The effectiveness of the stad model with tgt to improve learning outcomes and attitudes on global diversity in primary schools

Salma Anisa a1,*, Endang Indarini b2

a b Satya Wacana Christian University, Central Java, Indonesia
1 2 92020153@student.uksw.edu; 2 endang.indarini@uksw.edu
*Correspondent Author

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KEYWORDS
STAD; TGT; Learning Outcomes; Global Diversity Attitude.

ABSTRAK
This type of research is a quasi-experiment. This study aims to analyze the steps of the STAD model, analyze the steps of the TGT model and the main objective is to prove the level of effectiveness between the STAD and TGT models in improving learning outcomes and global diversity attitudes in elementary schools. The results of the research on learning outcomes, namely t-scores, showed results of 3.094 > 2.049. From the results of the t-test, it is known that the sig value (2-tailed) is 0.004, (0.004 < 0.05). Then the results of the attitude of global diversity obtained t-counts, t-table which is 2.785 > 2.049. From the results of the t-test, it is known that the sig value (2-tailed) is 0.009, (0.009 < 0.05). The average value of post-test learning outcomes in the experimental group using the STAD model was 79.20, while in the control group using the TGT model was 86.89. Additionally, the average score of the global diversity attitude questionnaire assessment in the experimental group was 38.17, whereas in the control group, it was 43.28. Therefore, the TGT model proves to be more effective in enhancing both learning outcomes and global diversity attitudes in elementary schools.

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Introduction

Education plays an important role in shaping individual attitudes and behavior. Education includes Pancasila character values in every curriculum used in Indonesia, one of which is the Merdeka curriculum through a character education program called Pancasila Student Profile (Safitri et al., 2022). One form of implementing the Pancasila Student Profile is the application of the spirit of global diversity. Global diversity is in accordance with the characteristics of Indonesian society which has a pluralistic scope. Global diversity is an attitude of respect for diversity and tolerance for existing differences (Istianah et al., 2021). Guidance and direction are very necessary to create students who understand diversity, respect and preserve every culture and are open to global cultural developments (Ghozali, 2020).

Diversity is a condition of society with different ethnicities, religions, races and differences between groups (Yanty et al., 2019). However, the tendency of a pluralistic nation can make the nation vulnerable to conflict. Schools are not the only place for developing moral education, but this is a fundamental role in school education (Villanueva et al., 2018). The educational process in developing character taught by a teacher is found in all subjects, including the Pancasila Education subject.

Pancasila education is a subject that must be taught in the world of education from primary education to tertiary education. Pancasila education is considered appropriate in
instilling and passing on character that is in accordance with the guidelines of every Indonesian citizen, namely Pancasila (Sevtieny et al., 2023). Learning outcomes are measurements of mastery of material and aspects of behavior that can be measured through test and non-test techniques (Primandari et al., 2019). Student learning outcomes need to be considered because they will have an impact on the attitudes that emerge in each individual/student. Therefore, learning outcomes play an important role in the success of a learning process (Felianti et al., 2022). In the Pancasila Education subject there is diversity material with a focus on cultural diversity which is taught in class IV elementary school.

Cultural diversity material needs to be taught to elementary school students so that the character of love for the country emerges through implementing an attitude of global diversity (Sevtieny et al., 2023).

Education in Indonesia is considered to only focus on forming intellectuals, without paying attention to morals (Raharjo, 2020). The problems that occur can be seen from data released by the Program for International Students Assessment (PISA) in 2022, Indonesia, it was recorded that 25% of girls and 30% of boys were victims of bullying. Around 4% of students reported feeling unsafe when traveling to school, 6% of students felt unsafe in their classrooms, 17% felt unsafe in their surrounding environment. Apart from that, students also experience bullying such as spreading bad rumors about their friends. Judging from the percentage size, Indonesia is ranked 76th out of 81 countries whose students experience bullying in their environment (PISA 2022 Results, 2022).

The Child Protection Commission (KPAI) from January to April 2019 showed that there were 25 cases of bullying or around 67% (Sabanil et al., 2022). KPAI also revealed that on February 13 2023 there was an increase in the number of cases of 1,138 and in fact the majority of cases were dominated by elementary school students. Apart from that, based on the results of observations and interviews with several teachers in the Bangau cluster, Tuntang District, Semarang Regency, the average achievement of character abilities only reached 40%, which means that more than 50% of students have not reached the minimum competency. Problems arise because teachers still use teaching models that are less effective in improving the character of global diversity. Teaching is still centered on the teacher while teachers pay less attention to students’ attitudes when learning, in other words students still tend to choose their friends. Thus, it can be seen how bad the level of learning success is in character strengthening which is implemented in schools with teachers and parents at home and in the community (Sujatmiko et al., 2019).

In developing an attitude of global diversity, effective learning is needed by implementing cooperation between students. Cooperative learning is more effective compared to ordinary learning, because in the cooperative learning process students will be able to develop a deeper understanding of the material through an active and constructivist process (Rawas et al., 2019). Several cooperative learning models that can improve learning outcomes and the character of a global diversity attitude are the cooperative model of the Student Teams Achievement Division (STAD) type and the Team Game Tournament (TGT) type. STAD is a cooperative model that involves students in small, heterogeneous groups so that it can stimulate students to participate in discussions and work together and help each other master the learning material (Anisensia et al., 2020). TGT is a type of cooperative learning model that involves groups, which includes games/tournaments (Azizah et al., 2021).

Doubts regarding the level of effectiveness between the STAD and TGT cooperative models are shown in previous research which favors the effectiveness of one model. As in research Khuzairi (2023) which results that the STAD model can have an influence and can improve learning outcomes and positive attitudes of students based on the results of the pared sample T-Test (0.00 < 0.05). However, research Primandari et al., (2019) results that the TGT cooperative model is more effective in improving learning outcomes and student attitudes. The research results are confirmed with a significance value of 0.040 <0.05, so H0 is rejected and Ha is accepted and the sig (2-tailed) social attitude value = 0.003 <0.05, so Ho is rejected and Ha is accepted.
Based on the problems that arise, especially the application of learning, it is necessary to understand the steps of the STAD cooperative model and the TGT cooperative model. Apart from that, the discovery of previous research results regarding the STAD and TGT cooperative models with different results raises doubts about the level of effectiveness of the STAD and TGT cooperative models in improving learning outcomes and attitudes towards global diversity. So the researchers conducted research with the title "Effectiveness of the STAD Model with TGT to Improve Learning Outcomes and Global Diversity Attitudes in Elementary Schools".

**Method**

The type of research that will be used in this research is quasi-experimental or quasi-experimental research. According to Hastjarjo (2019) A quasi-experiment is a type of experiment that uses small unit assignments and has a control group. Thus, quasi-experiment is a type of research that is close to a true experiment, but cannot control all the variables in it. The experimental research design used is a Nonequivalent Control Group Design because it is in accordance with the research to be carried out, namely comparing two sample classes, one experimental class and one control class with different initial conditions. In the control class the learning will use the TGT model, while in the experimental class the learning will be carried out using the STAD model.

In this study, the population at Gugus Bangau Elementary School, located in Tuntang District, Semarang Regency, was selected. The samples from this research were class IVA students at SD Negeri Candirejo as the experimental class and class IV students at SD Negeri Jombor as the control class. The instruments used to measure are in the form of description tests and questionnaires. The test instrument is in the form of pretest and posttest questions to obtain data on student learning outcomes and the questionnaire instrument is in the form of self-assessment to obtain data measuring students' global diversity attitudes. Before the test is used to collect data, validity and reliability tests are required. The technique for determining the effectiveness of the applied model uses data analysis in the form of descriptive data analysis and inferential data analysis. To find out differences in effectiveness, further analysis is needed, namely using prerequisite tests and hypothesis tests (difference tests/t-tests) as well as descriptive analysis.

**Results and Discussion**

1. **Research Results**

   The data to be analyzed is the pretest and posttest data as well as data obtained from the questionnaire. The results of the pretest and posttest of learning Pancasila Education by applying the STAD and TGT models to the level of learning outcomes will be presented in the following table:

   **Table 1. Comparison of Learning Outcome Levels in the Experimental Group and Control Group**

<table>
<thead>
<tr>
<th>Measurement Stage</th>
<th>Average Score (Mean)</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Experiment</td>
<td>Control</td>
</tr>
<tr>
<td>Pretest</td>
<td>63,50</td>
<td>64,10</td>
</tr>
<tr>
<td>Posttest</td>
<td>79,20</td>
<td>86,89</td>
</tr>
</tbody>
</table>

   Based on table 1, there is a difference in the pretest score, namely 0.6, which shows that the control group is superior. Then in the posttest session the difference in average score was 7.69. The control group was also higher than the experimental group.

   Then the results of the attitudes carried out by students in the experimental group and the control group were also different. The average score in the experimental group was 38.17 and the average score in the control group was 43.28. Between the two groups, the
control group appeared to be superior in the assessment. The following is a comparative picture of the results of global diversity attitudes:

![Global Diversity Attitude Score](image)

**Figure 1. Comparison of Global Diversity Attitude Results**

The results of the pretest normality test for the experimental group and control group can be seen in the following table:

**Table 2. Normality test of Pretest One-Sample Kolmogorov-Smirnov Test data**

<table>
<thead>
<tr>
<th>Tests of Normality</th>
<th>Kolmogorov-Smirnov Statistic</th>
<th>Kolmogorov-Smirnov df</th>
<th>Kolmogorov-Smirnov Sig.</th>
<th>Shapiro-Wilk Statistic</th>
<th>Shapiro-Wilk df</th>
<th>Shapiro-Wilk Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student learning outcomes</td>
<td>PreTest Experiment</td>
<td>,119</td>
<td>17</td>
<td>,200*</td>
<td>,962</td>
<td>17</td>
</tr>
<tr>
<td>Control PreTest</td>
<td>,126</td>
<td>14</td>
<td>,200*</td>
<td>,946</td>
<td>14</td>
<td>,505</td>
</tr>
</tbody>
</table>

* This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Based on table 2, it shows that the significance value in the experimental group is 0.200>0.05, which means the data is normal. Then the significance value in the control group was 0.200>0.05. Thus it can be said that the data is normal. Then the results of the normality test on the posttest can be seen in the following table:

**Table 3. Posttest Data Normality Test One-Sample Kolmogorov-Smirnov Test**

<table>
<thead>
<tr>
<th>Tests of Normality</th>
<th>Kolmogorov-Smirnov Statistic</th>
<th>Kolmogorov-Smirnov df</th>
<th>Kolmogorov-Smirnov Sig.</th>
<th>Shapiro-Wilk Statistic</th>
<th>Shapiro-Wilk df</th>
<th>Shapiro-Wilk Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student learning outcomes</td>
<td>Post-Test Experiment</td>
<td>,139</td>
<td>17</td>
<td>,200*</td>
<td>,933</td>
<td>17</td>
</tr>
<tr>
<td>Control PostTest</td>
<td>,159</td>
<td>14</td>
<td>,200*</td>
<td>,927</td>
<td>14</td>
<td>,274</td>
</tr>
</tbody>
</table>

* This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Based on table 3, it shows that the significance value in the experimental group is 0.200>0.05, which means the data is normal. Then the significance value in the control group...
is 0.200>0.05 so it can be concluded that the data is normal. After the data has been tested for normality, it is necessary to carry out a pretest and posttest homogeneity test. The results of the pretest homogeneity test can be seen in the following table:

**Table 4. Pretest Homogeneity Test for Experimental Group and Control Group**

<table>
<thead>
<tr>
<th>Tests of Homogeneity of Variances</th>
<th>Levene Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student learning outcomes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Based on Mean</td>
<td>1,193</td>
<td>1</td>
<td>29</td>
<td>.284</td>
</tr>
<tr>
<td>Based on Median</td>
<td>1,015</td>
<td>1</td>
<td>29</td>
<td>.322</td>
</tr>
<tr>
<td>Based on Median and with adjusted df</td>
<td>1,015</td>
<td>1</td>
<td>26,61</td>
<td>.323</td>
</tr>
<tr>
<td>Based on trimmed mean</td>
<td>1,193</td>
<td>1</td>
<td>29</td>
<td>.284</td>
</tr>
</tbody>
</table>

From table 4, the pretest homogeneity test between the experimental group and the control group shows a significance value of 0.284. It can be concluded that the pretest value data for the experimental group and the control group have the same or homogeneous variance, because the probability value for the population data is 0.284>0.05. Furthermore, the results of the posttest homogeneity test can be seen in the following table:

**Table 5. Posttest Homogeneity Test for Experimental Group and Control Group**

<table>
<thead>
<tr>
<th>Tests of Homogeneity of Variances</th>
<th>Levene Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student learning outcomes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Based on Mean</td>
<td>.383</td>
<td>1</td>
<td>29</td>
<td>.541</td>
</tr>
<tr>
<td>Based on Median</td>
<td>.373</td>
<td>1</td>
<td>29</td>
<td>.546</td>
</tr>
<tr>
<td>Based on Median and with adjusted df</td>
<td>.373</td>
<td>1</td>
<td>26,77</td>
<td>.547</td>
</tr>
<tr>
<td>Based on trimmed mean</td>
<td>.374</td>
<td>1</td>
<td>29</td>
<td>.546</td>
</tr>
</tbody>
</table>

Based on table 5, the posttest homogeneity test for the experimental group and the control group shows that the significance value is 0.541. Thus, the posttest value data for the experimental group and the control group have balanced or homogeneous variants, because there is a population probability value of 0.541>0.05.

The next step is a difference test (t-test) on the posttest results and global diversity attitude scores using the Independent Sample T-test. The results of the posttest mean difference test and the mean difference in global diversity attitude scores can be seen in the following table.

**Table 6. Difference Test (t-test)**

<table>
<thead>
<tr>
<th>Independent Samples Test</th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The test results on learning outcomes, namely \( t \) count > \( t \) table, show results of 3.094 > 2.049. From the results of the difference test (t-test), it is known that the sig (2-tailed) value is 0.004 < 0.05. Then, in the results of global diversity attitudes, \( t \) count > \( t \) table shows results of 2.785 > 2.049. From the results of the difference test (t-test), it is known that the sig (2-tailed) value is 0.009 < 0.05. The t-test calculation can be concluded that Ho which states there is no significant difference between the STAD model and the TGT model on learning outcomes and attitudes towards global diversity in elementary schools is rejected, then Ha which states there is a significant difference in the application of the STAD and TGT models on learning outcomes and an attitude of global diversity in elementary schools is accepted. This shows that there is a significant difference between the application of the STAD and TGT models in improving learning outcomes and attitudes towards global diversity in elementary schools.

2. Discussion

This research was carried out in class IV elementary school by dividing the research group into two, namely the experimental group using the Student Teams Achievement Division (STAD) cooperative model and the control group using the Team Game Tournament (TGT) cooperative model. Research to prove the effectiveness of the STAD and TGT cooperative models to improve learning outcomes and attitudes towards global diversity material in elementary schools has been carried out in the experimental group and the control group. Through initial activities analyzing the steps for implementing the STAD cooperative model as an experimental class and analyzing the steps for implementing the TGT cooperative model as a control class.

Learning activities are carried out by applying the STAD model with steps (syntax), starting from class presentations, teams/groups, quizzes, scoring, team recognition. In the learning observation process, teacher activity was obtained as much as 95.23% and the percentage of student activity was 95%. In observing the learning process, a percentage of 100% was not obtained due to the obstacle of lack of time. Apart from that, when learning, it was also found that students who had a lower level of understanding contributed less. The shortcomings that are visible when the learning process is in accordance with the opinions expressed by Amelia et al., (2022) that the application of the STAD cooperative model will make students who have a poor level of understanding make less contributions when in groups. Apart from the obstacles and shortcomings, advantages were also found in the process of implementing the STAD model, namely when students' learning implemented...
collaboration between friends, apart from that, students were also actively involved, which was visible during the discussion process and during the question and answer session. These advantages are in accordance with opinion Wulandari (2022) which states that implementing the STAD cooperative model will stimulate students to be active and provide encouragement to collaborate with each other.

After analyzing and implementing the STAD model, learning activities carried out using the TGT model need to be adjusted to the steps (syntax), starting from class presentation, teams, games, tournaments, group awards. In the learning observation process, teacher activity was obtained at 95.45% and observation of student activity was 95.23%. In observing the learning process, a 100% percentage was not obtained due to lack of time. Apart from that, when implementing the TGT cooperative model, the learning process also found advantages and disadvantages in implementing the TGT cooperative model. When learning, students look very enthusiastic about games, apart from that, students are also active when asking questions and answering questions or when playing competitions between groups, and in group activities, students can respect each other’s opinions. This is in accordance with opinion Lubis (2018) that the TGT cooperative model has advantages in directing students to actively participate in learning, through games it increases students' interest in learning so that students are motivated to understand and study seriously regarding the material. The advantages of the TGT cooperative model were also conveyed by Haryana & Indarini (2022) namely, it can make students more enthusiastic in participating in learning by giving awards to the best groups, all students can participate actively, and increase student learning motivation. However, to implement the TGT cooperative model, teachers require quite a bit of preparation time. Lubis (2018) also believes that the implementation of TGT requires more time to prepare.

This research also aims to prove the difference in the effectiveness of the STAD and TGT type cooperative models to improve learning outcomes and attitudes towards global diversity in elementary schools. To prove the effectiveness of the two models, tests are needed before and after treatment with the STAD and TGT cooperative models as well as a questionnaire in the form of self-assessment to obtain attitude data. Previous question test instruments need to go through validity and reliability tests. The instrument validity test is used to determine the level of validity of the test questions, while the reliability test is used to identify whether the questions are reliable or can be used several times to measure the same object. After carrying out validity and reliability tests, 10 valid and reliable questions were obtained. Data collection using 10 descriptive questions was carried out before implementing the model (pretest) and after implementing the model (posttest), meanwhile administering a questionnaire in the form of self-assessment was carried out on the sidelines of learning activities. After data collection, the average posttest value was 79.20 when applying the STAD model. Meanwhile, the TGT model obtained an average posttest score of 86.89. Then, when administering the questionnaire when applying the STAD model, an average score of 38.17 was obtained, while when applying the TGT model, an average score was obtained at 43.28. Up to this stage, it appears that the TGT model is superior in improving learning outcomes and attitudes towards global diversity. However, to prove the difference in effectiveness requires further analysis, namely using prerequisite tests and hypothesis tests (difference tests/t-tests) as well as descriptive analysis.

Prerequisite tests, namely normality test and homogeneity test. The pretest normality test for the experimental group and the control group using the Kolmogorov-Smirnov test showed the same significance value, namely 0.200>0.05, which means normal distribution. Santoso (2010, p. 46) believes that if the significance figure is >0.05 then the data is normally distributed. Conversely, if the significance number is <0.05, the data is not normally distributed. In the pretest and posttest normality tests, the data from both groups was found to be normally distributed with a significance value in the experimental group and control group of 0.200, which means normal distribution. After the normality test was carried out, the homogeneity test was carried out. Data is declared homogeneous if the probability value is >0.05 and is not said to be homogeneous if the probability value is <0.05 (Dewi & Wardani,
According to Gani & Amalia (2015, p. 39) calculating the statistical hypothesis t-test is formulated as follows: 1.) >0.05 then H0 is accepted, namely there is no difference in effectiveness between the STAD and TGT models for improving learning outcomes and attitudes towards global diversity in Elementary School. 2.) <0.05 then Hα is accepted, namely that there is a difference in effectiveness between the STAD and TGT models for improving learning outcomes and attitudes towards global diversity in elementary schools. Based on the results of research conducted, namely on learning outcomes, namely t count>t table shows results of 3.094>2.049. From the results of the difference test (t-test), it is known that the sig (2-tailed) value is 0.004 <0.05. Then, in the results of global diversity attitudes, t count>t table shows results of 2.785>2.049. From the results of the different test (t-test) it is known that the sig (2-tailed) value is 0.009 <0.05. This research is supported by research Primandari et al., (2019) which results from the independent sample T-test showing the sig (2-tailed) value of learning outcomes between TGT and STAD = 0.040 <0.05, so H0 is rejected and Ha is accepted and the sig (2-tailed) value of social attitudes = 0.003 < 0.05, so Ho is rejected and Ha is accepted. So the hypothesis that has been formulated, namely Ho, which states that there is no difference in effectiveness between the STAD type cooperative model and the TGT type cooperative model for improving learning outcomes and attitudes towards global diversity in elementary schools, is rejected. Meanwhile, Ha stated that there is a difference in effectiveness between the STAD type cooperative model and the TGT type cooperative model which is accepted for improving learning outcomes and attitudes towards global diversity in elementary schools.

The results of the analysis, apart from using normality, homogeneity and difference tests, can be seen from the results of the posttest descriptive analysis between the experimental group and the control group. The average posttest learning results showed a difference in the experimental group of 79.20, while in the control group the average was 86.89. Apart from that, the average assessment score on the questionnaire showed a difference in the experimental group, 38.17 while the control group was 43.28. Thus, the TGT model applied to the control group is more effective in improving learning outcomes and attitudes towards global diversity in elementary schools than learning using the STAD model. In line with research Primandari et al., (2019) which results in the TGT model being more effective in improving student learning outcomes and attitudes. Obtaining a level of effectiveness can provide benefits to the surrounding environment, especially the education sector, for example, teachers can be an alternative in selecting learning models and for school principals it can be used as material for educational supervision to improve school quality. Apart from that, it can also enrich existing research by using the STAD and TGT models and can be a reference for developing further research.

**Conclusion**

Based on the results of the research and discussion, it can be concluded that learning steps need to be adjusted to the learning model that will be used. The steps of the STAD model are class presentation/class presentation, team/group, quiz, scoring, team recognition. Meanwhile, the steps of the TGT model are presentation of classes, teams, games, tournaments, group awards. The results of data collection from the t test (average difference test) based on the students’ posttest results showed that the sig (2-tailed) value was 0.004<0.05. Apart from that, the results of a different test (t-test) on global diversity attitudes showed that the sig (2-tailed) value was 0.009<0.05. The average posttest learning results showed a difference in the experimental group of 79.20, while in the control group it was 86.89. then the average score of the questionnaire assessment showed that the experimental group was 38.17 while the control group was 43.28. It can be concluded that Ho is rejected,
while Ha is accepted. This means that there is a difference in effectiveness and it can be concluded that the TGT model is more effective in improving learning outcomes and attitudes towards global diversity in elementary schools than learning using the STAD model.

**Bibliography**


