba Regency, there were 17 students with a percentage (100%) who had completed learning.

Based on the results of the study, it can be suggested for several things, especially for the teachers of State Elementary School 202 Balleanging, Ujungloe District, Bulukumba Regency, especially for physical education teachers as follows: (1) The results of this study can contribute information to the education office at large about the TGT type cooperative learning model can improve the results of learning the basic techniques of throwing and catching the ball in the ball kasti game for fourth graders at State Elementary School 202 Balleanging, Ujungloe District, Bulukumba Regency, (2) The teacher can apply a scientific approach by using the TGT learning model in the learning process of basic techniques of throwing and catching the ball in the ball kasti game to improve results. student learning at State Elementary School 202 Balleagging, Ujungloe District, Bulukumba Regency, and (3) Through a scientific approach with the TGT learning model in the learning process at school, it can improve and improve student learning outcomes at State Elementary School 202 Balleagging, Ujungloe District, Bulukumba Regency.

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