

Comparison of The Application of Problem Based Learning Learning Models with Jigsaw Learning Model Towards Learning Activity of Students of Sman 2 Sidoarjo

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Abstract: This research is a quantitative research with an experimental method. The population in this study included all students of class XI IPS SMA 2 Sidoarjo in the 2013/2014 school year. Data writing techniques in this case are documents, performance tests. The data analysis technique in this study is statistical analysis and inferential statistical analysis. Inferential statistical analysis uses a two-way analysis of variance. Based on the results of data analysis and discussion it can be concluded that: (1) There are significant differences in the use of the Jigsaw Model and the Problem Based Learning model in student learning activities. This is evidenced by $F_{count} > F_{table}$ ($24,677 > 4,17$) at a significance level of 5%; (2) There is a significant difference between high learning activities. This is evidenced by $F_{count} > F_{table}$ ($493,285 > 4,17$) at a significance level of 5%; (3) There is a significant influence between the learning model and learning activities. This is evidenced by $F_{count} > F_{table}$ ($10,712 > 4,17$) at the 5% significance level.

Keywords: Problem based learning, jigsaw cooperative learning method, student learning motivation, student accounting learning achievement

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I. Introduction

1.1 Background

The achievement of student competency in the learning process is a measure of the success of learning. This success can be seen from the activity of students during the learning process. Student learning activeness is seen from the enthusiasm of students when answering questions posed by the teacher, as well as working on assignments given by the teacher.

The activeness of students during the learning process is very important, because to know where students understand the learning material that has been taught by the teacher.

The teacher plays an important role in the learning process of students through the learning they manage. For this reason, the teacher needs to create conditions that allow for a good process of interaction with students so that they can carry out various learning activities effectively. In creating good interactions, professionalism and high responsibility are needed from the teacher in an effort to improve and develop student learning activeness. Because all the activity of students in learning is crucial for the success of achieving learning goals.

The level of student learning activeness in a learning process is also a benchmark of the quality of learning. Learning is said to be successful and of quality if all or at least most of the 75% of students are actively involved, both physically, mentally and socially in the learning process, in addition to showing high enthusiasm for learning, great enthusiasm for learning, and self-confidence .

Some forms of effort that can be made by teachers in developing student learning activeness in subjects are among others, increasing student interest in a lesson will be more active in learning it and vice versa, students will be less active in learning less desirable subjects, by motivating students carry out all learning activities in earnest. Conversely, learning with a weak motivation, will be lazy even do not want to do the tasks related to the lesson, by using methods in learning to develop student learning activeness in the subjects, teachers should be able to use methods in learning, in addition to clarifying the material presented also will be able to attract students.

Every teacher knows that the activity of students is very necessary so that learning activities can run and can achieve effective results. Therefore, teachers always try to create optimal learning conditions by using appropriate ways so that students can increase their activeness in learning in school (Usman, 2013: 27).

Based on the results of observations made by researchers at Probolinggo State High School 3 there are six classes, including class X IPS-I to X IPS-III which are majors and class X IPS-IV to IPS-VI are specialization classes.

Table 1.1 Learning Activity of Students in Class X IPS in SMA Negeri 2 Sidoarjo

Class	Score	Average Activeness of Student Learning Activity Criteria
IPS 1	3,0	High
IPS 2	1,7	Low
IPS 3	2,7	Medium

Source: Data from initial observations in class X IPS on Economics subjects. Financial Institution Basic Competencies.

It is known that in table 1.1 there is one class that has a low student learning activity category, namely class X IPS2. A student can be said to be active and meet the assessment criteria if he reaches a score of 3.0 - 4.0 and can be said in the high category. In class X IPS2 there are most students just sitting behind the desk of learning and listening to the explanation from the teacher, students do not do activities that encourage to actively participate in the learning process, student activities during learning are just silent and listening without anyone asking questions, there are still some students did not focus on attending the study even though their physical looks were silent paying attention to the explanation from the teacher. This can be seen when the teacher gives several questions to some of his students, they seem confused to answer. There are also students who joke themselves with friends without listening to the teacher's explanation.

During the learning process in the classroom, the teacher delivers the material only through the lecture method without applying learning methods that make students active in each activity. This lecture method is used from the beginning to the end of teaching and learning activities so that when the learning process takes place it seems monotonous, which causes students to not be quick to respond to the assignments given by the teacher. The impact that arises from these conditions is that using the lecture method causes students to be passive in learning because of the lack of interest in teaching a teacher. Based on this, the efforts of teachers in developing student learning activeness are very important, because student learning activeness becomes a determinant for the success of learning that is carried out.

Regarding the problems that occur in class X IPS2 at SMAN 2 Sidoarjo on economic subjects, solutions need to be found so that students become more active in learning. Through the improvement of the learning model that must be applied as long as the teaching and learning activities need to be done so that the achievement of optimal learning activities and make students active in each process. The success of the learning process is inseparable from the ability of a teacher to improve learning models that are oriented towards increasing student involvement directly in the lesson.

The use of learning models has the purpose of creating learning conditions that convince students to be able to learn actively and pleasantly so that students do not tend to be passive while in class.

A teacher must have adequate knowledge related to concepts and ways to improve learning that is appropriate to be applied in the classroom. Effective and appropriate learning methods are related to the teacher's level of understanding of student development and conditions.

One learning model that is able to improve student learning activeness is the Problem Based Learning and Jigsaw Model learning model which is used as an alternative to overcome the problems faced in economic learning in class X IPS2 at SMAN 3 Probolinggo.

Based on the description of the background above, the researcher conducted a study entitled "DIFFERENCES INFLUENCE OF THE USE OF THE PROBLEM BASED LEARNING LEARNING MODEL AND JIGSAW LEARNING MODEL ON THE STUDY OF LEARNING OF CLASS X IPS2 STUDENTS IN THE ECONOMIC LESSON OF FINANCIAL INSTITUTION IN SIDOARJO 2 STATE HIGH SCHOOL".

1.2 Problem Formulation

Based on the background above, the formulation of the problem in this study is as follows:

1. Is Comparison of the Application of Problem Based Learning and Jigsaw Learning Models simultaneously influencing the Learning Activity of Students of SMAN 2 Sidoarjo?

1.3 Purpose

a. To find out the purpose of this study is based on the background and formulation of the problem above, namely, knowing the differences in the Problem Based Learning learning model and the Jigsaw learning model

1.4 Benefits

This research is expected to be useful in education both directly and indirectly. The benefits of this research are as follows:

- a. For writers can add experience and deepen new knowledge gained from the field and writing scientific papers.
- b. For universities, the results of this study will be an additional reference for reading and information regarding the use of learning models.
- c. For schools, the results of this study are expected to provide input and consideration for schools that will use the learning method.
- d. For other researchers, as a reference, reference, and comparison for similar research.

II. Study Of Literature

This chapter discusses a literature review or study of theories relating to the research title. The literature review in this study includes the study of theories about the activeness of students in the learning process, inquiry learning methods and hypotheses used in researchers.

2.1 Overview of Prior Research

Ayu Ifana (2016) in her research entitled "Comparison of Problem Based Learning Learning Models and Guided Inquiry Learning Models on Critical Thinking Abilities of Students in Class X Dynamic Electrical Material at SMA Negeri 8 Bandar Lampung Academic Year 2015/2016" experienced a 25% increase from the first cycle was 54.17% (13 students) to 79.17% (19 students) and included in the very high category. This means that the existence of the inquiry method can change the increase in the activity of students who were originally low to high.

The similarities between the previous research with the current research, namely both examining student learning activeness and using the Problem Based Learning learning model. Whereas differences with previous studies compare two learning methods. Previous research used the Problem Based Learning Learning Model with Inquri. If this study uses a Problem Based Learning Learning model with Jigsaw. And have differences also in the subject and place of research.

2.2 Problem Based Learning Learning Models

Problem-Based Learning (PBL) is a teaching method characterized by real problems as a context for students learning critical thinking and problem-solving skills, and gaining knowledge (Duch, 1995). Finkle and Torp (1995) stated that PBM is the development of curriculum and teaching systems that develop simultaneously problem solving strategies and the basics of knowledge and skills by placing students in active roles as well-structured daily problem solvers. The two definitions above mean that PBL or PBM is any learning atmosphere that is directed by a daily problem. PBM starts from an innovative program developed at the McMaster University School of Medicine, Canada (Neufeld & Barrows, 1974). This program was developed based on the fact that many graduates were unable to apply the knowledge they learned in their daily practice. Today PBM has spread to many fields such as law, economics, architecture, engineering, and school curricula.

Problem based learning is the interaction between stimulus and response, is a two-way relationship between learning and the environment. Problem based learning is developed based on modern cognitive psychology theory which states that learning is a process in which students actively construct their knowledge through their interaction with the learning environment designed by learning facilitators (teachers). The problem based learning is mainly carried out to help students develop thinking skills, problem solving and intellectual skills.

Problem based learning is not designed to help teachers provide as much information as possible to students, but Problem based learning is developed to help students develop thinking skills, problem solving, and intellectual skills, learning various roles of adults through their involvement in real-world experience and become independent students. Because of this learning students are required to solve problems presented by digging as much information as possible, then analyzing and finding solutions.

2.3 Jigsaw Learning Model

In this jigsaw learning model students have many opportunities to express opinions, and manage acquired information and can improve communication skills, group members are responsible for the success of the group and the completeness of the part of the material being studied, and can convey it to the group (Rusman, 2008.203)

2.4 Activity of Student Learning

The activities of students in teaching and learning activities need to be considered by a teacher, so that the teaching and learning process taken gets maximum results. So the teacher needs to find ways to increase the

activity of his students. Active learning directly involves students in each learning activity. Active learning always encourages students to experience learning and critical thinking to participate in the learning process. With the existence of activity shows the direct involvement in students to gain learning experience.

According to Bonwell & Eison (2013: 14) that a student-centered teaching can be said as active learning. So active learning is only centered and refers to Student Based Learning (SCL).

Students are basically active beings. Students have a drive to do something, have curiosity, and a high willingness in the learning process. But learning also cannot be forced by others, the learning process occurs when an active student experiences it himself. John Dewey (in Dimiyati, 2013: 44) concludes "learning is about what students have to do for themselves, then the initiative must come from the students themselves". In the learning process, the teacher only guides and directs.

In each learning activity students are required to be physically, intellectually, and emotionally active in processing and processing their learning activities. Activeness can be realized such as finding the source of information needed, analyzing the results of experiments, making clippings, and similar behavior. The principle of student activity is realized through direct student involvement in each learning process

Active learning can help and train students to turn on the memory of students to develop optimally. Active learning can make students become more active early on through activities that can make students understand the subject matter presented. Active learning is demonstrated with enthusiasm, life, enthusiasm, continuity, strong and effective. Active learning involves learning that occurs when students are excited, mentally prepared, and can understand the experiences they experience (Marno & Idris, 2014: 148)

Thus it can be seen that, the opportunity given by the teacher will require students to be always active in finding, obtaining, and processing their learning gain. The role of a teacher provides learning opportunities to students, providing an opportunity for the implementation of the principle of activeness for teachers optimally. The use of learning methods as mentioned will be able to help students improve student activity during the learning process is underway. Based on several opinions that have been explained above, it can be concluded that student activity is a form of learning activities that involve the mental and physical of a student in responding to lessons during the teaching and learning process is underway. To be able to involve students physically, mentally emotionally, and intellectually in learning activities, the teacher should design and implement learning activities by considering the characteristics of students and the characteristics of the content of the lesson.

According to Suryosubroto (2009: 59) the activity of students appears in activities:

a. Do something to understand learning material:

Students try to find sources of information about subject matter that has not been understood, for example, just search from textbooks or from internet sources that allow students to be able to understand and understand.

According to Suryosubroto (2009: 59) the activity of students appears in activities:

b. Learn and understand for yourself about how to obtain knowledge:

That is, students don't just study at school when the teacher is explaining it. But students can study alone at home by looking for learning resources.

c. Feel for yourself how the assignments are given by the teacher: Tasks given by the teacher, so students can practice their abilities so that the teacher knows where the students understand.

d. Study Group :

Students do group learning with several friends to improve students' understanding and mastery of subject matter, train students' ability to communicate well with their fellow students, and develop students' ability to discuss and debate healthily.

e. Try out certain concepts yourself:

Students practice their abilities by doing problem exercises as a reference to find out until he understands the subject matter.

f. Communicating the results of students' thought processes verbally or in appearance:

After students find answers to the problems that have been worked on, students can express their answers in front of their friends. If something is not understood, students can ask the teacher directly.

The teaching and learning process should always include students actively to develop students' abilities, including the ability to observe, interpret, predict, apply concepts, plan and carry out research, and communicate their findings. Learning that emphasizes learning activity has positive benefits in the learning process.

2.3.1 Benefits of Student Activity in the Learning Process, among others:

Hamalik (2013: 91) mentions the benefits of active students in the learning process, including:

1. Students have their own experience

The experience experienced by students is very effective as a reference for students' active learning. With the direct experience experienced by students can make it easier for students to understand something that has not

been understood to be more understood. Like doing activities in real situations, for example in group discussions.

2. Developing all personal aspects of students

Each student will grow and develop quickly or slowly in an ever-changing environment. The environment, which among others is determined by the ability of educators to understand the goals to be achieved, the potential of students, the condition of their students with all their backgrounds.

To develop aspects of personality in accordance with their nature and essence, all aspects of their traits are developed as optimally as possible through learning experience as indicated by the activity in students. Thus the potential for overall personal aspects in students develops.

3. Cultivate collaboration among students in group discussions

Group discussion is a strategy that allows students to master a concept or solve a problem through a process that gives an opportunity to think, interact socially, and practice being positive. Thus group discussions can improve students' creativity, as well as the activity of students in learning.

4. Cultivate learning discipline and a conducive learning atmosphere

If a teacher is able to condition his class effectively and conducive, then a student can learn according to what is expected and able to create learning discipline as expected.

The activeness of a student in learning activities is a very important issue that is thirsty understood and developed by each teacher. This shows that activeness must be applied in every learning process. The fundamental view that needs to be the mindset of each teacher is that in principle students are active people. The active power of each student will be able to develop in a positive direction if the environment provides good feedback for the growth of that activity. This situation causes every teacher to explore the potential of each student's diversity through activeness that leads to their activities. Implications of the principle of activity or activity for teachers in the learning process according to Aunurrahman (2009: 121) that:

1. Provide opportunities for students to be creative during the learning process
2. Provide opportunities to make observations
3. Provide individual assignments or group assignments
4. Giving verbal and non verbal praise to students who respond to questions
5. Using multi methods and multi media in learning activities.

2.5 Indicators of Student Learning Activity

To complete the description of the meaning and theory of student learning activeness, it is necessary to state the existence of several indicators of student learning activeness based on the type of activity. According to Sudjana (2011: 61) students are said to be active learning when as follows:

1. Participate in carrying out their learning assignments
2. Engaging in problem solving
3. Ask other students or the teacher if they do not understand the problems they face
4. Try to find various information needed for problem solving
5. Carry out group discussions according to the teacher's instructions
6. Assessing his ability and the results obtained
7. Train yourself in solving problems or similar problems

While according to Hamdani (2010: 81) states that the characteristics of student learning activeness appear in terms of the following:

1. There is involvement of students in compiling or planning, process learning, and evaluation
2. The existence of intellectual-intellectual involvement of students
3. The existence of creative student involvement in creating situations
4. The teacher acts as a facilitator and coordinator of student activities
5. Using various methods, media, and various tools in various ways.

So, in this study the indicators used are as follows:

1. Participate in carrying out their learning assignments

One of the principles of student activity is in the form of curiosity by looking for the information needed. In this case students are required to be involved directly during learning. In this study students intended able to participate in carrying out his learning duties towards lessons delivered such as the enthusiasm of students to work on his job, completing his task on time, and trying to finish the job correctly.

2. The existence of creative student involvement in creating situations

In student learning activities not only demanded activeness but also creativity in solving problems given by the teacher. In order to solve problems or problems, there are differences in the steps taken from one individual to another individual. There are those who immediately take steps as soon as the command is understood and try to arrive at the right way, but there are also those who do not take action but think about the possibilities that are related to student involvement. In this study what is meant by the involvement of students creatively in creating situations when, students participate actively in expressing opinions, students master the material in full, have a sense of responsibility in learning.

3. Using various methods, media, and various tools in various ways

During the learning process, the teacher teaches using various methods, media and other tools in various ways to create active students in the classroom during the learning process. Students are required to be active in developing their understanding in class. In this study what is meant is to use various methods, media, and tools in a variety of ways when students search for good sources of learning information from the handbook, from HP that is used to find information about material that has not been understood or can also ask teachers and other students if there are which is not yet understood.

4. Trying to find various information needed for solving problem

In this case, involving students in the active learning process, collaborative, centered on students, who develop abilities problem solving and independent learning skills. Students are expected able to search from various sources regarding information about material learning. In this study what is meant by students is business look for various information needed for problem solving if, ask the teacher if anyone has not been understood, ask to friends if they don't understand the problem given by the teacher, trying to complete the task as quickly as possible and appropriately.

5. Carry out group discussions according to the teacher's instructions

Group discussion is an activity that involves involving more than one individual. Group discussion is a regular process that involves a group of people in a face-to-face interaction that is informal with a variety of experiences or information, conclusions or problem solving. In this discussion activity, students are expected to be active in expressing their opinions and contributing their respective thoughts and various experiences and information. In this study what is meant by carrying out discussions according to the teacher's instructions when students work together with their group members, have responsibility for group discussion assignments, explain the results of group discussions in front of the class.

2.6 Research Targets

The target of this research is the students of class X IPS2 have high category learning activeness with a score range of 3.0 to 4.0. In accordance with active learning indicators, namely, participating in carrying out their learning tasks, involved in problem solving, using various methods, media, and various tools in various ways, trying to find various information needed for problem solving, carrying out group discussions according to the teacher's instructions.

III. Research Methods

This chapter discusses classroom action research, which includes the place and time of research, research subjects, operational definitions of concepts, research plans and plans, data collection techniques, and data analysis.

3.1 Research Place and Time

3.1.1 Research sites

This research was conducted at SMAN 2 Sidoarjo in class X IPS2 students. The duration of the action is adjusted to the time allocation according to the syllabus of SMAN 2 Sidoarjo 2018/2019 school year and the school policy of the Senior High School 2. The reason was chosen by SMAN 2 Sidoarjo as a place of research with considerations including:

- a. The activity of students in the learning process in class X IPS2 of SMAN 2 Sidoarjo is still low
- b. The existence of willingness and cooperation from SMAN 2 Sidoarjo to be used as a place of research

3.1.2 Research Time

This research was carried out at the time of the economic subject activities of financial institutions basic competencies in the 2016/2017 Academic Year. The duration of action is adjusted to the time allocation according to the syllabus of SMAN 2 Sidoarjo Academic Year 2018/2019 and school policy.

3.2 Population and Samples

The population in this study were all students of class XI IPS in SMA Negeri 2 Sidoarjo in the 2013/2014 academic year as many as three classes namely XI IPS 1, XI IPS 2, and XI IPS 3 with a total population of 65 students. The samples in this study were XI IPS 2 and XI IPS 3 classes, each of which amounted to 22 and 21 students, so the number of samples in this study amounted to 43 students. Samples are obtained by simple random sampling technique, namely members of the sample obtained from the population carried out randomly regardless of the strata that exist in the population (Sugiyono, 2009).

3.3 Data Collection Techniques

Data collection techniques in this study were in the form of documents, and pretest and posttest consisted of multiple choice tests, then consulted with education experts in the Special Sector of Economics. Before using the research instruments that have been prepared first tested. The trial was conducted on students of class XI IPS 1 Sidoarjo SMA 2 who were not given any treatment with a total of 22 students. The results of the research trials were analyzed using content validity test, item analysis test, and reliability test using SPSS software. The data analysis technique used in this study is a two-way analysis of variance (anava two way). Before the two-way variance analysis was carried out the analysis prerequisite test consisted of a normality test and a variance homogeneity test. The normality test in this study was conducted using the Anderson Darling test, while the variance homogeneity test was carried out using the F. statistical test.

IV. Results And Discussion

4.1 Description

Based on the results of the two-way variance analysis calculation, it can be seen that F_{count} is 24,677 then compared with F_{table} at the 5% significance level, freedom degrees 1 for the numerator and 39 for the denominator. The calculation results show $F_{count} > F_{table}$ ($24,677 > 4,17$) so that H_0 is rejected. Thus it can be concluded that there is a Comparison of the Application of Problem Based Learning Learning Models with Jigsaw Learning Model towards Learning Activity of Students of SMAN 2 Sidoarjo .. Students who were treated using the problem based learning model and Jigsaw Model obtained an average score of economic learning activeness of 89.318 and 86.048 . With the distribution of data from the calculated average of 5.4% and 7.4% respectively. This shows that the distribution of data in the group of students who were treated using a problem based learning model was more closely compared to the distribution of data in the group of students who were given a treatment model of the cooperative learning method of jigsaw. The more tightly distributed a data means that the data is spread not far from the mean.

Based on the average score and distribution of data obtained shows that students who were given a treatment model of problem based learning had higher learning achievement compared to students who were given a treatment model of the cooperative learning method of jigsaw. Students who were given a treatment model of problem based learning had higher economic learning activeness because problem based learning emphasized students to actively seek problems for the material being studied, then students looked for solutions to solve these problems. In finding solutions to problems, students are encouraged to apply their knowledge and skills. Savery (2006: 12) suggests that "Problem-based learning is student-centered learning approach that empowers students to conduct research, integrate theory and practice, and apply knowledge and skills to develop a viable solution to a defined problem" (Learning-based problem is a student-centered learning approach that assigns students to conduct research, integrate theory and practice, apply knowledge and skills to be developed as a way to find solutions to problem solving).

he opinion above shows that learning using problem based learning emphasizes students combining knowledge and skills possessed to find solutions to problem solving. Furthermore, the cooperative learning method of the jigsaw method is an innovative learning model that emphasizes students learning in groups.

4.2 Effect of Problem Based Learning Learning Model with Jigsaw Learning Model

Based on the results of the two-way variance analysis obtained F_{count} of 493,285 then compared with F_{table} at the 5% significance level, freedom degrees 1 for the numerator and 39 for the denominator. Calculation results show $F_{count} > F_{table}$ ($493,285 > 4,17$) so that H_0 is rejected.

This is indicated by students who have high learning activeness in getting mathematics learning achievement better than students who have low learning activeness. Students who have high learning efficacy and low learning activeness obtain an average score of 92,500 and 81,684, respectively. With the distribution of data from the calculated average of 8.63% and 9.81% respectively. This shows that the distribution of data in groups of students who have high learning activity is more tightly compared with the distribution of data in groups of students who have low learning activeness. The more tightly distributed a data means that the data is spread not far from the mean. Students with high learning activeness get higher average scores because they

have a big drive to learn, develop their thinking skills and knowledge. Students who have high learning activeness tend to be active in learning activities, have high curiosity, and are critical in thinking. Conversely, students with low learning activeness lack the motivation to learn, and develop their abilities and knowledge. In learning activities students who have low learning activeness are less active and do not care about what they have learned.

4.3 Comparison of the Application of Problem Based Learning Learning Models with Jigsaw Learning Model towards Learning Activity of Students of SMAN 2 Sidoarjo

Based on the results of the two-way variance analysis obtained Fcount of 10.712 then compared with Ftable at the 5% significance level, freedom degrees 1 for the numerator and 39 for the denominator. The calculation results show $F_{count} > F_{table}$ ($10.712 > 4.17$) so that H_0 is rejected. The use of learning models that are precisely supported by high learning motivation can produce optimal learning achievement. Hidayah (2013: 105) states that "There is an interaction between learning models with learning motivation towards social studies learning achievement". The learning achievement of social studies subjects in the cooperative learning model of the jigsaw method with high learning motivation has the highest average value while the cooperative learning model group think pare share method with low learning motivation has the lowest average value. The use of appropriate learning methods supported by high learning motivation can produce good achievements. Students who were given a treatment model of problem based learning that had high and low learning motivation obtained an average score of 94.308 82.111. With the distribution of data from the calculated average of 1.7% and 1.9%, respectively. Students who were treated using a model of cooperative learning jigsaw method that had high learning motivation and low learning motivation each had an average score of 90,364 and 81,300, respectively. With the distribution of data of 2.22% and 13.167% respectively. This shows that the distribution of data in the group of students who were treated using a problem based learning model that had high learning motivation and lower learning motivation was denser than the distribution of data in the group of students who were given a jigsaw cooperative learning model that had high learning motivation and low learning motivation. The more tightly distributed a data means that the data is spread not far from the mean. There are differences in the average score of accounting learning achievement obtained from the two samples even though using a similar learning model, this is because there are differences in the level of motivation to learn. Students who have high learning motivation have a big drive to learn, develop their thinking skills and knowledge. Conversely students who have low learning motivation are less active in learning, and do not have concern for learning achievement. Students who were treated using a problem based learning model with different levels of learning motivation gained higher average scores.

This is because in the problem based learning model students are encouraged to develop thinking skills, problem solving skills, and have the skills to learn independently. It is different from the cooperative learning method of the jigsaw method which emphasizes cooperation in groups to master the subject matter without developing their knowledge. The use of the right learning model that is a problem based learning model supported by high learning motivation will result in optimal accounting learning achievement.

V. Conclusions And Suggestions

A. Conclusion

Based on the results of data analysis and discussion that has been stated previously it can be concluded as follows: There is a significant difference in the use of the problem based learning model and cooperative learning jigsaw method on student accounting learning achievement. This is evidenced by $F_{count} > F_{table}$ ($24,677 > 4,17$) with a significance level of 5%; There is a significant difference between high learning motivation and low learning motivation on student accounting learning achievement. This is evidenced by $F_{count} > F_{table}$ ($493,285 > 4,17$) with a significance level of 5%; There is an interaction of significant influence between the learning model and learning motivation on student accounting learning achievement. This is evidenced by $F_{count} > F_{table}$ ($10.712 > 4.17$) at the 5% significance level.

B. Suggestions

Accounting teachers are expected to be able to apply the problem based learning model to accounting subjects. For students Students are expected to play an active role in learning to cooperate in groups and solve problems. For schools it should facilitate teachers in developing skills and knowledge, by providing training related to learning management. Other researchers are expected to develop this research in different subjects and levels of education.

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