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RESEARCH ARTICLE

Enhancing Students' Motivation to Learn Social Studies through the Jigsaw Cooperative Learning Model Supported by Puzzle Media: A Classroom Action Research Study at Cukuhbalak State Junior High School No.3

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ABSTRAK

Motivation to learn is one of the factors that influence the success of the learning process. Low levels of student motivation in social studies subjects highlight the need to implement more innovative learning models. This study aims to enhance motivation to learn Social Studies through the application of the Jigsaw cooperative learning model using puzzles as teaching aids. The study employed the Classroom Action Research (CAR) method, conducted over two cycles with 28 Year 8 pupils at SMPN 3 Cukuhbalak as participants. Data were collected through observation, questionnaires and documentation, and subsequently analysed descriptively. The results of the study indicate that pupils' motivation to learn increased from 56.86 per cent in Cycle I to 79.29 per cent in Cycle II. This increase was accompanied by a rise in the average learning outcomes from 72.86 to 89.64. Consequently, the implementation of the Jigsaw cooperative learning model using puzzle-based media is effective in enhancing pupils' motivation to learn Social Studies.

Keywords : motivation to learn, Jigsaw-style cooperative learning, puzzle resources, social studies, classroom action research

1. Introduction

Education is a fundamental aspect in improving the quality of human resources and developing the intellectual, social and character-building abilities of learners. According to Law of the Republic of Indonesia No. 20 of 2003 on the National Education System, education serves to develop abilities and shape the character and civilisation of a dignified nation, with a view to enriching the nation's life. According to Mulyasa (2023), education is a process designed to develop the full potential of learners so that they are able to cope with changes in science, technology and social life. Through education, learners are expected to develop their potential to become individuals who are faithful, God-fearing, of noble character, knowledgeable, creative, independent, democratic and responsible.

One of the factors determining the success of the educational process is learners' motivation to learn. Motivation to learn is an impulse originating from within or outside the learner that drives them to engage in the learning process and achieve learning objectives. Sardiman (2018) states that motivation to learn is the totality of driving forces within the learner that initiates learning activities, ensures the continuity of learning activities, and provides direction to learning activities so that learning objectives can be achieved. Pupils with high learning motivation tend to be more active, enthusiastic and diligent in their learning. Conversely, low learning motivation can result in low pupil participation during lessons, leading to sub-optimal learning outcomes.

In Social Studies (IPS) lessons, learning motivation plays a crucial role because Social Studies not only emphasises conceptual mastery but also the ability to think critically, collaborate, and understand various social phenomena occurring in society. Therefore, teachers are required to select teaching models and media capable of creating a learning environment that is active, engaging, and learner-centred. According to Safitri (2024), Social Studies education aims to develop pupils' understanding of the relationships between individuals, society and the environment so that they can become active, skilled and critically thinking citizens. Consequently, Social Studies lessons need to be designed in an active and pupil-centred manner to ensure these objectives are achieved.

Preliminary research conducted at SMP Negeri 3 Cukuhbalak indicates that the Social Studies learning process is still dominated by conventional teaching methods, specifically lectures. Teachers play a more active role than pupils, meaning that interaction during lessons remains limited. This situation leads pupils to tend to be passive, reluctant to express their opinions, rarely ask questions, and lack enthusiasm for the lessons; indeed, there are still instances of pupils entering and leaving the classroom whilst lessons are in progress. According to Silberman (2013), learning dominated by lectures tends to reduce pupils' active engagement, making them more prone to boredom and less motivated to learn. Monotonous teaching also results in low pupil engagement in the learning process.

This situation has an impact on pupils' low learning outcomes. Based on documentation of learning outcomes for the Social Studies subject in Year 8 at SMP Negeri 3 Cukuhbalak for the 2024/2025 academic year, only 34 out of 84 pupils (40.48 per cent) met the Minimum Passing Criteria (KKM), whilst 50 pupils (59.52 per cent) had not yet achieved the required standard. These figures indicate that the majority of pupils are still experiencing difficulties in understanding Social Studies material, thus requiring improvements to the learning process.

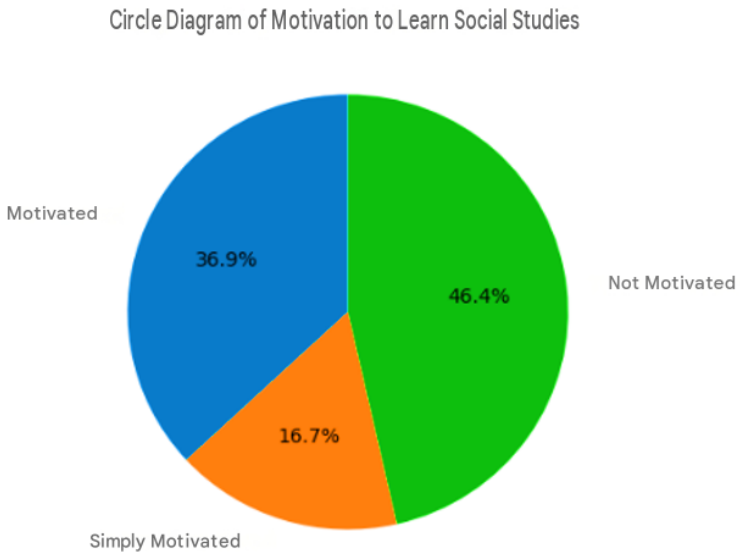

Figure 1. Diagram showing the achievement of social studies learning outcomes among Year 8 pupils

In addition to learning outcomes, pupils' motivation to learn also appears to be sub-optimal. The results of the learning motivation questionnaire indicate that the majority of pupils have low motivation to learn. This situation is influenced by a lack of variety in teaching methods and the minimal use of engaging learning resources. Consequently, pupils tend to pay less attention to the teacher's explanations, are less active in discussions, and participate less during the learning process. According to Sardiman (2018), learning motivation is influenced by various factors, including engaging learning activities, rewards for learning, and a conducive learning environment. Therefore, learning innovations are required that can enhance pupil engagement during the learning process

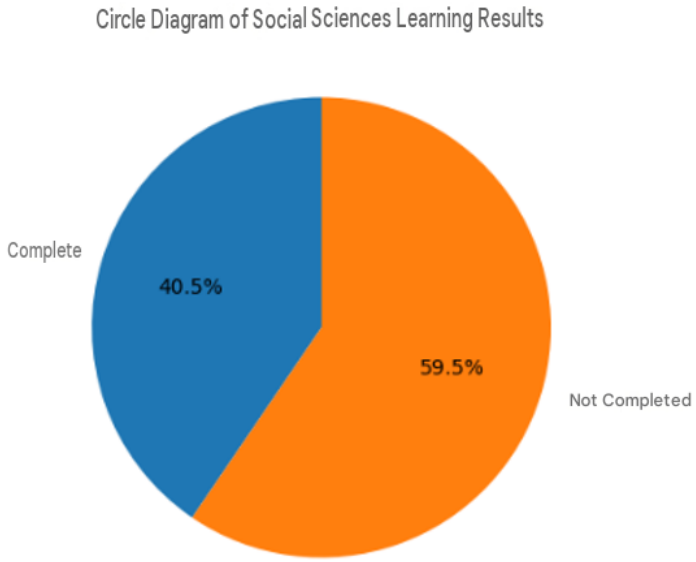

Figure 2. Diagram of Social Studies Learning Motivation amongst Year 8 Pupils

In view of these circumstances, a learning model is required that is capable of improving learner engagement during the learning process. One alternative that can be implemented is the Jigsaw cooperative learning model. This model places learners at the centre of the learning process through collaboration in heterogeneous groups. Each group member is responsible for studying a specific section of the material within an expert group, before returning to their original group to explain that material to the other group members. Through this process, pupils not only improve their understanding of the subject matter but also develop their communication and collaboration skills, as well as a sense of responsibility for their own learning.

Given these circumstances, a learning model is required that can enhance pupil engagement during the learning process. One alternative that can be implemented is the Jigsaw cooperative learning model. This model places pupils at the centre of the learning process through collaboration in heterogeneous groups. Each group member is responsible for studying a specific section of the material within an expert group, before returning to their original group to explain that material to the other group members. Through this process, pupils not only improve their understanding of the material but also develop their communication and collaboration skills, as well as a sense of responsibility for the learning process. Slavin (2015) explains that the Jigsaw cooperative learning model is capable of enhancing individual responsibility, positive interdependence amongst learners, and active participation in the learning process. This view is reinforced by Isjoni (2013), who states that the implementation of cooperative learning can enhance social interaction, collaboration, and learners' motivation to learn.

To make learning more engaging, the Jigsaw cooperative learning model is combined with puzzles. Puzzles are a learning medium that involves pupils in the activity of assembling pieces of an image into a complete picture. The use of puzzles creates a more enjoyable learning atmosphere, increases pupil

activity, and encourages them to work together to solve problems, thereby boosting their motivation to learn. According to Arsyad (2019), learning media serve as a means to enhance pupils' attention, interest, motivation, and learning activity, thereby making the learning process more effective. These findings are also supported by Suratiningsih (2021), who explains that the use of puzzle-based learning media can boost learning motivation by providing an active and enjoyable learning experience. Numerous studies have been conducted on the Jigsaw model; however, the majority have focused solely on improving learning outcomes. Research combining the Jigsaw model with puzzle-based media to enhance motivation in social studies at lower secondary level remains relatively limited; consequently, this study contributes to the development of social studies teaching strategies.

Based on the above, this study aims to enhance motivation to learn social studies through the application of the Jigsaw cooperative learning model, supported by puzzle-based media, amongst Year 8 pupils at SMP Negeri 3 Cukuhbalak. It is hoped that the findings of this study will contribute as an alternative learning model capable of enhancing motivation to learn and creating social studies lessons that are more active, engaging and learner-centred.

2. Literature Review

This section presents the theoretical framework underpinning the research, covering the concepts of learning motivation, social studies learning, and the Jigsaw cooperative learning model. These theories provide the conceptual basis for explaining how the application of a cooperative learning model supported by puzzle-based media can enhance pupils' motivation to learn social studies.

2.1 Motivation to Learn

Motivation to learn is one of the key factors influencing learners' participation and success during the learning process. Etymologically, the term 'motivation' derives from the Latin word *movere*, which means to move or encourage someone to take action. According to Arifudin (2020), motivation is a state that gives rise to specific behaviour whilst providing direction and perseverance in achieving set goals. In line with this, Ulfah (2020) explains that motivation is a driving force that encourages individuals to engage in learning activities in order to achieve desired goals. This view is supported by Emda (2018), who states that learning motivation plays a crucial role in determining the intensity, direction and continuity of learners' learning activities, thereby influencing the achievement of learning outcomes.

In an educational context, motivation determines learners' willingness to learn and influences the level of effort they exert in achieving academic success. Wina Sanjaya (2010) states that low academic achievement among learners is not always caused by limited ability, but is often linked to low learning motivation. Therefore, the learning process should not only focus on the delivery of subject matter but must also be able to stimulate and sustain learners' motivation throughout the learning process. This is consistent with the findings of Hamdu and Agustina (2011), which show that learning motivation has a positive relationship with learners' learning outcomes; thus, the higher the learning motivation, the better the learning outcomes achieved.

According to Hamzah B. Uno (2017), learning motivation comprises two dimensions: intrinsic motivation and extrinsic motivation. Intrinsic motivation includes the desire to succeed, the need to learn, and hopes or aspirations for the future. Meanwhile, extrinsic motivation is influenced by factors external to the learner, such as rewards, engaging learning activities, and a conducive learning environment. Therefore, teachers are expected to be able to create meaningful learning experiences that foster both intrinsic and extrinsic motivation in learners to enhance their participation and learning outcomes.

2.2 Social Studies Lessons

According to Londong (2026), Social Studies (IPS) is an interdisciplinary field of study that integrates various social science disciplines, such as geography, history, economics, sociology and other social

disciplines. This integration is carried out for educational purposes so that Social Studies learning is structured contextually and tailored to the learning objectives and characteristics of the learners. Furthermore, according to Hopeman (2021), Social Studies learning is a process aimed at equipping learners with knowledge, skills, attitudes, and social values so that they are able to understand various issues that arise in social life. Social Studies learning is not only oriented towards the mastery of concepts but is also directed towards developing critical thinking, collaboration, problem-solving skills, and shaping pupils' character so that they are able to participate actively in social life

Social Studies learning is not only oriented towards the mastery of concepts but also emphasises the development of critical thinking, problem-solving, communication, and collaboration in social life. Eriyanti (2023) states that learning is a process of educational interaction between teachers, pupils and various learning resources that takes place within a learning environment. This interaction is designed to create effective learning experiences so that learning objectives can be achieved. Therefore, the Social Studies learning process needs to be designed in an active, innovative and pupil-centred manner in order to increase their engagement in learning activities

According to Permana (2021), Social Studies learning should be designed to be active, innovative and learner-centred. The use of appropriate learning models will increase learner engagement, thereby making the learning process more meaningful and ensuring that learning objectives are achieved optimally.

2.3 The Jigsaw Cooperative Learning Model

Cooperative learning is a learning model that emphasises collaboration amongst learners through structured group activities to achieve shared learning objectives. Jeppu (2023) explains that the Jigsaw method of cooperative learning is a learning strategy that places learners in small groups with individual responsibilities and positive interdependence amongst members. Each learner is responsible for mastering their assigned section of the material whilst helping group members understand the material so that learning objectives can be achieved collectively. In line with this, Taniredja (2012) states that cooperative learning involves collaboration amongst learners in small, heterogeneous groups, so that every member has the opportunity to contribute actively to the group's success.

Gillies (2023) explains that cooperative learning is based on social interaction amongst learners within small groups. Through these interactions, learners construct knowledge collectively, exchange ideas, provide justifications, and develop a deeper understanding of the learning material. Therefore, cooperative learning comprises several key elements, namely positive interdependence, face-to-face interaction, individual accountability, and interpersonal skills. These four elements encourage learners to communicate effectively, work together to solve problems, and develop social skills during the learning process. The results of Prasetyo's (2023) research also indicate that learning that prioritises cooperation amongst learners is able to increase engagement and learning activity whilst the learning process is underway.

One widely applied type of cooperative learning is the Jigsaw model. Siregar (2024) states that the Jigsaw model is implemented through the formation of heterogeneous learning groups, in which each learner is given the responsibility to master a specific part of the material and share their learning outcomes with members of their original group, thereby fostering cooperation and accountability. Through this process, each learner acts both as a learner and as a facilitator for their group members, thereby encouraging active participation and individual responsibility in learning. Furthermore, Isjoni (2013) states that cooperative learning not only contributes to improved learning outcomes but also develops critical thinking skills, communication skills, social interaction skills, and learners' motivation to learn. Through activities such as exchanging ideas, respecting others' opinions, and working together to achieve learning objectives, learners gain a more meaningful learning experience whilst increasing their engagement throughout the learning process.

2.4 Media Puzzles

Learning resources play a vital role in creating meaningful and engaging learning experiences. One such resource that supports active learning is the jigsaw puzzle. According to Rulianti (2023), a jigsaw puzzle is a learning resource consisting of pieces of an image that must be assembled to form a complete picture. The use of jigsaw puzzles encourages pupils to think critically, engage actively in learning, and collaborate with their groupmates to complete tasks. As well as developing logical thinking skills, the activity of assembling jigsaw puzzles also encourages pupils to work together to solve problems and remain engaged throughout the learning process.

The integration of jigsaw puzzles into cooperative learning enables pupils to construct their knowledge directly through discussion and collaboration. Prasetyo (2023) states that jigsaw-based learning creates an enjoyable learning atmosphere because pupils communicate actively whilst assembling the puzzle pieces into a complete concept. In line with this, Kartini (2023) explains that puzzle activities can strengthen logical thinking skills whilst enhancing pupils' collaborative skills.

In Social Studies lessons, puzzles provide pupils with the opportunity to understand concepts through visual representations and collaborative activities. Suratiningsih (2021) explains that puzzle games can boost learning motivation as they encourage pupils to persist in overcoming challenges within an enjoyable learning environment. Repeated opportunities to solve puzzles can foster perseverance, curiosity and a passion for learning, thereby making learning activities more meaningful. The use of puzzle games as a learning medium is expected to make it easier for teachers to convey messages to pupils, encouraging them to be active, enthusiastic and more motivated in their learning activities, whilst creating meaningful learning experiences (Dina, 2024).

Based on these various theories, the application of the Jigsaw cooperative learning model, combined with puzzle-based media, is expected to create a student-centred learning environment, enhance cooperation, encourage active participation, and strengthen learning motivation in social studies lessons.

3. RESEARCH METHODOLOGY

The research methods employed in this study include the research design, research subjects, research instruments and data analysis techniques. All these procedures were carried out to examine the effectiveness of implementing the Jigsaw cooperative learning model, supported by puzzle-based media, in enhancing pupils' motivation to learn in Social Studies.

3.1 Research Design

This study employs the Classroom Action Research (CAR) method, which aims to improve the quality of the learning process through actions planned and implemented directly within the classroom. According to Arikunto (2008), CAR is conducted collaboratively and reflectively to address various issues that arise during the learning process.

This research was carried out in two cycles, with each cycle comprising four stages, namely:

1. *planning*
2. *action*)
3. *observation*
4. *reflection*

Each cycle consists of two sessions. At the end of each cycle, an evaluation is carried out through observation, a learning motivation questionnaire and a learning outcomes test. The findings from the reflection on each cycle are used as a basis for refining the implementation of interventions in the subsequent cycle until the research success indicators are met.

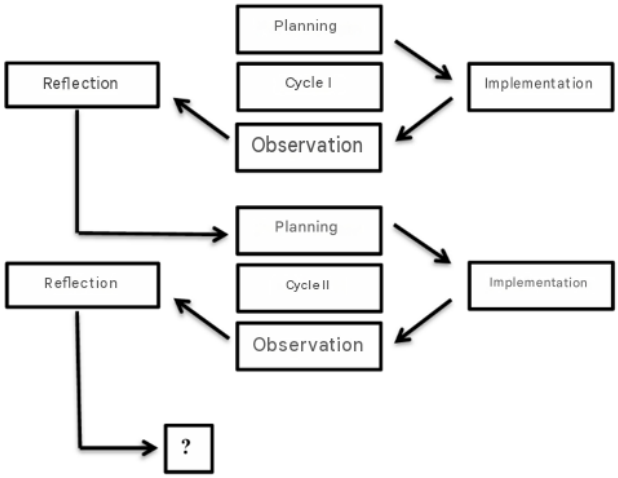

Figure 3. The Classroom Action Research Cycle

3.2 Research Subject

The research was conducted at Cukuhbalak State Junior High School No. 3, Tanggamus Regency, during the 2025/2026 academic year. The research subjects comprised 28 pupils in Class VIII A, selected on the basis of preliminary observations which indicated that the pupils' motivation to learn social studies was still relatively low.

In addition to the pupils, the social studies teacher also acted as a collaborator, assisting the researcher in conducting observations during the learning process and providing feedback during the reflection stage of each cycle.

3.3 Data Collection Techniques

Research data were collected through observation sheets, questionnaires, documentation and learning outcome tests. These four instruments were used to obtain comprehensive information regarding the implementation of the Jigsaw-type cooperative learning model aided by puzzle-based media, the learners' motivation to learn, and their learning outcomes during the classroom action research. A description of each research instrument is presented in Table 1 below:

Table 1. Data Collection Methods

Data Collection Methods	Objectives	Data Collected
Observation Sheet	To observe the implementation of the Jigsaw cooperative learning model, supported by puzzle-based media, as well as pupils' activities during the learning process.	Pupils' learning activities and the implementation of teaching strategies.
Learning Motivation Questionnaire	To measure pupils' levels of learning motivation based on six indicators of learning motivation adapted from Sardiman (2007).	Data on pupils' motivation to learn.
Documentation	To support the research findings through documentation in the form of photographs of activities, field notes and school documents.	Data supporting the research.

Learning Outcome Test	To measure pupils' learning outcomes following the learning process.	Data on pupils' learning outcomes.

The learning motivation questionnaire consists of 25 statements. The questionnaire was developed with reference to the indicators of learning motivation proposed by Sardiman (2007). The questionnaire was used to measure six indicators of learning motivation, namely: (1) the presence of a desire and willingness to succeed, (2) the presence of drive and a need to learn, (3) the presence of hopes and aspirations for the future, (4) the presence of recognition for learning, (5) the presence of engaging learning activities, and (6) the presence of a conducive learning environment.

3.4 Data Analysis Techniques

The data collected were analysed using descriptive analysis to determine the improvement in pupils' motivation to learn and their learning outcomes following the implementation of the Jigsaw cooperative learning model supported by puzzle-based media.

Table 2. Questionnaire Scores

Score range	Category
86-100	Highly motivated
70-85	Motivated
50-69	Somewhat motivated
25-49	Not motivated

Source : Zainal Arifin (2017)

Next, the percentage of pupils' motivation to learn is calculated using a class-based approach, based on a comparison of the number of pupils who fall into a particular motivation category with the total number of pupils.

Table 3. Vulnerability: Percentage of Survey Results

Score range	Category
81-100%	Very High
61-80%	High
46-60%	Medium
26-45%	Low
0-25%	Very Low

Source : Zainal Arifin (2017)

The success of classroom action research is determined by the increase in pupils' motivation to learn in each cycle. The research is deemed successful if the average level of pupils' motivation to learn reaches the 'High' category (61–80 per cent) or shows an improvement compared with the previous cycle. As supporting data, pupils' learning outcomes are also analysed based on class-level learning attainment. The intervention is deemed successful if pupils achieve a mark equal to or higher than the Minimum Pass Mark (KKM) of 75, as set by the school.

4. RESULTS AND DISCUSSION

4.1 result

This classroom action research was conducted over two cycles. Prior to the intervention, observations indicated that the Social Studies learning process remained teacher-centred. Pupils demonstrated low levels of participation in class discussions, lacked confidence in expressing their

opinions, and exhibited low levels of motivation to learn. Consequently, the Jigsaw cooperative learning model, supported by puzzle-based media, was implemented to create a more active, collaborative and engaging learning environment.

The implementation of the learning model showed a sustained improvement from Cycle I to Cycle II. Pupils began to become accustomed to cooperative learning activities, participated more actively in both expert group and home group discussions, and demonstrated greater responsibility in completing group tasks. The use of puzzle-based media also boosted the pupils' enthusiasm as they were directly involved in organising the learning material through collaborative activities.

The pupils' motivation to learn increased in each cycle following the implementation of the Jigsaw-type cooperative learning model supported by puzzle-based media. In Cycle I, the average percentage of pupils' learning motivation reached 56.86 per cent and fell into the 'moderate' category. These results indicate that pupils' learning motivation had not yet met the pre-determined indicators of research success. Furthermore, out of the total of 28 pupils, none had reached the 'proficient' category; consequently, the overall class-level achievement rate for learning motivation remained at 0 per cent.

Following improvements to the teaching approach in Cycle II, the average percentage of learning motivation increased to 79.29%, falling into the high category. This represents an increase of 22.43 percentage points compared to Cycle I. In this cycle, all 28 pupils (100 per cent) achieved the required level of learning motivation in line with the study's success indicators, meaning no pupils remained in the 'not yet proficient' category.

This increase in learning motivation demonstrates that the implementation of the Jigsaw-type cooperative learning model, supported by puzzle-based media, is capable of creating a more active, collaborative and engaging learning process. Through discussion activities within expert groups and home groups, as well as the use of puzzle-based media as a learning tool, pupils became more enthusiastic about participating in lessons, took a more active part in discussions, were more confident in expressing their opinions, and took responsibility for the tasks assigned to them. These conditions led to an overall increase in pupils' learning motivation, moving from the 'moderate' category in Cycle I to the 'high' category in Cycle II.

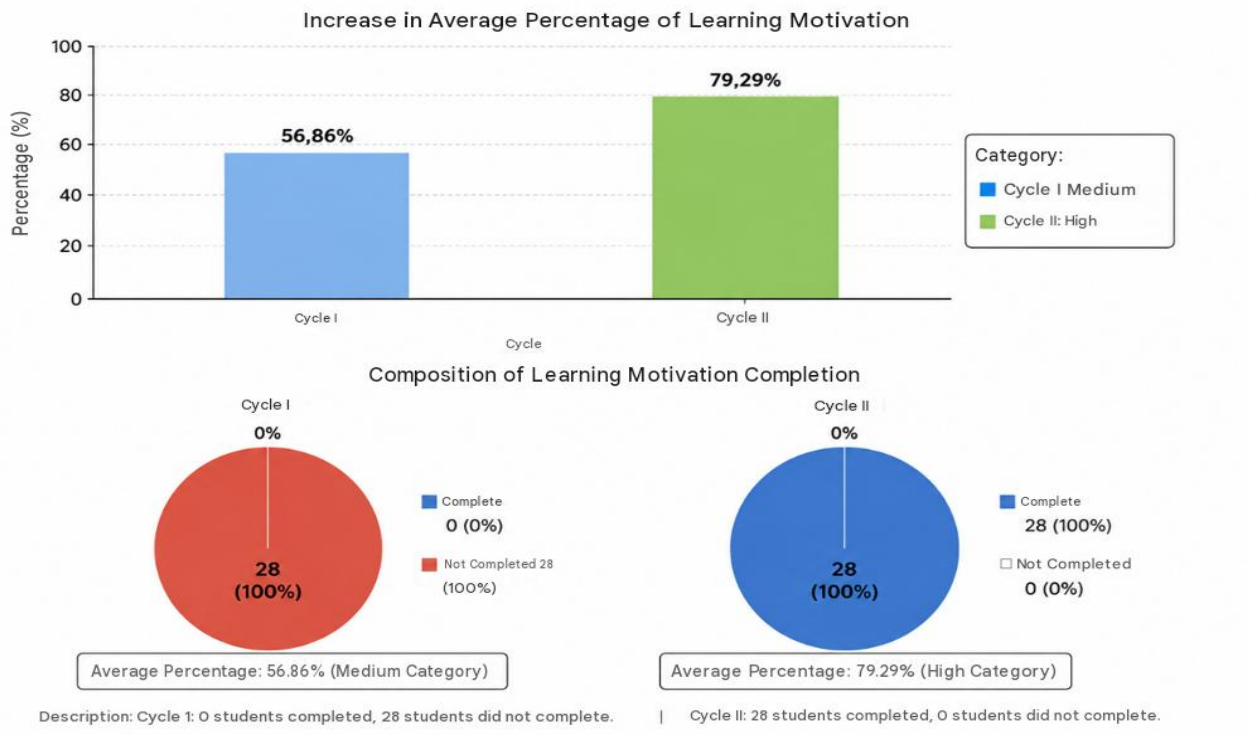

figure 3. Outcomes of Pupils' Motivation to Learn

In addition to boosting learning motivation, the implementation of the Jigsaw cooperative learning model, supported by puzzle-based media, also has a positive impact on pupils' learning outcomes. The increase in learning motivation that occurs during the learning process encourages pupils to engage more actively in understanding the material, discussing it with their groupmates, and completing the assigned tasks. These factors contribute to an improvement in pupils' learning outcomes, which will be elaborated upon in the following discussion.

Table 4. Pupils' Learning Outcomes

Indicators	Siklus I	Siklus II
Number of Pupils	28	28
Average Mark	72,86	89,64
Pupils Who Have Achieved the Standard	16	28
Pupils Who Have Not Achieved the Standard	12	0
Class-level Achievement Rate	57,14%	100%

Source: Primary Research Data (2025).

Based on Table 4, pupils' learning outcomes improved in Cycle II compared with Cycle I. The average mark rose from 72.86 to 89.64. The number of pupils who achieved the minimum proficiency standard also increased from 16 pupils (57.14 per cent) in Cycle I to 28 pupils (100 per cent) in Cycle II. Consequently, all pupils met the Minimum Pass Mark (KKM) set by the school, meaning that class-wide learning attainment was successfully achieved by the end of the study.

Overall, the research findings indicate an increase in pupils' learning motivation and learning outcomes following the implementation of the Jigsaw cooperative learning model supported by puzzle-based media. This improvement is evident from the rise in the percentage of learning motivation, the increase in the average learning outcome score, and the achievement of class-wide mastery in Cycle II.

4.2 Discussion

The research findings indicate that the implementation of the Jigsaw cooperative learning model, supported by puzzle-based media, was able to enhance the social studies learning motivation of Year 8 pupils at SMP Negeri 3 Cukuhbalak. This improvement was evident from the results of the learning motivation questionnaire, which showed an increase from the 'moderate' category in Cycle I to the 'high' category in Cycle II. Furthermore, all pupils had achieved the learning motivation mastery indicators by the end of the study. These findings indicate that teaching methods which actively involve pupils in the learning process can enhance their engagement throughout the learning process. Learning motivation plays a crucial role in determining the success of the learning process, as pupils with high motivation tend to demonstrate greater enthusiasm, perseverance and a stronger desire to achieve learning objectives. This is in line with the view of Hamzah B. Uno (2017), who states that learning motivation is an internal or external drive that fosters a passion for learning, thereby encouraging learners to achieve predetermined objectives. This view is also supported by research explaining that learning motivation is a key factor influencing the success of the learning process and learners' achievement of learning outcomes.

The increase in learning motivation in this study is closely linked to the characteristics of the Jigsaw cooperative learning model. In this model, each learner is given the responsibility to study a specific part of the material within an expert group, and then to explain that material back to the members of their home group. This process encourages learners to study independently whilst also collaborating with their groupmates. Learning is no longer teacher-centred but provides learners with the opportunity to actively seek information, discuss, exchange views, and share their understanding with their peers. According to Isjoni (2013), cooperative learning models can enhance social interaction, individual responsibility, cooperation, and learners' active participation in the learning process. Consequently, the

implementation of the Jigsaw model creates a more collaborative learning environment, so that pupils feel a sense of responsibility for their own learning success as well as that of their group.

In addition to the learning model, the use of puzzle-based materials also contributes to increasing pupils' motivation to learn. Puzzle-based materials make learning activities more engaging because pupils do not merely receive information passively, but also directly piece together fragments of information to form a coherent concept. These activities require pupils to think, discuss and work together to complete group tasks. Varied learning activities make the learning atmosphere more enjoyable, thereby reducing pupils' boredom whilst studying Social Studies. Arsyad (2019) states that learning media serve to stimulate pupils' attention, interest, motivation and learning activities, thereby making the learning process more effective. Other research findings also indicate that the use of engaging learning media has a positive and significant impact on pupils' motivation to learn.

This increase in motivation is also reflected in changes in pupils' behaviour during the learning process. In Cycle I, some pupils were still passive, lacked confidence in expressing their opinions, and tended to rely on their groupmates when completing tasks. However, following improvements made in Cycle II, the pupils began to show positive changes. They were more active in participating in discussions within both expert groups and home groups, were bold in expressing their opinions, asked questions, and were able to explain the material to other group members. These changes indicate that the pupils are becoming accustomed to learner-centred learning, thereby increasing their engagement in the learning process. According to Sardiman (2018), pupils with high learning motivation will demonstrate perseverance and tenacity in the face of difficulties, as well as active participation in learning activities.

The increase in learning motivation observed in this study was accompanied by an improvement in pupils' learning outcomes. The average mark for learning outcomes rose from 72.86 in Cycle I to 89.64 in Cycle II, whilst the rate of achievement in standardised tests increased from 57.14 per cent to 100 per cent. These results indicate that increased learning motivation has an impact on pupils' understanding of the subject matter. When pupils are highly motivated, they are more enthusiastic about participating in lessons, engage more seriously in discussions, and are more active in seeking out and processing information. These conditions make it easier for pupils to understand social studies concepts, thereby leading to improved learning outcomes. This finding is supported by research showing that learning motivation and the use of learning media have a positive influence on pupils' learning outcomes.

The results of this study are also consistent with various previous studies indicating that cooperative learning models can enhance pupils' learning activities, motivation, and learning outcomes. Similarly, the use of interactive learning media has been shown to create a more engaging learning environment, making pupils more active and motivated to participate in lessons. Therefore, the combination of the Jigsaw cooperative learning model and puzzle-based media can serve as an effective alternative for creating social studies lessons that are more active, collaborative and pupil-centred.

5. CONCLUSION

The implementation of the Jigsaw cooperative learning model, supported by puzzle-based media, has proven effective in enhancing the learning motivation of Year 8 pupils at SMP Negeri 3 Cukuhbalak in the Social Studies subject. This improvement is demonstrated by a rise in the average percentage of learning motivation from 56.86 per cent in Cycle I (moderate category) to 79.29 per cent in Cycle II (high category), thereby successfully achieving the pre-defined indicators of research success.

The implementation of this learning model also had a positive impact on pupils' learning outcomes. The average learning outcome score rose from 72.86 in Cycle I to 89.64 in Cycle II, whilst the class-wide learning attainment rate increased from 57.14 per cent to 100 per cent. These results indicate that the implementation of the Jigsaw-type cooperative learning model, supported by puzzle-based media, is capable of creating a more active, collaborative and engaging learning process, thereby encouraging pupils to participate actively in learning activities and enhancing their motivation and learning outcomes.

Consequently, the Jigsaw-type cooperative learning model supported by puzzle-based media can be used as an effective alternative learning method to improve pupils' motivation and learning outcomes in Social Studies, particularly at lower secondary school (SMP) level.

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