



Implementation of a Scientific Approach Using Problem Based Learning (PBL) Models to Improve Learning Outcomes of Overhand Pass In Volleyball Game

Indri Utami^{1*}, Sudirman Burhanuddin², Sahabuddin³

^{1,2}Physical Education and Sports, Postgraduate Program, State University of Makassar
South Sulawesi Indonesia

³Education of Sports Coaching, Faculty of Sport Science, State University of Makassar,
South Sulawesi, Indonesia

^{1,2}Street. Bonto Langkasa, Makassar City, South Sulawesi Selatan KP. 90222

³Street. Wijaya Kusuma Raya No. 14 (Banta-Bantaeng FIK Campus) Makassar City,
South Sulawesi, 90222

¹indriutami617@gmail.com, ²sudirmanburhanuddin@unm.ac.id, ³sahabuddin@unm.ac.id

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ABSTRACT

This study is a classroom action research that aims to discover whether a scientific approach using a problem-based learning model can improve the learning outcomes of upper passing in volleyball for grade XI MIPA 2 at Ma Ma'arif Nu Lasepang in the Bantaeng district. A classroom action research employed the PBL model in its material, namely the basic technique of upper passing in a volleyball. The study was conducted in 2 cycles, each cycle consisted of 3 meetings. The aspects assessed in this study were spiritual KI- 1, social KI- 2, cognitive KI- 3, and psychomotor KI- 4. The research sample was 20 students. Based on the results of the study, at the beginning of the study, initial observation was conducted to determine the condition of students' initial data. As a reference in the assessment, the Benchmark Reference Assessment (PAP) on a scale of 5. In the initial data, it is discovered that no student can achieve the minimum completeness criteria. Furthermore, in the first cycle, there is an increase in the number of students who experienced mastery learning, namely 5 students with a percentage of 25% and there is a significant increase in the second cycle, namely 18 students with 90%.

Keywords: PBL; Learning Outcomes; Volleyball.

INTRODUCTION

A scientific approach that is believed to be able to make students construct their knowledge and can foster a scientific attitude requires a learning model that is synergistic and in harmony with the scientific approach (Prabawanti, 2010). The rest of the 2013 curriculum adheres to the basic view that knowledge cannot be simply transferred from teachers to students, learning must be related to the opportunities given to students to construct knowledge in their cognitive processes (Sahabuddin, 2018b). The learning

model that is emphasized in the 2013 curriculum is prioritizing the Problem Based Learning and Project-Based Learning models. These two models, especially Problem Based Learning, are very compatible with the steps of learning in the scientific approach, which includes 5 aspects, namely observing, asking, trying, associating and communicating (Jaya et al., 2016).

Budiyanto (2016) also explains that the steps of scientific learning are observing (to identify or find problems), formulating problems, formulating hypotheses, collecting data with various techniques, analyzing data, drawing conclusions and communicating findings. Furthermore, Nurdyansyah and Fahyuni (2016) also mention that scientific learning involves the process of observing, classifying, measuring, predicting, explaining and concluding (Sahabuddin, Hakim, & Bismar, 2020).

Therefore, learning using this approach will involve students in solving complex problems through brainstorming, creative thinking, and conducting research activities (Setiawan et al., 2020). The research activities carried out will lead students to understand the material that will be obtained in each step of the learning. Learning with this approach can be combined with subjects that mainly rely on physical activity, one of which is Physical Education, Sports and Health with various materials in it. One of them is a volleyball game (Sahabuddin, 2018a). The volleyball game is one of the popular sports games in the PJOK subject. One of the main keys to the success of the volleyball game is passing (Sahabuddin, Hakim, & Syahrudin, 2020). In playing volleyball, players are required to be able to pass accurately, which can be done by passing up or down. Failure in passing will be very detrimental in a volleyball match. To get a better level of accuracy, most players use top passing, especially for a setter (feeder). So, students must be able to master passing over to play volleyball well.

To be able to do overhead passes well, it is necessary to pay attention to several things, namely in doing overhead passing, it is necessary to pay attention to the following things, namely touching the ball with the inside of the finger, stopping the ball with the thumb and the other four fingers, bending the wrist to the left. back and elbows bent to the sides to hold the ball with the thumbs and fingers, pushing the ball up with the fingers and wrist extended. If the basic technique of passing over is not considered, there will be a passing error, especially it will affect the level of accuracy of the passing (Satria, 2019).

The teacher can determine the problems to be used, resources or materials that are relevant to the problem. Birgili (2015) states, "problem-based learning (PBL) is defined as

a pedagogical approach which uses cases and problems as departure points to accomplish the intended learning objectives". That is, PBL is learning that uses problems to achieve a learning goal (Inel, D., & Balim, A. G., 2010). The chosen problem must also be related and believed to be able to build students' concepts on the material to be delivered in the learning. Furthermore, Inel & Balim (2010) said, "problem-based learning methods will be effective in improving students' cognitive levels, or to put it in another way, their academic achievement and level of concept construction so that they can adapt to the changing and developing world". Budiyanto (2016) said that the PBL learning model was developed to help students develop thinking skills, problem-solving, and intellectual skills by involving students in real experiences. This is in line with the opinion of Hallinger and Lu (2011), "This finding from a strong longitudinal analysis bolsters the belief that PBL offers specific advantages for creating an active learning environment that engages students productively". The advantage of using PBL is that it can create an active learning environment that involves students productively (Kusmaryono, I., & Suyitno, H., 2016).

Based on the observations made, the PJOK learning conducted at Ma Ma'arif NU Lasepang, Bantaeng Regency, especially class XI, has implemented the 2013 curriculum. The Minimum Completeness Criteria are the criteria for the lowest score limit given to students achieving completeness. The KKM is usually set at the beginning of the new school year and usually several educational units have the same character.

To determine the KKM, it must consider the level of average ability of the students themselves and the ability of supporting resources such as infrastructure and so on. As for the school's carrying capacity aspect, it gets a score of 85, the complexity aspect gets a score of 70, the intake aspect gets a score of 70. Thus, the school has a standard value of the Minimum Completeness Criteria, which is 75. But if you look at the learning model used for PJOK lessons for class XI, applying the K13 curriculum but the model used does not use one of the two models that should be applied in K13 which is then continued with individual or group exercises. In the opinion of the PJOK teacher, the model was used for all the material being taught because they were still confused about how to apply it directly to the PJOK subject matter.

Based on this, it can be seen that the application of the scientific approach is felt by teachers to be still difficult to apply to PJOK subjects. So this class action research is certainly very necessary to do. Because as is well known, that to achieve successful

learning outcomes, the role of a teacher is needed to direct students. Both in terms of approaches, learning models, and techniques used during the learning process (Kusumaningrum, I. A., Ashadi, A., & Indriyanti, N. Y. 2017). Good learning is a teaching and learning process that actively involves students in the affective, cognitive, and psychomotor domains so that there is a pleasant two-way communication. Therefore, it is necessary to apply a scientific approach using a problem based learning model (Hmelo-Silver, C. E., & Eberbach, C., 2012).

In addition, based on the results of initial observations from 20 existing students, namely 7 male students and 13 female students, an assessment was obtained covering aspects of spiritual attitudes (KI-1), social attitudes (KI-2), cognitive aspects (KI-3), and psychomotor aspects (KI-4). The students' average score from 0-100 in each aspect, namely spiritual attitude (KI-1) is 85; social attitude (KI-2) is 32; knowledge (KI-3) is 38.93; and psychomotor ability (KI-4) is 42. The problem found is that when learning the basic technique of passing over, there are some students who still arrive late and don't seem ready to follow the learning process. Then quite a lot of students who do not show good social attitudes during the learning process. Such as not being on time, not wanting to discuss with friends, not completing assignments from the teacher, cheating when given assignments and not being responsive to the subject matter given (Kemendikbud, 2014).

In the big ball material, namely volleyball, there are several sub-materials that are taught including passing. Based on observations, the passing grades of many students have not reached the KKM value. The problem is that there are still many students who do not stand balanced when doing the initial movement. Students do not notice that this initial process is very important to be able to carry out the next movement perfectly. The student body also does not lean forward a little when doing the overhead pass. Many also do both arms open above the head but the elbows are not bent to the side. Many do not push the ball up using the base of the fingers but use the lower palm of the hand so that the direction of the ball is not directed properly. The feet also don't tiptoe, resulting in imperfect upper passing movements (Wardono, Waluya, B., Kartono, Mulyono, & Mariani, S. 2018).

From the initial data that has been carried out, it also shows that the value of student knowledge is still far below the standard KKM value that has been set. In theory, they also find it difficult to answer the questions given. This is because students do not understand the basic techniques of passing over properly and correctly. This is due to the lack of attention of students when the teacher is giving learning material about the basic

technique of passing over. So that it also affects learning outcomes on basic passing technique material which as a whole is still lacking or can be said to be low.

The use of a learning model that can be observed and practiced directly is very influential on the sustainability of the learning process. Both in terms of teaching materials as well as supporting facilities and infrastructure really need to be adjusted first. In this case, the teacher is required to be able to play a more creative role in presenting learning material in a fun way with the existing conditions and limitations (Esema, D., Susari, E., & Kurniawan, D. 2016). The learning model is a way to distribute teaching materials, so that if a teacher is less creative in choosing the appropriate learning model, it will certainly affect the learning outcomes of students later (Hayati, S. 2016). The research tries to apply a scientific approach by using a problem based learning model. This model is a learning model that is widely recognized as effective and student-centered learning, because it increases students' metacognitive knowledge (Gerde, H. K., Schachter, R. E., & Wasik, B. A. 2013). Students are presented with complex problems everyday that align with learning objectives. Using problems to build a material concept through everyday life problems. Therefore, the combination of a scientific approach with a problem-based learning model produces learning that requires students to be active in discovery activities, and to use everyday life problems in the discovery process (Hallinger, P., & Lu, J., 2011). The choice of daily life problems is also the main key to the success of this learning design. Students will become more interested and motivated in learning so that student learning outcomes will increase.

METHOD

Based on the research review to be achieved, this research is Classroom Action Research (CAR). According to Kunandar (Sudirman & Maru, 2016) Classroom Action Research is a form of self-reflection activity carried out by education actors in a situation of rationality and justice about their educational practices and an understanding of the practices carried out and the situations in which these practices can be carried out. In line with this opinion, Burhanuddin (2020) stated that research was conducted to make a change for the better than before.

Based on this description, Classroom Action Research has special characteristics, namely to solve problems and to improve teacher performance. Where in its implementation is colored by reflecting thinking. This classroom action research

approach can be used as a problem-solving strategy by utilizing real action, then reflecting on the results of the action. Then the results of these reflections can be used as a step in selecting the next action according to the problems faced so that the learning objectives run optimally. The subjects of this study consisted of 17 students of class XI MIPA 2 MA Ma'arif NU Lasepang, Bantaeng Regency. The objects of this research include the learning outcomes of students' passing knowledge, social attitudes learning outcomes and student's passing skills learning outcomes. The time of this research is one cycle consisting of two meetings by following the physical education learning schedule at the school. The design for implementing classroom action research includes determining the focus of the problem, planning actions, implementing actions followed by observation, interpretation, and analysis, as well as reflection activities. The data that has been collected in the observation activities in each cycle were analyzed descriptively with statistical calculations to see the percentage of developments that occurred as a whole. The indicators of success in the assessment of student learning outcomes based on the national standard KKM 75 are presented in the following table:

Table 1.
Indicators of Completeness of Student Learning Outcomes

No.	Value Range	Criteria	Description
1	> 95 – 100	Very Good	Complete
2	> 85 – 94	Good	Complete
3	> 76 - 84	Enough	Complete
4	< 75	Less	Not Complete

RESULTS AND DISCUSSION

Results

Cycle 1

Research Results Cycle 1 Meeting 2

Table 2.
Level of Mastery of Spiritual Attitude

No.	Level of Mastery	Score Range by Individual	Scoring Range by Class	F	%	Score	Quality	Predicate
1.	90% – 100%	1,8 – 2,0	36 – 40	16	80	A	4	Very Good
2.	80% – 89%	1,6 – 1,7	32 – 35	0	0	B	3	Good
3.	65% – 79%	1,3 – 1,5	26 – 31	0	0	C	2	Enough
4.	55% – 64%	1,1 – 1,2	22 – 25	0	0	D	1	Less
5.	< 55%	< 1,1	< 22	4	20	E	0	Less Once

Table 2.
Level of Mastery of Social Attitudes

No.	Level of Mastery	Score Range by Individual	Scoring Range by Class	F	%	Score	Quality	Predicate
1.	90% – 100%	4,5 – 5	90 - 100	0	0%	A	4	Very Good
2.	80% – 89%	4 – 4,4	80 – 89	3	15%	B	3	Good
3.	65% – 79%	3,25 – 3,9	65 – 79	0	0%	C	2	Enough
4.	55% – 64%	2,75 – 3,15	55 – 64	11	55%	D	1	Less
5.	< 55%	< 2,75	<55	6	30%	E	0	Less Once

Table 3.
Level of Mastery of Cognitive Aspects

No.	Level of Mastery	Score Range by Individual	Scoring Range by Class	F	%	Score	Quality	Predicate
1.	90% – 100%	12,6 – 14	252 - 280	0	0%	A	4	Very Good
2.	80% – 89%	11,2 – 12,5	224 - 251	0	0%	B	3	Good
3.	65% – 79%	9,1 – 11,1	182 - 223	3	15%	C	2	Enough
4.	55% – 64%	7,7 – 9	154 – 280	3	15%	D	1	Less
5.	< 55%	< 7,7	<154	14	70%	E	0	Less Once

Table 4.
Levels of Psychomotor Mastery

No	Level of Mastery	Range Average Score	F	Score	Quality	Predicate
1	90% - 100%	90 -100	0	A	4	Very Good
2	80% – 89%	80 - 89	0	B	3	Good
3	65% - 79%	65 - 79	3	C	2	Enough
4	55% - 64%	55 - 64	1	D	1	Less
5	< 55%	< 55	16	E	0	Less Once

Table 5.
Results of Data Cycle 1 Meeting 1

No.	Level of Mastery	Range Total Score	Range Average Score	F	%	Score	Quality	Predicate
1.	90% – 100%	648 - 720	32,4 - 36	0	0%	A	4	Very Good
2.	80% – 89%	576 – 647	28,8 - 32,3	0	0%	B	3	Good
3.	65% – 79%	468 – 575	23,4 - 28,7	2	10%	C	2	Enough
4.	55% – 64%	396 – 467	19,8 -23,3	8	40%	D	1	Less
5.	< 55%	< 396	< 19,8	10	50%	E	0	Less Once

Research Results Cycle 1 Meeting 2

Table 6.
Level of Mastery of Spiritual Attitude

No.	Level of Mastery	Score Range by Individual	Scoring Range by Class	F	%	Score	Quality	Predicate
1.	90% – 100%	1,8 – 2,0	36 – 40	18	90%	A	4	Very Good
2.	80% – 89%	1,6 – 1,7	32 – 35	0	0%	B	3	Good
3.	65% – 79%	1,3 – 1,5	26 – 31	0	0%	C	2	Enough
4.	55% – 64%	1,1 – 1,2	22 - 25	0	0%	D	1	Less
5.	< 55%	< 1,1	< 22	2	10%	E	0	Less Once

Table 7.
Level of Mastery of Social Attitudes

No.	Level of Mastery	Score Range by Individual	Scoring Range by Class	F	%	Score	Quality	Predicate
1.	90% – 100%	4,5 – 5	90 - 100	2	10%	A	4	Very Good
2.	80% – 89%	4 – 4,4	80 – 89	8	40%	B	3	Good
3.	65% – 79%	3,25 – 3,9	65 – 79	0	0%	C	2	Enough
4.	55% – 64%	2,75 – 3,15	55 – 64	7	35%	D	1	Less
5.	< 55%	< 2,75	<55	3	15%	E	0	Less Once

Table 8.
Level of Mastery of Cognitive Aspects

No.	Level of Mastery	Score Range by Individual	Scoring Range by Class	F	%	Score	Quality	Predicate
1.	90% – 100%	12,6 – 14	252 – 280	0	0%	A	4	Very Good
2.	80% – 89%	11,2 – 12,5	224 – 251	4	20%	B	3	Good
3.	65% – 79%	9,1 – 11,1	182 – 223	6	30%	C	2	Enough
4.	55% – 64%	7,7 – 9,0	154 – 181	10	50%	D	1	Less
5.	< 55%	< 7,7	< 154	0	0%	E	0	Less Once

Table 9.
Levels of Psychomotor Mastery

No	Level of Mastery	Range Average Score	F	Score	Quality	Predicate
1.	90% - 100%	90 -100	0	A	4	Very Good
2.	80% – 89%	80 - 89	5	B	3	Good
3.	65% - 79%	65 - 79	10	C	2	Enough
4.	55% - 64%	55 - 64	2	D	1	Less
5.	< 55%	< 55	3	E	0	Less Once

Table 10.
Results of Data Cycle 1 Meeting 2

No.	Level of Mastery	Range Total Score	Range Average Score	F	%	Score	Quality	Predicate
1.	90% – 100%	648 - 720	32,4 - 36	0	0%	A	4	Very Good
2.	80% – 89%	576 – 647	28,8 - 32,3	3	15%	B	3	Good
3.	65% – 79%	468 – 575	23,4 - 28,7	14	70%	C	2	Enough
4.	55% – 64%	396 – 467	19,8 -23,3	3	15%	D	1	Less
5.	< 55%	< 396	< 19,8	0	0%	E	0	Less Once

Research Results Cycle 1 Meeting 3

Table 11.
Level of Mastery of Spiritual Attitude

No.	Level of Mastery	Score Range by Individual	Scoring Range by Class	F	%	Score	Quality	Predicate
1.	90% – 100%	1,8 – 2	36 – 40	20	100%	A	4	Very Good
2.	80% – 89%	1,6 – 1,7	32 – 35	0	0%	B	3	Good
3.	65% – 79%	1,3 – 1,5	26 – 31	0	0%	C	2	Enough
4.	55% – 64%	1,1 – 1,2	22 - 25	0	0%	D	1	Less
5.	< 55%	< 1,1	< 22	0	0%	E	0	Less Once

Table 12.
Level of Mastery of Social Attitudes

No.	Level of Mastery	Score Range by Individual	Scoring Range by Class	F	%	Score	Quality	Predicate
1.	90% – 100%	4,5 – 5	90 - 100	6	30%	A	4	Very Good
2.	80% – 89%	4 – 4,4	80 – 89	10	50%	B	3	Good
3.	65% – 79%	3,25 – 3,9	65 – 79	0	0%	C	2	Enough
4.	55% – 64%	2,75 – 3,15	55 – 64	3	15%	D	1	Less
5.	< 55%	< 2,75	<55	1	5%	E	0	Less Once

Table 13.
Level of Mastery of Cognitive Aspects

No.	Level of Mastery	Score Range by Individual	Scoring Range by Class	F	%	Score	Quality	Predicate
1.	90% – 100%	12,6 – 14	252 - 280	3	15%	A	4	Very Good
2.	80% – 89%	11,2 – 12,5	224 - 251	3	15%	B	3	Good
3.	65% – 79%	9,1 – 11,1	182 - 223	10	50%	C	2	Enough
4.	55% – 64%	7,7 – 9	154 – 280	4	20%	D	1	Less
5.	< 55%	< 7,7	<154	0	0%	E	0	Less Once

Table 14.
Levels of Psychomotor Mastery

No	Level of Mastery	Range Average Score	F	Score	Quality	Predicate
1.	90% - 100%	90 -100	0	A	4	Very Good
2.	80% – 89%	80 - 89	0	B	3	Good
3.	65% - 79%	65 - 79	2	C	2	Enough
4.	55% - 64%	55 - 64	8	D	1	Less
5.	< 55%	< 55	10	E	0	Less Once

Table 15.
Results of Data Cycle 1 Meeting 3

No.	Level of Mastery	Range Total Score	Range Average Score	F	%	Score	Quality	Predicate
1.	90% – 100%	648 - 720	32,4 - 36	0	0%	A	4	Very Good
2.	80% – 89%	576 – 647	28,8 - 32,3	0	0%	B	3	Good
3.	65% – 79%	468 – 575	23,4 - 28,7	17	85%	C	2	Enough
4.	55% – 64%	396 – 467	19,8 -23,3	3	15%	D	1	Less
5.	< 55%	< 396	< 19,8	0	0%	E	0	Less Once

Research Results Cycle 2 Meeting 1

Table 16.
Level of Mastery of Spiritual Attitude

No.	Level of Mastery	Score Range by Individual	Scoring Range by Class	F	%	Score	Quality	Predicate
1.	90% – 100%	1,8 – 2	36 – 40	20	100%	A	4	Very Good
2.	80% – 89%	1,6 – 1,7	32 – 35	0	0%	B	3	Good
3.	65% – 79%	1,3 – 1,5	26 – 31	0	0%	C	2	Enough
4.	55% – 64%	1,1 – 1,2	22 - 25	0	0%	D	1	Less
5.	< 55%	< 1,1	< 22	0	0%	E	0	Less Once

Table 17.
Level of Mastery of Social Attitudes

No.	Level of Mastery	Score Range by Individual	Scoring Range by Class	F	%	Score	Quality	Predicate
1.	90% – 100%	4,5 – 5	90 - 100	6	30%	A	4	Very Good
2.	80% – 89%	4 – 4,4	80 – 89	11	55%	B	3	Good
3.	65% – 79%	3,25 – 3,9	65 – 79	0	0%	C	2	Enough
4.	55% – 64%	2,75 – 3,15	55 – 64	3	15%	D	1	Less
5.	< 55%	< 2,75	<55	0	0%	E	0	Less Once

Table 18.
Level of Mastery of Cognitive Aspects

No.	Level of Mastery	Score Range by Individual	Scoring Range by Class	F	%	Score	Quality	Predicate
1.	90% – 100%	12,6 – 14	252 - 280	3	15%	A	4	Very Good
2.	80% – 89%	11,2 – 12,5	224 - 251	4	20%	B	3	Good
3.	65% – 79%	9,1 – 11,1	182 - 223	11	55%	C	2	Enough
4.	55% – 64%	7,7 – 9	154 – 280	2	10%	D	1	Less
5.	< 55%	< 7,7	<154	0	0%	E	0	Less Once

Table 19.
Levels of Psychomotor Mastery

No	Level of Mastery	Range Average Score	F	Score	Quality	Predicate
1.	90% - 100%	90 -100	0	A	4	Very Good
2.	80% – 89%	80 - 89	9	B	3	Good
3.	65% - 79%	65 - 79	11	C	2	Enough
4.	55% - 64%	55 - 64	0	D	1	Less
5.	< 55%	< 55	0	E	0	Less Once

Table 20.
Results of Data Cycle 2 Meeting 1

No.	Level of Mastery	Range Total Score	Range Average Score	F	%	Score	Quality	Predicate
1.	90% – 100%	648 - 720	32,4 - 36	0	0%	A	4	Very Good
2.	80% – 89%	576 – 647	28,8 - 32,3	11	55%	B	3	Good
3.	65% – 79%	468 – 575	23,4 - 28,7	9	45%	C	2	Enough
4.	55% – 64%	396 – 467	19,8 -23,3	0	0%	D	1	Less
5.	< 55%	< 396	< 19,8	0	0%	E	0	Less Once

Research Results Cycle 2 Meeting 2

Table 21.
Level of Mastery of Spiritual Attitude

No.	Level of Mastery	Score Range by Individual	Scoring Range by Class	F	%	Score	Quality	Predicate
1.	90% – 100%	1,8 – 2	36 – 40	20	100%	A	4	Very Good
2.	80% – 89%	1,6 – 1,7	32 – 35	0	0%	B	3	Good
3.	65% – 79%	1,3 – 1,5	26 – 31	0	0%	C	2	Enough
4.	55% – 64%	1,1 – 1,2	22 - 25	0	0%	D	1	Less
5.	< 55%	< 1,1	< 22	0	0%	E	0	Less Once

Table 22.
Level of Mastery of Social Attitudes

No.	Level of Mastery	Score Range by Individual	Scoring Range by Class	F	%	Score	Quality	Predicate
1.	90% – 100%	4,5 – 5	90 - 100	7	35%	A	4	Very Good
2.	80% – 89%	4 – 4,4	80 – 89	12	60%	B	3	Good
3.	65% – 79%	3,25 – 3,9	65 – 79	0	0%	C	2	Enough
4.	55% – 64%	2,75 – 3,15	55 – 64	1	5%	D	1	Less
5.	< 55%	< 2,75	<55	0	0%	E	0	Less Once

Table 23.
Level of Mastery of Cognitive Aspects

No.	Level of Mastery	Score Range by Individual	Scoring Range by Class	F	%	Score	Quality	Predicate
1.	90% – 100%	12,6 – 14	252 - 280	6	30%	A	4	Very Good
2.	80% – 89%	11,2 – 12,5	224 - 251	8	40%	B	3	Good
3.	65% – 79%	9,1 – 11,1	182 - 223	6	30%	C	2	Enough
4.	55% – 64%	7,7 – 9	154 – 280	0	0%	D	1	Less
5.	< 55%	< 7,7	<154	0	0%	E	0	Less Once

Table 24.
Levels of Psychomotor Mastery

No	Level of Mastery	Range Average Score	F	Score	Quality	Predicate
1.	90% - 100%	90 -100	1	A	4	Very Good
2.	80% – 89%	80 - 89	15	B	3	Good
3.	65% - 79%	65 - 79	4	C	2	Enough
4.	55% - 64%	55 - 64	0	D	1	Less
5.	< 55%	< 55	0	E	0	Less Once

Table 25.
Results of Data Cycle 2 Meeting 2

No.	Level of Mastery	Range Total Score	Range Average Score	F	%	Score	Quality	Predicate
1.	90% – 100%	648 - 720	32,4 - 36	0	0%	A	4	Very Good
2.	80% – 89%	576 – 647	28,8 - 32,3	16	80%	B	3	Good
3.	65% – 79%	468 – 575	23,4 - 28,7	4	20%	C	2	Enough
4.	55% – 64%	396 – 467	19,8 -23,3	0	0%	D	1	Less
5.	< 55%	< 396	< 19,8	0	0%	E	0	Less Once

Research Results Cycle 2 Meeting 3

Table 26.
Level of Mastery of Spiritual Attitude

No.	Level of Mastery	Score Range by Individual	Scoring Range by Class	F	%	Score	Quality	Predicate
1.	90% – 100%	1,8 – 2	36 – 40	20	100%	A	4	Very Good
2.	80% – 89%	1,6 – 1,7	32 – 35	0	0%	B	3	Good
3.	65% – 79%	1,3 – 1,5	26 – 31	0	0%	C	2	Enough
4.	55% – 64%	1,1 – 1,2	22 - 25	0	0%	D	1	Less
5.	< 55%	< 1,1	< 22	0	100%	E	0	Less Once

Table 27.
Level of Mastery of Social Attitudes

No.	Level of Mastery	Score Range by Individual	Scoring Range by Class	F	%	Score	Quality	Predicate
1.	90% – 100%	4,5 – 5	90 - 100	2	10%	A	4	Very Good
2.	80% – 89%	4 – 4,4	80 – 89	8	40%	B	3	Good
3.	65% – 79%	3,25 – 3,9	65 – 79	0	0%	C	2	Enough
4.	55% – 64%	2,75 – 3,15	55 – 64	7	35%	D	1	Less
5.	< 55%	< 2,75	<55	3	15%	E	0	Less Once

Table 28.
Level of Mastery of Cognitive Aspects

No.	Level of Mastery	Score Range by Individual	Scoring Range by Class	F	%	Score	Quality	Predicate
1.	90% – 100%	12,6 – 14	252 - 280	6	30%	A	4	Very Good
2.	80% – 89%	11,2 – 12,5	224 - 251	4	20%	B	3	Good
3.	65% – 79%	9,1 – 11,1	182 - 223	4	20%	C	2	Enough
4.	55% – 64%	7,7 – 9	154 – 280	5	25%	D	1	Less
5.	< 55%	< 7,7	<154	1	5%	E	0	Less Once

Table 29.
Levels of Psychomotor Mastery

No	Level of Mastery	Range Average Score	F	Score	Quality	Predicate
1	90% - 100%	90 -100	14	A	4	Very Good
2	80% – 89%	80 - 89	6	B	3	Good
3	65% - 79%	65 - 79	0	C	2	Enough
4	55% - 64%	55 - 64	0	D	1	Less
5	< 55%	< 55	0	E	0	Less Once

Table 30.
Results of Data Cycle 2 Meeting 3

No.	Level of Mastery	Range Total Score	Range Average Score	F	%	Score	Quality	Predicate
1.	90% – 100%	648 - 720	32,4 - 36	1	5%	A	4	Very Good
2.	80% – 89%	576 – 647	28,8 - 32,3	14	70%	B	3	Good
3.	65% – 79%	468 – 575	23,4 - 28,7	5	25%	C	2	Enough
4.	55% – 64%	396 – 467	19,8 -23,3	0	0%	D	1	Less
5.	< 55%	< 396	< 19,8	0	0%	E	0	Less Once

Discussion

Cycle I

Meeting 1

At the meeting of Cycle 1 in class XI MIPA, the overall result was obtained from 20 students the average score was 53.47. Where in the assessment, namely in KI-1 the spiritual aspect was obtained 90, then in KI-2 the social aspect the students got 56. In KI-3 the cognitive aspect obtained a score of 48.57 and at KI-4 the psychomotor aspect

obtained the result of 52, 33. From the four aspects, it is known that only the spiritual KI-1 aspect has met the minimum limit that has been set. This is constrained because there are students who still do not fully comply with the rules that need to be done in passing the volleyball game. Thus, the value of cognitive and psychomotor aspects is still low and below the KKM. The results of this study are in line with the opinion of Afandi (2013: p.5) which explains that learning outcomes are a process of changing intellectual abilities (cognitive), interest or emotional abilities (affective) and fine and gross motor skills (psychomotor) in students.

Meeting 2

At the 2nd Cycle 1 meeting in class XI MIPA, the overall result was obtained from 20 students the average score was 70.42. Where in the assessment, namely in KI-1 the spiritual aspect was obtained 95, then in KI-2 the social aspect the students obtained 69. In KI-3 the cognitive aspect obtained a score of 69.28 and in KI-4 the psychomotor aspect obtained the result of 68, 67. From the four aspects, it is known that only the spiritual KI-1 aspect has met the minimum limit that has been set. This is constrained because there are students who still do not fully comply with the rules that need to be done in passing the volleyball game. Thus, the value of cognitive and psychomotor aspects is still low and below the KKM. Furthermore, Hayati (2016: p.55) explains that learning outcomes as a result of organizing a new cognitive structure, is an integration between old and new knowledge.

Meeting 3

In Cycle 1 Meeting 3, students of class XI MIPA obtained overall results, namely from 20 students the average score was 70.42. Where in the assessment, namely in KI-1 the spiritual aspect was obtained 100, then in KI-2 the social aspect the students got 81. In KI-3 the cognitive aspect obtained a score of 77.5 and in KI-4 the psychomotor aspect obtained the result of 56, 63. From the four aspects, it is known that the spiritual KI-1, social KI-2, and cognitive KI-3 aspects have met the minimum limits that have been set. This is constrained because there are students who still do not fully comply with the rules that need to be done in passing the volleyball game. Thus, the value of the psychomotor aspect is still low and below the KKM. The results of this study are in line with the opinion of Afandi (2013: p.5) which explains that learning outcomes are a process of changing intellectual abilities (cognitive), interest or emotional abilities (affective) and fine and gross motor skills (psychomotor) in students.

Cycle II

Meeting 1

In Cycle 2 Meeting 1, students of class XI MIPA obtained overall results, namely from 20 students the average score was 79.17. Where in the assessment, namely in KI-1 the spiritual aspect was obtained 100, then in KI-2 the social aspect the students got 83. In KI-3 the cognitive aspect obtained a value of 79.64 and in KI-4 the psychomotor aspect obtained the result of 74, 67. From the four aspects, it is known that the spiritual KI-1, social KI-2, and cognitive KI-3 aspects have met the minimum limits that have been set. This is constrained because there are students who still do not fully comply with the rules that need to be done in passing the volleyball game. Thus, the value of the psychomotor aspect is still low and below the KKM. According to Susanto (2013), "learning outcomes are changes that occur in students, both concerning cognitive, affective, psychomotor aspects as a result of learning activities". Meanwhile, according to Sudjana (2013) "student learning outcomes are essentially changes in behavior. The behavior itself as a result of learning in broad knowledge covers the cognitive, affective, and psychomotor fields. Both of these aspects can be achieved after going through the learning process. The result is often the application of a learning method becomes less effective. In fact, this neglected aspect is an important thing that must be assessed. Especially in children who are in need of stimulation for cognitive, affective and psychomotor development while at school. This aspect is also important for the process of evaluating educational materials where it can be seen whether everything has been absorbed and applied properly by students, both individually and in groups. This is because the functions of these three aspects are different in the learning process. One aspect moves on concepts and thoughts, one aspect on value development and one aspect on the child's ability to move the body so that its growth and development can be achieved properly. Reference to this aspect is applied in the learning method to see how effective the method used in the learning process is. So that you as a parent don't just hand over your child to the school. But you also play a role in the development of these three aspects. Because it feels useless if the child only gets it while at school. It is hoped that at home children will also get the same or similar application by not only emphasizing theoretical learning. But also learning in practice is interspersed with playing so that children's non-academic skills develop and children have motivation and are not easily bored by learning continuously.

Meeting 2

In Cycle 2 Meeting 2, the students of class XI MIPA obtained overall results, namely from 20 students the average score was 83.75. Where in the assessment, namely in KI-1 the spiritual aspect was obtained 100, then in KI-2 the social aspect the students got 86. In KI-3 the cognitive aspect obtained a score of 84.64 and in KI-4 the psychomotor aspect obtained the result of 80. From the four aspects, it is known that all aspects of both spiritual KI-1, social KI-2, and cognitive KI-3 have met the minimum limit that has been set. This shows that students have been able to receive learning about the basic techniques of passing on a volleyball game well. Sudirman and Maru (2016: p.9) learning outcomes are defined as the results achieved after the learning and learning process occurs, which results in changes in behavior.

Meeting 3

At the 3rd meeting of Cycle 2, the students of class XI MIPA obtained the overall result that from 20 students the average score was 85.14. Where in the assessment, namely in KI-1 the spiritual aspect was obtained 100, then in KI-2 the social aspect the students got 81. In KI-3 the cognitive aspect obtained a score of 85.71 and in KI-4 the psychomotor aspect obtained the result of 84. From the four aspects, it is known that all aspects of both spiritual KI-1, social KI-2, and cognitive KI-3 have met the minimum limit that has been set. This shows that students have been able to receive learning about the basic techniques of passing on a volleyball game well. There was even an increase in scores compared to the previous meeting. According to Burhanuddin. S., (2020) in his book "Classroom Action Research" Aspects of learning development generally include cognitive, affective and psychomotor. The development of these 3 aspects explains the learning process. Ideally, the development of these three aspects must be in accordance with the theory presented in the field of physical education, sports and health. It also explains the theory used as a reference in it. It contains a more detailed explanation of the role of the cognitive aspect. Such as orientation on thinking skills which include memory, ability for problem based learning, generating new ideas and creativity, generating ideas and also procedures for a task to be completed. Strictly speaking, this cognitive ability is divided into approximately 5 parts. The first part is a learning experience by memorizing verbally and making useful paraphrases to find a way of memorizing that fits each individual. The material includes facts, concepts, principles and procedures. The second part is learning to compare by looking for similarities and

differences, generalizing, identifying and drawing conclusions from the learning outcomes. The third part is the existence of learning at the application level from the application of the principles of real cases in the field. The fourth part is a synthesis by combining elements such as components, compiling, composing, painting and also drawing. While the fifth part is the assessment experience by assigning a value to the object according to the criteria in the material being taught. (Burhanuddin. S, 2020).

Affective is an aspect of learning development in the form of attitudes and values. The scope includes a person's character and behavior such as interests, emotions, feelings and values. This can affect a person's attitude and can vary based on cognitive power. In the learning method, this affective aspect includes 5 parts. The first part is receiving/attending that is receiving or paying attention. The second part is responding or responding actively in a group, students must participate in it. The third part is valuing, namely assessing or appreciating something. The fourth part is organization or organize or organize the given task. The fifth part is characterization by value or value complex. Specifically, this aspect of learning development includes the competencies to be achieved. For example, by practicing to react or respond to the value or object seen. Students also practice to accept values, norms and objects that have value or aesthetics. In addition, it is an exercise to assess whether something is good or bad, fair or not, interesting or not from the object of study. Another exercise is to try to apply or practice values, norms, ethics and aesthetics from student behavior in everyday life. (Burhanuddin. S, 2020). The next explanation from the developmental aspect of learning is psychomotor. This aspect is closely related to skills. It can also be said with the individual's ability to act from the learning experience received. This aspect has the result of the continuation of the previous two aspects. Namely cognitive where students are expected to be able to understand something, and affective where students are expected to recognize and develop behavioral tendencies. This psychomotor aspect can be carried out and measured by direct observation during the learning process of student behavior, observing students after learning by giving tests that measure knowledge, attitudes and skills captured from the learning process. Then the measurement is also carried out within a certain time after the learning process is complete. This includes initial movements, semi-routine movements and also routine movements. The competence of the material itself includes understanding and mastering the initial movements of the limbs, semi-routine movements, namely imitating the movements of all limbs and routine

movements which include complete movements perfectly so that students can follow them automatically because they are used to it. (Burhanuddin. S, 2020). These three aspects of learning development can be fulfilled by doing exercises in duration, intensity and frequency that tend to be high, following imitation, conducting simulations and demonstrations of the movements to be mastered. In addition, these three aspects can influence students in learning by way of direct practice of the material to be achieved according to the grade level. This requires experience in solving problems not only from individuals, but also from groups. So that these three aspects of human development are suitable for use in problem based learning methods. Based on the results of research by Muharram and Kholis (2018), it is stated that the PBL learning model is one of many innovative learning models. This model presents an active student learning condition and involves students in problem solving through the stages of the scientific method. Through this PBI, it is hoped that students can learn knowledge related to the problems presented and can have a skill in solving problems. From the research results, problem based learning learning models can help students get maximum learning outcomes because students are more required to better understand the problems that occur and find solutions for how to solve problems, thus making students more active in thinking and more critical in dealing with problems.

CONCLUSIONS AND SUGGESTIONS

Conclusions

Cycle I

Based on research on students of class XI MIPA MA Ma'arif NU Lasepang Bantaeng Regency as follows: At the meeting 1 Cycle 1 of class XI MIPA students, the overall results were obtained from 20 students the average score was 53.47. At the 2nd Cycle 1 meeting in class XI MIPA, the overall result was obtained from 20 students the average score was 70.42. In Cycle 1 Meeting 3, students of class XI MIPA obtained overall results, namely from 20 students the average score was 70.42. This is constrained because there are students who still do not fully comply with the rules that need to be done in passing the volleyball game. Thus, the value of cognitive and psychomotor aspects is still low and below the KKM 75. Thus, this researcher needs to go to Cycle II stage.

Cycle II

In Cycle 2 Meeting 1, students of class XI MIPA obtained overall results, namely from 20 students the average score was 79.17. In Cycle 2 Meeting 2, the students of class XI MIPA obtained overall results, namely from 20 students the average score was 83.75. At the 3rd meeting of Cycle 2, the students of class XI MIPA obtained the overall result that from 20 students the average score was 85.14. This shows that students have been able to receive learning about the basic techniques of passing on a volleyball game well. There was even an increase in value compared to the previous meeting.

Suggestions

Based on the results of the research above, it can provide data and information for academics and educational institutions regarding suitable learning methods and can be used in learning Physical Education, Sports and Health in the future. So it is recommended for academics to make the best use of this research data. And or can be used as a reference or reference by PJOK teachers in particular. And the results of the research can provide information and views for further researchers who want to research also in classroom action research. Regarding the development of learning models, especially in the fields of physical education and sports. So it is recommended to be able to conduct research in the field of physical education and sports using a different learning model from this research. In order to further develop knowledge.

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