



Enhancing Students' Social Intelligence in Social Studies through Interactive Video-Assisted Reverse Jigsaw: A Classroom Action Research Study

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Abstract

The goal of the research was to investigate the implementation of Reverse Jigsaw learning model supported by the use of interactive video media and the improvement of social intelligence of the students in social studies class. The research employed Classroom Action Research (CAR) method with Kemmis-McTaggart Model of CAR comprising the stages of planning, action, observation and reflection conducted in two cycles. The subjects of the research were 19 students of grade VII at Al-Khadijah Junior High School in Sumber Kuning, Pamekasan. Data were collected through observation, attitude assessment journals, and documentation. Data analysis employed both quantitative and qualitative descriptive approaches. The study's findings indicate an increase in students' social intelligence from 65.23% in Cycle I to 79.32% in Cycle II, representing a 14.09% increase. Improvements were observed across all indicators: attentiveness, self-management, empathy, and influence. These findings suggest that the implementation of the Reverse Jigsaw model, supported by interactive videos, is effective in optimizing students' social intelligence. © The Authors.

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1. Introduction

Education plays a crucial role in developing human resources who are not only academically excellent but also possess strong social skills. The rise of globalization and the rapid advancement of science and technology are influencing various aspects of life. In the 21st century, science and technology have become indispensable in the field of education because they can provide students with a more optimal learning experience [1].

In the context of Social Studies education, the development of social intelligence is crucial; it encompasses students' ability to interact, collaborate, and understand social phenomena in their surrounding environment. Social intelligence involves not only the ability to communicate, but also the ability to understand others' feelings, show empathy, and build harmonious social relationships [2].

The development of students' social intelligence is often suboptimal. Learning is still dominated by conventional, teacher-centered approaches, so students tend to be passive and have few opportunities to interact actively [3]. This kind of problem was experienced by the seventh graders at Al-Khadijah Junior High School in Sumber Kuning, Pamekasan based on the lack of involvement from students during class discussions, lack of cooperation, and lack of empathy for their fellow students.

Teachers should take care while choosing instructional models and developing learning programs and approaches in order for their lessons to be interesting, useful, and relevant to students. One of the methods which could be applied here is the cooperative learning model and in particular Reverse Jigsaw method. It is a variation of the Jigsaw model where students have an opportunity to learn in expert groups and present their results in front of the whole group [4].

Not only learning models, but the media employed is also important for increasing the quality of learning. Video media is one of the solutions since it involves interesting presentations using sounds and images. This kind of media is not only able to capture the attention of students but also makes them understand the lesson better [5].

The integration of the Reverse Jigsaw learning model and interactive video media is intended to foster a more interactive, collaborative, and student-centered learning experience, as well as to fully optimize students' social intelligence in social studies learning [6].

From previous research, it can be concluded that there has been a lot of research conducted on how to develop social intelligence among students by utilizing different instructional models, such as role-play that is conducted to develop the students' social intelligence [7] and the sociodrama guidance model [2]. But this research does not meet its full purpose yet since most of the researches do not pay attention to the implementation of the reverse jigsaw model using video media in the form of Classroom Action Research (CAR) in IPS at the Junior High School (SMP) level.

A number of previous studies have focused primarily on cognitive aspects and learning outcomes, and have not yet optimized the use of interactive video media as a tool to enhance student engagement. In fact, the Reverse Jigsaw model emphasizes the importance of social interaction, communication, and individual responsibility within a group through the process of information exchange among students. This approach has been shown to optimize student engagement and social skills in learning [8].

The use of interactive video media has the advantage of presenting information in an engaging audio-visual format, thereby optimizing students' attention, motivation, and understanding during the learning process [9]. This study is crucial as an effort to address a gap in the literature—namely, the lack of research on the implementation of an interactive video-based reverse jigsaw model to optimize students' social intelligence in the Social Studies course for 7th-grade junior high school students.

The development and implementation of the Reverse Jigsaw learning model, supported by interactive video media in schools, is a strategic step toward improving the quality of learning, particularly in developing students' social intelligence. This is because cooperative learning models encourage intensive social interaction, collaboration among students, and communication among students during the learning process, all of which contribute to students' ability to understand others, demonstrate empathy, and build harmonious social relationships [10].

Preliminary observations conducted on April 13, 2025, at Al-Khadijah Junior High School in Sumber Kuning, Pamekasan, indicated that there were still issues in the classroom during the learning process, particularly regarding students' social intelligence [11]. This was evidenced by the fact that 51.75% of students scored in the "adequate" category for social intelligence. Some students tended to be passive and less active in the learning process. Even when the teacher asked questions, some students hesitated to express their opinions, indicating a lack of self-confidence in self-expression,

which suggests that their communication and self-expression skills have not yet developed to their full potential.

The learning process in the classroom remains teacher-centered, so students tend to passively receive information without meaningful interaction [12]. Interaction during learning is still one-sided, so students' opportunities to discuss, exchange opinions, and show empathy toward their peers remain very limited. In fact, social intelligence encompasses the ability to understand others' feelings, adapt to social environments, and establish effective cooperation within groups [13].

Based on the issues mentioned by the researcher above, the researcher conducted a study on "The Implementation of the Reverse Jigsaw Learning Model Supported by Interactive Video Media to Improve Students' Social Intelligence in Social Studies Classes for Seventh Graders at Al-Khadijah Junior High School in Sumber Kuning, Pamekasan."

2. Method

The study was conducted in two cycles using the Kemmis and McTaggart model, consisting of planning, action, observation, and reflection. In Cycle I, students learned through interactive video-assisted Reverse Jigsaw activities, including video presentation, expert-group discussions, and knowledge sharing in home groups. Observations and attitude assessment journals were used to assess students' social intelligence. Reflection on Cycle I revealed that some students remained passive and lacked confidence in expressing their opinions. Therefore, Cycle II incorporated more structured group roles, clearer guidance, and stimulating questions to encourage active participation. The same observation procedures were applied in Cycle II to evaluate improvements in students' social intelligence.

The data collection instruments used in this study included observation, an attitude assessment journal, and documentation. The validity and reliability of the attitude assessment journal instrument were tested. The test results showed that all items were valid (calculated $r >$ table r of 0.4555) and reliable, with a Cronbach's Alpha value of 0.980. According to Daniel Goleman, the indicators of emotional intelligence are basic empathy, self-management, influence, and awareness [15]. The scoring scale ranges from 1 to 4 (4 = always, 3 = often, 2 = rarely, 1 = never). Using the percentage formula [16]:

$$\text{Percentage} = \frac{\text{Score obtained}}{\text{Maximum score}} \times 100$$

The classification of social intelligence of the students is calculated using percentages: 76%-100% (very good); 56%-75% (good); 40%-55% (fair); and 0%-40% (poor). For this research, the criteria of success are met when more than 76% of students reach the social intelligence category based on the predetermined criteria through improvement in observations and attitudes journal from Cycle I to Cycle II. Therefore, this research is expected to help improve the quality of social studies learning as well as social intelligence of the students through the video-assisted Reverse Jigsaw model.

3. Results and Discussion

This Classroom Action Research (PTK) was conducted at Al-Khadijah Junior High School in Sumber Kuning, Pamekasan, with 19 seventh-grade students. The 19 seventh-grade students were selected because they constituted the class in which the initial observations identified challenges in social interaction, participation, and empathy. As the study employed classroom action research, the entire class represented the specific classroom context targeted for instructional improvement.

The study aimed to enhance students' social intelligence through the implementation of the Reverse Jigsaw learning model aided by interactive video media. The indicators of social intelligence according to Daniel Goleman used in this study include basic empathy, self-management, influence, and awareness. The social intelligence assessment instrument was developed based on the theoretical framework adopted in this study. The calculated correlation coefficients were compared with the critical r -value of 0.4555. Instrument reliability was assessed using Cronbach's alpha, yielding a coefficient of 0.980. The validity and reliability analyses were conducted using [specify the software or calculation method]. Detailed information on the respondents, item analysis, and calculation procedures is provided to ensure the transparency of the instrument evaluation.

In the early stages, the students' social intelligence was still in the "adequate" category, as evidenced by their lack of engagement in learning, minimal communication among students, and a lack of empathy toward classmates experiencing learning difficulties. The results of the pre-cycle observations showed a percentage of 51.75%.

Table 1. Pre-Cycle Social Intelligence Percentage Results

No	Indicator	Percentage
1	Basic Empathy	50,00%
2	Self-Control Ability	50,66%
3	Influence	51,32%
4	Attention	55,04%
Average		51,75%
Category		Moderate

The success criterion was defined based on the overall average social intelligence score, which was required to exceed 76%, rather than each individual indicator. In Cycle II, the overall average reached 79.32%, exceeding the predetermined threshold. However, the Influence indicator remained at 75.66%, slightly below the threshold. This finding indicates that the overall success criterion was achieved, although further improvement in the Influence indicator is still needed.

Instruction in Cycle I was conducted using the Reverse Jigsaw model, supported by interactive video media. The activity began with the presentation of a stimulus through an interactive video relevant to the social studies curriculum. Next, students were divided into home groups and then directed to join expert groups to discuss specific sections of the material based on the video content. After the discussions in the expert groups were completed, students returned to their home groups to present the results of their discussions and exchange information with one another.

The activity of the students in Cycle I started to improve compared to that of the pre-cycle phase. There were some students who have mustered enough courage to voice out their views and actively engage in classroom discussions, while there were others who remained passive. Communication between the teachers and students started to improve as well, but was not yet totally effective since the students were still adjusting to the new learning method used.



Figure 1. Video screening and formation of groups from Cycle I



Figure 2. Formation of the Expert Group and Cycle I Discussion



Figure 3. Presentation to the entire first-cycle class

In Cycle I, students' social intelligence improved, with a score of 65.23%, which falls into the "good" category. When examined by social intelligence indicators, the attention indicator scored 73,03%, self-presentation 69.52%, basic empathy 58.77%, and influence 59.65%. These results

indicate that all social intelligence indicators showed improvement compared to the previous stage, although they have not yet met the established success criteria. Based on reflections, some students remain passive in discussions and lack confidence in expressing their opinions.

Table 2. Social Intelligence Percentage Results for Cycle I

No	Indicator	Percentage
1	Basic Empathy	58,77%
2	Self-Control Ability	69,52%
3	Influence	59,65%
4	Attention	73,03%
Average		65,23%
Category		Good

The implementation of the Reverse Jigsaw learning model aided by interactive video media in Cycle II showed a more significant improvement compared to Cycle I. During this stage, the teacher offered structured guidance when conducting the discussions, especially when assigning roles in both the expert groups and the home groups.

In addition, teachers serve as a stimulus through posing stimulating questions that promote deeper thinking and expression of opinions. Interaction through the use of video media is used in its fullest as a means of explaining the material.

It has brought changes to the way students participate in their activities; there have been great achievements in this matter. They seemed more assured when presenting the outcome of their discussions before the whole class, they asked questions and could work well in groups. Interactions among students became more intensive and showed improvements in empathy and social skills. Consequently, the learning environment in Cycle II became more conducive, interactive, and participatory compared to the previous cycle, which ultimately contributed to an increase in students' social intelligence.



Figure 1. Video screening and formation of groups from Cycle II



Figure 2. Formation of the Expert Group and Cycle II Discussion



Figure 3. Presentation to the entire Cycle II class

The research results showed a significant increase in students' social intelligence in each cycle. In Cycle I, the percentage of students' social intelligence reached 65.23%, falling into the "good" category. Subsequently, in Cycle II, there was an increase of 14.09%, bringing the percentage

to 79.32% and placing it in the “very good” category. The basic empathy indicator reached 78.29%, self-presentation skills 81.36%, influence 75.66%, and attentiveness 82.02%. This improvement indicates that the success indicators for this study have been met, so the intervention was discontinued after Cycle II.

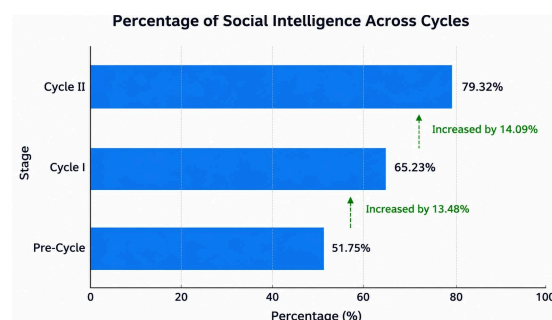
Table 3. Social Intelligence Percentage Results for Cycle II

No	Indicator	Percentage
1	Basic Empathy	78,29%
2	Self-Control Ability	81,36%
3	Influence	75,66%
4	Attention	82,02%
Average		79,32%
Category		Very Good

Table 4. Comparison of Results Across Cycles

No	Cycle	Percentage	Category
1	Pre-Cycle	51,75%	Moderate
2	Cycle I	65,23%	Good
3	Cycle II	79,32%	Very Good

Based on these results, it can be concluded that the implementation of the Reverse Jigsaw learning model supported by interactive video media is capable of gradually improving students' social intelligence. This is demonstrated by an increase in students' social intelligence scores from 51.75% in the pre-cycle phase, rising by 13.48% to 65.23% in Cycle I, and further increasing by 14.09% to 79.32% in Cycle II. This progress is further illustrated in the following graph:



Angka 7. Percentage Diagram of Students' Social Intelligence from Pre-Cycle, Cycle I, and Cycle II

The improvement in students' social intelligence in this study was evident in their increased activity during the learning process. This shows that the use of the Reverse Jigsaw technique facilitated through the use of interactive video media was capable of providing an interactive, cooperative, and more active learning experience. This is due to the fact that the Reverse Jigsaw technique puts the students in the role of the learners themselves who are dependent on each other within the group.

In practice, however, students are not only supposed to be fed with information by the teacher but must also understand the lesson. They will be required to engage in discussion of the lessons within expert groups and eventually present what they have discussed before the whole class. In doing so, they develop interpersonal abilities, cooperation among themselves, and social responsibility [17].

In this research, the application of interactive video media is seen as an assisting factor that enhances the learning process. Interactive video media can help to portray the social phenomenon more vividly in visual terms so that students can have better comprehension of the social studies subjects. The medium is an instrument that helps to stimulate discussion, expression of opinions, and empathy on the social problems presented in class. There was one study that proved the effectiveness of interactive videos in enhancing student engagement in social studies classes [18].

On a pedagogical level, the application of the Reverse Jigsaw method assisted by interactive videos takes place in several complementary steps. The first step involves using videos as triggers for learning to help students become oriented and acquire some preliminary knowledge. The second step includes dividing students into expert groups working on certain aspects of the topic and making a presentation in front of the class on the outcomes of their discussion. Such an approach allows the

development of peer teaching and the creation of intensive social interaction. Moreover, presentations and discussions in the classroom give students chances to develop their self-confidence, learn to argue, and respect the opinion of others [19].

These findings of this study are in line with the opinion stated in [20], where it is pointed out that in cooperative learning teachers are facilitators who help students become active, engage in discussion, and voice their views. No longer are teachers the only source of information; on the contrary, teachers now function as guides who provide an environment for learning in which students can learn from each other.

In this model, the participation of students in both expert groups and homogenous groups increases substantially, hence increasing the social intelligence of the students. This can be noted through increased student involvement from the "fair" to "very good" category, meaning that there is greater participation in the learning process.

This research study differs from other previous research in its specificity in incorporating the Reverse Jigsaw model with the use of interactive video media in teaching social studies. There were previous studies which focused more on the application of the cooperative learning models with little visual media involved [21]. In this research, interactive videos become the media in which the learning context becomes real. This way, students can understand the social realities in concrete ways. It is easier for them to discuss things when they can refer to something concrete that they can analyze together.

Implications from the study towards the teaching of Social Studies imply that the learning process would become much more effective if teachers are not only able to give theoretical information about certain concepts but also show the real social facts using certain media. In regard to the theme "Getting to Know the Surrounding Environment," especially in the section "Getting to Know Nature," the use of interactive video media becomes very helpful in helping students to realize human life in prehistoric ages as well as contemporary issues of environmental pollution.

The lesson on knowing the community where social interaction is the theme will make the application of the Reverse Jigsaw model give chance to students to learn about many forms of social interaction by working in small groups. In expert groups, the students may discuss issues on cooperation, accommodation, or social conflict and then share their discussion results in the whole class. In addition, this will not only make the students comprehend the theories on social interaction, but also train them how to implement those social interactions by communication, cooperation, and respecting their peer's opinions.

Consequently, the enhancement of social intelligence of students in this study is not only attributed to repetitive actions in the action research but also because of the change in the learning process of the students from being passive to being more active due to the application of the Reverse Jigsaw model using interactive video media. The results show that the application of the Reverse Jigsaw model and interactive video media can effectively produce a learning process that is more meaningful and engages students actively in their learning processes.

4. Conclusion

The use of the Reverse Jigsaw learning approach facilitated by interactive videos has been found to boost social intelligence in social studies among students. The improvement has been consistent since the pre-cycle up to Cycle II. During the pre-cycle stage, social intelligence of the students was 51.75%, it increased to 65.23% during Cycle I, and further increased to 79.32% in Cycle II. These numbers show that there has been improvement in the social intelligence of the students as a result of using this learning approach.

The development is associated with the transformation of the quality of social interaction among students during the process of learning. Students have been made more communicative, collaborative, and empathic toward their peers in groups. With the aid of the Reverse Jigsaw strategy, students are both receivers and transmitters of information to their peers in groups. The positive interdependence of students has been developed in this way; thus, there has been more social interaction among students in the process of learning.

Furthermore, there is an important role played by interactive video media in contributing to developing the social intelligence of students. Through interactive videos, it becomes easier for students to learn the content in a concrete manner, thus allowing them to relate to it in terms of the social occurrences in real life situations. From the teaching standpoint, the adoption of the reverse jigsaw model together with interactive video media creates a form of learning which is more active, collaborative, and student-centered. As such, the development of the students' social intelligence is

not only achieved as a result of repeating actions within the action research cycle but also as a consequence of changing learning patterns.

5. Suggestion

The Reverse Jigsaw learning model with the aid of interactive video media could become an alternative learning model for developing students' social intelligence especially in social studies classes discussing social life in society. Teachers are required to design lessons strategically by optimizing each phase of the Reverse Jigsaw model, from home groups to expert groups, in such a way that social interaction between students occurs maximally.

Application of interactive video media should also be customized to contextual learning resources to help students improve their comprehension and active involvement in the learning process. The teachers may combine videos with LKPD and encourage students to actively discuss, analyze, and voice their thoughts on the issues raised. Also, presentation and reflection phases need to be reinforced so that students not only learn the subject matter but also develop proper social attitudes of empathy, teamwork, and responsibility.

Schools should provide appropriate learning facilities using technology to make sure that the application of interactive video media is at its best. In addition, future researches should consider developing further the current study by integrating it with any other type of cooperative learning approach or by adding variables that are associated with students' social and affective elements.

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