# Application of STAD Cooperative Learning Model with Authentic Assessment of Increasing Knowledge Competencies and Competencies of Social Attitudes of Students at SMPN 40 Makassar

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## ABSTRACT

The national education exam above explains that Indonesia's implementation of education is directed at preparing quality human resources, namely obedience to religious teachings, healthy body and soul, knowledgeable, independent, creative, and responsible. This study aimed to obtain, analyze, interpret, and describe/describe the data regarding the level of knowledge competence and social attitude competence of class VIII students of SMPN 40 Makassar through the application of the STAD cooperative learning model with authentic assessment. The research design used was a quasi-experimental design with a nonequivalent control group design in which neither the experimental group nor the control group was chosen randomly. This study's results are the competence of knowledge through the application of conventional learning models for students of class VIIISMP Negeri 40 Makassar in the excellent category with an average score of 75.6364. The level of knowledge competence through applying the STAD cooperative learning model with authentic assessment for class VIIISMP Negeri 40 Makassar students is in the excellent category, with an average score of 82.3030. The competency level of social attitudes through applying conventional learning models for class VIIISMP Negeri 40 Makassar students is in a suitable category, with an average score of 80.8083. The level of social competence through applying the standard cooperative learning model with authentic assessment for students of the 40 State Viiismp class in Makassar is in the outstanding category with an average of 90.7647. There is a significant effect of applying the standard cooperative learning model with an authentic assessment of students' knowledge competence in class VII SMP Negeri 40 Makassar. There is a significant effect of applying the standard cooperative learning model with an authentic assessment of the competence of students' social attitudes in class VII SMP Negeri 40 Makassar.

**Keywords** - STAD Cooperative Learning, Authentic Assessment

## INTRODUCTION

Education is a forum for forming a nation's human resources to become completely superior human beings. Therefore education is seen as a strategic medium in preparing human resources quality to get on with life a nation, so it is with the Indonesian government

(1). The preamble to the 1945 Constitution in the fourth paragraph explains that among the goals of establishing the Republic of Indonesia is to educate the nation's life (2).

The national education objectives above explain that the implementation of education in Indonesia is directed at preparing quality human resources, namely obeying religious teachings, being healthy in mind and body, knowledgeable, independent, creative, and responsible (3).

While the purpose of this study was to obtain, analyze, interpret, and describe/describe the data regarding the level of knowledge competence and social attitude competence of class VIII students of SMPN 40 Makassar through the STAD cooperative application learning model with authentic assessment.

Ideally, the learning process that is expected to be created is a learning process that is interactive, inspiring, fun, challenging, and motivates students to participate actively and provides sufficient space for the initiative, creativity, and independence according to their talents, interests, and physical development, as well as their psychology (4). The results of the researchers' preliminary observations, in the implementation of Social Sciences (IPS) learning at SMP Negeri 40 Makassar, especially in class VIII, obtained data that the performance of learning in class was not by the main task as stated above. Even though the teacher has prepared a learning program, its implementation in the learning process is not by the steps that have been compiled in the RPP. Learning implementation plans prepared by teachers also tend to only copy from examples of lesson plans contained in the 2013 Curriculum Teacher Book or lesson plans for other teachers (5).

Teacher innovation and creativity in applying and developing learning models that can activate students in developing social attitude competencies and increasing knowledge competencies are still low. Learning in the classroom always tends to be teacher-centered by using the conventional classroom model's lecture method (6).

The assessment carried out still focuses on evaluating results, not on the process, whereas in the 2013 curriculum, the demand for the evaluation is authentic assessment. The implementation of learning and assessment in class VIII on social studies subjects that focus on results and not on the process results in unrecorded development of students' social attitudes during the learning process.

**METHODOLOGY**

The research design used was a quasi-experimental design with a nonequivalent control group design in which neither the experimental group nor the control group was chosen randomly (7). The nonequivalent control group design used in this study aims to determine differences in the attainment of knowledge competencies and competencies of students' social attitudes in the treated and untreated levels.

This study seeks to reveal two parallel variables: the use of the STAD type cooperative learning model and the application of authentic assessment given the symbol (X1) and the conventional techniques in social studies learning given the character (X2) as the independent variable. Each of these variables contains dependent variables, namely knowledge competencies, especially in social studies subjects and social attitudes competence using the STAD type cooperative learning model and the application of authentic assessment is given a symbol (Y1) and knowledge competencies, especially social

studies subjects and social attitude competences with conventional techniques are given a mark (Y2).

Sampling was carried out to determine the research subject by taking two population groups with specific considerations (purposive sampling) into an experimental group and a control group.

**RESULT**

**Presentation and Results of Data Analysis**

To answer this problem, the data in this study were analyzed according to the procedures specified in Chapter III, by first making a comparative hypothesis, namely the null hypothesis (Ho). The null hypothesis reads: (1) There is no significant effect of applying the STAD cooperative learning model with Authentic Assessment on the knowledge competence of class VIII students of SMP Negeri 40 Makassar. (2) There is no significant effect of applying the STAD cooperative learning model with Authentic Assessment on the social competence of class VIII students of SMP Negeri 40 Makassar.

The data analyzed were the experimental group students (X) and the test results of the control group students (Y). The results of the data analysis are divided into several types as in the formulation of the problem as described below.

**Table 1. Knowledge Competency Levels through the Application of Conventional Learning Models for Class VIII Students of SMP Negeri 40 Makassar**

| Statistics | | |
|---|---|---|
| Description | Experiment | Control |
| N. Valid | 33 | 33 |
| N. Missing | 0 | 0 |
| Mean | 82,3030 | 75,6364 |
| Std. Error of Mean | 1,40109 | 1,38636 |
| Median | 85,0000 | 78,0000 |
| Std. Deviation | 8,04862 | 7,96405 |
| Variance | 64,780 | 63,426 |
| Minimum | 68,00 | 63,00 |
| Maximum | 95,00 | 93,00 |
| Sum | 2716,00 | 2496,00 |

So, the average value of knowledge competencies through the application of conventional learning models or in the control class for class VIII students of SMP Negeri 40 Makassar is 75.6364 in the 10-100 value range. Also, based on the results of the analysis of the raw data (see Appendix 7), it can be seen that the highest score is 93.00 from the maximum score. At the same time, the lowest score is 63.00. The total score of all students is 2496. Furthermore, it is associated with the value category according to the assessment guidelines in Junior High School as follows:

**Table 2. Knowledge Competency Levels through the Application of the STAD Cooperative Learning Model with Authentic Assessment for Class VIII Students of SMP Negeri 40 Makassar**

| Statistics | | |
|---|---|---|
| Description | Experiment | Control |
| N. Valid | 33 | 33 |
| N. Missing | 0 | 0 |
| Mean | 82,3030 | 75,6364 |
| Std. Error of Mean | 1,40109 | 1,38636 |
| Median | 85,0000 | 78,0000 |
| Std. Deviation | 8,04862 | 7,96405 |
| Variance | 64,780 | 63,426 |
| Minimum | 68,00 | 63,00 |
| Maximum | 95,00 | 93,00 |
| Sum | 2716,00 | 2496,00 |

So, the average value of knowledge competence through applying the STAD cooperative learning model with authentic assessment or in the experimental class for class VIII students of SMP Negeri 40 Makassar is 82.3030 in the 10-100 value range. Also, based on the results of the analysis of the raw data (see Appendix 7), it can be seen that the highest score is 95.00 from the maximum score. At the same time, the lowest score was 68.00. The total score of all students is 2716. Furthermore, it is associated with the value category according to the assessment guidelines in Junior High School as follows:

**Table 3. Competency Levels of Social Attitudes Through the Application of Conventional Learning Models for Class VIII Students of SMP Negeri 40 Makassar**

| Statistics | | |
|---|---|---|
| Description | Experiment | Control |
| N. Valid | 33 | 33 |
| N. Missing | 0 | 0 |
| Mean | 19,0606 | 16,9697 |
| Std. Error of Mean | ,20384 | ,24804 |
| Median | 19,0000 | 17,0000 |
| Std. Deviation | 1,17099 | 1,42489 |
| Variance | 1,371 | 2,030 |
| Minimum | 17,00 | 13,00 |
| Maximum | 21,00 | 19,00 |
| Sum | 629,00 | 560,00 |

The average value of knowledge competence through applying the STAD cooperative learning model with authentic assessment or in the experimental class for class VIII students of SMP Negeri 40 Makassar is 82.3030 in the 10-100 value range. Also, based on the results of the analysis of the raw data (see Appendix 7), it can be seen that the highest score is 95.00 from the maximum score. At the same time, the lowest score was 68.00. The total score of all students is 2716. Furthermore, it is associated with the value category according to the assessment guidelines in Junior High School as follows:

**Table 4. Competency Levels of Social Attitudes through the Application of the STAD Cooperative Learning Model with Authentic Assessment for Class VIII Students of SMP Negeri 40 Makassar**

| Statistics | | |
|---|---|---|
| Description | Experiment | Control |
| N. Valid | 33 | 33 |
| N. Missing | 0 | 0 |
| Mean | 19,0606 | 16,9697 |
| Std. Error of Mean | ,20384 | ,24804 |
| Median | 19,0000 | 17,0000 |
| Std. Deviation | 1,17099 | 1,42489 |
| Variance | 1,371 | 2,030 |
| Minimum | 17,00 | 13,00 |
| Maximum | 21,00 | 19,00 |
| Sum | 629,00 | 560,00 |

So, the social attitude competency score through the application of the STAD cooperative learning model with authentic assessment or in the experimental class for class VIII students of SMP Negeri 40 Makassar is 19.0606. In addition, based on the results of the analysis of the raw data, it can be seen that the highest score is 21.00 of the maximum score. While the lowest score is 17 out of a score of 21 as the highest score, the total score of all students is 629.

**DISCUSSION**

**Knowledge competency levels and social attitude competencies through the application of conventional learning models for class viii students of SMP Negeri 40 Makassar**

Learning in class is ideally expected to involve all students actively by applying various learning models. The learning process that focuses the teacher as the only learning source makes students only as objects and not learning subjects. In conventional learning practice, the teacher acts as a teacher who provides as much knowledge as possible, dominated by lecturing activities and memorizing material content. Students are concluded to have learned if they have memorized the material that has been studied and can answer questions or tests given with answers that are not different from those written in the textbook.

Implementing the 2013 curriculum, followed by socialization and teacher training, does not necessarily change teachers' mindset and work patterns when implementing learning in class. Despite having prepared a plan learning as well as possible according to the instructions and guidelines for preparing lesson plans, but in practice, teachers still tend to return to the conventional model (8).

The things that were observed during the research in the control class, namely, the class design tended to be one-way, the delivery of material tended to use the lecture method, the group division grew to be only done by the teacher based on the proximity of the students' seats, it was not heterogeneous, and the assessment of learning outcomes tended to assess the result of learning, not in the learning process (9).

The description of learning activities in the control class is as follows:

**Preliminary activities:**

The teacher begins the lesson by checking students' initial readiness by greeting, praying, and checking students' attendance using the students' attendance list. The teacher conveys competency achievement indicators to be achieved in the competency aspects of knowledge and skills. The teacher performs apperception by reminding the material that has been previously studied. The teacher motivates by asking questions that lead to the material to be discussed.

**Core activities**

The teacher explains the subject matter using broadcast material media. The subject matter is described in detail by the teacher, and students pay attention to this explanation. After the teacher has finished explaining the material, students are given time to do questions and answers related to the subject matter presented. The teacher explains the reinforcement of the problems questioned by students. The teacher forms groups randomly based on the closeness of the students' seats with four to five members. Almost all groups formed are homogeneous groups. Homogeneous in sex and with relatively equal abilities. After the groups are formed, the teacher conveys the steps for group work activities according to the instructions contained in the student worksheets (LKPD). Students are given time by the teacher to complete group assignments. Each group does the task according to the instructions contained in the worksheet by utilizing existing learning resources. During group work activities, students are closely observed by observers to see the responsibility and caring attitudes of each group. Until the time limit has been determined, the teacher checks by monitoring and ensuring that the entire group has completed the worksheets. The teacher collects the whole worksheet and gives praise to the group that has done well.

**Closing Activities**

The teacher randomly gives short questions in front of the class to check the achievement of the competency achievement indicators. The teacher guides students to formulate conclusions from the subject matter. The teacher delivers material and activities to be carried out at the next meeting. The teacher closes the learning activity by praying and then greeting

The series of activities above were carried out for four sessions. To measure students' competency level, a written test was carried out in the form of multiple-choice questions. All students follow this test on class control.

The test is carried out individually without the assistance of each other from the group members.

The test results showed that the highest score was 93.00, and the lowest score was 63.00. The average acquisition value is 75.6364, with a total score of all students, namely 2496. The average acquisition value is in the excellent category. For the results of social attitude competence, the lowest score was 13.00, and the highest score was 19.00. The total

score was 560, with an average score of 16.99697. The average score after being converted is 80.8083, which is in the excellent category.

The results of the analysis of the relationship between the implementation of learning activities with data on the level of competence of knowledge and competence in social attitudes of students indicate that the learning process carried out has not been able to challenge and motivate students to participate actively and provide sufficient space for the initiative, creativity, and independence according to their talents. Interests and their physical and psychological development (Rusman, 2014). Teacher's assessment that only assesses learning outcomes results in no authentic evaluation.

**Knowledge Competency Levels and Social Attitude Competencies through the Application of STAD Cooperative Learning Model with Authentic Assessment for Class VIII Students of SMP Negeri 40 Makassar**

Cooperative learning is social-based learning that does not just collect students in a group. Through well-organized collaborative learning, multi-directional interaction and communication will occur. The interaction occurs between teachers and students, between individual learners individually in small groups, between individuals and groups, and between groups and groups. This multi-directional interaction aims so that each group member can work together and help each other to achieve learning goals (10).

STAD cooperative learning is a learning model that can facilitate interaction and multi-directional communication in the learning process. This learning model is by the demands that are expected to be achieved in the 2013 curriculum. Its simple learning components make this learning model easy to adapt, including for teachers who are just applying the cooperative learning model.

The implementation of the STAD cooperative learning model's components in this study was class presentations, teams, and quizzes. Class presentation is direct teaching by the teacher using media in the form of broadcast material according to the subject matter. A couple is a division of groups consisting of four to five heterogeneous group members based on student ranking data. Quizzes are given to students after a period of learning activities. In this research, the learning period consisted of four meetings with material prepared according to the syllabus and lesson plans. During the learning period, observations were made to obtain competency data on students' social attitudes.

The description of learning activities through the application of the STAD cooperative learning model with authentic assessment in the experimental class is as follows:

**Preliminary activities**

The teacher checks students' initial readiness by greeting, praying, and checking the attendance of students using the attendance list of students. Students follow the initial checking activities carried out by the teacher. The teacher divides students into predetermined groups based on student ranking data. Each group's composition consists of four to five members, heterogeneously consisting of one upper-ranking member, two middle-ranking members, and one lower-ranking member. The group consists of female students and male students. There were eight groups formed. After all group members have

sat down according to their respective groups, they can name their group by group agreement.

The teacher conveys the purpose of group activities, namely that each member of the group must be responsible by working actively in completing group assignments, each member of the group must be able to function optimally to collect points for the excellence of the group, and at the end of the material ( period) will be given quizzes individually. Learners follow the teacher's directions well about the purpose of group activities.

The teacher conveys the indicators of competency attainment to be achieved from the competency of knowledge and skills. Students listen well to the delivery. The teacher said that to achieve the predetermined competencies, all students must understand the material to be discussed.

The teacher makes apperception by asking questions to remind students of the material that has been studied. Students demonstrate their ability to answer questions asked by the teacher. The teacher motivates students by developing problems and directing the items to the material to be discussed.

## Core activities

The teacher makes a presentation using broadcast material media. Students observe (listen to) carefully the presentation delivered by the teacher. After the presentation, the teacher gives time to students to ask questions or opinions related to the material that has been presented. Students ask questions (ask questions) or views related to the material that has been given by the teacher. The questions posed by students are identified on inquiries related to the material to be discussed next. The teacher explains the relationship between the problems that have been identified with the material and activities that will be addressed in the next action. The teacher motivates participants to stay focused on the learning process and tells about the activities that students will do when working in groups and the preparation of the tools and materials needed.

The teacher prepares and then distributes LKPD to all groups and ensures that all groups have received LKPD. Students read and understand the LKPD that the teacher distributes. The teacher conveys the steps for group work activities by the instructions contained in the LKPD. Students understand the actions of the movement according to the LKPD instructions. The teacher directs and facilitates students to work in teams with the emphasis that all group members contribute to completing group assignments. Learners collect information from various sources, discuss in groups, and multiple tasks in completing group assignments. Furthermore, students process information to complete group assignments.

During the students' working process, the teacher facilitates students when there are group members who have questions; they must ask for help from group members first before the teacher. Group members help each other explain answers, especially when group members have questions and do not understand the group's responses. The teacher monitors and facilitates the whole group to present solutions to each other (11).

The teacher monitors the entire group and ensures that the whole group has finished work on the LKPD and praises the group that has worked well. In groups, students communicate the results of group assignments on answer sheets in the form of written

descriptions and ensure that all group members have mastered group assignments' effects before the teacher collects the results. During the process, the teacher observes and assesses the competence of social attitudes using the observation sheet.

**Closing Activities**

The teacher checks the students back on the achievement of the competency achievement indicators. Students actively answer questions asked by the teacher to check the achievement of the competency achievement indicators. Teachers, together with students, formulate conclusions from the material being studied and reinforce indicators that have not been achieved. Students note the decisions prepared. The teacher conveys information about the activities or material that will be carried out at the next meeting. Students listen to and pay attention to the information submitted by the teacher. The teacher closes the learning activity by inviting students to pray and then give greetings. Students pray and then answer the teacher's greetings (12).

A series of STAD cooperative learning activities were carried out throughout four meetings. To measure the competency level of students' knowledge, a test was conducted in the form of multiple-choice questions followed by all students in the experimental class.

The knowledge competency test results showed that the highest acquisition score data was 95.00 of the maximum score. The lowest score is 68.00 from the top score. The total score was 2,716, with an average score of 82.3030. By the assessment guidelines in SMP, the average score is in the excellent category. For the competence of students' social attitudes, the highest score data was 21.00; the lowest score was 17.00. The total score of all was 629, with the mean score was 19.0606. According to SMP's assessment guidelines, the average score after being converted was 90.7647, which means that it was in an outstanding category.

Based on the results of this study, it can be understood that the application of the STAD cooperative learning model with an authentic assessment of the knowledge and social competence of class VIII students of SMP Negeri 40 Makassar, especially in social studies subjects. This is evident from the analysis results, which show that the empirical value is greater than the theoretical value, which is offered at a significant amount that is smaller than the value 0.05. based on research results, there are several understandings of applying the STAD cooperative learning model with authentic assessment, positive interdependence, or positive interdependence. There are two group responsibilities in collaborative learning: studying the materials assigned to the group and ensuring that all group members individually learn the posted material. Personal obligation or individual responsibility, after participating in a group study together, group members must complete the same task. Face to face promotive interaction, each member of the group helps each other effectively and efficiently, motivating each other's efforts to learn to gain mutual success. Interpersonal skills or communication between members on the condition that each member of the group knows each other can communicate accurately and not ambitiously, accept and support each other, and constructively resolve conflicts. Group processing or group processing means assessing. Through this activity, it can be identified from the sequence of stages of group activities and activities of group members to increase the effectiveness of members in contributing to collaborative activities to achieve group goals. Nurulhayati (Rusman, 2011)

suggests elements of cooperative learning, namely: (1) positive dependence, (2) individual accountability, (3) social skills, (4) face to face, and (5) group process evaluation.

**CONCLUSIONS**

The level of knowledge competence through the application of conventional learning models for class VIII SMP Negeri 40 Makassar students is in the excellent category, with an average score of 75.6364. The level of knowledge competence through applying the STAD cooperative learning model with authentic assessment for class VIII SMP Negeri 40 Makassar students is in the excellent category, with an average score of 82.3030. The competency level of social attitudes through applying conventional learning models for class VIII SMP Negeri 40 Makassar students is in a suitable category, with an average score of 80.8083. The level of social competence through applying the STAD cooperative learning model with authentic assessment for class VIII SMP Negeri 40 Makassar students is in an outstanding category, with an average of 90.7647. There is a significant effect of applying the STAD cooperative learning model with an authentic assessment of the knowledge competence of class VIII students of SMP Negeri 40 Makassar. There is a significant effect of applying the STAD cooperative learning model with an accurate assessment of the competence of social attitudes of class VIII students of SMP Negeri 40 Makassar.

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