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Implementation Of The Student Teams Achievement Divisions (STAD) Cooperative Learning Model To Improve Student Learning Outcomes In The Teaching Profession Course At Pamulang University

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ABSTRACT

The purpose of this research is to enhance students' academic performance through the application of the Cooperative Learning model, specifically the Student Teams Achievement Divisions (STAD) type, in the Teaching Profession course at Universitas Pamulang. This research is a classroom action research (CAR) conducted in two cycles, each consisting of planning, implementation, observation, and reflection stages. The research subjects were 21 students in the even semester of the 2024/2025 academic year. The instruments used included learning outcome tests, student activity observation sheets, response questionnaires, documentation, and lecturer reflection notes.

The results showed an increase in the average score from 72.5 in the first cycle to 80.1 in the second cycle, and an improvement in the number of students achieving mastery from 13 students (61.9%) to 19 students (90.5%). Observations indicated greater student engagement, participation, and collaboration in group activities. Students also responded positively to the STAD model, suggesting that the method fosters an active and cooperative learning environment. Therefore, the STAD learning model is effective in improving student learning outcomes, both cognitively and affectively.

Keywords: STAD, cooperative learning, learning outcomes, teaching profession, collaborative learning

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INTRODUCTION

Higher education comprises diploma, bachelor's, master's, doctoral, and specialist programs administered by accredited institutions. Instruction at this level is inherently more demanding due to students' higher cognitive development. Therefore, lecturers are required to implement a variety of active and student-centered approaches to teaching, along with assigning tasks that are aligned with learning objectives. The learning model is a conceptual framework that describes systematic procedures for organizing learning experiences to achieve specific learning objectives (Irviana, 2020). This structure functions as a reference for educators and instructional designers when developing teaching strategies. Various learning models regarded as effective for lecturers to apply include collaborative learning, discovery learning, project-based learning, and cooperative learning approaches.

However, in practice, it has been found that very few lecturers use the learning models mentioned above. Often, students are only given material through presentations followed by discussions and assignments. This process can be effective, but other models, methods, and strategies are needed to make learning more effective and varied so that learning outcomes can be said to be satisfactory. (Thi et al., 2024) found that factors such as the training program, family and friends, teaching methods, facilities, and learning methods all have a substantial impact on students' learning motivation and academic outcomes.

One learning model considered effective is cooperative learning. Cooperative learning allows students to work together, learn together, and interact better with their peers in groups to better understand the material presented. According to Slavin (1990), cooperative learning is a learning model in which

students learn and work collaboratively in creative groups of 4-6 people with heterogeneous group structures. Cooperative learning encompasses various learning models, including jigsaw, number-and-head-together, student team achievement development, think-pair-share, group investigation, the picture-and-picture learning method, and others. Among the cooperative learning models mentioned above, there is one cooperative learning model that makes the classroom atmosphere more interactive, namely STAD (student teams achievement development) learning. According to Trianto (2010:68) STAD type Cooperative learning "is a Cooperative model that uses small groups with each group consisting of 4-5 students in a heterogeneous manner which is a mixture according to achievement level, gender, and ethnicity". When the STAD model is applied in the classroom, it is expected to make students learn, discuss, work together, interact, collaborate with friends in one group with the aim of helping to motivate each other so that they can master the material well and be responsible in completing their tasks.

Roestiyah, in Sudarsana (2021), explains that the STAD cooperative learning model has several advantages. This model encourages students to develop their questioning and argumentation skills through discussion activities. Furthermore, STAD facilitates deeper investigation into a problem and contributes to the development of leadership and discussion skills. Through this model, educators also find it easier to provide individual attention to students according to their learning needs. The implementation of STAD has been shown to increase active student participation in the learning process and group discussions. Furthermore, this model helps foster mutual respect and appreciation among group members.

Hundreds of studies have been conducted across various subjects and grade levels, highlighting the widespread applicability and effectiveness of this pedagogical approach. Cooperative learning is defined as a teaching method that involves students working together in small groups to achieve a common goal (Slavin, 1996). This approach encourages students to actively participate in the learning process, share knowledge and ideas, and support each other in achieving learning goals. Numerous studies have investigated the benefits of cooperative learning, including its impact on student achievement, social interaction, and critical thinking skills. One study found that cooperative learning can be an effective method in English classes, particularly in engaging students and supporting their language learning process (Kriesna, 2023). Another study emphasized the importance of group knowledge sharing among student teams, highlighting the potential of cooperative learning to foster collaborative learning and knowledge construction (Mastin & Yoon, 2013).

Students Teams Achievement Divisions (STAD) is a cooperative learning model developed by Robert Slavin in the early 1990s. This model aims to improve student academic achievement through collaboration in small groups. STAD integrates aspects of group work with individual assessment to encourage students to learn actively and support each other. According to Slavin (1995), STAD focuses on learning through groups with an emphasis on individual achievement and contributions to group success. This model involves four main components: instruction, group work, individual assessment, and group rewards. In addition, Rusman (2016:215) explains the activities or steps in the STAD model as follows; 1) conveying objectives and motivating students to organize them into groups; 2) conveying information (teacher presentation); 3) guiding learning groups in teams (teamwork); 4) quizzes (evaluation); 5) team achievement awards. Based on the steps above, we can see that there are activities that can enable students to learn in teams. This approach is anticipated to enhance students' capacity to comprehend and internalize learning materials during classroom activities. In the Teaching Profession course, which requires deep comprehension and reflective competence, the STAD model proves to be highly applicable. Students, as prospective educators, need to be trained to work collaboratively, think critically, and be responsible both individually and in groups. Consequently, this research was carried out to explore the implementation of the STAD Cooperative Learning model as a means of enhancing students' learning achievement in the Teaching Profession course at Pamulang University.

Although the Student Teams Achievement Divisions (STAD) learning model has many advantages in improving learning outcomes, its implementation in higher education environments is not always without obstacles. There are a number of challenges that lecturers and institutions need to consider to ensure optimal STAD implementation. One example is student readiness. Not all students are prepared or experienced in working in groups. Some students tend to be passive, lack confidence, or are not yet

accustomed to actively discussing and sharing ideas with their peers. This can affect group dynamics, especially if there is an imbalance in participation among members. Furthermore, there are differences in academic ability. The composition of STAD groups is generally heterogeneous, meaning each group consists of students with varying academic abilities. While this is intended to be mutually supportive, in practice, students with higher abilities sometimes feel burdened by having to explain material to group members who are less familiar with it. Conversely, students with lower abilities may feel inferior or reluctant to participate.

METHOD

This study utilized a classroom action research approach aimed at improving student achievement by applying the STAD cooperative learning model within the Teaching Profession course. Conducted by the researcher serving concurrently as the lecturer, the study ensured close monitoring and management of instructional activities and interventions. According to Kemmis and McTaggart (1988) in (Hine, 2013), view action research as a collaborative process carried out by teachers with a shared concern. CAR is cyclical, meaning it is carried out repeatedly through several cycles until the desired improvement is achieved.

Furthermore, Arikunto (2008:104) explains that classroom action research is a careful examination of learning activities in the form of actions intentionally initiated and occurring collectively in a classroom. These efforts are intended to enhance both the learning process and student achievement by employing a deliberate, structured, and reflective method. The study was conducted over two cycles, and each cycle includes four phases as illustrated in the figure below.

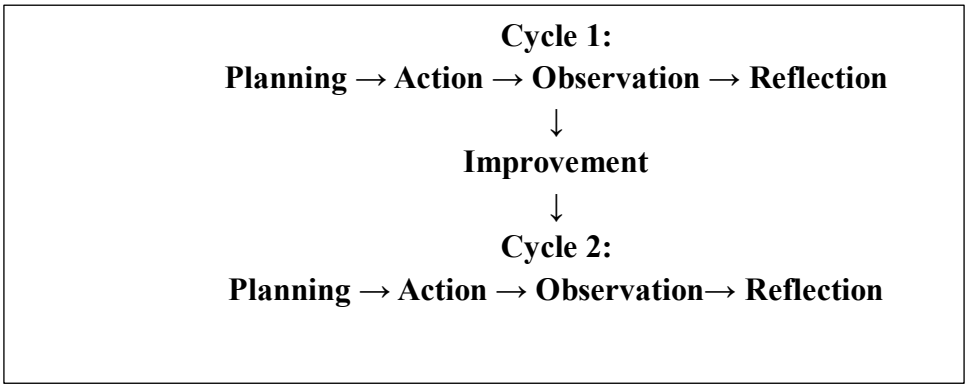


Figure 1. Stages in Action Research

The classroom action research was carried out through four stages. Planning involved preparing a learning action plan using the STAD cooperative learning model, including the development of learning tools and research instruments. In the Acting stage, the STAD learning model was implemented in the classroom in accordance with the established plan. The Observing stage was conducted by monitoring the learning process, student activities, and student learning outcomes using the observation sheets and documents that had been prepared. Finally, in the Reflecting stage, an evaluation was carried out to analyze the learning process and outcomes to determine the success of the action and to design improvements for the next cycle.

The subjects in this study were students in a class in the Economics Education Study Program, Faculty of Teacher Training and Education, Pamulang University. The study was conducted in the Teaching Profession course taught by the researcher in the even semester of the 2024/2025 Academic Year. Subject selection was purposive, based on the consideration that the researcher taught directly in the class, thus allowing for optimal implementation of the intervention. Furthermore, this class was chosen because previous student learning outcomes had not yet achieved the expected learning completion indicators. The class used for the research was class 02PIEE001, with 21 students. The researcher served as both the lecturer and the implementer of the intervention. To maintain objectivity of observations, the researcher was assisted by one collaborator who acted as an observer of the learning activities during the intervention.

This research was conducted using the Classroom Action Research (CAR) method based on the spiral model by Kemmis and McTaggart (1988), which consists of four stages in each cycle: planning, acting, observing, and reflecting. The research was designed in two cycles, where the results of the reflection in the first cycle became the basis for improvements to the actions in the second cycle. The following is the figure of the two cycles.



In planning of each cycle, researchers prepare Semester Learning Plans (RPS) and Learning Implementation Plans (RPP) based on the STAD model, prepare learning tools, and compile research instruments in the form of pretest and posttest questions, observation sheets, and student response questionnaires. Then in the action implementation section, the researcher carried out learning according to the RPP by applying the STAD type Cooperative Learning model followed by administering a post-test and then analyzing the observation results, post-test results, and questionnaires to evaluate the effectiveness of the action.

In this study, data collection techniques were carried out systematically to obtain valid information regarding the learning process and outcomes through the application of the STAD Cooperative Learning model. Several techniques were used, including tests (pretest and posttest), observation, questionnaires, and documentation.

Data Analysis Techniques

Data analysis in this study was conducted using two approaches: quantitative and qualitative, adapted to the type of data obtained from the data collection techniques. Quantitative data came from the results of pretests and posttests administered in each cycle. The purpose of this analysis was to determine improvements in student learning outcomes after implementing the STAD learning model. Qualitative data were obtained from observations of student activities, student response questionnaires, documentation, and lecturer reflection notes. The analysis was then conducted through data reduction, data presentation, and drawing conclusions. This process was used to describe how the learning process occurred, how student engagement increased, and their responses to the STAD model.

FINDINGS AND DISCUSSIONS

Quantitative Data analysis Technique Results

In this study, student learning outcomes were measured to determine the extent of improvement following the implementation of the Student Teams Achievement Divisions (STAD) Cooperative Learning model in the Teaching Profession course at Pamulang University. Data were obtained through learning outcome tests administered in two cycles, Cycle I and Cycle II, taking into account class average scores, individual learning completion, and class percentages. In quantitative data analysis, there are three stages:

a) Calculating the average (mean) pretest and posttest results.

b) Calculating the percentage of learning completion which is the number of students who achieved the Minimum Completion Criteria (KKM).

c) Comparing the pretest and posttest results to assess overall improvement.

The following table presents student learning outcomes, depicting the average pretest and posttest results and the percentage of learning completion, from the pre-action to the second cycle

No.	Name	Pretest Score	Postest Score in Cycle 1	Postest Score in Cycle 2	Description
1.	Ardilesach	60	72	80	Complete
2.	Dzaky Anwar Fauzi	55	65	75	Complete

3	Irma	62	70	78	Complete
4	Laila Ainun Nissa	58	68	72	Complete
5	Marsya Tania Putri	64	74	82	Complete
...	.....	.....	.....	.....	.....
21	Supriadin				
	Average	61,2	72,5	80,1	Complete
	Completed	-	13 students (61,9%)	19 students (90,5%)	

Figure 3. Students' Score

Of the 21 students in the figure shown above, the average pretest score was 61.2, increasing to 72.5 in the Cycle I posttest, and then further increasing to 80.1 in the Cycle II posttest.

The improvement in learning outcomes was also reflected in the number of students who achieved learning completion, which at least met the Minimum Completion Criteria (KKM). In the Cycle I posttest, 13 students (61.9%) were declared to have completed the course. After improvements in learning and actions in Cycle II, the number of students who completed the course increased to 19 (90.5%). These results indicate a significant increase in both average grades and the number of students achieving completion. The implementation of the STAD model has been shown to increase active participation, teamwork, and individual responsibility in the learning process, thus positively impacting student learning outcomes.

2. Qualitative Analysis Results

Qualitative analysis was conducted through data reduction, data presentation, and drawing conclusions. This process was used to describe how the learning process occurred, how student engagement increased, and their responses to the STAD model. Qualitative data in this study were obtained through observations of student activities, student response questionnaires, documentation during the learning process, and lecturer reflection notes. Data analysis was conducted using the Miles and Huberman approach, which involves three stages: data reduction, data presentation, and drawing conclusions/verification.

CONCLUSIONS

The implementation of the STAD Cooperative Learning model has been proven to improve student learning outcomes. These results align with Slavin's (2005) opinion, which states that the STAD model is effective in increasing learning engagement through structured group work and individual responsibility in completing assignments.

In general, student engagement increased from cycle I to cycle II. Not only did cognitive aspects, such as improved academic grades, but affective aspects such as social interaction, sense of responsibility, and self-confidence, also experienced positive development. This was evident in the improved quality of discussions, active participation in groups, and students' willingness to express their opinions. Improved learning outcomes are demonstrated through an increase in the average grade from 72.5 to 80.1, an increase in the completion rate from 61.9% to 90.5% also an Improved discussion quality and active student participation in group learning

The findings of this study are consistent with the research reported by Suryani (2019), which demonstrated that the use of the STAD approach in university-level Civics courses enhances students' conceptual comprehension as well as their ability to work collaboratively.. Similarly, Putra & Lestari (2021) concluded in their study that STAD can improve learning outcomes and foster students' cooperative attitudes in project-based learning. These findings confirm that the STAD model is not only relevant at the elementary and secondary levels of education, but is also effective in higher education, particularly in learning contexts that demand collaboration, responsibility, and active student involvement. Pedagogically, the STAD model provides opportunities for students to take an active role in the learning process, learn from fellow group members, improve communication and critical thinking skills, and to develop empathy and respect for differing opinions

Thus, it can be concluded that the implementation of the STAD model is effective in improving student learning outcomes not only in terms of knowledge, but also in social skills and learning attitudes. This supports the direction of 21st-century learning, which emphasizes collaboration, critical thinking, and individual responsibility within teamwork.

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