

IMPLEMENTATION OF JIGSAW STRATEGY IN IMPROVING STUDENTS' LEARNING OUTCOMES AT SMPN 17, JAMBI

HINDUN¹ – MARPUAH, S.^{2*}

¹ *Universitas Islam Negeri Sultan Thaha Saifuddin, Jambi, Indonesia.*

² *Universiti Tun Hussein Onn Malaysia, Johor Bahru, Malaysia.*

**Corresponding author
e-mail: marpuah[at]uthm.edu.my*

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Abstract. This study aimed to analyze the implementation of a jigsaw strategy in Junior High Schools in Jambi Province. This type of research is Classroom Action Research (CAR), which means research conducted in a class to determine the impact of actions that have been implemented on a research subject in that class. The Jigsaw strategy is a strategy where a group of people can organize circumstances in which they can learn from their own experiences and make those lessons available to others, where the teacher is the implementer of learning while the researcher is the observer. The design of this research uses the Kemmis and Mc Taggart models. This research was in the odd semester of 2023/2024, namely in February. The subjects of this study were students of State Junior High School 17 Jambi consisting of 32 people. The object of research is the ability of students to work together. Jigsaw strategy is a learning that focuses on group discussion, cooperation of each member and responsibility. Jigsaw learning has expert groups and original groups; each group consists of 5 or 6 students. This study uses Classroom Action Research. In data collection, observation, interview and documentation methods are used. The application of the Jigsaw strategy can improve the learning outcomes of class VIII G students of State Junior High School 17 Jambi City, namely 67% in cycle I, and 85% in cycle II. Based on the results of the data analysis obtained, it can be concluded that Islamic Religious Education learning using the Jigsaw strategy can improve student learning outcomes on the main material of Respect and Obedience to Parents and Teachers.

Keywords: *Jigsaw strategy, learning outcomes, junior high school, implementation, improving*

Introduction

The jigsaw strategy according to Azizah et al. (2024) as well as Hafsi (2023) is a cooperative learning paradigm that emphasizes student group activities in the form of small groups. Students learn collaboratively in these groups, which usually have four to six members, while developing healthy dependencies and independence; whereas Elliot Aronson created a cooperative learning method known as Jigsaw. This educational philosophy seeks to instill in students a sense of responsibility for their own learning and the learning of others. Along with learning the content provided, students must be prepared to teach their group about the subject. In the Jigsaw model, student activity is required (student centered), so that the original group and expert group are divided into small groups consisting of 3-5 people. So, to learn the assigned content, students must work together with each other. To help each other with their assigned learning topics, members of several teams with the same topic come together to discuss (expert teams). Students leave the expert group meeting and return to their teams or groups to share what they have learned with the other members of their teams or groups. There are expert groups and initiator groups in the jigsaw puzzle cooperative learning model. The student group called the "home group" consists of peers with various talents, ethnic

origins, and family histories. The home group consists of various specialists. The expert group is a collection of students from various ethnicities.

The jigsaw strategy can also be considered as an organized way of teamwork that focuses on cooperation and accountability. This strategy ensures that each student will take on significant responsibility in the group. The teacher and other group members value or trust the students to understand a topic and problem before returning to the group to explain it to their peers. It goes beyond sharing knowledge and information about anything. The steps for implementing the jigsaw strategy are as follows: (1) the main topic of the lesson is broken down into several parts or subtopics by the teacher. For example, the subject of a novel is broken down into plot, characters, setting, and theme. (2) The teacher offers an introduction to the topic that will be discussed at that day's meeting before the subtopic is given. A topic can be written on the board by the teacher, who can then test their knowledge of the topic. (3) The class is divided into several groups. (4) Student/member 1 receives the first section/subtopic, followed by Student/member 2 for the second section/subtopic, and so on. (5) Students are then instructed to read and work on sections or subtopics that relate to them. (6) After completion, students take part in peer conversations. Teachers can share incomplete fairy tales with each student, especially for reading activities. Students read passages to guess the content of the story. (7) A debate on the subject can follow this exercise. These discussions can take place in small groups or with the whole class (*Figure 1*).

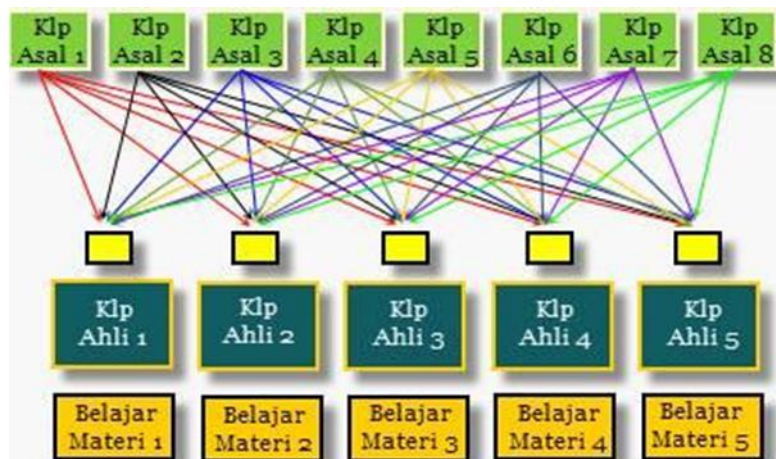


Figure 1. The Jigsaw Group formation.

The steps of the jigsaw strategy are described as follows by Stephen, Sikes, and Snapp: (1) Students are divided into groups of one to five people. (2) Different sections of content are distributed to each team member. (3) The assigned content is distributed to each team member. (4) Individuals from different teams who have studied the same section or subsection gather in new groups ("expert groups") to discuss the section or subsection. (5) Each member of the expert team returns to their original group after the conversation is complete, and they take turns teaching the other team members about the section they have mastered while the other members watch attentively. (6) The results of the conversation are presented by each expert panel. (7) The instructor offers. (8) Closing. The benefits of the jigsaw strategy are: (1) Students can focus more on the educational process. (2) Facilitates the teacher's work because the subject matter expert team has explained the curriculum to their colleagues. (3) Achieving a more uniform distribution of material mastery can be done in a shorter time. (4) By using this teaching

strategy, students can learn to speak and argue more actively. In its application, several problems are often encountered, namely: (1) Energetic students tend to dominate the conversation and direct it for their own interests. Teachers must carefully monitor the flow of conversation to anticipate this problem. Instructors must emphasize that group members must listen to the expert's explanation first. In such cases, if you still do not understand, just ask. (2) When given the responsibility to provide expert comments, students with poor reading and cognitive abilities will find it difficult to do so. To convey the topic accurately, teachers must first select the right experts and then assess their performance when delivering the material. Intelligent students tend to get bored. (3) To anticipate this, instructors must be skilled in developing a stimulating learning environment where intelligent students are motivated to follow the development of the discussion. (4) This will be a challenge for students who are not used to competing to follow the learning process.

We need to find solutions to a number of problems that Anggraini et al. (2025), Fajarianto et al. (2024) as well as Ismail and Nugraha (2024) said could prevent the implementation of this model in the field: (1) The basic principle of this learning pattern is "peer teaching", but learning from friends may be difficult because of the differences in how they see the ideas to be discussed with other students. (2) If students are less confident, it is difficult to persuade them to be able to talk about teaching topics to friends. (3) Education must already have student records related to grades, personality, and attention, and it usually takes time to identify different types of students in a group. (4) Before this learning model works successfully, it usually takes enough time and thorough preparation. The initial use of this strategy is usually difficult to control. (5) The use of this technique with large courses (more than 4 students) is very difficult but can be overcome with group learning methods. (6) In its implementation, the Jigsaw Strategy has advantages and disadvantages (Faiqoh and Asih, 2025). They are better at managing their time, setting realistic goals, and employing strategies that enhance understanding and retention of information. Additionally, these students are more adaptable and able to modify their learning strategies based on feedback and changing circumstances, which is particularly important in dynamic and diverse educational settings (Nan Cenka et al., 2024). This illustrates that the positive characteristics of effective students are having time management, being realistic in setting goals, using strategies in learning, adaptability and being able to respond to feedback. The advantages of the Jigsaw strategy are that it can provide opportunities for students to work together with other students, students can master the lessons given, and each student member has the right to be an expert in their group. In the teaching and learning process, students are positively interdependent; each student can complement each other. The disadvantages are that it takes a long time, smart students tend not to want to be put together with their less smart friends, and those who are less smart will feel inferior when combined with their smart friends, although over time those feelings will disappear by themselves. In implementing this Jigsaw Strategy, the teacher acts as a facilitator and motivator for each group member so that they can easily understand the material given.

According to the results of the preliminary study (grand tour) conducted by researchers in Jambi province, there are hundreds of Junior High Schools, both public and private, that are worth studying in the application of the jigsaw strategy to improve student learning outcomes, this study only focused on Junior High School 17 Jambi City in Islamic Religious Education learning, researchers found several problems including

that there are still many class VIII G students who pay less attention to the teacher when explaining the learning material, students are busy talking to their own friends, students who sleep when the teacher is explaining and there are students who always make excuses to leave the class. Researchers also found that the learning outcomes of class VIII G students were still relatively low, only 13 out of 32 students achieved the KKM score with a minimum student completion score of 70. The following is the student learning outcome data (*Table 1*).

Table 1. Initial data on student learning outcomes.

No.	Students list	Mark	Information
1.	3 students	20	Not Completed
2.	1 student	25	Not Completed
3.	4 students	30	Not Completed
4.	1 student	35	Not Completed
5.	3 student	40	Not Completed
6.	2 students	50	Not Completed
7.	1 student	55	Not Completed
8.	5 students	60	Not Completed
9.	4 students	70	Completed
10.	1 student	75	Completed
11.	3 student	80	Completed
12.	1 student	85	Completed
13.	3 students	90	Completed
	Amount	1765	32
	The highest score	-	90
	Lowest Value	-	20
	Average value	-	55.15%
	Student Completion Percentage	37.5%	12
	Percentage of Students Who Have Not Completed	62.5%	20

The data clearly shows that students' learning abilities are still relatively low and need to improve learning outcomes. This can be caused by how the teacher teaches, what methods are used. The PAI subject teacher for class VIII G always uses the lecture method so that students feel bored and less enthusiastic during learning. Therefore, creativity and activeness of teachers are needed in teaching and learning activities so that students' interest and learning outcomes can increase. One of the student-oriented learning strategies is the Jigsaw learning strategy, a group or team system consisting of 4-6 people per group with different academic values. The Jigsaw learning strategy is designed to increase students' sense of responsibility for their own learning and also the learning of others. Students not only learn the material given, but they must also be ready to provide and explain the material to other group members (Asrori and Rusman, 2020; Daulay et al., 2016; Paizaluddin and Ermalinda, 2016). Referring to the background of the problem above, the main question in this study is "Can the Application of the Jigsaw Strategy in Islamic Religious Education learning for class VIII Improve Student Learning Outcomes at State Junior High School 17, Jambi City?" The purpose of the research is to analyze students' weaknesses or deficiencies in receiving material using the Jigsaw strategy and to integrate students' values, character, morals, and learning outcomes using the Jigsaw strategy.

The benefits of the research, theoretically (1) the results of this study can be used as a guideline for teachers at State Junior High School 17, Jambi City. (2) Adding to the

treasury of information and literature on the application of the Jigsaw strategy in learning, so that learning outcomes increase. (3) The results of this study provide a contribution to teachers in implementing learning in the classroom, especially at State Junior High School 17, Jambi City. The focus of this research, this research only discusses the application of jigsaw strategy in improving the learning outcomes of the rest in Junior High School 17 Jambi City. With the reason application of the jigsaw strategy can help students develop creativity, talent and problem-solving on their own will, and the relationship between teachers and students is balanced and perhaps can create a very familiar and harmonious learning atmosphere and encourage teachers to be more active and creative and then be able to combine different learning approaches, namely class, group and individual approaches.

Materials and Methods

This study uses classroom action research. According to Kardiawarman in the book by Paizaluddin and Ermalinda (2016) Classroom Action Research comes from the English Classroom Action Research, which means research conducted in a class to determine the impact of actions that have been applied to a research subject in the class. In a broader sense, classroom action research is defined as research that aims to apply actions to improve quality or solve problems in student groups and monitor success, followed by further actions, namely improvements or adjustments to actions with conditional situations to obtain better results. Thus, classroom action research is activity research that examines learning activities, considering activities that are deliberately presented in the classroom to solve problems or improve learning outcomes in the class (Paizaluddin and Ermalinda, 2016). According to Suharsimi Arikunto, four stages are commonly passed through in carrying out classroom action research: (1) planning, (2) implementation, (3) observation, and (4) reflection.

Results and Discussion

This study is classroom action research to improve student learning outcomes by using the Jigsaw learning model in class VIII G. The learning research carried out in this study has been following the stages of the Jigsaw learning strategy. The stages of learning the Jigsaw learning strategy can improve student learning outcomes. Learning activities using the Jigsaw model have effectively implemented the Islamic Religious Education learning process in class VIII G of State Junior High School 17 Jambi City. This can be seen from the increase in student learning outcomes, namely by using the Jigsaw learning strategy because, in the learning process, students are seen to be active in learning and train students' critical thinking skills so that students can find problems given by the teacher. In its implementation, this research was carried out in two cycles, from Monday, January 16, 2023, to Monday, February 13, 2023. From the data analysis of the two cycles that had been implemented, it was seen that there was an increase in learning outcomes after using the learning model Jigsaw; this is also supported by student activities, which also increase in each cycle. Tests are given to students in each cycle. In cycle I, learning outcomes have not improved due to several factors. Among them are that there are still many students who do not follow the learning scenario well, such as some still chatting when the researcher explains the learning, in addition the researcher also does not provide enough motivation to students during the learning

process so that there are still many students who are lacking in working together between their respective groups.

With the evaluation in cycle I, the implementation in cycle II began to be maximized. Thus, the action was continued in cycle II. The evaluation that was always carried out at the end of each cycle made the learning outcomes of students in cycle II increase, namely from cycle I 66.56%, cycle II 85.31%. This means that student learning outcomes have achieved the expected action intervention. The enthusiasm and focus of students in the learning process also positively impact student learning outcomes. Increasing student activity using learning models, such as Jigsawseen, in each cycle. The ability of students' learning outcomes completed in the pre-cycle only reached 37.5%, meaning that more than 50% of the total students did not complete it. In cycle I, there was an increase in student learning outcomes; 43.75% of students completed the total number. Because there were still more than 50% of students who did not complete it, the researcher continued the classroom action research in cycle II, and there was a high increase in student learning outcomes, namely increasing to 90.62% of students who completed the total number. This shows increased student learning outcomes using the Jigsaw learning model in Islamic Religious Education learning for class VIII G of State Junior High School 17, Jambi City. The results of observations of student learning activities in cycle I can be seen from the results of observations obtained a percentage of 69.33%. When researchers conducted research cycle II, the average student learning activity increased to 88%. This shows increased activeness in the learning process using the Jigsaw learning model in Islamic Religious Education learning for class VIII G of State Junior High School 17, Jambi City.

From the results of the data analysis conducted, information was obtained that the implementation of cycle I on students' learning outcomes and student learning activity increased but was not optimal. After the implementation of cycle II, there was a significant increase in student learning outcomes and activity. Based on the two diagrams above, the percentage of student learning completion results in the pre-cycle was 37.50%; there was an increase in cycle I but not optimal, namely 47.75%, and in cycle II, it increased significantly with a percentage of 90.62%. Then the test results in cycle I were 43.75% of students who completed and 56.25% of students who did not complete. The percentage in cycle I still have not reached the expected action intervention. In cycle II, the percentage of student learning was 90.62% of students who completed and 9.37% of students who did not. Learning outcomes in cycle II increased. This shows that the expected action intervention has been achieved (*Figure 2* and *Figure 3*).

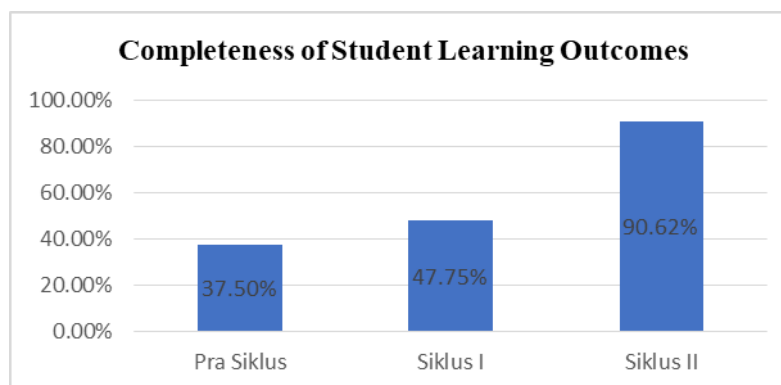


Figure 2. Student learning completion results pre-cycle, cycle I and cycle II.

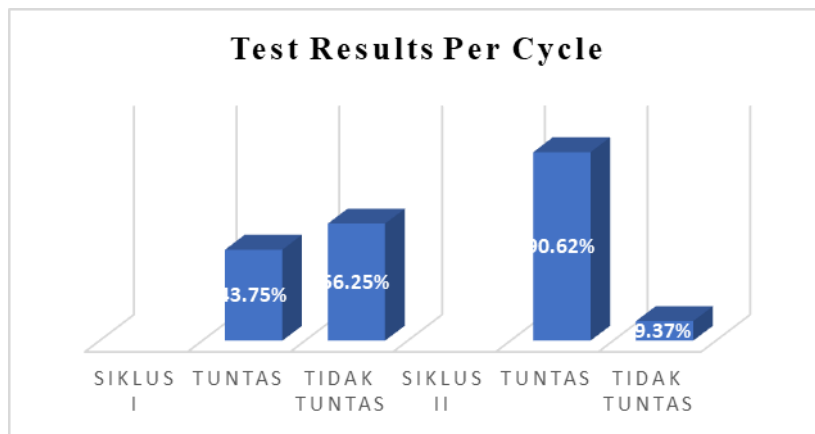


Figure 3. Test results diagram per cycle.

Conclusion

Implementing the Jigsaw learning strategy to improve the learning outcomes of class VIII G students of State Junior High School 17 Jambi City can run well as expected at the implementation stage. This can be seen from the implementation of Cycle I to Cycle II. The implementation of this jigsaw learning strategy can be proven to help improve student learning outcomes and activities. Implementing the Jigsaw learning strategy goes through 3 stages, starting from the pre-cycle, cycle I, and II. Each cycle is carried out for two meetings. From the data obtained during the study, it is known that there was an increase in students' learning abilities after implementing the Jigsaw learning strategy. Data obtained from the learning outcomes during the learning process can be seen from the increase in learning outcomes in each cycle. Student learning outcomes in cycle I reached an average of 66.56%; there were only 14 students who completed it with a percentage of 43.75%, and 18 students did not with a percentage of 56.25%. Then there was an increase in cycle II, where the average value of student learning outcomes reached 85.31%; there was an increase in the number of students who completed it, namely 29 students with a percentage of 90.62% and students who did not complete it were only 3 students with a percentage of 9.37%. Thus, after being seen from the second cycle, it can be proven that the use of the Jigsaw learning model in Islamic Religious Education subjects with the material Respect and Obedience to Parents and Teachers of Class VIII G of State Junior High School 17, Jambi City can improve student learning outcomes and spur student enthusiasm in the learning process.

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Conflict of interest

The authors confirm that there is no conflict of interest involve with any parties in this research study.

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