The Effect of Jigsaw Methode and Motivation on Students' of Learning Outcomes

by Hidayat Dkk

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Yunita[1], Hidayat[2], Harun Sitompul[2]
[1]Postgraduate Student at State University of Medan, Indonesia
[2]Postgraduate Lecturer at State University of Medan, Indonesia
yunitakila01@gmail.com

Abstract

This study aims to: (1) investigate the effect of Jigsaw cooperative learning on students learning outcomes; (2) find the difference in learning outcomes between high and low learning motivation and (3) find the interaction between learning approaches and learning motivation towards learning outcomes. The population of the study is students of grade IVa, IVb, IVc at SD Kasih Ibu Patumbak and the sample in this study is grade IVa with 35 students and grade IVb with 35 students. The results show that: (1) the average student learning outcomes of jigsaw cooperative learning is 28.40 while conventional is 24.14. Thus, students learning outcomes that get cooperative learning of jigsaw type are higher than conventional learning, (2) Students who have high motivation get average value = 30.74, while low motivation is 22.72. Thus, it can be concluded that there are differences in student learning outcomes having high learning motivation and low learning motivation, and (3) students learning outcomes taught by jigsaw cooperative learning are high learning motivation groups (32.94), and low learning motivation groups (24.58), while students taught with conventional learning are high learning motivation groups (28.40), and low motivation groups (20,95). Thus, there is no interaction between learning approaches and learning motivation towards learning outcomes.

I. Introduction

Learning is a complex process that occurs in all individuals in long terms. Learning is also a process activity and it is a very fundamental element in the level of education. The success of achieving educational goals is highly dependent on achieving the success of the learning process of students at school and society.

Learning is an active process in which students builds new knowledge based on existing knowledge (Trianto, 2010: 15). Many factors cause the low learning outcomes of students, one of which is the ability of a teacher to manage learning by using approaches, strategies, learning methods, models and techniques that can be adapted to materials that are suitable for use in elementary schools. In teaching and learning activities, a teacher is required to carry out maximum learning aimed at maximizing student learning outcomes, increasing student knowledge, attitudes and skills of students relating to subject matter taught by a teacher. Based on its function, learning is realized by creating innovative activities. It is very important for students in the level of basic education. This is to train students' thinking power so that they can use knowledge as a basis for learning

In fact, teachers only use conventional learning approaches such as lecturing, question and answer, practice, demonstration and assignment methods as well as the absence of media used in learning. It makes students feel bored, playing in the graderoom, not feeling interested in learning or learning motivation of students to be low, and students forget more quickly about learning material that they have just learned. Conventional learning is an approach to learning done with combining various learning methods. This method is teacher centered or the teacher is more dominated by learning activities. Students only succeed in remembering the short term, but fail to equip themselves in solving problems in life in the long term. Therefore, there needs to be a change in learning approach that is more meaningful so that it can equip students in facing life problems.

Based on the field observations, it is found that the average value of midterm exams is still lower than minimum mastery criteria set by the Private Kasih Ibu Elementary School. This is proven by Table 1.1 the average value of even midterm which is tested in fourth grade of Kasih Ibu Elementary Schools Patumbak.

Table 1. The Average Score Students Grade IV at Kasih Ibu Primary School

No	Academic Year	Minimum Mastery Criteria	Lowest Score	Highest Score	Average Score of Midterm
	2014/2015	70	42,7	80,2	64,45
	2015/2016	70	46,7	80,5	63,60
	2016/2017	70	57,8	85,7	71,75
	2017/2018	70	20,8	83,6	67,20

Source: Administration of SD Kasih Ibu

It can be seen at Kasih Ibu Private Elementary School that the average scores for the 2014/2015 academic year to 2017/2018 do not meet the minimum mastery criteria. In 2014/2015 academic year, the average score is 64, 45 while minimum mastery criteria 70 (incomplete). In 2015/2016 academic year, the average score is 63.60 while the minimum mastery criterion is 70 (incomplete). In 2016/2017, the average score is 71.75 and it is complete. In 2017/2018, the average score is 67.20 and it is not complete. The low average value of the midterm greatly influences the quality of education at SD Kasih Ibu Patumbak.

Learning approaches can be used as a pattern of choice which means that teachers may choose appropriate and efficient learning approaches to achieve educational goals. The learning approach used in this study aims to improve student learning outcomes and motivation, namely cooperative learning type jigsaw. Cooperative learning type Jigsaw is one of the ways of learning that emphasizes the importance of the natural environment created in the learning process so that the grade is more meaningful because students experience what they learn. Cooperative learning type jigsaw is a model that allows students to strengthen, expand and apply their academic knowledge and skills in a variety of life settings both at school and outside of school. In addition, students are trained to be able to solve the problems they face in a situation that exist in the real world.

Jigsaw cooperative learning approach is a learning concept that assumes that children will learn better if the environment is created naturally. Learning becomes more meaningful if students work and experience what they learn. It is not just a transfer of knowledge from educators to students, but how students are able to interpret what is learned. Cooperative learning type jigsaw encourages students more towards learning. It is critical thinking and

increase students' learning motivation. It is achieved in accordance with those targeted specifically at Kasih Ibu Elementary School Patumbak.

In learning activities, motivation is very necessary, because someone who has no motivation in learning will not be able to carry out learning activities effectively. Encouraging or motivating students to do something, it makes learning process more active. Thus, learning is more fun and meaningful with the use of jigsaw type cooperative learning and motivation of students. It increases students learning outcome.

II. Review of Literature

2.1 Learning Outcomes

Learning outcomes are specific statements expressed in behavior and appearance that are manifested in written form to describe the expected learning outcomes. Kurwanto (2011: 54) states that learning outcomes are behavioral changes that occur after following the teaching and learning process in accordance with educational goals. It is often used as a measure to find out how far someone masters the material that has been taught. Sudjana (2009: 3) learning outcomes are changes in student behavior. Slameto (2003: 162) explains that learning outcomes are a testament to the success of a students learning or ability to carry out the learning activities in accordance with what they achieve.

Based on the above opinion, it is concluded that learning outcomes are obtained abilities after going through learning activities that cause changes in overall behavior. Bloom (Sudjana, 2009: 22) states that learning outcomes include aspects of knowledge ability (cognitive), aspects of attitude (affective) , and aspects of skills (psychomotor). Cognitive aspects are aspects that discuss learning outcomes with regard to mental processes that begin at the level of knowledge to a higher level, it is evaluation. The affective aspect is a domain that is related to attitudes, values of interest, appreciation (knowledge) and the formation of social feelings. Psychomotor aspects are aspects of the third category of educational goals that indicate physical movements and control.

Learning outcomes gives an assessment, where the assessment of learning outcomes involves short-term learning and long-term learning outcomes. Supratiknya (2012: 204) explains that the assessment aims to: (1) Know the level of achievement of competence during and after the learning process; (2) Provide feedback for students to know their strengths and weaknesses in the process of achieving competence; (3) Monitor progress and diagnose learning difficulties experienced by students so that enrichment and remedial can be done; (4) Provide feedback for teachers in improving the methods, approaches, activities and learning resources used; (5) Provide alternative assessment options to teachers; and (6) Provide information to parents and school committees about the effectiveness of education. The purpose of the assessment is an effort to give value to teaching and learning activities that have been carried out by students and teachers in achieving the stated teaching goals. In this study the intended learning outcomes are cognitive aspects of learning outcomes.

2.2. Learning Motivation

Motivation is an energy in human beings that encourages to do certain activities with certain goals. Asori (2007: 60) depicts that motivation is the driving force that causes a person willing to direct the ability in the form of expertise or skills, energy and time to carry out various activities which becomes his responsibility and fulfill his obligations in order to achieve goals and various targets that have been determined previously. Sardiman (2011: 73)

explains that motivation is a series of efforts to provide certain conditions, so that someone has effort to do something. In learning activities, motivation is a driving force from within students that lead to learning activities, which ensures the continuity of learning activities and gives direction to learning activities, so that the desired goals of students are achieved. Learning motivation is anything that can motivate students or individuals who want to learn. Without having motivation to learn, student will not achieve success in learning. (Sani, 2013: 49). Uno (2008) states that learning motivation is encouragement and external that occurs in students who are learning to make changes in behavior in general with several supporting indicators.

Based on some of the above theories, it is concluded that learning motivation is an impulse that can be generated from within learners as well as from outside students whose purpose is to achieve high learning outcomes. Therefore, to improve the quality of learning and student learning outcomes, teachers must be able to generate student learning motivation by using a variety of approaches, strategies, methods and learning models.

According to Uno (2008: 9), a person has the motivation to learn if he has the following characteristics: (1) Persevering in the task; (2) Resilient in facing difficulties, (3) Showing interest in various problems, (4) Prefer to work independently, (5) Get bored with routine tasks quickly, (6) Can defend his opinion; (7) It is not easy to give up what is believed; and (8) owning spirit to solve problems. Students who have high motivation in learning have a positive attitude towards learning. They are critical and active in using opinions or asking questions, answering questions. They are also able to do everything assigned by the teacher with better results, more independent in learning.

Sardirman (2011: 12) explains that learning motivation indicators include persevering and tenacious in facing tasks, showing a high interest in learning, preferring to work independently, being able to defend his opinion, owning spirit to solve problems. Sudjana (2009: 12) indicator of student motivation includes students' interest and attention to the lesson, students' enthusiasm for doing their learning tasks, students' responsibilities in doing their learning tasks, the reaction shown by students to the stimulus given by the teacher, feeling happy and satisfied in finishing assignment

From the opinions above, the more dominant indicators in this research are the desire to succeed, the drive and needs in learning, the hopes and ideals of the future, the appreciation of learning, the existence of interesting activities in learning, the existence of a learning environment which is conducive in order to enable students to learn well.

2.3 Jigsaw Cooperative Learning

Cooperative learning means to do things together by helping one another as a group or as a team. Huda (2011: 28) calls cooperative learning the term mutual learning, which is a learning system that gives students the opportunity to collaborate with other students in structured tasks.It only runs when a group or a team has been formed in which students work in a direction to achieve the goals that have been determined with the number of group members generally consisting of only 4-6 people.

Ibrahim (2000: 41) mentions cooperative learning is a learning model that has been known for a long time, at which time the teacher encourages students to collaborate in certain activities such as discussion or teaching by peers (peer teaching). In conducting the teaching-learning process, the teacher no longer dominates as is usual at this time, so students are required to share information with other students and learn and teach each other. Cooperative learning is not intended to replace the competitive approach (competition). Competitive

nuance in grade will be very good if applied in a healthy manner. This cooperative approach is an alternative choice in filling the weaknesses of the competition, where only some students will get smarter, while others will sink deeper into ignorance. Not a few students who lack knowledge feel ashamed if the shortcomings are exposed. Sometimes the motivation for competition will be unhealthy if the students want each other so that other students are not able, say in answering questions given by the teacher. This mental attitude is deemed necessary to experience improvement (Slavin, 2009: 5).

Cooperative learning type jigsaw is a type of cooperative learning that consists of several members in a group who are responsible for mastering the learning material section and are able to teach that part to group members (Johnson, 2003: 13). According to Ibrahim (2000: 41) jigsaw is designed to increase students' sense of responsibility towards their own learning and also the learning of others. Students not only learn the material given, but they must also be prepared to give and teach the material to other group members. Thus, students are interdependent with each other and must cooperate cooperatively to learn the material assigned. Members from different teams with the same topic meet for discussion (expert teams) helping one another on the learning topics assigned to them. Then the students return to the original team / group to explain to other group members what they have learned before

In the Jigsaw type cooperative learning approach, there are origin and expert group. The origin group is the parent group of students consisting of students with diverse abilities, genders and family backgrounds. Expert group is a group of students consisting of members of the original group different tasks. They are assigned to study and explore specific topics and complete tasks related to the topic to be explained to members of the original group. The expert group is a combination of several experts from the original group. The key to the success of jigsaw is interdependence. Each student depends on team members to get the information. They need to be able to do the quiz properly. (Huda, 2011: 13).

From the above quotation, it can be concluded that the Jigsaw type cooperative learning approach is a model of cooperative learning, with students learning in small groups of 4-6 heterogeneous people and collaborating on positive interdependence and being responsible for completing parts of the subject matter that must be learned and delivered. It is designed not only to increase students' sense of responsibility independently but also requires positive interdependence (telling each other) of group peers. Then at the end of the lesson, students are given an individual quiz that covers the material topics that have been discussed. The key to the success of this type of jigsaw cooperative model is the interdependence of each student on the team members who provide the information needed in order to be able to do the quiz properly.

2.4. Conventional Learning

The conventional learning approach is an approach that is carried out by combining various learning methods. This method applies teacher centered, the teacher is more dominating in learning activities. Learning methods carried out in the form of lecture methods, assignments, and questions and answers. Conventional learning approach is an approach that is widely implemented at this time in schools, which uses a sequence of activities to provide examples and exercises. Ruseffendi (2001: 17) says that in the conventional learning approach, teachers are considered as a storehouse of knowledge, teachers act authoritarian, teachers dominate the grade, the teacher teaches science, the teacher directly proves the propositions, the teacher proves examples of questions. While students must sit neatly listening, imitating the patterns given by the teacher, copying the

ways the teacher resolves the questions. Conventional learning is characterized by lectures, explanation and division of tasks and exercises.

Conventional learning is a teaching method which applies teacher center. Negative assumptions about the conventional approach should be rectified, both in terms of understanding the articulation of the teacher and its application in teaching and learning processes in schools. Hamalik (2001: 136) says that the implementation of conventional methods emphasizes the learning objectives in the form of additional knowledge, so learning is seen as a process of imitating and students are required to be able to re-express knowledge already learned through quizzes or standardized tests.

It is concluded that the conventional approach is a teacher-centered. The teacher is required to be more active in presenting experiences related to the concepts to be learned and students only listen and record what is conveyed by the teacher and do the exercises

III. Research Method

3.1. Population and Research Samples

Population is the totality of all possible values, both the calculation and qualitative and quantitative measurements of certain statistics regarding a set of objects that are complete and clear. The population of this study is all students of grade IVa and IVb, amounting to 102 students. This study applies Purposive Random Sampling technique or choosing a sample based on research considerations, namely from grade IVa for the experimental grade taught by using learning cooperative jigsaw type and for grade IVb control grade taught using conventional learning.

3.2. Research Location and Time

This research is conducted at Kasih Ibu Elementary School by considering the following: (1) This school has never been conducted a research with the problems examined; (2) This school can represent the type of formal school at the elementary school level; and (3) This school has a problem where the learning outcomes and learning motivation of students on the theme of togetherness is still low. This research lasts for two months starting from April to July 2019 with a frequency of 4 (four) meetings. The research time is adjusted to the school schedule on the theme of Beautiful togetherness in the form of teaching and learning at the school

3.3. Types of Research

This research applies Quasi Experimental Method with the research design as a basis for conducting research. It distinguishes the effect of jigsaw type cooperative learning and conventional learning approaches to learning outcomes in topic *The Beauty of Togetherness* in terms of high and low learning motivation where the treatment grade is grade IVa and grade IVb. Before treating grade IVa and IVb, researchers spread the learning motivation questionnaire first to grade IVa as many as 35 students and grade IVb as many as 35 students whose purpose is to find out students who have high and low learning motivation in each grade. The treatment is carried out in both the experimental and control gradees, namely grade IV by using jigsaw type cooperative learning and grade IVb by using conventional learning approaches.

3.4. Data Analysis Technique

The data analysis technique used in this study is descriptive and inferential statistical techniques. To test the hypothesis of this study two-lane Anava is used with a factor of 2X2. Variance analysis is an inferential technique used to test the assessment of average values. As a variance analysis technique or often called Anava which has many uses.

IV. Discussion

4.1 Research Result

The main objective of this study is to investigate the effect of learning on student learning outcomes using Jigsaw cooperative learning and conventional learning at Kasih Ibu Elementary School, and to determine differences in learning motivation of students who use jigsaw cooperative learning with students using conventional learning. The presentations of the results of this study include analysis of student learning outcomes using jigsaw type cooperative learning and conventional learning, as well as analysis of student learning motivation using jigsaw type cooperative learning and conventional learning. To get a post-test score of learning outcomes, a written test of 40 items is given, with a maximum score of 40. Each correct score is given a score of 1 for each item and an incorrect score is given a score of 0 for each item.

Before conducting hypothesis testing, calculating the total score and the average score of each treatment group according to the ANAVA table. It can then be used as a basis for statistical decisions for hypothesis testing. To prove whether there is difference in student learning outcomes using jigsaw type cooperative learning with students who use conventional learning at Kasih Ibu Elementary School, and whether there is a difference in learning motivation of students who use jigsaw type cooperative learning with students who use conventional learning by using anava test for each research problem statement .

From the data of the post-test scores of student using jigsaw cooperative learning and conventional learning at Kasih Ibu Elementary School, it can be shown by calculating the average value of student learning outcomes for both groups. The full results of post-tests can be seen in the attachment section, while the summary results are presented in Table 1 below.

Table 1 Summary of Analysis Results of Learning Outcomes Using Anava Two Paths

Tests of Between-Subjects Effects					
Dependent Variable:					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1399,724[a]	3	466,575	18,220	0,000
Intercept	49268,870	1	49268,870	1923,974	0,000
method	287,711	1	287,711	11,235	0,001
Motivation	1078,137	1	1078,137	42,102	0,000
Method of * motivation	3,561	1	3,561	0,139	0,710
Error	1690,119	66	25,608		
Total	51403,000	70			

Corrected Total	3089,843	69			
a. R Squared = ,453 (Adjusted R Squared = ,428)					

Statistical hypothesis testing for cooperative learning with jigsaw type and conventional learning shows that there are differences in student learning outcomes taught by using cooperative learning with jigsaw type and conventional learning. Based on the results of data calculations, it can be seen that student learning outcomes are taught by using cooperative learning jigsaw type gets an average value = 28.40 while the learning outcomes of students who are taught with conventional learning get an average value = 24.14. The results of the analysis of variance for both Learning shows the fh value of 11,235 is greater than the price of f1 of 3,978 at a significant level α = 0.05 so that H0 rejected and Ha is accepted at a significant level α = 0.05. Thus, it can be concluded that students who are taught by using Jigsaw cooperative learning results in higher learning outcomes than students who are taught with conventional learning.

Testing the statistical hypothesis about high and low learning motivation shows that there is difference in student learning outcomes using high learning motivation with low learning motivation. Based on the results of data calculation, it can be seen that students taught by using high learning motivation obtain an average value = 30.74, while student learning outcomes that use low learning motivation get an average value = 22.72. The results of the analysis of variance for both motivational learning shows the price of fh is 42,102 greater than the price of f1 of 3,978 at a significant level α = 0.05 so that H0 is rejected and Ha is accepted at a significant level α = 0.05. Thus, it can be concluded that the hypothesis stating there is a difference Student learning outcomes have high learning motivation with student learning outcomes have low learning motivation

Interaction between learning and learning motivation on student learning outcomes, the testing of the statistical hypotheses is the interaction of learning use and learning motivation with student learning outcomes. The results indicate that fh = 0.139 < ft = 3,978 so that it can be concluded that the null hypothesis which states there is no interaction between learning factors (jigsaw cooperative learning and conventional learning) with student motivation factors (high and low) in influencing student learning outcomes, or the significance level of 0.710. It turns out that the value is greater when compared with α = 0.05 or P-value> α, so it can be concluded that the null hypothesis states there is no interaction between learning factors (jigsaw cooperative learning and conventional learning) with learning motivation factors student (high and low) in influencing student learning outcomes can be accepted. Other words, it can be concluded that there is no interaction between learning factors (jigsaw cooperative learning and conventional learning) and student motivation (high and low) in influencing student learning outcomes.

Jigsaw cooperative learning and conventional learning are in accordance with student learning motivation (high and low) in improving student learning outcomes. It can be seen from the average value of each group of data that the learning outcomes of students taught with jigsaw cooperative learning and high learning motivation groups (32.94), and low learning motivation groups (24.58), are greater when compared to students taught by conventional learning namely groups high learning motivation (28.40), and low motivation groups (20.95). The results show that there is no significant interaction between the use of jigsaw cooperative learning and conventional learning and student motivation (high and low) in influencing student learning outcomes. In other words, the difference in the average score of student learning outcomes and the average score of student motivation (high and low)

taught by conventional learning does not differ significantly from those taught by jigsaw cooperative learning. This shows that learning can accommodate the level of student learning outcome. Jigsaw cooperative learning and conventional learning can accommodate student motivation (high and low).

4.2 Research Discussion

Student learning outcomes using jigsaw cooperative learning are higher than using conventional learning. Based on the above data acquisition, it can be concluded that student learning outcomes using jigsaw cooperative learning are higher than student learning outcomes using conventional learning. This is in line with Schunk (2012) that constructivism theory is a learning theory that emphasizes the ability of students to build their own knowledge so that students tend to understand and analyze the knowledge they have. This means that students who are taught using Jigsaw cooperative learning get higher score than students taught with conventional learning.

Through jigsaw type cooperative learning is expected to stimulate students to think actively, build understanding and ideas and find solutions. Learning outcomes are more appropriate when used environment that is close to the lives of students. Besides, student learning outcomes by using jigsaw cooperative learning can contain knowledge that is easy and can be imagined by students. This is consistent with the view that says that a teaching material can be taught, among others, if it has a connection with the initial knowledge possessed by students. In the learning process, students are expected to be able to connect the concepts learned with problems in everyday life. The results of students' thinking are summarized into knowledge of concepts, skills and attitudes expressed in ideas both verbally and in writing to be used in problem solving. Thus, students will be trained to use jigsaw cooperative that can improve learning outcomes. In learning using cooperative jigsaw types, each student is given a large space in giving opinions without time limit in the problem solving process. It can change students into understanding and handling a problem and practice their problem solving skills.

Jigsaw cooperative learning is a learning and teaching concept that helps teachers relate the material taught to students' real situations and encourages them to make connections between knowledge and its application in their lives. This shows that in cooperative learning jigsaw types, students find a full relationship the meaning of high motivational ideas with practical application in real world contexts. This is different from conventional learning done by teachers in the graderoom, where learning begins with the delivery of subject matter with lectures. The teacher is the only source of information so that students only become active listeners. Students in learning only carry out according to the rules of learning determined by the teacher and wait their turn to use learning so students tend to get bored, as a result the students concentration in learning are less focused.

In conventional learning, teacher does not give a broad opportunity to students to provide ideas about ongoing learning but the teacher tells students to follow the learning stages to completion. That students' knowledge is more limited to what the teacher sees and conveys. Based on the discussion above it can be concluded that cooperative learning with jigsaw type is better used in the learning process than conventional learning in terms of solving problems, as well as in taking ideas that can improve learning outcomes. Jigsaw cooperative learning activates the ability of reasoning and students' thinking abilities so that they can more quickly understand the learning outcomes provided by the teacher.

In the learning process, students have different motivations for the subject matter. There are students who have high learning motivation and some have low learning motivation. It is said to have high learning motivation because of its ability to understand the concepts and analyze the material provided. It deals with enthusiasm and understanding toward what subject matter and it can be absorbed well. Learning motivation of students who use Jigsaw cooperative learning is higher than learning motivation of students who use conventional learning. By using jigsaw cooperative learning, students will find it easier to improve learning outcomes.

The results of this study are in line with the opinion of Gregore (2004: 150), the reality for thinkers with motivation is the world of metaphysical theory and highly motivated thinking. Highly motivated people like to think in concepts and analyze information. It is easy for them to observe important things such as key points and important details. Teachers who teach in the graderoom are expected to be able to direct students in learning motivations, able to motivate students to be active in stud. The ability of a teacher determines the success of learning outcomes, for that learning applied by teachers must vary. Applying appropriate learning enables students who are highly motivated to have better learning outcomes. If the response of students is good, they must immediately be given positive reinforcement. The response is even better so that the learning outcomes are also good. Improved learning outcomes can affect enjoyment in learning so students are motivated to learn.

The results of hypothesis testing show that the learning motivation of students who use Jigsaw cooperative learning is higher than the learning motivation of students who use conventional learning. It can be understood that the material of cooperative learning jigsaw type is closely related to the material that students have learned previously. Students who are included in high ability are usually shown by high motivation in learning, attention and seriousness in following lessons and so on. Instead students who are gradeified as low ability are characterized by lack of learning motivation and lack of seriousness in completing assignments.

The results of the analysis obtained, there are differences in learning interactions and student motivation in influencing student learning outcomes. On average groups of students who have high learning motivation and are taught by using cooperative learning jigsaw types have learning outcomes higher than using conventional learning. Then on average the learning outcomes of groups of students who have low learning motivation and are taught with cooperative learning jigsaw types are lower than those of groups of students who have low learning motivation but are taught by using conventional learning. In other words, for groups of students who have low motivation it is better to use conventional learning compared to using jigsaw cooperative learning, although the difference in learning outcomes is not significant. In this case, student learning and learning motivation are significant enough to influence student learning outcomes at Kasih Ibu Elementary School Patumbak.

Based on student learning outcomes as a whole, there is an increase of the ability of students before treatment and after treatment, especially in the type of cooperative learning jigsaw treatment. While in conventional learning gradees, there is also an increase in learning outcomes, but it is lower than the average that has been implemented by using learning in jigsaw cooperative learning.

V. Conclusion

Based on the results of the research and discussion, the following conclusions can be drawn: The learning outcomes of students who get cooperative learning jigsaw type by 28.40 is greater than students who get conventional learning by 24.14. So it can be concluded that the learning outcomes students using Jigsaw cooperative learning are higher than student learning outcomes using conventional learning. Through jigsaw type cooperative learning is expected to stimulate students to think actively, build understanding and ideas to find solutions. Students learning motivation who get cooperative learning jigsaw type is greater than students who get conventional learning. Students learning outcomes are taught by using high learning motivation get an average value = 30.70, while the learning outcomes of students who use low learning motivation get an average value = 22.70. So it can be concluded that the learning motivation of students who use cooperative learning jigsaw type is higher than the learning motivation of students who use conventional learning. Jigsaw cooperative learning and conventional learning are in accordance with student motivation (high and low) in improving student learning outcomes. It can be seen from the average value of each group of data that student learning outcomes taught by jigsaw cooperative learning that have high learning motivation groups (32.9), and low learning motivation groups (24.6), it is higher than students taught by conventional learning namely high learning motivation groups (28.4), and low learning motivation groups (21.0). The results show that there is no significant interaction between the use of learning and student motivation (high and low) in influencing learning outcomes.

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