



## Implementation Of The Team Assisted Individualization (TAI) Learning Model To Improve Learning Activities And Outcomes Students

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### Abstract

The problem in this study is the low level of student learning activity and the accounting learning outcomes that remain below the Minimum Mastery Criteria (KKM). The purpose of this study is to determine the improvement in learning activity and accounting achievement of students in class XI AKL 2 at SMK Negeri 6 Medan through the implementation of the Team Assisted Individualization (TAI) learning model. This research was conducted at SMK Negeri 6 Medan in the 2024/2025 academic year. The subjects of the study were 35 students from class XI AKL 2, while the object of the study was the Team Assisted Individualization learning model. The study was carried out in two cycles. Data collection techniques included observation sheets to assess student learning activity and tests to measure learning outcomes. The data analysis techniques used were both quantitative and qualitative. Based on the observation sheets, in Cycle I, 12 students (34.29%) were categorized as active and very active. In Cycle II, this number increased to 31 students (88.58%), meeting the success indicator of  $\geq 85\%$ . Regarding learning outcomes, the data showed that the average pre-test score was 69.71, with 15 students (42.85%) achieving mastery. In the post-test of Cycle I, the average score increased to 82.00, with 26 students (74.29%) achieving mastery. This improved further in the post-test of Cycle II, with an average score of 95.71 and 33 students (94.29%) achieving mastery, thereby meeting the success indicator of  $\geq 85\%$ . Based on this analysis, it can be concluded that the implementation of the Team Assisted Individualization (TAI) learning model can improve both the learning activity and accounting achievement of students at SMK Negeri 6 Medan.

**Keywords :** Team Assisted Individualization, Learning Activities, Accounting Learning Outcome

## INTRODUCTION

Learning is a process of interaction (reciprocal relationship) between teachers and students, along with all the aspects contained therein (Sutihermi, 2022). In the learning process, teachers play a very influential role, not only providing instruction but also being required to create an active learning atmosphere. Teachers must ensure that students are actively involved, physically, mentally, and socially, in the learning process. This ensures that the material taught is more meaningful to students, and the desired learning objectives can be achieved. Therefore, the learning process cannot run smoothly without learning activities (Widana & Diartiani, 2021).

Learning activities are activities or behaviors that occur during the teaching and learning process. Student learning activities are expected to occur frequently during the learning process, as they can train students to determine their own answers to questions they may not know. Learning that focuses on student activity will make it easier for students to understand concepts, especially in accounting. This aligns with Sadirman's opinion (Marasabessy et al., 2021), who stated that "In learning activities, students must be active. In other words, learning requires activity; without activity, the learning process cannot proceed effectively."

Based on the results of initial observations conducted by the author, information was obtained that learning activities in class XI AKL 2 were still relatively low, this was seen from several types of student learning activities. In visual activities, the problem encountered was that when the teacher explained the material in front of the class, some students did not pay attention to the teacher properly, so students could not understand the material presented by the teacher. Furthermore, problems in oral activities, when the teacher gave oral questions, only a few students were able to answer the teacher's questions (Mertayasa, 2021). Furthermore, problems in listening activities, most students did not listen to the teacher well, some students even often chatted with their friends. Then, problems in writing activities, some students did not take notes on the material that had been delivered by the teacher. Then, problems in emotional activities, some students did not have the enthusiasm to learn and even fell asleep during the teaching and learning process in class.

The implementation of learning in class XI AKL 2 often uses the *Problem Based Learning learning model*, but it has not been optimally implemented. This is due to the division of student learning groups that are not heterogeneous, where students with high cognitive abilities are combined into one learning group and vice versa, students with low cognitive abilities are combined in one group. This makes the group of students with high abilities only active, while the group of students with low abilities chooses to be silent and does not do the tasks given by the teacher because they find it difficult to understand the learning material and they do not feel helped in solving the problems given by the teacher (Misastri et al., 2023).

Based on information obtained from student interviews, most students stated that the Accounting course was difficult to understand. However, when teachers gave them the opportunity to ask questions about things they didn't understand, most students were still

embarrassed to ask, preferring to ask other students who had a better understanding of the material. This impacted student learning outcomes.

Learning outcomes are the results of an interaction in the teaching and learning process which are usually indicated by test scores given by the teacher (Surur & Dwiyanto, 2019).

Given this situation, several factors contribute to the low learning outcomes of accounting students. One contributing factor is the ineffectiveness of the learning model currently used. In constructivist theory, a person's knowledge is constructed by the individual themselves. The learning process within constructivism also requires students to play an active role during the learning process, where learning requires interaction with their environment. The learning model in question is cooperative learning. *learning* ) (Berliana, 2022).

To address the aforementioned issues, a learning model is needed that can actively engage students in the learning process and provide them with opportunities to optimally develop their abilities. Cooperative learning models come in various forms, one of which is *Team Assisted Individualization* (TAI) (Aminah Mursalin & Muhsam, 2021).

*Team-Assisted Individualization* learning model can be a solution to address the problem of low activity and learning outcomes. The *Team-Assisted Individualization learning model* provides opportunities for students to express their opinions and ask questions. This learning model also requires students to be responsible for themselves and their group in understanding the material presented by the teacher.

(Sutihermi, 2022) states that "The *Team Assisted Individualization learning model* is a student-centered learning model." The *Team Assisted Individualization learning model* is thought to be able to overcome the above problems because the learning model is designed to address students' learning difficulties individually and the implementation of the *Team Assisted Individualization learning model* requires cooperation between students because in the learning process not only interactions between students and teachers but also interactions between students and students. The system in this learning model provides opportunities for students to work together in completing structured tasks where the teacher acts as a facilitator. The *Team Assisted Individualization learning model* takes the form of small, heterogeneous groups with different backgrounds of thinking to help each other with other students who need help (Widiansyah, 2023).

*Team Assisted Individualization* (TAI) learning model is characterized by each student individually studying the subject matter prepared by the teacher. The individual learning outcomes are then discussed in the group and shared by the group members. All group members are responsible for the overall answer as a shared responsibility (Suryati, 2019).

This is in line with research conducted by (Aprita et al., 2021) who concluded that the *Team Assisted Individualization* (TAI) learning model can improve students' accounting learning activities (Rusmalinda & Syaifudin, 2022). Furthermore, research conducted by (Sutihermi, 2022) concluded that the application of the *Team Assisted Individualization* (TAI) learning model can improve students' accounting learning activities and outcomes in the basic competencies of transaction recording stages. This learning model is suitable for

application in accounting subjects because this subject requires students to have skills in recording such as recording transactions into documents to be recorded in general journals and special journals, posting to the general ledger, preparing trial balances, and preparing financial reports (Sugianti et al., 2023).

Based on the description above, the author is interested in conducting research entitled "Implementation of the Team Assisted Individualization (TAI) Model to Improve the Activities and Learning Outcomes of Class XI AKL Students of SMKN 6 Medan in the 2024/2025 Academic Year".

## **METHOD**

This research was conducted in class XI AKL 2 SMKN 6 Medan, with the address Jl. Jambi No.23D, Pandau Hilir, Medan Kota District, Medan City, North Sumatra with postal code 20233 and this research was conducted in the even semester of the 2024/2025 Academic Year. In this study, the research subjects were students of class XI AKL 2 SMKN 6 Medan in the 2024/2025 Academic Year, totaling 35 students. The object in this classroom action research is the application of the Team Assisted Individualization (TAI) Learning Model to Improve Learning Activities and Outcomes (Aprita et al., 2021) .

The operational definitions in this study are as follows:

1. Team Assisted Individualization (TAI) learning model. A learning model that combines group learning with individual learning, where students are responsible for themselves and must help each other as group members.
2. Learning Activities. Learning activities are the entire series of activities that take place during the learning process, involving 8 student activities, such as visual activities, oral activities, listening activities, writing activities, drawing activities, motor activities, mental activities, and emotional activities.
3. Learning Outcomes. Learning outcomes are an indicator of a student's level of success or failure in achieving specific learning objectives, expressed in numbers or statements.

This type of research is Classroom Action Research (CAR) which is carried out in at least two cycles of action sequentially and aims to improve critical thinking skills and student learning outcomes. According to Arikunto (2015), classroom action research consists of 4 components, namely: 1) Planning, 2) Implementation, 3) Observation, 4) Reflection.

Lubis (Septiana et al., 2022) stated that a model serves as a guideline for developing or implementing an activity. In this study, the authors followed the Kemmis and McTaggart model of the CAR cycle design, which divides classroom action research procedures into four stages of activity in one cycle: 1) Planning, 2) Action, 3) Observation, and 4) Reflection.

Based on the cycle above, the activities carried out at each stage will be stopped if there are changes in the activities and learning outcomes of students in class XI AKL 2 SMKN 6 Medan. The actions implemented in classroom action research as in Figure 3.1 are explained through the following stages:

### **1. Planning Stages**

After the process of the problem to be studied both from the results of interviews with accounting subject teachers and with several students of class XI AKL 2 SMKN 6 Medan. Then the researcher will plan the research in the form of compiling a Teaching Module in accordance with learning activities that apply the Team Assisted Individualization (TAI) learning model, then compiling teaching materials and learning resources that are applied to improve student activity and learning outcomes. Next, prepare or compile pre-test and post-test questions as well as answer keys and assessment rubrics (Bakri, 2019) .

## 2. Implementation Stages

The implementation stage is carried out after the action planning has been completed. If cycle I has not achieved the objectives, it will proceed to cycle II. The implementation of actions in cycle II depends on the reflection of cycle I. Any deficiencies in cycle I will be corrected in the planning of cycle II and then implemented during the implementation of cycle II (Sari, 2022) .

Data analysis techniques are a crucial step in this research. All data obtained will be processed and analyzed. The results of this analysis will indicate the direction, goals, and objectives of the research. This study used two data analysis approaches: descriptive qualitative and quantitative

## RESULT AND DISCUSSION

### Description of Research Results

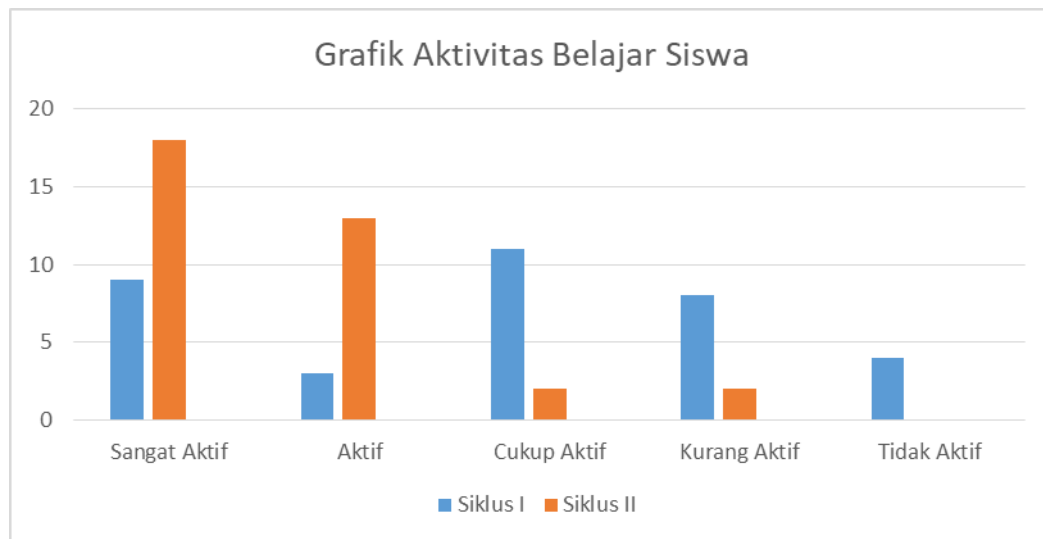
This research was conducted in class XI AKL 2 SMKN 6 Medan located at Jalan Jambi No. 23D, Pandau Hilir, Medan Kota District, Medan City, North Sumatra in the even semester of the 2024/2025 academic year. The purpose of this study was to determine the increase in student financial accounting learning activities and outcomes through the application of the *Team Assisted Individualization learning model* in class XI AKL 2 SMKN 6 Medan students. The subjects in this study were 35 class XI AKL 2 SMKN 6 Medan students. This type of research is Classroom Action Research (CAR) which is carried out in 2 cycles with 2 meetings in each cycle. Data on student learning activities is obtained through observations during the learning process, where the observed activities consist of 8 indicators and each indicator is assessed from a score range of 1-4 and the overall scores that have been obtained are added up to determine whether the student is included in the category of very active, active, quite active, less active, or inactive. Students are declared active if they obtain a score of  $\geq 23$ . The increase in student learning activities has been fulfilled if  $\geq 85\%$  of the research subjects are included in the active category (Suprayitno et al., 2023).

Meanwhile, student learning outcome data was obtained based on tests. A *pre-test* was held at the first meeting of cycle I to determine students' initial abilities before the implementation of research actions, and a post-test was conducted at the final meeting of cycles I and II to determine the extent to which the implementation of actions could improve student learning outcomes. Students were declared to have completed individual learning if they obtained a score of  $\geq 85$ . If  $\geq 85\%$  of the research subjects had completed learning, then the improvement in learning outcomes had been met.

## Student Learning Activities

Observation of student learning activities is carried out during the learning process by applying the *Team Assisted learning model. Individualization*. The first meeting of cycle I was observed on May 16, 2025, and continued at the second meeting of cycle I on May 17, 2025, each student activity in cycle I was observed by filling out an observation sheet. Furthermore, the first meeting of cycle II was conducted on May 23, 2025 and the second meeting of cycle II on May 24, 2025, each student activity in cycle II was observed using an observation sheet.

Overall student learning activities are categorized into several criteria: very active, active, moderately active, less active, and inactive. This is used to determine the number of active students and is based on the scoring criteria for each student learning activity indicator: very often, often, rarely, and never (Marisa Fisabti Fadlilah et al., 2021) . This is used to determine the number of students capable of carrying out these learning activities.



**Figure 1. Diagram of Student Learning Activity Improvement**

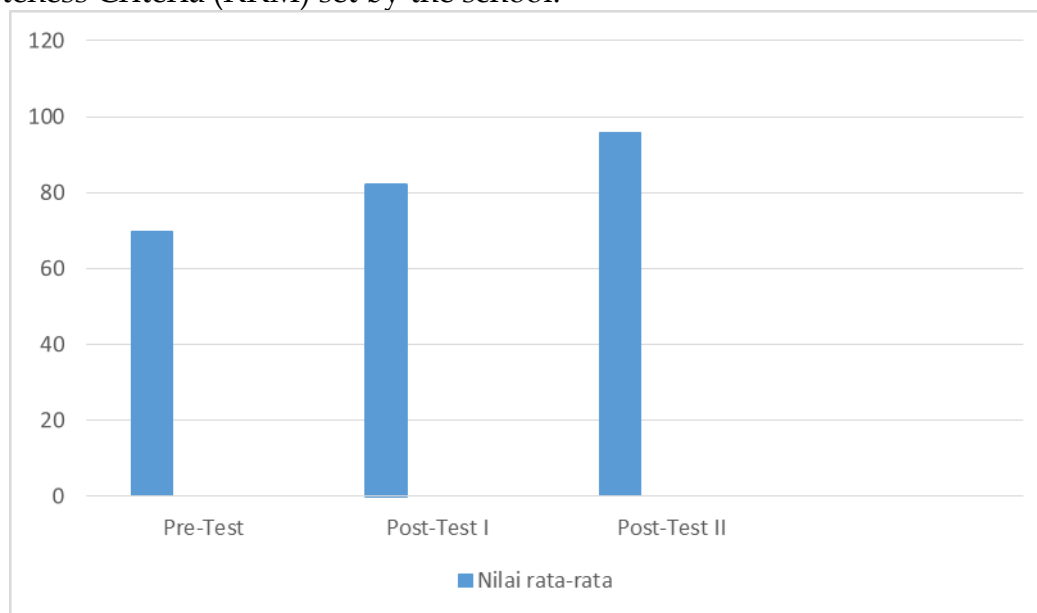
## Learning outcomes

Student learning outcomes were obtained from the pre-test and post-test scores in cycles I and II. The pre-test results aimed to assess students' initial abilities before treatment, while the post-test aimed to assess students' abilities after the Team Assisted Individualization learning model was applied to the basic concept of merchandise inventory cards in cycle I and creating merchandise inventory cards in cycle II (Prabaningrum & Putra, 2019a) .

**Table 1. Student Learning Outcomes**

Test Type	Average value	Completed	%	Not Completed	%
		Number of Students		Number of Students	
Pre-test	69.71	15	42.85	21	57.15
Post-Test I	82.00	26	74.29	9	25.71
Post-Test II	95.71	33	94.29	2	5.71

Based on the data in the table, it is known that in the pre-test there were 14 students (40%) who completed and 21 students (60%) who did not complete with an average of 69.42. In the post-test of cycle I, the number of students increased to 26 students (74.29%) and the number of students who did not complete decreased to 9 students (25.71%) with an average of 82.00. The results of the post-test of cycle I showed an increase in student learning outcomes after the action was taken, but this increase had not reached the success indicator, therefore the implementation of the action was continued to cycle II. In cycle II, the number of students who completed experienced a significant increase, namely from 35 students there were 33 students (94.29%) who completed and only 2 students (5.71%) who did not complete with an average of 95.71. If the completeness of learning outcomes in cycle I and cycle II are compared, then the increase in the completeness of learning outcomes in cycle II is greater than the increase that occurred in cycle I. In addition, the completeness of learning outcomes in cycle II has also fulfilled the learning success indicator, namely 85% because 94.29% of students in one class have achieved a score of  $\geq 85$  according to the Minimum Completeness Criteria (KKM) set by the school.



**Figure 2. Increase in the average pre-test and post-test scores in cycle I and cycle II**

## **Discussion of Research Results**

This Classroom Action Research (CAR) was conducted at SMKN 6 Medan in the even semester of the 2024/2025 academic year. This research consisted of two cycles, each carried out in two meetings, each consisting of four stages: planning, implementation, observation, and reflection (Nuraeni et al., 2022).

This research was conducted through collaboration between subject teachers and researchers in implementing the *Team Assisted Individualization* (TAI) learning model in Financial Accounting, focusing on Inventory Cards. At the beginning of the meeting, the researchers administered a *pre-test* to determine students' initial abilities before the intervention. At the end of the cycle, a *post-test* was conducted to determine students' improvement after the intervention.

At the beginning of the meeting, the researcher conducted a *pre-test* to determine students' initial abilities and knowledge. *Post-tests* were conducted at the end of the first and second cycles. This aimed to determine changes and improvements in students' abilities after the intervention. The following will discuss the procedures for each cycle of implementing the *Team Assisted Individualization* (TAI) learning model (Prabaningrum & Putra, 2019b).

## **Discussion of Cycle I Research Results**

This stage is the preparatory stage for implementing classroom actions in cycle I, referring to the results of observations carried out in the Financial Accounting subject with the Inventory Card material. In the first meeting of cycle I, held on May 16, 2025, each student activity was observed. This was then continued in the second meeting of cycle I on May 17, 2025.

Activities at this stage began with a discussion between the researcher and the subject teacher. Discussions included determining core competencies and basic competencies, the main material to be taught, namely inventory cards, and time allocation. The learning module was developed in accordance with the operational steps for implementing the *Team Learning model. Assisted Individualization* (TAI), preparing student activity observation sheets, as well as compiling cycle I *pre-test questions*, answer keys, and assessment rubrics.

Implementation of the action is the implementation stage of the planning that has been made, namely the teacher plays the role of a teacher by applying the *Team Learning model. Assisted Individualization* (TAI). Cycle I was conducted in two meetings, the first meeting on May 16, 2025. The time allocation for the first meeting was 4 JP x 45 minutes or 4 lesson hours. It consisted of three stages, namely: (1) Introduction, (2) Core activities, and (3) Closing.

Observations were conducted during the learning process using a student learning activity observation sheet. The purpose of this observation was to measure student learning activities during the implementation of the *Team Assisted Individualization* (TAI) learning model. The results of student learning observations showed that the number of active students was still relatively small. When the teacher gave students the opportunity to ask questions, many students remained silent. Furthermore, students were still hesitant and



afraid of making mistakes in expressing their opinions. Therefore, the teacher must take the initiative so that students dare to ask and submit opinions. Furthermore, many students were less serious in carrying out group discussions, most students were busy chatting with their groupmates and joking (AULIYA et al., 2018).

Only a few groups actually conducted group discussions well, namely groups 1, 2 and 6 where they were able to divide tasks and work together well so that the group was able to complete the discussion questions by getting good grades. While groups 3, 4, 5, and 7 were still relatively passive and could not work together well so they completed the discussion questions with low grades. In addition, students were not yet accustomed to the *Team Assisted Individualization learning model*, this was seen from students who were still confused about dividing tasks so that when group representatives were asked to come forward to make presentations, several groups still pointed to each other so that the teacher took the initiative to choose randomly (Purwati et al., 2019).

In cycle I through the implementation of the *Team Assisted Individualization learning model*, there were 12 students (34.29%) who had met the criteria for very active and active, while 23 students (65.71%) were in the criteria for sufficient, less active, and inactive. The level of student learning activity in cycle I had not reached the success indicator of 85%, so further action was needed in cycle II.

At the end of the activity, a reflection was carried out with the aim of knowing the level of success as well as weaknesses and problems encountered during the implementation of the *Team Assisted Individualization learning model* in cycle I. Based on the data obtained from the implementation of the *Team Assisted Individualization learning model*, it can be concluded that student activities and learning outcomes showed better results compared to the activities and learning outcomes of students during the initial observation of the action. This shows that the activities and learning outcomes of class XI AKL 2 students have increased (Pradja & Firmansyah, 2020).

After the teaching and learning process using the *Team Assisted Individualization learning model*, the teacher and researcher conducted a reflection by discussing any difficulties or problems encountered during the teaching and learning process. Several factors that contributed to the less than optimal improvement in student learning activities and learning outcomes in cycle I include:

- a. Students are still embarrassed to show their courage in expressing opinions or asking questions and giving responses.
- b. Most students are still lazy to record the results of group discussions, so only a few students have complete notes.
- c. Most students still don't care about the time constraints in completing group assignments or *pre-tests* and *post-tests*, where students work beyond the time set by the teacher.
- d. Most students do not participate in group discussions well, so when the group presents in front of them, they still do not dare to express their opinions.

The problems found in cycle I can be used as a reference in determining corrective actions in implementing learning in cycle II.

## **Discussion of Cycle II Research Results**

Before the actions in cycle II were carried out, the researcher and teacher planned solutions to overcome the shortcomings in cycle I. From the results of the discussion between the researcher and the teacher, several solutions for improvement were found, including:

- a. The teacher explains again to students the steps for implementing the *Team Assisted Individualization learning model* so that students are able to adapt and become accustomed to implementing this learning model.
- b. Students are encouraged to express their opinions, questions, or responses. By increasing reinforcement for each student activity, students will become more confident in expressing their opinions, questions, or responses. Furthermore, it is explained to all students that making mistakes in expressing opinions, questions, or responses is normal, so students should not feel afraid or embarrassed when expressing their opinions, questions, or responses.
- c. Each group of students is directed to divide up tasks in the learning process, so that no group member remains silent or plays around during the learning process.
- d. Students are given emphasis to collect *pre-tests* and *post-tests* on time as determined by the teacher.
- e. Teachers and researchers check students' notes periodically so that students really record the results of group discussions.
- f. The teacher gives *rewards* to every student who is actively involved in the learning process and provides further direction and motivation regarding students' awareness of the need for active learning in realizing their dreams and aspirations.

In cycle II, the implementation was carried out in two meetings per week. The first meeting was held on May 23, 2025, with a time allocation of 4 JP x 45 minutes consisting of three stages, namely: (1) Introduction, (2) Core activities, and (3) Closing. (Yusuf et al., 2022).

The introductory activity begins with greeting and greeting the students, then the teacher invites the students to read a prayer led by the students. After that, the teacher checks student attendance to find out how many students are present and participating physically and mentally in participating in learning activities at school. (Anantatur, 2012). Then, students receive initial information about learning in the first meeting including: Learning Outcomes (CP) and Learning Objectives (TP), learning steps, the relationship of topics in previous meetings with the topics to be discussed in this first meeting as well as the assessment methods that will be implemented and displayed. Then the teacher prepares learning materials and conducts the class so that students are truly learning.

At this stage, students receive information about the learning that will be carried out in this meeting and relate it to the previous material. The material presented in this second meeting is about the method of recording items. Then, the teacher asks several questions regarding the material presented in the previous meeting to focus students' attention, stimulate students' curiosity, and prepare students mentally so that students are actively involved in the learning process. In this case, it can be seen that several students have participated in expressing their opinions. Students are already more actively involved in

expressing their understanding and ideas in answering questions. The teacher gives appreciation in the form of applause and praise to students who have dared to answer questions and express their opinions.

At the end of the second cycle meeting, the teacher and researcher conducted a reflection aimed at determining the success or weakness in implementing the *Team Assisted Individualization* (TAI) learning model. Based on observation data on learning activities in the first cycle, there were 12 students (%) in the active category and in the second cycle there were 31 students (88.58%) in the active category. So it has met the criteria for assessing learning activities, so this indicates the learning ability or hypothesis is accepted. Student learning outcomes in the first cycle were 26 students (74.29%) who completed and in the second cycle there were 33 students (94.29%) who completed. So it has met the criteria for assessing learning outcomes by 85%. So this shows an increase in student activity and learning outcomes.

Based on this understanding, it is known from the characteristics of the problems that occur in students who are shy to ask questions and express their opinions during learning with group discussions, students do not show their involvement during discussions, and there are still many students who have not yet reached the KKM. Therefore, from the characteristics of these problems, a learning model is needed with the characteristics that in learning students do not only get material from the teacher's explanation, but students are also directed to find answers to the questions through problem solving with teacher guidance, students are also not only required to master the subject matter but how students can apply their abilities. From these characteristics, it provides positive results to increase student activity and learning outcomes (Susanti et al., 2018).

Based on research, there are several advantages and disadvantages to implementing the *Team Assisted Individualization* (TAI) learning model during the learning process. The advantages are:

- 1) It can improve student activity and learning outcomes because learning activities are mostly carried out by students individually or in groups, the teacher only plays a role as a guide or facilitator.
- 2) Can improve student cooperation to help each other in solving problems.
- 3) Can increase students' self-confidence and enthusiasm.

the *Team Assisted Individualization* (TAI) learning model in this study also has disadvantages, namely:

- 1) Requires good classroom management so that learning remains conducive and runs according to the learning scenario.
- 2) It takes a lot of time to implement this learning model because each student needs a different amount of time to complete group discussion questions, *pre-test questions*, or *post-test questions*.

As for the solutions that can be implemented to support this success, teachers must be able to make plans, master classroom management, evaluate learning activities at each meeting and manage time as well as possible so that learning stages can be achieved and the learning process is in accordance with learning objectives.

Although there were several shortcomings in this research, thanks to the collaboration between researchers and subject teachers, this research went well.

## CONCLUSION

Based on the research results and discussion, the following conclusions can be drawn:

1. The implementation of the Team Assisted Individualization (TAI) learning model can improve learning activities, especially in the inventory card material for class XI AKL 2 at SMKN 6 Medan in the 2024/2025 Academic Year.
2. The implementation of the Team Assisted Individualization (TAI) learning model can improve accounting learning outcomes, especially on inventory card material for class XI AKL 2 at SMKN 6 Medan in the 2024/2025 academic year

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