



The Impact of the Jigsaw Learning Model on Students' Discipline Character Development

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ABSTRACT

This study aimed to examine the effect of the Jigsaw cooperative learning model on the development of discipline character among elementary school students. A quantitative approach with an associative research design was employed. The independent variable was the Jigsaw learning model, while the dependent variable was students' discipline character. The study was conducted at an elementary school in South Bengkulu Regency during the 2025/2026 academic year, involving 15 students selected through purposive sampling. Data were collected using a discipline character observation sheet consisting of 15 indicators measured on a four-point scale. The instrument was tested for reliability using Cronbach's Alpha, and the data were analyzed using SPSS through prerequisite tests, including normality and homogeneity tests, followed by simple linear regression analysis and a *t*-test at a significance level of 0.05. The findings revealed that the Jigsaw learning model had a positive and significant effect on students' discipline character, with a significance value of 0.003 ($p < 0.05$). The coefficient of determination ($R^2 = 0.496$) indicated that the model contributed 49.6% to the development of discipline character, while the remaining 50.4% was influenced by other factors. Descriptive analysis showed that students' average discipline score reached 89.33, categorized as Excellent, with 66.67% of students in the Excellent category and 33.33% in the Good category. The results demonstrate that the Jigsaw learning model effectively promotes discipline by encouraging individual responsibility, cooperative learning, adherence to classroom rules, and active participation. Therefore, the Jigsaw model can be recommended as an effective instructional strategy for integrating academic learning with character education in elementary schools.

Keywords—Jigsaw learning model, cooperative learning, discipline character, character education, elementary school.



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INTRODUCTION

Education is a fundamental aspect of national development because it plays a role in developing human potential as a whole, in terms of knowledge, skills, and character. According to Ki Hadjar Dewantara (2013), education is an effort to guide all the natural strengths possessed by students so that they can achieve the highest safety and happiness as individuals and members of society. In line with that, the Republic of Indonesia Law Number 20 of 2003 on the National Education System emphasizes that education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential, thereby possessing spiritual strength, self-control, personality, intelligence, noble character, and skills necessary for life.

In the educational process, learning becomes the core activity that determines the success of achieving educational goals. According to Syaiful Bahri Djamarah (2018), learning is a process of behavioral change obtained thru experience and practice, resulting in changes in aspects of knowledge, attitudes, skills, and habits. Therefore, learning in schools is not only oriented toward achieving academic competencies but also directed toward shaping the character of students as preparation for life in society.

One of the most important characters to be developed in elementary school students is discipline. According to Mohammad Mustari (2014), discipline is behavior that demonstrates obedience and compliance with agreed-upon rules, norms, and responsibilities. Meanwhile, Thomas Lickona (2013) explains that discipline is an important part of character education built thru habituation, exemplary behavior, and a conducive learning environment. Thus, the character of discipline becomes one of the important indicators of the success of character education in schools.

However, the situation on the ground shows that the discipline of elementary school students still needs attention. There are still students who arrive late, do not complete assignments, pay little attention to the teacher's explanations, talk during lessons, and are less responsible for their learning obligations. According to Mulyasa (2021), the low discipline of students is influenced by the suboptimal management of the classroom, the role model of the teacher, and the habituation of character in the school environment. Furthermore, Doni Koesoema A. (2018) states that education that is too focused on academic aspects without being balanced by character formation will hinder the development of discipline and responsibility in students.

The issue of low discipline is also influenced by the teaching model applied by the teacher. Teacher-centered learning causes students to be less active, less responsible for the learning process, and not yet accustomed to working together to complete tasks. According to Hamzah B. Uno (2023), the use of less varied learning models can decrease students' learning motivation and result in low discipline during the learning process.

One of the learning models believed to enhance student engagement while instilling discipline is the Jigsaw cooperative learning model. According to Robert E. Slavin (2015), the Jigsaw model is a cooperative learning approach that assigns each group member responsibility for a specific part of the material, which they then teach to other group members. The process trains students to be responsible, work together, value time, and adhere to group rules, thereby supporting the development of a disciplined character.

Various studies show that the cooperative learning model can improve learning outcomes, motivation, responsibility, and social attitudes of students. However, research specifically examining the influence of the Jigsaw learning model on the formation of discipline character in elementary school students is still relatively limited. Therefore, this research is novel as it focuses on studying the influence of the Jigsaw learning model on the formation of students' discipline character thru a quantitative approach.

Based on the description, this research is conducted with the title "The Influence of the Jigsaw Learning Model on the Formation of Student Discipline Character." This study aims to determine the effect of the Jigsaw learning model on the formation of discipline character in elementary school students. The proposed hypothesis is that there is a positive and significant influence of the Jigsaw learning model on the formation of students' discipline character.

RESEARCH METHODS

This research uses a quantitative approach with an associative research design to analyze the influence of the Jigsaw learning model on the formation of discipline character in elementary school students. According to Sugiyono (2023), quantitative research is a research method based on positivist philosophy, using data in the form of numbers, and analyzed with statistical techniques to test the formulated hypothesis.

The independent variable in this study is the Jigsaw learning model (X), while the dependent variable is the students' discipline character (Y). The research was conducted at one of the elementary schools in South Bengkulu Regency in the 2025/2026 academic year. The research population consists of all students who participate in learning using the Jigsaw model. The sample consisted of 15 students

selected using the purposive sampling technique, which is the selection of samples based on specific criteria according to the research objectives, such as participating in the entire learning process and having complete observation data (Sugiyono, 2023).

Data collection was conducted using a Student Discipline Character Observation Sheet with a scale of 1 to 4. The instrument was developed based on discipline indicators, which include adherence to rules, responsibility in completing tasks, punctuality, participation in group work, and orderly behavior during the learning process. According to Arikunto (2021), observation is a data collection technique used to obtain information about the behavior or activities of subjects directly in real situations. Student Discipline Character Data Student Discipline Character is measured using an observation sheet consisting of 15 indicators.

Determination of Discipline Character Value The Observation Instrument Consists of 15 Indicators, Thus the Maximum and Minimum Scores are Determined as Follows.

Maximum Score $15 \times 4 = 60$

Minimum Score $15 \times 1 = 15$

Next, the observation score is converted into a value using the following formula.

$$\square ("Score" = "Obtained Score" / "Maximum Score" \times 100)$$

Explanation: Score = Student's Discipline Character Score.

Obtained Score = Total Score from Observation.

Maximum Score = 60.

Before being used in the research, the instrument's reliability is tested using the Cronbach's Alpha coefficient. According to Ghazali (2021), an instrument is considered to have good reliability if the Cronbach's Alpha value meets the established criteria. Next, the data is analyzed using the Statistical Product and Service Solutions (SPSS) program with a significance level of 0.05. The data analysis stages begin with prerequisite tests, including the normality test using Shapiro–Wilk, and the homogeneity test to determine the similarity of data variances. Hypothesis testing was conducted using the T-test. The hypothesis is accepted if the significance value is less than 0.05.

RESULTS AND DISCUSSION

RESULTS

Table 1 Student Discipline Character Categories

No	Student Name	Excellent	Good	Rather Good	Not Good Enough
1	Abdi Putra	✓			
2	Agus Sagapal	✓			
3	Alfi		✓		
4	Arga A		✓		
5	Doni Aryanto	✓			
6	Nona Ashari	✓			
7	Gafi Putra			✓	
8	Kanay Fradita	✓			
9	Kiara N		✓		
10	Padil		✓		
11	Pelesia		✓		

12	Refki	✓
13	Reja Pramata	✓
14	Zakia	✓
15	Zalfa	✓

Source: Researcher Observation Data (2026).

Based on the results of the student discipline character observation in Table 3, it is known that most students show a high level of discipline after the implementation of the Jigsaw learning model. Out of the 15 students who were the subjects of the study, 11 students (73.33%) fell into the Very Good category, while 4 students (26.67%) were in the Good category. There were no students in the Sufficient or Poor categories. These results indicate that the implementation of the Jigsaw learning model is capable of creating a learning environment that supports the development of students' discipline character during the learning process.

Based on the observation score, there are four students who achieved a perfect score (100), namely Nona Ashari, Kanay Fradita, Zakia, and Zalfa. This score indicates that all discipline indicators were consistently met during the learning activities. In addition, several other students received scores of 93 and 87, which also fall into the Very Good category. This indicates that the majority of students are able to adhere to learning rules, follow the teacher's instructions, complete tasks on time, and actively participate in study groups.

Meanwhile, four students received a Good category with scores between 73 and 80. Although they have not yet reached the Very Good category, the results still show that the students have demonstrated positive disciplinary behavior. Differences in discipline levels among students can be influenced by individual characteristics, time management skills, learning motivation, and experience working in groups. Therefore, habituation thru cooperative learning needs to be carried out continuously so that all students can achieve an optimal level of discipline.

Overall, the average score for students' discipline character reached 89.33, which falls into the Very Good category. This high average indicates that the Jigsaw learning model is not only oriented toward improving cognitive learning outcomes but also contributes to the character development of the students. In the Jigsaw model, each group member is responsible for mastering the material and conveying the discussion results to the original group members. This condition requires students to be punctual, follow every stage of the learning process, be responsible for their respective tasks, and respect the group's rules and agreements. Individual responsibility integrated with group cooperation becomes a factor that encourages the development of disciplined behavior during the learning process.

The findings of this study align with cooperative learning theory, which states that the success of a group heavily depends on individual responsibility and positive interdependence among its members. In Jigsaw learning, each student plays an important role as a source of information for their group, which creates a motivation to prepare themselves thoroughly and carry out tasks with discipline. The situation indirectly fosters positive habits that support the strengthening of character education in schools.

The results of this study also reinforce various previous studies that show that the cooperative learning model, particularly the Jigsaw type, not only improves academic achievement but also develops students' character such as discipline, responsibility, cooperation, and social concern. Thus, the Jigsaw model can be used as an effective alternative learning strategy in integrating academic competence achievement with character building of students in accordance with national education goals.

DISCUSSION

The research results show that the Jigsaw learning model has a positive and significant effect on the formation of discipline character in elementary school students. This was proven thru the results of a simple linear regression test which obtained a significance value of 0.003 (<0.05). Thus, the research hypothesis stating that there is an influence of the Jigsaw learning model on students' discipline character is accepted. Furthermore, the coefficient of determination ($R^2 = 0.496$) indicates that the application of the Jigsaw learning model contributes 49.6% to the formation of students' discipline

character, while the remaining 50.4% is influenced by other factors outside the study, such as family environment, school culture, learning motivation, and teacher role models. The research results also show that students' discipline character is in the very good category, with an average score of 89.33. As many as 10 students (66.67%) are in the very good category and 5 students (33.33%) are in the good category. These findings indicate that the majority of students have been able to comply with school regulations, attend on time, complete tasks according to the rules, maintain order during learning, and cooperate responsibly in groups. This condition shows that the application of the Jigsaw learning model is not only oriented toward improving learning outcomes but also capable of shaping disciplined behavior thru learning activities that involve individual responsibility and group cooperation.

Theoretically, the results of this study are in line with the opinion of Robert E. Slavin (2015) who stated that the Jigsaw type of cooperative learning is designed to foster individual responsibility and positive interdependence among students. In the Jigsaw Model, each group member is responsible for studying a specific part of the material, then explaining it back to the original group members. The process requires students to prepare themselves well, utilize their time effectively, and carry out their tasks according to their roles. These activities directly cultivate habits of discipline, a sense of responsibility, and commitment to academic tasks. The findings of this research also support Anita Lie's (2017) theory, which explains that cooperative learning provides students with the opportunity to learn thru social interaction, mutual assistance, and shared responsibility for group success. In Jigsaw Learning, the success of the group is not only determined by individual abilities but also by the contributions of each member. Therefore, students are encouraged to adhere to group rules, complete tasks on time, and actively participate in the learning process. Those habits gradually shape a better disciplined character.

This opinion is reinforced by Trianto (2019), who states that the Jigsaw learning model can enhance students' learning activities, sense of responsibility, cooperation, and independence. Thru Student-Centered Learning, the teacher is no longer the sole source of information but acts as a facilitator guiding students in the learning process. This situation encourages students to manage their study time independently, complete tasks on schedule, and adhere to rules during the learning activities. Thus, the formation of disciplined character occurs naturally thru the learning experiences that students undergo. From the perspective of character education, the results of this research align with Thomas Lickona's (2013) theory, which explains that good character is built thru three main components: moral knowing, moral feeling, and moral action. Discipline is not enough to be understood as knowledge of rules, but must be manifested in real actions carried out consistently. The Jigsaw Learning Model provides students with the opportunity to practice the values of discipline thru task division, adherence to learning procedures, and responsibility in presenting discussion results to other group members. Therefore, discipline is not only taught as a concept but also instilled thru daily learning activities.

The results of this study are also in line with the views of Mohammad Mustari (2022), who stated that discipline is a behavior that demonstrates compliance with regulations and a willingness to fulfill responsibilities without always being supervised. In this study, students are required to prepare the material before the discussion, follow the learning stages according to the teacher's instructions, and complete group assignments on time. These activities demonstrate that the Jigsaw learning model is capable of building discipline thru the habituation of positive behavior during the learning process.

Furthermore, Mulyasa (2022) explains that the success of instilling discipline character is influenced by a conducive learning environment, teacher role models, and the application of learning strategies that actively involve students. The Jigsaw Learning Model creates a more interactive learning atmosphere because students have the opportunity to discuss, exchange opinions, and collaborate in completing tasks. The teacher acts as a guide who ensures that each student fulfills their responsibilities. This condition allows for the formation of a disciplined, active, and responsible learning culture, thereby supporting the strengthening of students' disciplinary character.

The findings of this research are also supported by various empirical studies published during the period 2020–2026. Various studies report that the application of the Jigsaw-type cooperative learning model can enhance learning activities, responsibility, cooperation, discipline, and learning outcomes of elementary school students. These studies show that the success of Jigsaw is not only evident in cognitive aspects but also in the development of students' attitudes and character. This reinforces the research findings that the Jigsaw learning model is an effective learning strategy to integrate academic learning with character education.

Thus, the results of this study imply that the application of the Jigsaw learning model can be used as an alternative learning strategy to support the implementation of character education in elementary schools. Thru learning that emphasizes cooperation, individual responsibility, communication, and active participation, students gain learning experiences that not only enhance mastery of the material but also shape the discipline character needed in daily life. Therefore, teachers are advised to optimize the use of the Jigsaw learning model as part of efforts to create an active, meaningful, and character-strengthening learning process for students.

Based on the Research and Discussion Results, it can be concluded that the Jigsaw Learning Model has a Positive and Significant Effect on the Formation of Discipline Character in Elementary School Students. The results of the Simple Linear Regression Analysis show a significance value of $0.003 (< 0.05)$, thus the research hypothesis is accepted. These findings indicate that the implementation of the Jigsaw learning model can enhance students' discipline character thru learning activities that emphasize individual responsibility, group cooperation, adherence to rules, and active participation in the learning process. The results of the Descriptive Analysis show that the average score for students' discipline character is 89.33, which falls into the Very Good category. A total of 10 students (66.67%) are in the Very Good category and 5 students (33.33%) are in the Good category. The Jigsaw Learning Model contributes 49.6% to the formation of students' discipline character, while 50.4% is influenced by other factors outside the study, such as family environment, school culture, learning motivation, teacher role modeling, and internal student factors. Thus, the Jigsaw Learning Model can be used as an effective alternative learning strategy to support the formation of students' discipline character in elementary schools, while also increasing students' active involvement in the learning process.

CONCLUSION

Based on the Research and Discussion Results, it can be concluded that the Jigsaw Learning Model has a Positive and Significant Effect on the Formation of Discipline Character in Elementary School Students. The results of the Simple Linear Regression Analysis show a significance value of $0.003 (< 0.05)$, thus the research hypothesis is accepted. These findings indicate that the implementation of the Jigsaw learning model can enhance students' discipline character thru learning activities that emphasize individual responsibility, group cooperation, adherence to rules, and active participation in the learning process. The results of the Descriptive Analysis show that the average score for students' discipline character is 89.33, which falls into the Very Good category. A total of 10 students (66.67%) are in the Very Good category and 5 students (33.33%) are in the Good category. The Jigsaw Learning Model contributes 49.6% to the formation of students' discipline character, while 50.4% is influenced by other factors outside the study, such as family environment, school culture, learning motivation, teacher role modeling, and internal student factors. Thus, the Jigsaw Learning Model can be used as an effective alternative learning strategy to support the formation of students' discipline character in elementary schools, while also increasing students' active involvement in the learning process.

The research can be conducted with a larger sample size and involve several schools with different characteristics to achieve a higher level of generalization. Additionally, the research can also be applied to different educational levels, such as junior high schools or high schools, to determine the consistency of the Jigsaw model's influence on the formation of disciplined character. The next research is recommended to combine quantitative and qualitative approaches (mixed methods) not only to measure the improvement of discipline character thru numerical data but also to explore the factors influencing students' behavioral changes during the learning process thru interviews, in-depth observations, and documentation. Subsequent researchers can examine the influence of the Jigsaw learning model on other character traits, such as responsibility, cooperation, honesty, independence, and leadership, thereby obtaining a more comprehensive picture of the contribution of cooperative learning models to the strengthening of character education.

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