



The Effect of Cooperative Learning Model and Discipline on History Learning Achievement

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Abstract:

The study aims to ascertain three things: (1) the difference in learning achievement in history between students using the Jigsaw cooperative learning model and students using the Studen Teams Achievement Divisions (STAD) model; (2) the impact of high and low discipline on learning achievement; and (3) the possibility of an interaction between cooperative learning models and discipline on history learning achievement. This study employed experimental research as its research methodology. The 2023–2024 academic year saw the conducting of this study at SMAN 11 North Bengkulu and SMAN 13 North Bengkulu. The XI social studies classes made up the study's population. Two groups were chosen at random to serve as research samples: one was the treatment group, which I taught using Jigsaw-style instruction, and the other used Studen Teams Achievement Divisions (STAD) instruction. This study employed a 2x2 factorial ANOVA research design. The application of Jigsaw and Studen Teams Achievement Divisions (STAD) has an impact on student learning achievement. High and low discipline have an impact on history learning achievement. Cooperative learning models and discipline have an impact on history learning achievement. These are the study's findings.

Keywords: Discipline, Jigsaw Type Cooperative Model, Learning Achievement Student Teams Achievement Divisions (STAD)

1. INTRODUCTION

Education has the power to shape a country's future (Hakim & Darajat, 2023). As a result, everyone has a right to education and a necessity for education. Schools still teach history using a rigid, traditional curriculum most of the time (Wu et al., 2023). Static can refer to the fact that history professors have not made any modifications and have only sometimes used traditional teaching techniques, such as repeating and reading aloud from books.

The phenomenon of history education in Indonesia explains that, from elementary school through high school, the majority of history instruction uses historical facts as the primary source of knowledge, making the curriculum seem dull and uninteresting and depriving students of the chance to consider the significance of historical events (Kindenberg, 2024).

As stated by Nur'Alam & Timur (2024) that

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studying history in school helps shape the national character of the next generation by creating historical awareness, which in turn may ethically support students' nationalism.

The problem that is often faced is that history subjects are considered by some students to be unimportant because they only deal with the past. Even more ironically, history lessons are identical to learning to memorize the same events from past to present. Less interesting and less fun lessons learned by students can make them feel unhappy and easily bored. In order to assist students in achieving the best possible learning outcomes, teachers must be able to identify and design an engaging, creative, and active learning process.

Learning is essentially a process that students go through to obtain changes in behavior towards the better (Schweder & Raufelder, 2024). Learning may take many different forms, such as reading, listening, following directions, watching, thinking, enjoying, imitating, and receiving instruction.

Changes in behavior towards the better are valuable learning outcomes for students in the process of interacting with the people around them and the environment with knowledge making a person's personality elevated.

A person's learning accomplishment is the outcome of the interplay of several elements that affect it from the inside out (internal factors) and from the outside

in (external factors) (Sauder et al., 2024). To assist students in reaching the highest learning outcomes possible, it is critical to identify the elements that influence learning performance.

Learners' learning achievement is determined by the learners themselves with the influence of environmental factors (Novitasari, 2023). Learners as learners are subjects involved in the learning process. Because each individual is unique so that in the learning process there is also uniqueness. There are learners who are fast in learning, some are slow, some are creative. All of that happens because of the uniqueness of each individual.

In learning situations in education we cannot forget the process of learner development itself. Development is also experienced and lived by individual learners. Meanwhile, education is an interaction activity. In this activity, the educator acts to educate the learner. The act of educating is aimed at the development of learners to become independent. To be able to develop independently, learners must learn (Wijayanti & Waitaby, 2024).

Learning objectives are important for both the teacher and the learners themselves. In instructional design teachers formulate specific instructional objectives or learning targets for learners. The formulation is adjusted to the behavior that learners should be able to do.

According to Nur et al. (2024), discipline is an order that may control the dynamics in a group or personal setting. The order is not made by animals, but made by humans as makers and actors. In the meantime, the desire to follow instructions comes from the soul and leads to discipline.

Discipline consists of 2 (two) words, namely discipline and learning. A person with discipline learns to willingly follow a leader. Children are learners towards a more fulfilling and productive life, and parents or instructors serve as role models. A disciplined person means that behavior and decisions are made consciously and willingly, something that allows him to become himself as a person who obeys the applicable rules.

Based on the experience gained by researchers when conducting observations in class XI IPS, there are trends in the behavior of students in the classroom, namely, some students are busy playing, telling stories that are not related to learning and some are asleep while the teacher is explaining the material being studied, this is because they consider the

material less interesting. Furthermore, no students took the initiative to ask the teacher because students did not understand the material explained by the teacher and when the teacher asked, no one was able to answer because they tended to be afraid to answer. Such a learning process can cause learners not to be actively involved in learning activities. This can make students' learning discipline decrease towards learning history. Another problem that often arises is the use of learning models by teachers that are not appropriate. Teachers are less creative in teaching History lessons at school.

Therefore, it is necessary to seek a very appropriate learning strategy so that students can be more interested and enthusiastic in participating in learning. One of the strategies that can be applied is cooperative learning strategy, which is an innovation in learning. In order to promote effective, engaging, and enjoyable learning, an educator must thus become proficient in a variety of learning models and techniques. This will boost students' attention spans, foster a spirit of learning, and result in passing grades.

One of the group learning models with set guidelines is the cooperative learning model. The fundamental idea behind cooperative learning is that students work in small groups to help one another accomplish shared objectives (Hanapi & Kamal, 2024). By use of cooperative learning, students who possess some level of material mastery may impart knowledge to others who lack it without feeling at a disadvantage. Lackluster learners might study in a comfortable environment since they have lots of friends who support and encourage them.

Cooperative learning has several related elements. According to Keramati & Gillies (2024), The main components of cooperative learning are as follows: (a) positive interdependence; (b) in-person interaction; (c) individual accountability; and (d) intentionally taught interpersonal relationship-building or social skills (use of collaborative/social skills). With some of these elements must be owned and applied to cooperative learning.

The four elements above are of course very necessary to be applied in the cooperative learning method, we should not exaggerate one and the other. As a result of the cooperative learning approach's expectation that students respect their group members and friends from different groups, learning results will undoubtedly improve and student unity will prevail.

Then, there are several forms of cooperative learning; nevertheless, the future researcher selects Jigsaw and

STAD kinds as substitutes as the researcher believes these types may enhance students' academic performance and self-control.

A teacher's exam results often demonstrate a student's mastery of the information or abilities they have acquired in a topic, whereas learning achievement is characterized as (Negara et al., 2024). When viewed from the theory and information above, we can see that there are indications of the influence of discipline on learning achievement. And from the above opinion, if it is related to history learning, it means that teachers are required to develop historical awareness by using the Jigsaw and STAD type cooperative learning models.

2. MATERIAL AND METHOD

In this study, the places used were SMA Negeri 11 North Bengkulu and SMA Negeri 13 North Bengkulu. The implementation time was carried out in the even semester of the 2023/2024 academic year from January to February 2024.

This research method uses experimental methods with factorial design. Pupulation in this study were all students of grade 11 social studies SMAN 11 and SMAN 13 North Bengkulu, namely grade 11 social studies 1 amounted to 28 people, grade 11 social studies 2 amounted to 29 people, grade 11 social studies 3 amounted to 30 people, and grade 11 social studies 4 amounted to 28 people with a total population of 115 people.

The data collected were learning achievement data and student discipline. Data analysis is done through prerequisite analysis tests such as normality test, homogeneity test and finally hypothesis testing.

3. RESULT AND DISCUSSION

3.1 Result

a. Hypothesis 1

Differences in learning achievement between Jigsaw and Student Teams Achievement Divisions (STAD) cooperative learning models.

Table 1. Test Results of Differences in Learning Achievement between Jigsaw and STAD Learning Models

Dependent Variable: Achievements				
Model	Class	Mean	Std. Deviation	N
Jigsaw	High Grade	93.00	2.878	8
	Low Grade	80.50	1.690	8
	Total	86.75	6.846	16
STAD	High Grade	94.63	3.335	8
	Low Grade	82.00	2.673	8
	Total	88.31	7.143	16
Total	High Grade	93.81	3.124	16
	Low Grade	81.25	2.295	16
	Total	87.53	6.928	32

Based on the results of the two-way Anava calculation above, it can be stated that overall the History learning achievement of students who learn with the Jigsaw type cooperative learning model is lower than the History learning achievement of students who learn using the Student Teams Achievement Divisions (STAD) type learning model. From the calculation results The average score for group A1 is 93.00, while A2 is 94.63 or $A1 < A2$. This means that the cooperative learning model of Student Teams Achievement Divisions (STAD) type gives a higher effect than the History learning achievement of students who learn with the Jigsaw type cooperative learning model.

The results of the two-way Anava calculation show that the value of F_{count} is 0.948 while F_{table} at α significant level $\alpha = 0.05$ is 2.95 ($F_{count} > F_{table}$), so H_0 is rejected and H_a is accepted which means there is a significant difference in learning outcomes between the Jigsaw and Student Teams Achievement Divisions (STAD) learning models.

b. Hypothesis 2

Differences in learning achievement between high discipline and low discipline.

Table 2: Results of Analysis of Variance Description of Two-Way ANOVA Test

Dependent Variable: Discipline				
95% Confidence Interval				
Class	Mean	Std. Error	Lower Bound	Upper Bound
High	70.500	.408	69.663	71.337
Low	62.750	.408	61.913	63.587

To test the hypothesis that there is a significant influence between high discipline and low discipline on history learning achievement, based on the calculation, the average score for group B1 is 70.500, while B2 is 62.750 or $B1 < B2$. This means that high discipline and low discipline have an influence on learning achievement.

Based on the two-way analysis of variance obtained $F_{count} = 2.294$ and significant 0.01. The results of these calculations were consulted with the F_{table} with $df_1 = 3$ and $df_2 = 28$ and a significant level of 0.05 obtained

$F_{table} = 2.95$. because $F_{count} < F_{table}$ or $2.294 < 2.95$ with α significant level of 0.01, so H_0 is accepted and H_a is rejected and it can be said that there is an influence between high discipline and low discipline on student achievement.

c. Hypothesis 3

There is an interaction between the use of cooperative learning model and discipline on learning achievement.

Table 3. Results of Analysis of Variance Description of Two-Way ANOVA Test

F	df ₁	df ₂	Sig.
6.352	8	10	.006

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

- a. Dependent variable: Perfomance
- b. Design: Intercept + Discipline + Model + Discipline * Model

To test the hypothesis that there is an interaction between cooperative learning models and discipline on history learning achievement, based on the calculation of two-way analysis of variance obtained $F_{count} = 6.352$ and significant .006. The results of these calculations were consulted with the F_{table} with $df_1 =$

8 and $df_2 = 10$ and a significant level of 0.05 obtained $F_{table} = 3.07$. because $F_{count} > F_{table}$ or $6.352 > 3.07$ with a significant level of .006, so H_0 is rejected and H_a is accepted and it can be said that there is an interaction between the cooperative model and discipline on student learning achievement.

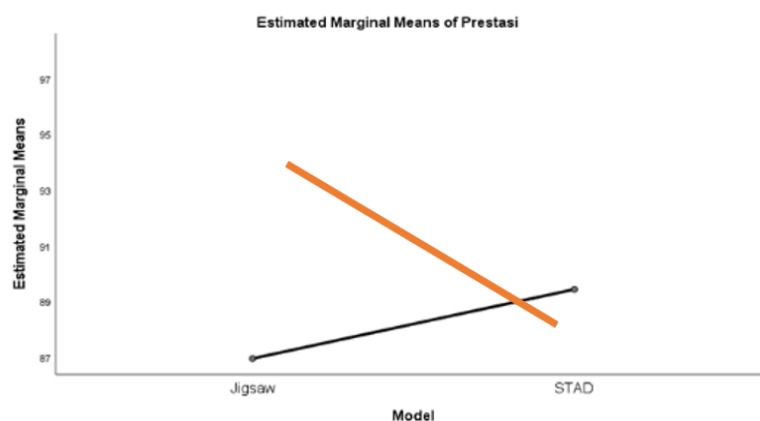


Figure 1. Interaction of Learning Model and Discipline

In Figure 1. the diagram above shows a line cut, so it is suspected that there is an interaction between the two cooperative models and discipline on learning achievement.

d. Hypothesis 4

There is a difference in achievement between high Jigsaw group students and high STAD group students.

Table 4. Description Results of Mean Values of High Group

		Group Statistics				
		Group	N	Mean	Std. Deviation	Std. Error Mean
Result	Jigsaw		8	93.000	2.8785	1.0177
	STAD		8	94.625	3.3354	1.1792

Table 4. shows that the mean or average of each group, namely in the Jigsaw group, the value is 93.000 which is lower than the STAD group with a value of 94.625. By comparing between t_{count} and t_{tabel} in the independent T test results, the Sig value is 0.315 which is > 0.05 , it can be concluded that there is a statistically meaningful or significant difference in the high jigsaw type group and the high STAD type

group. So that learning history with high discipline is more suitable for STAD type.

e. Hypothesis 5

There is a difference in achievement between students in low Jigsaw group and low STAD group.

Table 5. Description Results of Mean Value of Low Group

		Group Statistics				
		Group	N	Mean	Std. Deviation	Std. Error Mean
Learning Outcomes	Jigsaw		8	80.500	1.6903	.5976
	STAD		8	82.000	2.6726	.9449

Table 5. above explains that the mean or average of each group is 80.500 is the value in the low jigsaw group and the highest value in the STAD group is 82.000. While the value of the independent test results obtained a Sig value of 0.201 which is $>$ significant in the low jigsaw type group and the low STAD type group.

mentor and evaluate their group members to help them perform well on the test.

3.2 Discussion

a. The results of testing the first hypothesis

It demonstrates the distinction between learning through the Student Teams Achievement Divisions (STAD) cooperative model and the Jigsaw cooperative approach. Both learning models are essentially learner-centered learning models. Learners have a big role and responsibility in learning. The cooperative learning model focuses on group work of learners in small groups and working together with positive interdependence and independent responsibility. Therefore, the success of the group depends on each individual learner.

Instead of providing instructors with a full teaching methodology for a certain topic, Student Teams Achievement Divisions (STAD) is a genetic form of classroom organization wherein teachers utilize their own courses and resources. Most school disciplines come with task papers and tests for students, but most teachers augment these materials with their own resources.

The learning paradigm known as Student Teams Achievement Divisions (STAD) encourages students to support and assist one another in mastering the skills that the instructor is teaching. Students collaborate in pairs, exchanging answers, talking about differences, and supporting one another. In addition, they talk about different strategies for handling the issue and have the option of asking one another questions on the subject matter they are studying. Since the group score is dependent on the improvement students make on prior scores, they

Whereas the Jigsaw-type learning model requires each learner to be responsible for the completion of the part of the lesson that must be learned and to convey the material to other group members. Essentially, the instructor breaks down huge informational units into smaller components when using the Jigsaw learning methodology. Students in each group who are in charge of the same subtopic combine to form another group of two or three.

The downside of the Jigsaw learning model is peer learning, this will be an obstacle due to perceptions in understanding a concept with other participants. In this case, supervision by the teacher is still needed. Another drawback is that learning typically starts out hard to manage since it takes a lot of time and careful planning.

b. Second hypothesis testing results

Following the two-way Anava test analysis of the study data, it was determined to reject H_0 and accept H_a . This shows that students' learning achievement affects discipline. Learners who have high discipline

affect high learning outcomes as well, otherwise low discipline also affects low learning outcomes.

The history learning achievement of students who have high discipline gets a greater average score than students who have low discipline. This is the consequence of the participant's personal attributes, such as intellect, talent, and enthusiasm in learning, all of which have an impact on how learning is implemented and ultimately effect the learning results.

The drop in learning outcomes or academic achievement is indicative of an issue with other kids' learning discipline. External variables—that is, elements from the outside world—have an impact on these issues. Examples of external influences include neighborhood conditions, school policies, and family customs.

Qulub & Puspitasari (2024) suggests that indicators of student learning discipline are getting used to being present on time and getting used to obeying the rules. Meanwhile, according to Dukalang & Sudirman (2024) indicators of student learning discipline are managing time at home, diligent and organized learning, attentive and good when studying in class, and self-order when studying in class.

Student learning discipline in the learning process is very important because learning is not only transferring knowledge from teachers to students but also creating situations that can bring students who are actively learning to achieve the goal of changing their behavior. Learners who have learning discipline will always learn without being forced by anyone and always do learning tasks quickly and accurately.

It can be concluded that high discipline and low discipline in learning are all activities that are physical and non-physical in the process of optimal teaching and learning activities so that they can create a conducive classroom atmosphere and affect learning achievement.

c. Third hypothesis testing results

The results of research data analysis including two-way anova test were decided to reject and accept H1. This shows that there is an interaction between the cooperative learning model type Jigsaw and Student Teams Achievement Divisions (STAD) with Discipline on students' learning achievement in History subjects. The results of anova testing obtained at a significant level $\alpha = 0.05$, the results show that $F_{\text{count}} > F_{\text{table}}$ so that there is an interaction

between the use of cooperative learning models and discipline in influencing students' learning achievement in History subjects.

According to Kartini & Ahmadi (2024) interaction in this case is the cooperation of two or more independent variables in influencing a dependent variable. Interaction occurs if independent variables have different effects on a dependent variable at various levels of another independent variable. Thus, it can be interpreted that the effect of each cooperative learning model, both Jigsaw type and Student Teams Achievement Divisions (STAD) type, is closely related to student discipline on learning achievement.

In learning, there are two main factors that influence the achievement of students' learning achievement, namely the quality of learning and the characteristics of students. The quality of learning is an external factor that affects learning, including strategies, methods, media, teaching materials and so on. Learner characteristics are internal factors including learning activeness, learning motivation, learning interest, thinking style, and activeness. Thus, the two factors cannot be ignored because they interact with each other.

The relationship between cooperative learning models and students' discipline in learning is something that needs to be considered, because to improve learning outcomes, it must be adjusted to the characteristics of students.

d. The results of testing the fourth hypothesis

It shows that there is a difference between the history learning achievement of students who have high scores with the jigsaw and STAD type cooperative learning models. This is shown based on the results of research that shows the mean or average value of each group. The high Jigsaw group with the mean value is 93 while the mean value of the high STAD group is 94.

The weakness of this high jigsaw type group is that it takes a long time, so that students do not want to be put together with their less intelligent friends when they themselves are smart and the less intelligent also feel inferior when combined with their smart friends, although over time the feeling will disappear by itself.

e. Fifth hypothesis testing results

The results of the research conducted showed that there were differences between the low Jigsaw group and the low STAD group, with the average value of

each group being 80 for the low Jigsaw group where the value was lower than the low STAD group with a value of 82. The difference was significant. So that learning history with low grades is also suitable for applying the STAD type cooperative learning model in classes that have low discipline as well.

According to Slavin, the advantages of the STAD learning model are that each learner has the opportunity to make a substantial contribution to the group and the position of the group members. Beating interaction actively and positively so that the form of cooperation of each group member becomes better. Helps learners to gain friendships across race, ethnicity, religion, gender, academic abilities that are more numerous and diverse

4. CONCLUSION

The conclusion obtained is:

- a) Learning achievement of students who studied with Jigsaw and Student Teams Achievement Devisions (STAD) cooperative learning models.
- b) There is a difference in learning achievement between students who have high discipline and students who have low discipline.
- c) There is an interaction between cooperative learning model and discipline on learning achievement.
- d) There is a difference in learning achievement between students who have high discipline who learn with Jigsaw and Student Teams Achievement Devisions (STAD) cooperative learning models.
- e) There is a difference in the learning achievement of students who have low discipline who study with Jigsaw and Student Teams Achievement Devisions (STAD) cooperative learning models.

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