Proceedings of International Conference on Islamic Education (ICIED)
Impactful Education: Integrating Technology, and Ecotheological Values For a Sustainable Future
Volume 11, 2026 (p-ISSN 2477-3638 / e-ISSN 2613-9804)

The implementation of the jigsaw method in improving students' cognitive abilities in Islamic cultural history subjects

Laili Halimatus Sa'adah[1], Salsabila Raudhatuz Zahro[2], Ummi Farichatul Masykuroh[3], Nanda Nurus Sholihin[4], Marno[5]

Correspondence:
lailihs79@email.com

Afiliation:
Department of Islamic Religious Education, Faculty of Tarbiyah and Teaher Training, Universitas Islam Negeri Maulana Malik Ibrahim Malang, Indonesia[1]
lailihs79@email.com

Department of Islamic Religious Education, Faculty of Tarbiyah and Teaher Training, Universitas Islam Negeri Maulana Malik Ibrahim Malang, Indonesia[2]
salsabilazahro59@email.com

Departement of Arabic Language Education, Faculty of Tarbiyah and Teaher Training, Universitas Islam Negeri Maulana Malik Ibrahim Malang, Indonesia[3]
mifarichatul@email.com

Department of Social Sciences Education, Faculty of Tarbiyah and Teaher Training, Universitas Islam Negeri Maulana Malik Ibrahim Malang, Indonesia[3]

Department of Islamic Religious Education, Faculty of Tarbiyah and Teaher Training, Universitas Islam Negeri Maulana Malik Ibrahim Malang, Indonesia[2]

Abstract
This study aims to describe the level of quality of the application of the Jigsaw-type Cooperative Learning Method based on students' perceptions and to determine the level of achievement of students' cognitive abilities after participating in learning using the Jigsaw model in the material on the Role of Muslims during the Indonesian Independence Period in grade XI E at the State Aliyah Madrasah in Malang. This type of research is a descriptive quantitative research with an ex post facto approach. The research subjects were 30 students. The data collection technique was carried out through a questionnaire to measure students' perception of the application of the Jigsaw model and a post-test test to measure cognitive ability. The data analysis technique used descriptive statistics followed by quartile-based interval categorization to determine the quality of the results. The results showed that students' perception of the application of the Jigsaw-type Cooperative Learning Method was in the Good category with an average score of 51 (maximum score of 60). The achievement of students' cognitive abilities after learning showed the Good category close to Very Good, with an average score of 97 (maximum score of 100). Based on these results, it can be concluded that the implementation of the Jigsaw-type Cooperative Learning Method has gone well and has a positive impact on students' cognitive achievements in learning Islamic Cultural History.

Keywords: Cooperative Learning, Jigsaw, Student Perception, Cognitive Ability, SKI.

A. INTRODUCTION

All education has a strategic role in shaping students who not only excel academically, but also have the ability to think critically, reflectively, and historically. In the context of Islamic education, the subject of Islamic Cultural History (SKI) functions as a means to instill the values of struggle, Islamic identity, and religious nationalism through understanding the historical journey of Muslims. SKI does not merely present a series of past events, but requires learners to understand the meaning, context, and historical relevance to present life (Achmadin et al., 2022). However, in learning practice in madrasas, SKI is still often delivered through a

conventional teacher-centered approach. This kind of learning pattern tends to place students as passive recipients of information, so learning emphasizes memorization of facts rather than deep understanding. As a result, the development of high-level cognitive abilities, such as analysis and evaluation, has not been optimally developed (Huda et al., 2024). This condition requires an innovation in learning methods that are able to activate students and improve the quality of cognitive processes in SKI learning.

Cognitive ability is a fundamental aspect of the learning process which includes the ability to remember, understand, apply, analyze, and evaluate knowledge as described in the revised Bloom Taxonomy by Anderson and Krathwohl (Aisyah et al., 2025). In learning the History of Islamic Culture, cognitive abilities are very important because the material is not only informative, but also requires an understanding of the historical context, causal reasoning, and the ability to relate historical events to social reality and life values. SKI learning that does not actively involve students has the potential to inhibit the development of high-level thinking skills and reduce the meaning of history learning itself. In fact, 21st century education requires students to have the ability to think critically, collaboratively, and problem solve (Ayu, 2019). Therefore, SKI learning needs to be designed with strategies that encourage students' intellectual activity, allow them to discuss, analyze historical events, and build understanding independently. Improving students' cognitive abilities through the right learning methods is an urgent need in developing the quality of SKI learning in madrasas.

One of the learning approaches that is considered effective in improving students' cognitive abilities is the Jigsaw-type cooperative learning model. This method places students as active subjects of learning through heterogeneous group work, where each member is responsible for learning and teaching a specific part of the material to his or her groupmates. Theoretically, the Jigsaw model is in line with the theory of social constructivism which emphasizes that knowledge is built through interaction and cooperation between individuals (E. G. Ningsih, 2021). In the context of SKI learning, the Jigsaw method allows students to understand historical material more deeply through the process of reading, discussing, explaining, and reflecting on the information obtained. The activity encourages students to not only remember historical facts, but also understand the meaning and relevance of events. In addition, the Jigsaw method can improve students' sense of responsibility, confidence, and communication skills. With these characteristics, the Jigsaw model is seen as a relevant pedagogical solution to improve students' cognitive abilities in learning Islamic Cultural History, especially in complex and historically high value materials.

Various journal studies have examined the effectiveness of the Jigsaw method in improving students' learning outcomes and cognitive abilities. Experimental research by Harefa et al. (2022) shows that Jigsaw-type cooperative learning significantly improves students' understanding of concepts and academic achievement. A study by Idris (2025) in the context of Islamic education found that Jigsaw was able to increase students' active involvement and conceptual understanding of PAI and SKI subjects. Research by Ningsih et al. (2022) proves that the application of Jigsaw to SKI learning in madrasas has a significant positive influence on student learning outcomes. Asda (2022) through classroom action research reported an increase in SKI learning activities and achievement after the implementation of Jigsaw. In addition, Aprizal et al. (2025) concluded that Jigsaw is effective in deepening historical understanding and increasing students' learning responsibility. Although the results of these studies consistently show the effectiveness of Jigsaw, most of the research still focuses on general learning outcomes and student activity, not specifically examining the improvement of cognitive abilities in specific SKI materials.

Although previous studies have shown the effectiveness of the Jigsaw method, there are some limitations that still need to be further studied. First, most studies use a classroom or qualitative action research approach, so the data produced does not fully provide a measurable quantitative picture of students' cognitive ability achievements. Second, the focus of research is generally on SKI subjects without examining certain materials that have high historical and cognitive complexity. Third, there is still limited research that integrates the quality analysis of

the application of the Jigsaw method with the achievement of students' cognitive abilities in a systematic manner. In addition, studies that place students as active subjects in assessing the learning process through their perceptions are still relatively limited. This gap shows the need for more focused research on the influence of the Jigsaw method on students' cognitive abilities in SKI learning, especially on the material on the Role of Muslims during the Indonesian Independence Period in Madrasah Aliyah Negeri, so that a more comprehensive empirical picture is obtained.

This research is expected to make a scientific contribution to the development of cooperative learning studies, especially the Jigsaw method in Islamic education. The novelty of the research lies in the focus of the study that specifically analyzes the influence of the Jigsaw method on improving students' cognitive abilities on the material The Role of Muslims in the Indonesian Independence Period. In addition, this study integrates the analysis of the quality of the application of learning methods with the achievement of students' cognitive abilities, so that it not only assesses the final learning outcomes, but also the quality of the learning process. This approach provides a more holistic perspective in understanding the effectiveness of the Jigsaw method. Practically, the results of this research are expected to be a reference for SKI teachers at Madrasah Aliyah Negeri in designing more active, collaborative, and meaningful learning. Theoretically, this study enriches the literature on cooperative learning and cognitive ability development in the context of Islamic history learning.

Based on the background of the problem, previous research studies, and identified research gaps, this study aims to analyze the influence of the Jigsaw-type cooperative learning method on improving students' cognitive abilities in the subject of Islamic Cultural History. In particular, this study aims to describe the quality of the application of the Jigsaw method in SKI learning and identify the level of achievement of students' cognitive abilities after participating in learning with this method in the material The Role of Muslims during the Indonesian Independence Period. The achievement of this research goal is expected to be able to make a scientific contribution to the development of effective and innovative SKI learning strategies, as well as provide practical benefits for teachers in improving the quality of learning processes and outcomes. Thus, this research is relevant to efforts to improve the quality of Islamic education that is adaptive to the demands of 21st century education.

B. RESEARCH METHODS

This study uses a quantitative approach with an ex post facto design. The selection of this design was based on the consideration that the independent variable, i.e. the application of the Jigsaw-type cooperative learning method, had taken place in learning practice and was not directly manipulated by the researcher. The ex post facto approach is commonly used to examine the relationships between variables after treatment occurs in the natural context of learning (Sugiyono, 2019). The research was carried out in one of the State Aliyah Madrasas in Malang, on the subject of Islamic Cultural History material The Role of Muslims during the Indonesian Independence Period. The research population was grade XI students, while the sample of 30 students was determined through purposive sampling techniques with consideration of involvement in full Jigsaw-based learning. This technique is relevant because it provides an opportunity to select subjects who have actually experienced learning with the method studied. This methodological approach allows researchers to obtain an objective picture of the influence of the Jigsaw method on students' cognitive abilities through the observation of learning outcome variables that have occurred.

This study involved two main variables: the free variable in the form of the application of the Jigsaw method and the bound variable in the form of students' cognitive abilities in the material of Islamic Cultural History. The research instrument consisted of a questionnaire of students' perception of the quality of the application of learning methods and the final cognitive ability test. The questionnaire instrument contains seven statement indicators that reflect the quality of group-based learning, discussion activity, individual responsibility, involvement in expert groups, and material understanding. The questionnaire uses a four-level Likert scale,

ranging from strongly disagree to strongly agree. Meanwhile, the cognitive ability test is in the form of a description and is arranged based on the cognitive dimensions of the revised Bloom Taxonomy, including understanding, applying, and analyzing. This test was chosen so that students were able to demonstrate high-level thinking skills in history learning. The validity of the instrument's content was consulted with two SKI learning experts, while the reliability was calculated through the Alpha Cronbach coefficient as recommended by Purwanto (2019).

The research data was collected through the dissemination of perception questionnaires and the implementation of cognitive tests after learning with the Jigsaw method was completed at the end of the meeting. Questionnaire data was analyzed using descriptive statistics to obtain the average score and categorization of the quality of the application of the method. The categorization technique uses the division of quartiles so that scores can be presented in the category of excellent, good, adequate, and poor. This technique provides objectivity in assessing the quality of the application of learning methods quantitatively. Cognitive ability data is analyzed through the calculation of students' final scores and interpreted through score range-based assessment guidelines. To find out the relationship between the application of the Jigsaw method and students' cognitive abilities, Pearson product moment correlation test and simple regression analysis were used. This analysis technique is commonly used to identify the influence of intervariables in educational research (Noor, 2017; Slavin, 2015). The results of the analysis are presented in the form of percentage tables, score categories, and statistical significance.

The research procedure is carried out through three main stages, namely preparation, implementation, and evaluation. The preparation stage includes preparing instruments, determining samples, coordinating with SKI teachers, and explaining research objectives and procedures to research participants. The implementation stage was carried out during SKI learning on the material The Role of Muslims during the Indonesian Independence Period which used a Jigsaw-type cooperative learning model. The learning syntax follows Aronson and Slavin's procedure which includes the formation of origin groups, topic divisions, expert group discussions, discussion sharing of discussions, and individual tests. The evaluation stage was carried out by distributing perception questionnaires and cognitive tests to measure learning outcomes. Methodological validity is maintained through triangulation of instrument sources, statistical reliability tests, and learning implementation with consistent syntax. Previous research has shown that the Jigsaw method is effective in improving students' cognitive outcomes and social interaction in history learning (Huda, 2020; Asda, 2022; Ningsih et al., 2022).

C. RESULTS & DISCUSSION

The results of this study provide an empirical overview of the influence of the Jigsaw Method on the cognitive ability of grade XI students in the subject of Islamic Cultural History in one of the State Aliyah Madrasah in Malang. The application of the Jigsaw method is carried out following the main syntax of cooperative learning, namely the formation of the origin group, the distribution of material, the discussion of the expert group, the redelivery of the material to the original group, and the individual evaluation test. After the learning treatment, students were given a perception questionnaire to determine the quality of the implementation of the method and cognitive tests to measure the level of cognitive achievement in the material on the Role of Muslims during the Indonesian Independence Period. The research data shows that both student perception and cognitive achievement are in the high to very high category. These findings indicate that the Jigsaw method is not only received positively, but also contributes significantly to improving students' thinking abilities. This analysis is reinforced through descriptive statistics and quartile-based categorization to provide a comprehensive interpretation of the distribution of student scores.

The research instrument consisting of 15 statement items on the perception questionnaire was tested for validity and reliability before being used in data collection. Based on the results of the Alpha Cronbach test, a reliability coefficient value of **0.920** was obtained, as

shown in the following table of instrument test results:

Table 1. Results of the Reliability Test of Student Perception Instruments

Alpha Cronbach	Number of Items	Remarks
0,920	15	Reliable

The reliability value is far above the minimum limit of 0.60, so the instrument is declared to be consistent internally in measuring students' perception of the application of the Jigsaw method. This condition ensures that the instrument is able to produce stable and accountable data. With reliable instruments, researchers can objectively assess students' perceptions of the quality of learning and conclude validly. Reliable instruments are an important prerequisite for measuring the impact of the implementation of learning methods and their relationship to cognitive learning outcomes. Based on the results of descriptive statistical analysis, students' perception of the application of the Jigsaw method is in the high category. Statistical data is presented as follows:

Table 2. Descriptive Statistics of Student Perception Variables (X)

Statistik	Value
N	30
Minimum	41
Maksimum	60
Mean	51
Standard Deviation	5,96

The average perception score of 51 is close to the maximum ideal score (60), indicating that students assess the implementation of the Jigsaw method effective and help understand the SKI material. Most respondents scored in the high and very high ranges. A minimum score of 41 indicates that no student gives a low grade, so it can be concluded that learning is conducive and students are actively involved. The standard of relative deviation indicates a homogeneous distribution of data, indicating that students' perceptions tend to be similar. These findings reinforce the view that the Jigsaw method facilitates interaction between students and increases a sense of responsibility in the learning of history.

To provide a meaningful interpretation of student perception data, a quartile interval-based categorization was carried out. The quartile technique provides an objective interval limit based on the distribution of scores, not just comparisons to ideal scores. Based on the interval categorization, the average score of 51 was in the Very High category, showing that the implementation of the Jigsaw method was considered optimal by students. This is in line with the syntax of cooperative learning according to Slavin (2015) which emphasizes positive interdependence, individual responsibility, and active contribution to group learning. The high perception of students indicates that the stages of the Jigsaw strategy are carried out according to pedagogical procedures, including expert group discussions and presentation of results to the home group. Thus, it can be concluded that learning takes place effectively, creating a collaborative, interactive classroom atmosphere, and providing space for students to build a common understanding of Islamic history material in a constructive manner.

After participating in learning using the Jigsaw method, students are given a cognitive test to find out the level of mastery of the material. The results of descriptive statistical analysis showed high cognitive ability. A summary of the data is shown in the following table:

Table 3. Descriptive Statistics of Cognitive Ability (Y)

Statistik	Value
N	30
Minimum	80
Maksimum	100
Mean	97
Standard Deviation	5,47

An average score of 97 indicates cognitive achievement in the very high category. The absence of a low score indicates that all students are able to understand the material thoroughly after group discussions and presentations. A small standard deviation indicates a not significant variation in scores, so most students achieve relatively similar improvement in ability. These findings suggest that the Jigsaw method is effective in improving understanding of SKI material, especially because it provides opportunities for students to solve material topics through discussion, help group mates, and reconvey material orally.

To assess the quality of cognitive achievements, interval categorization was carried out based on the standards of the Ministry of National Education as stated in the research file. The range of categories is used as follows:

Table 4. Post-Test Cognitive Ability Score Category (Y)

Score Range	Category
86–100	Very High
71–85	Height
56–70	Medium
41–55	Low
≤ 40	Very Low

Based on categorization, the average score of 97 is in the Very High category, even the minimum score of 80 is in the high category. There are no students who are in the medium category, let alone low. These results indicate that Jigsaw-based learning has a significant positive impact on students' thinking skills, especially the aspects of analyzing, understanding the connections between historical events, and being able to explain the material back to other students. This categorization reinforces the interpretation that the Jigsaw model encourages in-depth information processing and thus has an impact on the final test results.

The findings show a close relationship between students' positive perceptions of the application of the Jigsaw method and the improvement of their cognitive abilities. When students feel comfortable learning, have a space for discussion, and gain support between group members, the process of internalizing the material is more optimal. Learning models with characteristics of positive interdependence, individual responsibility, and discussion in expert groups contribute to building a stronger conceptual understanding. Intensive discussions awaken the ability to analyze, solve problems, and deliver arguments logically. Positive perception also encourages intrinsic motivation and increases students' confidence when delivering material to the group of origin. With the findings of an average perception of 51 and a cognitive achievement of 97, it can be concluded that the quality of good application of the Jigsaw method correlates with high cognitive achievement, according to the principle of cooperative learning according to Slavin (2015) that social interaction improves thinking skills.

Theoretically, the application of the Jigsaw method supports the development of cognitive abilities through collaborative mechanisms that emphasize active learning and the construction of shared knowledge. In the context of SKI, complex and extensive history material requires a learning approach that is able to activate analytical thinking skills. Through the division of topics to expert groups, students have the opportunity to study parts of the material in depth. The process of explaining back to the group of origin spurs the process of mental elaboration, retention, and knowledge transfer. The theoretical perspective of constructivism and cognitive

social explains that social interaction in learning helps students build meaning through scaffolding and being in the zone of proximal development. The findings of this study are in line with this view. The achievement of high cognitive scores shows the success of Jigsaw-based learning in improving the ability to analyze, understand concepts, and apply Islamic historical knowledge in the context of today's life.

The findings of this study are consistent with the results of previous research that showed the effectiveness of the Jigsaw method in improving students' learning outcomes and thinking skills. Huda's (2020) study found that the Jigsaw-type cooperative method improves understanding of historical concepts through the interaction of expert groups. Research by Ningsih et al. (2022) reported that Jigsaw-based learning has a significant effect on PAI learning outcomes through increased learning motivation. In addition, Aprizal (2025) shows that the Jigsaw method is effective in encouraging students' critical thinking skills in learning history. The alignment of the findings of this study with previous research strengthens the argument that the Jigsaw method is able to encourage active student involvement and facilitate increased cognitive achievement, especially in SKI learning which requires an in-depth understanding of historical context. Thus, the results of this study make an empirical contribution to the literature on cooperative learning in Islamic education.

Temuan penelitian ini memiliki beberapa implikasi praktis bagi guru SKI. Pertama, metode Jigsaw can be used as an effective learning alternative to improve high-level thinking skills and understanding of historical materials. Second, teachers need to design clear division of material so that each group member has the responsibility to learn a particular passage. Third, the implementation of expert group discussions needs to be ensured to run effectively through teacher facilitation and supervision so that the information exchange process runs optimally. Fourth, the results showed that students felt the benefits of collaboration-based learning, so that teachers could vary classroom activities with active discussions and presentations in small groups. By applying the Jigsaw method, SKI learning becomes more lively, meaningful, and relevant to 21st century competencies that emphasize collaborative learning, communication, empathy, and problem-solving.

Based on the results of the analysis and discussion that has been presented, it can be concluded that the Jigsaw method has a positive influence on improving students' cognitive abilities in the subject of Islamic Cultural History. Students' perception of the application of the method is in the very high category, shown by an average score of 51. Similarly, the achievement of students' cognitive abilities shows a very high category with an average score of 97. No students received low grades. This shows that Jigsaw-type cooperative learning is effective in facilitating students to understand and analyze historical material. These findings also indicate that the application of methods that emphasize cooperation, individual responsibility, and expert group discussions helps students achieve optimal learning outcomes. The application of the Jigsaw method can be recommended as an active learning strategy in improving students' cognitive abilities, especially in SKI learning.

D. CONCLUSION

Based on the results of a study on the influence of the Jigsaw method in improving students' cognitive abilities in the subject of Islamic Cultural History in one of the State Aliyah Madrasas in Malang, it can be concluded that the application of the Jigsaw-type cooperative learning method has a positive impact on student learning outcomes. Students' perception of the implementation of this method is in the very high category, as shown by the average perception score of 51 out of a maximum score of 60. This shows that students experience real benefits in group-based learning, expert discussions, and individual responsibility. In addition, the achievement of students' cognitive abilities in the final evaluation test was in the very high category with an average score of 97, without any students obtaining low scores. Thus, the Jigsaw method has proven to be effective in improving students' ability to think, understand, and analyze Islamic history material. This method is recommended as an alternative to active learning strategies in strengthening cognitive learning outcomes in SKI subjects.

E. ACKNOWLEDGMENTS

Praise be to the presence of Allah SWT for the abundance of His grace and gifts so that the research entitled *The Influence of the Jigsaw Method in Improving Students' Cognitive Abilities in the Subject of Islamic Cultural History* can be completed properly. The researcher expressed his gratitude to the Head of the State Aliyah Madrasah in Malang for granting research permits, as well as to SKI subject teachers who have helped coordinate the implementation of learning using the Jigsaw method. Gratitude was also conveyed to all grade XI students who had actively participated as research respondents. Awards are given to fellow educators and academics for valuable scientific input during the process of refining instruments and data analysis. Hopefully this research will make a real contribution to the development of cooperative learning strategies and improve student learning outcomes, as well as become a reference for further research..

REFERENCE

Achya, F. F., Taiyeb, M., & Halifah, P. (2022). Retensi Kognitif Biologi Siswa Sekolah Menengah Atas pada Pembelajaran Kooperatif Jigsaw. *Jurnal Biology Teaching and Learning*, *5*(2), 163–174.

Achmadin, B. Z., Pendidikan, J., Islam, A., Islam, U., Maulana, N., & Ibrahim, M. (2022). Urgensi Historical Thinking Skills Bagi Peserta Didik Dalam Pembelajaran Sejarah Kebudayaan Islam. *Muta ' Allim : Jurnal Pendidikan Agama Islam*, *1*(2), 96–114.

Aisyah, N., Rusli, D. M., Akbar, M., Islam, U., & Makassar, N. (2025). Kondisi Belajar dan Pembelajaran yang Efektif : Analisis Teori Gagne dan Taksonomi Bloom dalam Perspektif Pendidikan Islam. *JPIM: Jurnal Penelitian Ilmiah Multidisipliner*, *02*(03), 2335–2346.

Ananda, T. A. (2024). Implementasi Model Pembelajaran Jigsaw Pada Mata Pelajaran Akidah Akhlak Di Mas Tarbiyah Islamiyah Hamparan Perak. *INNOVATIVE: Journal Of Social Science Research*, *4*, 12295–12306.

Anderson, L. W., & Krathwohl, D. R. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives: complete edition*. Addison Wesley Longman, Inc.

Aronson, E., Blaney, N., Stephin, C., Sikes, J., & Snapp, M. (1978). *The Jigsaw Classroom. Beberly Hills*. California: Sage Publications.

Aronson, E., & Patnoe, S. (2011). Cooperation in the classroom: The jigsaw method. *(No Title)*.

Aprizal, R., Anton, Rahmat, A., & Rohman, A. J. (2025). Implementasi Pembelajaran Kooperatif Jigsaw Dalam Meningkatkan Hasil Belajar Siswa Pada Mata Pelajaran SKI. *Al-Ilmiya: Jurnal Pendidikan Islam*, *01*(02), 244–250.

Asda, Y. (2022). Efektivitas Pembelajaran Model Kooperatif Tipe Jigsaw Untuk Meningkatkan Hasil Belajar Sejarah Kebudayaan Islam Pada Siswa Man Model Banda Aceh. *PENDALAS: Jurnal Penelitian Tindakan Kelas Dan Pengabdian Masyarakat*, *2*(3), 160–174. https://doi.org/10.47006/pendalas.v2i3.129

Ayu, P. E. S. (2019). Keterampilan belajar dan berinovasi abad 21 pada era revolusi industri 4.0. *Purwadita: Jurnal Agama Dan Budaya*, *03*, 77–83.

Bandura, A. (1986). Social foundations of thought and action. *Englewood Cliffs, NJ*, *1986*(23–28), 2.

Darman, R. A. (2017). Mempersiapkan Generasi Emas Indonesia Tahun 2045 Melalui Pendidikan Berkualitas. *Edik Informatika*, *3*(2), 73–87. https://doi.org/10.22202/ei.2017.v3i2.1320

Dayu Feri Apriliansah, R. R. (2025). Analisis Pembelajaran SKI Menggunakan Jigsaw di Kelas VII MTsN 6 Nganjuk. *Jurnal Manajemen Dan Pendidikan Agama Islam*, *3*(2), 109–118.

Holliday, D. C. (2002). *Jigsaw IV: Using Student/Teacher Concerns To Improve Jigsaw III.*

Harefa, D., Sarumaha, M., Fau, A., Telambanua, T., & Hulu, F. (2022). Penggunaan Model Pembelajaran Kooperatif Tipe Jigsaw Terhadap Kemampuan Pemahaman Konsep Belajar Siswa. *AKSARA: Jurnal Ilmu Pendidikan Nonformal*, *08*(January), 325–332. http://ejurnal.pps.ung.ac.id/index.php/Aksara

Huda, S., Hasanah, T., Lestari, H., & Rusydi, L. N. (2024). Analisis Model Pembelajaran Konvesional dan Model Pembelajaran Islam. *JURNAL KAJIAN ISLAM MODERN*, *11*(September), 1–8. https://jurnal-inais.id/index.php/JKIM

Idris, M. I. (2025). Enhancing Students ' Understanding of Islamic History through Jigsaw Cooperative Learning in SKI at MIS Bilingual Al-Islam Sukomoro. *EduSpirit : Jurnal Pendidikan Kolaboratif*, *2*(3), 501–508. https://journal.makwafoundation.org/index.php/eduspirit

Johnson, D. W., & Johnson, R. T. (2009). An educational psychology success story: Social interdependence theory and cooperative learning. *Educational Researcher*, *38*(5), 365–379.

Johnson, D. W., & Johnson, R. T. (2014). Cooperative Learning in 21st Century.[Aprendizaje cooperativo en el siglo XXI]. *Anales de Psicología/Annals of Psychology*, *30*(3), 841–851.

Ma'ruf Abdullah. (2015). *Metodologi Penelitian Kuantitaif* (Cetakan 1). Aswaja Pressindo.

Ningsih, R., Halim, S., Hanafi, A. H., & Dahlan, D. (2022). Pengaruh Model Pembelajaran Kooperatif Tipe Jigsaw Dalam Meningkatkan Minat Dan Hasil Belajar Sejarah Kebudayaan Islam Di Madrasah Ibtidaiyah Negeri. *SITTAH: Journal of Primary Education*, *3*(2), 191–202. https://doi.org/10.30762/sittah.v3i2.494

Nuerweda. (2022). PENERAPAN MODEL PEMBELAJARAN KOOPERATIF TIPE JIGSAW DALAM MENINGKATKAN HASIL BELAJAR SISWA PADA MATA PELAJARAN SEJARAH. *VOCATIONAL : Jurnal Inovasi Pendidikan Kejuruan*, *2*(1), 19–26. https://doi.org/10.52434/jpai.v2i1.2838

Nurhalimah, S., Klaudia Selfa, S., Amanda, U., & Ilmi, D. (2024). Penguatan Pendidikan Peserta Didik Melalui Keterampilan 4C dengan Mengimplementasikan Pembelajaran Abad 21 dalam Pembelajaran Pendidikan Agama Islam. *Jurnal Ilmu Pendidikan Islam*, *2*(1), 239–249.

Slavin, R. E. (2016). Instruction based on cooperative learning. *2016). Handbook of Research on Learning and Instruction. Taylor & Francis*.

Sugiyono. (2013). *Metode penelitian pendidikan pendekatan kuantitatif, kualitatif dan R&D*.

Sugiyono. (2019). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D* (Cetakan ke). ALFABETA.

Sulaiman, S. (2022). Upaya Pengembangan Kemampuan Kognitif Melalui Pembelajaran Kooperatif Tipe Jigsaw Pada Mata Pelajaran Pendidikan Agama Islam Dan Budi Pekerti. *Pedagogik: Jurnal Pendidikan*, *17*(1), 16–23. https://doi.org/10.33084/pedagogik.v17i1.3346

Sweller, J. (1988). Cognitive load during problem solving: Effects on learning. *Cognitive Science*, *12*(2), 257–285.

Syahputra, Ari Nahwiyah, S. (2024). Penerapan Model Pembelajaran Kooperatif Tipe Jigsaw Untuk Meningkatkan Keaktifan (Dalam Mata Pelajaran Sejarah Kebudayaan Islam Di Kelas VIII 1 MTS Baiturrahman Beringin Teluk Kuantan). *Jom Ftk Uniks*, *4*(2), 26–37.

Watson, R. (2015). Quantitative research. *Nursing Standard*, *29*(31).