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Enhancement of Motivation and Learning Outcomes Mathematics Using the Problem-Based Learning Model in Elementary Schools

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1. Abstract

Study This background behind the lack of motivation and results Study participants educate in activity learning. Teachers yet gives learning by using varied and participant-centered learning media-educate. Objective study This For increasing motivation and results Study Mathematics by using the Problem-Based Learning model in schools basic. Type study This is study action Kemmis and Mc Taggart model class stages consists of planning, implementing, observing, and reflecting. Subject study as many as 21 participants educate in class III school basic. Object study This is motivation and results Study participant educate. Data collection techniques using interviews, questionnaires, tests and documentation. Data analysis techniques-descriptive served in the form table. Research results This show exists enhancement motivation Study participant students in cycle 1 at 70.78% and cycle 2 of 87.89%. Whereas results Study participant students in cycle 1 at 61.90% and cycle 2 of 90.47%. With so, can conclude that learning using the Problem-Based Learning model can increase motivation and results Study participants educate the eyes lesson Mathematics.

Keywords: Motivation learning, learning outcomes, Problem Based Learning

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2. Introduction

Education has a role important in the learning process. Education becomes a factor main in increasing quality source Power for more humans-ok. Based on (Sisdiknas, 2003) Education is business conscious and planned to realize the atmosphere of learning and the learning process in a manner active develop potency himself For own religious spiritual power, control self, personality, intelligence, morals glorious, as well necessary skillshimself, society, and the state.

In the era of globalization like moment this, sue exists source Power qualified human, must-supported by a good learning process and also quality. Because-that, moment This many models, methods, approaches, and learning media varied with objective For optimizing enhancement teacher quality and quality learning. An educator demanded give effective learning-through a learning model that can make participants educate motivated and active in the implementation learning.

Mathematics is one-eye mandatory lesson-there in every level of formal education. For participant educates in general, Mathematics considered difficult, of course just influence the development results learn. Master in give learning expected can create possible conditions-participant educate For an actively carry out learning so that No one experience difficulty in following learning Arjanggi (Syafitri, 2020: 64). Learning Math at school base should equip participant to educate with the ability to think analytical, logical, critical, and creative as well as own ability For Work the same (Eismawati, E., 2019:72). This-proven Still Not yet achievement objective expected learning, for-reach objective

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learning expected of teachers and participants educate must role active in the learning process. One-way you can make participant educate active in the learning process is with apply a variety of learning models. Because-that, teachers need to use a participant-centered learning model educate. Learning models the is Problem-Based Learning or learning based problem.

Learning Models Problem-Based Learning is a learning model that involves participants education in solving problems real (Suari, NP, 2018: 243). According to (Fauzia, HA, 2018:42) the use of Problem-Based Learning models inconcrete media-can be an effort to increase results in Study Mathematics. So the model is Problem-Based Learning is a learning model that presents something problem-solving and participant-centered learning educate. Rusmono (Janah, 2019: 66) revealed that the learning model This own steps activity in learning which includes: 1) organizing participant education on problems, 2) organizing participant education For learn, 3) helping investigation independently and in groups, 4) developing and present results works, and 5) analyze and evaluate the solving process problem.

Problems in learning Math also happens in the scope school base by following per under yield data observation and interview participant educate class III, obtained several some many problem in learning among them participant educate not enough enthusiastic in learning Math, still low activity participant educate in the learning process Mathematics, the conventional learning model. So from That is, the potentials possessed by the

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participants educate difficult developed as well as Still low motivation and study participant educate in the learning process Mathematics.

Factor resulting in success-in self participant education from outside participant students who influence the learning process teach one of them is motivation. Sardiman (2007: 73) said that motivation can be interpreted as a Power mover or pusher somebody become active in giving enthusiasm and pleasure in the learning process so that participant educate their own motivation in high learning. Motivation contained exists desire that activates, moves, channels, and directs attitude, as well as behavior individual learn. Arikunto (2010: 35) Indicators motivation Study participant education covers exists desire and desire success, encouragement and need in learning, future hopes and aspirations, appreciation-of learning, interesting activities-in learning, and the environment conducive to learning-so that possible a participant educate can Study with ok.

Implementation-based learning-solving problem expected can increase motivation Study Mathematics participants educate Because participants educates involved direct to finish in a manner together. Besides that is, the learning model Project-Based Learning can build knowledge participants learn and get hook it up with life real so that can make it easy to understand participants teach lessons-Mathematics. From several problems such, the researchers are interested in Research "Improvement motivation and results Study Mathematics using the Problem-Based Learning model in schools basic ". Learning models the expected can increase motivation and results Study participants educate.

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3. Methods

3.1. Participants and context

Study This uses method of qualitative manifold Classroom Action Research Collaborative (PTKK). In study these using models from Kemmis and Mc Taggart who composed four stages, namely: planning, action, observation, and reflection (Machali (2022: 321). subject from study This is participant education school base class III, with a total of 21 participants educate. Study action class collaborative This was carried out in two cycles. Implementation of each cycle follows stages planning, action, observation, and reflection.

3.2. Material

Instrument in study This is use interviews, questionnaires, tests, and documentation. on sheet questionnaire function for measure results motivation Study participant educate. Interview For Obtain condition data beginning participant educate. Studies documentation from the photos and videos that deliver descriptions in a manner concrete in the learning process with apply the Problem Based Learning model. The test is used to knowing the results of Study participant educate.

3.3. Data Collection and Analysis

Technique collection data is way Which can used researchers to obtain data. For technique of deep data collection study that is interviews, questionnaires, tests, and documentation. Data collected through the questionnaire on each implementation cycle

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study were analyzed in a manner descriptive with the use of technique percentage to see trend that occurs in activity learning.

3.4. Ethical Considerations

All studies or research involve man as subject research. Because-it, deep study This there is principle base ethics research, including: first is respect people, deep matter This We must honor and appreciate participant students, which are participants educate the as subject research, second is benefits, in study This there is a benefit for participant educate that is add experience fun learning _ with a Problem-Based Learning model that can increase motivation and results study, and third No endanger subject research.

3.5. Limitations to the Study

There are limitations owned by researchers-related to time, energy, and cost. Study This focuses on applying the Problem-Based Learning model to increase motivation and results Study participant educate class III on learning Mathematics school basic.

4. Results and Discussion

Classroom Action Research Collaborative (PTKK) consists from pre-action, cycle I, and cycle II. Following is motivational data and results Study Mathematics participants educate start ai from condition initial (pre-action), cycle I and Cycle II participants educate class III using learning models Problem-Based Learning.

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	Pre cycle	Cycle 1	Cycle II
Average	59.62%	70.78%	87.89%
Category	Enough	Good	Very good

Table 1. Improvement Motivation Participants educatePre Cycle, Cycle 1 and Cycle II

Based on the table above-about the enhancement motivation study at the time precycle, cycle I, and cycle II, average motivation Study participant educate experience improvement. Implementation pre-cycle (before subject to action) average motivation Study participant educate only 59.62 or are in category enough, after held cycle I average motivation Study participant educate experience enhancement to 70.78 or are in category Good However the results obtained in cycle I have not by following per under indicator achievements that have set Because Still experience several some many constraint ie There is participant educate Embarrassed ask when There are things that haven't under, participant educate Embarrassed ask when There are things that haven't understood, and still is Lots participant students who are lazy to do assignment given by the teacher. So that For increased motivation Study participants teach to achieve criteria success improvement in cycle II. Implementation cycle II average motivation Study participant educates experience enhancement ie 87.89 or is in the very good category. The increase that occurred in cycle II had fulfil the criteria indicator motivation Study participants educate Because Already in the category Good once.

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Change	Indicator	Pre cycle	Cycle I	Cycle II
Learning	Student's Average Score	63,33	75,19	90.42
Outcomes	Percentage Amount Students	23.80%	61.90%	90.47%
	Reach KKM			

Table 2. Learning Outcomes Mathematics Pre cycle, Cycle I, and Cycle II

Based on the table above-results Study participant acquired education-from every evaluation experienced average-improvement. Enhancement can be seen from the condition beginning with an average value of 63.33 and occurring enhancement as much as 11.86 with an average of 75.19 in cycle I. The average also increased from cycle I ie from 75.19 to 90.42 in cycle II or increase as much as 15.23. In addition to class averages, percentages of The achievement of KKM is also included increase. Percentage completeness of conditions beginning namely 23.80% increase to 61.90% in cycle I or increase as much as 38.10%. Percentage completeness in cycle II is 90.47% which means experience enhancement from cycle I as much as 28.57%.

Results data study show that exists enhancement motivation Study participant scale from pre-cycle, cycle I to cycle II. This-is caused Because part big participant edict capable fulfill criteria indicator motivation study and completing task with really. Arikunto (2010: 35) states that the aspect motivation Study participant learn, criteria evaluation questionnaire be measured through six indicators namely 1) exists desire and desire successful; 2) exists encouragement and need to learning ; 3) exists future hopes and

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aspirations; 4) exists award in learn; 5) exists interesting activity-peace learn; and 6) exists environment conducive learning _ so that possible participant educate can Study with ok. Based on the results sheet questionnaire cycle I show the average percentage motivation Study participant education of 70.78% shows motivation Study participants educate Already start increase or category fine, however Not yet maximum Because from sixth indicator Still There are no indicators yet reached.

learning process carried out in cycle II runs with kind and enthusiastic participants enthusiastic student-in Study Because There is an effort to repair results reflection cycle I. Increased average motivation Study participant students obtained in cycle II of 87.89%. Increased average motivation learning in cycle I and cycle II increased by 6.26%. In this second cycle, every indicator in the motivation Study participant education experience improvement for each participant educate, though There is several some many participants still teaching-Not yet experience change after done learning in cycle II. Motivation Study participants educate through the application of the Project Based Learning model Already reach the expected criteria-ie very good.

5. Conclusion

Based on the results of study actions that have been implemented in the class III school base so can conclude that the application of learning models Problem-Based Learning can increase motivation in cycle I average percentage of motivation for Study participants education is 70.78%. In cycle II the average percentage of liveliness participant

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educate is 87.89%. Average activity Study participants educate an increase from 6.26% of cycle I to cycle II. Application of learning models Problem-Based Learning can increase results learning in cycle I average percentage results Study participants education is 61.90%. In cycle II the average percentage results Study participant education is 90.47%. Average yield Study participant educate an increase of 28.57% from cycle I to cycle II. Students who complete 19 people and students who have not completed amounted to two.

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