Applying Of Jigsaw Model To Enhance Students' Reading Comprehension

Sudirman

Faculty of culture, Management, and Business, Mandalika University of Education

Article Info	Abstract
	The purpose of the research was to know the Jigsaw learning model can enhance on VII grade students' cognitive learning outcomes in reading comprehension at SMPN 1 Praya Barat. It was participant classroom action research. It was done in two cycles. Each cycle consisted of planning, action, observation, and reflection stages. Subject of the research was 32 students. Instruments used were students' test, students' and teacher's activities used observation sheets, at the end of each cycle. The research findings show that implementation of Jigsaw learning model can improve students' cognitive competence. Percentage of students' classical achievement in cognitive competence improves time by time. In pre-cycle, the percentage is 46% (not enough), in cycle I is 50% (not enough) and in cycle II is 92% (very good). Meanwhile, percentage of students' Activity also improves. In pre-cycle, the percentage is 52% (enough), in cycle I is 64% (good) and in cycle II is 80% (very good). From the finding, it proves that the implementation of Jigsaw learning model can improve students' cognitive competence and Activity in class VII of SMPN 1 Praya Barat.

Corresponding Author:
Sudriman,
Faculty of culture, Management, and Business, Mandalika University of Education
Email: sudirman@undikma.ac.id

1. INTRODUCTION

Reading skill is the ability to comprehend and interpret written texts of various genres, levels and purposes. Reading skill involves several cognitive processes, such as decoding, fluency, vocabulary, background knowledge, inference, summarization, and evaluation. Reading skill is essential for academic success, personal development, and lifelong learning. Reading skill can be improved by engaging in various reading activities, such as reading for pleasure, reading for information, reading for critical analysis, and reading for specific tasks.

The jigsaw learning model is one of the cooperative learning methods that prioritizes cooperation between students in heterogeneous small groups. The model was developed by Elliot Aronson and his friends at the University of Texas, and adapted by Slavin at Johns Hopkins University. The model aims to increase students' sense of responsibility towards their own and others' learning, as well as to develop social and academic skills. This model has six steps, namely: (1) group division, (2) provision of material, (3) learning of part of the material by group members, (4) expert group meetings, (5) returning to the original group, and (6) giving quizzes. With this model, students can share information, experiences, ideas, attitudes, opinions, abilities, and skills they must achieve common goals.

The Jigsaw procedure is one of the cooperative learning methods that divides students into heterogeneous small groups. Each group member is responsible for learning the part of the material specified by the teacher and then teaching it to the rest of the group. The purpose of the Jigsaw procedure is to increase student engagement, understanding, and cooperation in learning. The Jigsaw procedure has the following steps:

a. The teacher determines the material to be studied and divides it into several balanced and interrelated parts.

b. Teachers form study groups of 4-6 students considering students' abilities, genders, backgrounds, and interests.
c. The teacher assigns each piece of material to one member of the group at random and gives sufficient time to study it independently or together with other students who get the same part of the material from another group (expert group).
d. After learning the part of the material, each student returns to his or her original group and teaches the part of the material to the other group members in turns (Jigsaw group).
e. Teachers evaluate student learning outcomes both individually and in groups using tests, quizzes, discussions, or other assignments.
f. Teachers provide positive feedback and reinforcement to students for their participation and cooperation in the learning process.

Cooperative learning is a teaching strategy that involves students working together in small groups to achieve a common goal. It is based on the idea that learning is enhanced when students interact with each other and share their ideas, perspectives and experiences. Cooperative learning can foster academic achievement, social skills, motivation, engagement and positive attitudes towards learning. Some of the benefits of cooperative learning are:

a. It promotes active learning and higher-order thinking skills.
b. It increases student participation and accountability.
c. It develops interpersonal and communication skills.
d. It enhances self-esteem and confidence.
e. It reduces anxiety and boredom.
f. It creates a positive classroom climate and community.

To implement cooperative learning effectively, teachers need to consider some key elements, such as:

a. Group formation: Teachers should form heterogeneous groups of 3 to 5 students, based on criteria such as ability, interest, gender, ethnicity, etc. Groups should be changed periodically to expose students to different peers and perspectives.
b. Group roles: Teachers should assign specific roles to each group member, such as leader, recorder, reporter, checker, encourager, etc. Roles should be rotated regularly to give students equal opportunities and responsibilities.
c. Group tasks: Teachers should design meaningful and challenging tasks that require group interdependence and individual accountability. Tasks should be aligned with the learning objectives and outcomes of the lesson.
d. Group norms: Teachers should establish clear and explicit norms for group work, such as listening, respecting, helping, sharing, etc. Norms should be modeled and reinforced by the teacher and the students.
e. Group assessment: Teachers should monitor and evaluate both the group process and the group product. Assessment should include both formative and summative feedback, as well as self-assessment and peer-assessment. Assessment criteria should be communicated to the students beforehand.

Cooperative learning is one of constructive learning strategies. According to Holubec (2001 in Nurhadi et al., 2004:60), cooperative learning is a learning strategy which requires students' cooperation in small groups to maximize learning situation to achieve learning objectives. Furthermore, learning through cooperative strategy is also expected to increase students' Activity.

Problem found in learning process is teacher' method in teaching English is not various. He only uses lecturing method. Lufri (2010: 32) states that lecturing method has some weaknesses, which are it makes students passive in learning process, it is boring for

students if it is used for long time, it makes students depend much on teacher, and it makes students' learning outcome less maximal. In addition, students' Activities, like critical thinking, communication and cooperation do not develop well. It can be seen from students' craziness in asking or answering questions in group discussion or presentation. There are only some students actively involved. Most of them do not pay attention to the discussion.

The researcher formulates the research question as follows: Does the use of Jigsaw learning model can enhance on VII grade students' cognitive learning outcomes in reading comprehension at SMPN 1 Praya Barat? The researcher limited only: "to know the Jigsaw learning model can enhance on VII grade students' cognitive learning outcomes in reading comprehension at SMPN 1 Praya Barat. Problem limitation in research is an effort to limit or focus the research into one or some problems so that its indicators of success can be measured. To make the research more focus, it is limited only on students' cognitive learning outcome.

The problems in this research identified as such as 1) No variation of learning method; 2) Students are less motivated and active in learning process; 3) Students' reading interest is still low; 4) Students' cognitive learning outcome is still low (under KKM); and 5) It is important for students to have Activity.

2. RESEARCH METHOD

The design of this research was classroom action research (CAR). According to Darmansah (2009, in Harahap, 2018), CAR was research which aims at improving learning process and outcomes qualities through a treatment in form of cycles based on teacher's observation towards problems in classroom to give the best solution for students in learning process. It was a participant CAR because the researcher was directly involved from the beginning of the research until the making of the report.

The implementation of this research consisted of two cycles. Each cycle consists of Plan, Action, Observation, and Reflection. It was based on the procedure of classroom action research implementation proposed by Kemmis and McTanggart. The researcher was conducted the research in the VII grade student of SMPN 1 Praya Barat in academic year of 2021/2022. The research was conducted from May to June 2022. The research instruments used in this study was test, observation, and field note. The test was in the form of multiple choices that consisted of 25 questions. It could be seen on the blue print. The test was delivered to the pre-test and post-test. By using observation, the researcher used observation's guide (students' and teacher Activity).

Data and source of data in this research came from researcher, students and observer. Data in this research include:

a. Test/Cognitive competence

Data of students' cognitive competence was obtained from test administered in the end of each cycle. Before the test was used as the research instrument, it was done a pilot test to them. Percentage of classical learning mastery can be calculated by using the following formula:

$$NT \frac{ST}{N} \ x \ 100$$

Description:
NT = Classical learning mastery
ST = Number of students who reach KKM
SM = Number of students in classroom

b. Observation/Activity

In this case, the researcher used the observation's guide to know the occurrences within learning process. In this research, the researcher acted as the teacher and collaborated with the teacher as the observer. The researcher gave the collaborator observation sheet that consisted of students' Activities in teaching and learning process through Jigsaw, and teacher's Activity during the teaching learning process. It was given every meeting. The collaborator conducted the observation in regular class and during the teaching and learning process, the collaborator sat behind the class, at the corner of the bar.

Data of students' Activity obtained from observation sheets were analyzed by using formula proposed by Sudjiono (2004), as follow:

$$X\% \frac{SS}{STS} \; x \; 100$$

Description:
X= Percentage of students' Activity
SS   = Score of students' Activity
STS = Maximum score of students' Activity
(Sudjiono, 2004)

Indicators of students' Activities classical mastery can be seen in Table 1 below;

Table 1.
Interval of students' Activity

Students' score	Category
81-100	Very Good
61-80	Good
41-60	Enough
1-4-	Bad
30-39	Failed

3. RESULT AND DISCUSSION
a. Result
1) Data of students' cognitive competence

From the result of the test, it is known that students' average score improves because of using Jigsaw learning model in learning material of Plants. The improvement is shown by the increasing of students' learning mastery percentage in learning process started from Pre-cycle, Cycle I and Cycle II, as seen in table 1 and graphic 1 below;

Table 2.
Comparison of Students' Cognitive Learning Outcomes

Cycle	Average score	Number of Students who reach KKM	Percentage %
Pre	60.31	12	46
Cycle I	74.92	13	50
Cycle II	81.54	24	92

From Table 2 above, students' average score in pre-cycle is 60.31, in which students who reach KKM are 12 students and the ones who do not reach KKM are 14 students. In Cycle I, students' average score improves to 79.92, in which students who reach KKM are 13 students and the ones who do not reach KKM are 13

students. In Cycle II, students' average score is 81.54, in which there are 24 students who reach KKM and 2 students who do not reach KKM. Percentage of classical mastery of learning in pre-cycle is 46%, which includes in "Not Enough "category. In Cycle I, it increases to 50%, which includes in "Not Enough" category. In Cycle II, it increases to 92%, which includes in "Very Good" category.

2) Result of Students' and Teacher's Activities

   Data of Students' and Teacher's Activities In this research, students' Activity are focused on critical thinking, communication, and cooperation Activity during learning process. Sources of the students' Activity data is Observation Sheets (teacher and students' activities). Result of students' Activity observation in pre-cycle is 52%, which includes in "enough" category. In Cycle I, it improves to 64%, which includes in "good" category. In Cycle II, it improves to 80%, which includes in "very good" category. The improvement of students' and teacher's activities and in every cycle can be seen in Table 3 below;

Table 3
Comparison of Students' Cognitive Learning Outcomes

Cycle	Percentage of Activity (%)
Pre	52
Cycle I	64
Cycle II	80

It is obvious that there is improvement of students' and teacher's softs kills from pre-cycle 52% to 64% in Cycle I (increasing 12%), and it improves to 80% in Cycle II (increasing 16%).

3) Overall Findings of Research

   Overall, the research findings can be seen in Table 4 and Graphic 3 below;

Table 4.
Overall Findings of Research

No	Aspects	Cycle		
		Pre	I	II
1	Result of students' cognitive learning outcomes	46%	50%	92%
2	Result of students' and teacher Activity (observation)	52%	64%	80%

It is obvious that there is improvement of students' cognitive learning outcomes and softs kills after applying Jigsaw learning model.

b. Discussion

   Cognitive learning outcomes are the outcomes of acquiring knowledge activities or processes through self-experiences. Cognitive is oriented on thinking skill or intellectual skill, such as a skill which requires students to combine previously learned procedures to solve a problem (Yamin, 2006 in Setyoko and Indriaty, 2018).

   The improvement if cognitive competence is caused by the increasing of students' understanding by doing various observation activities and collecting data during learning process. It was in line with Dirmanand Juarsih (2014, in Pedrice, et

al.,2018) who assert that basically, the development of students' cognitive competence is an effort to increase observation aspect, recall, think, create and students' creativities. To create good thinking and recalling, it needs to implement a learning model which can improve students' competence (Pedrice, et al., 2018).

In addition, the improvement of students' learning outcome is influenced by learning approach factor, which is strategy or method used in learning process (Slameto, 2010: 65). Implementation of Jigsaw learning model can improve students' cognitive learning outcomes. It is obvious from students' test result which improves from Pre-cycle to Cycle I to Cycle II.

The Jigsaw learning model has some advantages, which are 1) students are provided with additional knowledge acquired from reading tasks and conceptual framework making, which become the foundation of this learning model and 2) students also get experiences in using this as one of cooperative learning models in learning process.

The research finding shows that students' cognitive learning outcome improves because of the use of Jigsaw model in learning process. it is proven by students' average score in Pre-cycle is 68.78; then, it improves to 80.82 in Cycle I; next, it improves to 84.41 in Cycle II.

Activity is a skill that should be possessed by someone in life. It is useful to have good relations to groups, society, or even God. By having Activity s, someone will be recognized as a good person in society. Communication skills, emotional skills, linguistic skills, cooperation skills, spiritual skills and having good ethics and manners are some examples of Activity (Elfindri, et al., 2011:67). However, there are only three Activity studied in this research. They are critical thinking, communication, and cooperation

4. CONCLUSION

After conducting classroom action research in class VII of SMPN 1 Praya Barat, started from pre-cycle, cycle I and cycle II, result of observations and reflections can be concluded as follows: There is an improvement of students' cognitive learning outcomes after Jigsaw learning model. The percentage of students' mastery in pre-cycle is 46%; while, in Cycle I is 50%; and in Cycle II is 92%. There is an improvement of students' Activity of critical thinking, communication and cooperation after Jigsaw learning model. The percentage of students' Activity in pre-cycle is 52%; while in cycle I is 648%; and in Cycle II is 80%.

5. REFERENCES

Arends, R. (2008). *Learning to teach* (seventh ed). New york mcgraw hills companies.

Cohen, L., Manion, L., and Morrison, K. (2007). *Research Methods in Education* (6th Edition). New York: Routledge Falmer.

Essays, U. (2017, 06 19). *Definition of Reading*

Harahap, M. H. (2018). *Penerapan Media Visual Pada Pembelajaran Konstruksi* Kayu *Untuk Meningkatkan Keterampilan Membuat Kursi Siswa Kelas Xi Di Smk Negeri 2 Panyabungan. JURNAL HANDAYANI PGSD FIP UNIMED*, *9*(2), 120-124.

Harris, T., dan Hodges R. (1995). *The Literacy Dictionary*, 48. Newark DE. International Reading Association

Johnson, D, W. (1994). *Learning Together and Alone: Cooperative, Completitive, And Individualistic Learning*. A Paramount Comunication

Kemmis, S. and McTaggart, R., (eds.) (1988). *The action research planner. Victoria*: Deakin University Press.

Lufri.et al. 2010. *Strategi Pembelajaran Biologi*. Padang: UNP Press.

Morris, A., and Dore, N. Stewart. 1984. *Learning to Learn from Text: Effective Reading in the Content Areas.* North Ryde, NSW: AddisonWesley.

Nunan, D. (2005). *Practical English Languange Teaching:Young Learners*. New York: McGraw-Hill Companies

Nursamsu, N., & Kusnafizal, T. (2017). *Implementasi pembelajaran berbasis ICT (Information and communication technology) sebagai alat bantu komputer multimedia untuk meningkatkan kompetensi guru serta prestasi belajar siswa*. Jurnal Pendidikan Biologi, 6(3), 351-355.

Pujiono, S. (2012). *Berpikir kritis dalam literasi membaca dan menulis untuk memperkuat jati diri bangsa*. Prosiding PIBSI XXXIV, 778-783.

Setiani, R. E., & Razak, A. (2019). *Implementation of Jigsaw Model in Biology Learning to Improve X Grade Students' Learning Outcomes and Activity s*. International Journal of Progressive Sciences and Technologies, 14(1), 93-102.

Setyanighsih, R. (2013). *How to teach group investiation*. Universitas negeri Semarang