Does Jigsaw Learning Model Matters in Improving Students Achievement?

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Abstract
This research did the application in High School Brawijaya Smart School Malang with the application of the learning model of the jigsaw. The subject of this research is to grade X cross-interest. This research aims to find out how the jigsaw learning model implementation in class X cross-interest in economics subject in high school BSS and up to know how focused learning jigsaw to increase student learning outcomes grade X cross-interest High School BSS Malang. This study used a qualitative approach. This type of research is the research action class implemented in 2 cycles. The data used in this research is the primary data obtained from the learning activities of students. This research data gathering techniques using interview techniques, observation sheets, test better, and documentation. The result of this study demonstrate the application of the learning model of jigsaw has been applied very well and was able to increase the learning outcomes of student of class X cross-interest which has been evidenced by the increase in average yield learning activities post-test in cycle I of “62,14” rise in cycle II of “85,35”. Based on the result of research conducted, the advice that can be give is 1) is expected to implement the BSS model high school teacher learning jigsaw is not only on the material system of payment and means of payment, but for other materials that have the same problem 2) expected for the next researcher can measure student learning outcomes in the affective and psychomotor domains.

How to Cite
INTRODUCTION

Senior High School are educational institutions that are expected to create high quality students and to develop the potential of its students to be able to work in certain areas. There many strategies in teaching. One of them is cooperative learning strategy. As Jhonson & Holobec (2008); Slavin (2005).

According Solihatin & Raharjo (2007) cooperative learning is a learning method to help learners improve their understanding and attitude adjusted with the real life in the society. Riyanto (2010) cooperative learning is a teaching method designed with the goal to improve learners academic skills social skill, including interpersonal skill. Cooperative learning is a teaching method where learners study by making small groups that have different abilities based on high, medium and low capability of learners. Alma & Hurriyati (2008) in finishing assignment every group member is expected to help each other and try to comprehend the material resources. In summary cooperative learning can best be understood as a teaching method required learners learn cooperatively work in the assigned tasks. In the process of learning, learners will be devided into groups and every group member will hold accountability to help their friends achieve the goal.

Jigsaw Learning Model is a type of cooperative learning consisting of several members in one group who are responsible for assigning the learning material section and are able to teach the material to other members in the group. Jigsaw is a cooperative learning strategy that has been used for over thirty years. Jigsaw is a kind of strategy that allows learners woek cooperatively and help each other in dealing with new learning materials. Within the interaction in the group they will have particular active role to teach other members in the group on the materials they have studied. Brisk & Harrington (2000) during its implementation Jigsaw will require at least five to six participants in one group. Further referring to its characteristics this strategy belongs to cooperative learning that in fact has been studied by researchers and teachers in classes of different levels and subjects. Each student involved in this case, will have unique information and be an essential piece for their group as each of them will have significant role to succeed the learning in their group on the topic whole group is studying, Mengduo & Xiaololing (2010). Adams (2013) the unique characteristic of jigsaw is that students are given portion of the total learning task to master than teach that segment to the other members of their team. Until of the pieces of the learning “puzzle” are in place, meaningful learning cannot occur; hence, the name is jigsaw. Of the explanation this might be synthesized that this strategy is way to help teachers reach their teaching goals where the students are assigned to study in groups. Each of whom has personal task to set up to and needs to disseminate the finding to the other members in their group of origin.

This research was conducted at Brawijaya Smart School High School by applying the Jigsaw learning model. The subject of this research is the class X Cross-Interest student. This study aims to find out how the application of the Jigsaw learning model in class X Cross-Interest in SMA Brawijaya Smart School Economics subjects and to find out how the application of the Jigsaw learning model is able to improve class X student learning outcomes Cross-Interest in SMA Brawijaya Smart School. The results of preliminary observations indicate that the learning outcomes of class X students across Interest are low due to the lack of interest and readiness of students in learning so that during the learning...
process students often do other things such as chatting and playing mobile phones. As stated by (Slameto, 2003: 54) one of the factors that cause low learning outcomes are psychological factors such as intelligence, attention, interest, talent, motives, readiness.

Isjoni (2012: 54) "Jigsaw learning is one type of learning that encourages active students and help each other in mastering subject matter to achieve maximum achievement". Rusman (2012: 218) Jigsaw learning model is a cooperative learning model that focuses on student group work in the form of small groups. Salvin (2010: 237) suggests that the form of Jigsaw adaptation is more practical and easy, namely Jigsaw II.

The results of Sulasmi, Gregorious's research, (2013) in the Surabaya State University journal entitled "Application of the Jigsaw Type Cooperative Learning Model to Improve Student Learning Outcomes in Class IV Social Sciences Subjects at Tambaksari Mardisiwi Elementary School Surabaya" can be concluded that learning by applying the Jigsaw type learning model for social studies in grade IV of Mardisiwi Tambaksari Elementary School Surabaya runs well and in accordance with its objectives. Based on the problems described above, the research was carried out with the title "Application of Jigsaw Learning Model to Improve Learning Outcomes of Class X Students in Cross-Economic Interest in Malang Malang High School Smart School Economic Subjects".

METHOD
To find out how the application of the Jigsaw learning model can improve the learning outcomes of class X Cross-interest students of SMA BSS Malang, the author uses qualitative research aimed at gaining a basic understanding through first-hand experience (researchers must go directly and must know the research subject in person and without intermediaries) from researchers who proceed directly and merge into an inseparable part of the subject and background that will be examined in the form of actual reports, the facts, and actual field notes.

The place used in this study is the SMA Brawijaya Smart School Jl. Cipayung No. 10 Malang, postal code: 65412, email: smabss@ub.ac.id, telephone number: 0341-584654. The subjects of this class action research are class X students Cross-Interest in SMA Brawijaya Smart School. The number of students in class X Cross-Interest is 14 students, consisting of 7 male students and 7 female students. The data used in this study are primary data obtained from student learning activities. The data sources in this study were class X students in cross-interest, economic subject teachers, and student learning outcomes through pre-tests and post-tests conducted. (1) Interview: an interview aimed at Economics subject teachers to find out the problems that occur in the classroom, and the difficulties experienced during the learning process takes place; (2) observation Sheet: used by the observer to assess the teacher while teaching, and to measure the application of the Jigsaw model; (3) test questions: to see student learning outcomes in economic lessons through a pre-test and post-test; (4) documentation: collated to report learning activities and situations that occur during learning take place in the form of photographs.

Data analysis in this study was used to see whether there were changes in student learning outcomes, experienced an increase or decrease after the implementation of the Jigsaw learning model. And analysis of this data is also
used to see the validity, reliability, distinguishing power and the difficult power of the questions used.

RESULT AND DISCUSSION

The application of the Jigsaw learning model begins with the stage of division of the original group. Researchers divide heterogeneous groups so that one group can help each other. Class X Cross-Interest students number 14 children and are divided into 3 groups where each group consists of 4-5 students, and each student will have number 1-4 or 1-5 according to the number of each group. Each student who has the same number will gather into expert groups to discuss the subchapters of previously divided material. The team of experts is tasked with discussing the material thoroughly along with other expert teams assisted by the researcher and again explaining all the material to the other group members from the other. Each group of experts discusses different material. In accordance with what was expressed by Eliot Aronson and his colleagues (in Jamil 2009: 2004), each team has a different section intended so that each team masters unique information so that each one respects and contributes to each other. The material will be the full responsibility of each expert team. Researchers give time to expert groups to study the material that has been shared.

Expert group discussion activities, researchers give time to each team of experts to explain the material according to the section. After the expert team finished discussing the material, the expert team returned to their respective groups. The expert team is tasked with explaining all the material that has been discussed previously to other original group members until all group members understand. The next activity is a presentation. This presentation starts from the original group one followed by the original group of two then group of origin three. At the time of presentation, all group members must get a section to explain the material. The material presented is material that has been shared at the beginning of learning. The purpose of this presentation is to equate the understanding of the material being studied today.

The application of the Jigsaw learning model has been applied according to the steps outlined, there is an increase in the application of the Jigsaw model from cycle I to cycle II. The implementation of the Jigsaw model in the first cycle has been going well, but there are several indicators that have not been implemented well, there are still some students who are not ready to become trained to master the material because they feel they have a big responsibility. Researchers continue to provide students with insight into the purpose and benefits of implementing the Jigsaw learning model. Indicators that have not been well implemented are those during the presentation. All students must have a part of the material to be presented, but there are some students who at the time of presentation only come forward but do not take part in delivering the material. The application of the Jigsaw learning model in the second cycle has been going well because researchers have corrected the deficiencies that occur in the first cycle, researchers also provide a model parable so that students are easier to apply.

Learning outcomes are tangible results in the form of values obtained by students after the activities understand the material in the learning. Dimyati (2006) learning outcomes are the results achieved in the form of numbers or scores after
being given a test of learning outcomes at the end of each lesson. Learning outcomes in this study were obtained from the value of the tests carried out at the beginning of learning (pre-test) and the end of learning (post-test), researchers assessed student learning outcomes in the cognitive domain.

The jigsaw learning model is able to improve student learning outcomes in class X Cross-Interest because in applying the Jigsaw learning model the teacher gives full rights to students to understand the material and is responsible for understanding the material of other friends. Learning becomes easy and convenient because the delivery of material is done by their own friends, the language used is their daily language so that students of class X Cross-Interest more quickly understand the material. Automatically when students understand the material learned, students can improve their learning outcomes.

In addition, researchers always provide opportunities for students to ask, even in the middle of a discussion when students experience difficulties or do not understand the material. This is done because, in addition to giving full rights to students in understanding the material, researchers also monitor students' understanding of the material learned that day. In the opinion expressed by Hasibuan (1988) in the context of learning and learning theory point of view, the question is a stimulus that encourages children to think and learn so that children will more easily master the material or concepts provided and students' thinking skills will be more developed.

From the results of the discussion above, it can be concluded that the Jigsaw learning model applied in economic learning in class X Cross-Interest students has been able to increase student learning outcomes. In accordance with one of the results of Jhonson and Jhonson's research (in Teti Sobari 2006: 31) that the Jigsaw learning model can improve learning outcomes. This is indicated by an increase in the percentage of learning completeness that occurs in the first cycle and second cycle. The results of this study are in line with the results of research conducted by Widyawati (2010). He has carried out the research "Application of Cooperative Learning Model Jigsaw to Increase Geography Activity and Learning Outcomes in Atmospheric Material of Class X-8 Blitar 3 High School Students, the results of his research show that the Jigsaw learning model is able to improve the X-8 class student learning outcomes.

CONCLUSION

Based on the results of the research and discussion that has been described, conclusions can be drawn as follows: (1) implementation of the application of the Jigsaw learning model on class X Cross-Interest in the Economics of Brawijaya Smart School High School subjects has been successfully implemented very well, this is indicated by an increase in achievement of the results of the implementation of actions from cycle I to cycle II; (2) Jigsaw learning model can improve the learning outcomes of class X SMA Brawijaya Smart School. This is explained by the increase in student learning outcomes in economic subjects as indicated by the increase in the average learning outcomes of class X students in the interest from cycle I to cyclical II.
REFERENCES


