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Implementation of Cooperative Learning Model Type TAI (Team Assisted Individualization) to the Clothing Sewing Element of a Stand Collar in Class XI SMKN 3 Probolinggo

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Abstract

This research aims to determine the effect of implanting the TAI-type cooperative learning model with the following research variables: 1) implementation of learning model syntax, 2) learning results, and 3) student motivation learning. This research was conducted at SMKN 3 Probolinggo. This type of research is quantitative research with pre-experimental one-group pretest and post-test. The data sample in this research is fashion class XI, with 32 students. The data in the study were obtained using several methods: observation, practice test, and questionnaires. The research results show: 1) implementation of learning model syntax is good with a 3,5 score; 2) learning results showed a 37,5%% pass percentage and an average score of 69,8 before, then after that showed an increase with a 90,6% pass percentage and an average score of 80,1; 3) student's motivation learning showed an increase of an average 68,26% to 83,04%.

Keywords: Team Assisted Individualization, learning model, cooperative learning, learning results, student's motivation learning

Abstrak

Penelitian ini bertujuan untuk mengetahui pengaruh penerapan model pembelajaran kooperatif tipe TAI dengan variabel-variabel penelitian sebagai berikut : 1) keterlaksanaan sintaks model pembelajaran; 2) Hasil belajar; 3) motivasi belajar peserta didik. Penelitian ini dilakukan di SMKN 3 Probolinggo. Jenis penelitian ini merupakan penelitian kuantitatif dengan pendekatan pre-experimental one group pretest posstest. Sampel data dalam penelitian ini yaitu kelas XI 2 dengan jumlah peserta didik sebanyak 32 orang. Data dalam penelitian diperoleh dengan beberapa metode yaitu: observasi, tes unjuk kerja(pretest dan posttest), dan

angket. Hasil penelitian menunjukkan : 1) keterlaksanaan sintaks model pembelajaran menghasilkan nilai 3,5 dengan kategori baik; 2) hasil belajar peserta didik menunjukkan peningkatan dari prosentase ketuntasan 37,5% dengan rata-rata nilai 69,8 menjadi prosentase 90,6% dengan rata-rata nilai 80,1; 3) motivasi peserta didik menunjukkan peningkatan dari rata-rata awal 68,26% menjadi 83,04%.

Kata Kunci: *Model pembelajaran kooperatif tipe TAI (Team Assisted Individualization), hasil belajar, motivasi belajar*

Introduction

Based on the SISDIKNAS (National Education System) Law No.20 of 2003, education is defined as a planned effort to realize the learning process so that students can develop themselves for their needs, nation and state (Wahyudi et al., 2022). The implementation of education refers to a guideline, namely the curriculum. The curriculum is the core of education that must be evaluated periodically in developing science and technology (science and technology) to adapt to the times. Changes in the curriculum implemented in Indonesia have occurred several times.

The *kurikulum merdeka* refers to intraculicular, extracurricular activities, and strengthening the profile of Pancasila students in accordance with the Regulation of the Minister of Education and Culture (Permendikbud) No. 3 of 2020 Article 15 paragraph 1 can be carried out in study programs and outside study programs. For this reason, in implementing an independent curriculum, teachers are required to be able to apply effective learning methods during face-to-face learning (Noorhapizah et al., 2023).

Hamdayana (2016) said that learning models include individual and group learning. Individual learning models are learning activities that emphasize the ability to think critically and solve a problem. In comparison, the group learning model is a learning activity in which a group of students form small groups where they work together and help each other solve problems (Huda, 2015). However, it does not rule out the possibility that individual and group learning models can be used for collaboration. One of them is the TAI (Team Assisted Individualization) learning model.

Cooperative learning models have various models, including the TAI-type cooperative learning model. The TAI learning model is designed to overcome individual understanding difficulties, minimize teacher involvement, and allow students to learn the material presented quickly (Shoimin, 2014). The TAI learning model is expected to help students understand and overcome problems in mastering the practical material of making a stand collar without experiencing many difficulties (Suputra et al., 2023).

Based on direct observations and interviews carried out during PLP activities which took place from August 1 to November 11 with the cosmetology subject teacher at SMKN 3 Probolinggo, the problems that occur in class XI cosmetology at SMKN 3 Probolinggo, class XI cosmetology students use a teacher-centred learning model so that in practical subjects some students who do not understand tend to be passive to ask. In addition, students come from

various regions. Most students not from Probolinggo live in boarding houses around the school. Peers socialize less with each other because of this. Most of them hang out with friends who live in the same area. This causes an increase or decrease in understanding between learners depending on the friends gathered. If a suitable learning method is not used, learners' motivation to learn is challenging to improve.

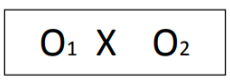
Learning motivation is an urge, desire, need, and similar power that drives a person's overall behaviour due to the influence of energy, including needs, interests, attitudes, desires, and stimuli (Wahab, 2015). The motivation that each learner has is different. One of the factors for increasing and decreasing motivation in students depends on their peers (Giyono, 2015).

From the results of observations, sewing practice subjects have more incomplete grades than other practical subjects. Students still have difficulty understanding how to sew components on clothing, such as collars. In even semesters, the fashion sewing project of class XI students involves manufacturing work clothes with stand collars by design, namely stand collars. According to Hasanah (2014), a collar is a part of clothing sewn or paired on the neckline; collars have various constructions and shapes. An upright collar is a collar that is attached to the neck and extends upwards. Stand collars have several sewing stages that must be done to match the design. For this reason, teachers need learning strategies that can increase students' understanding and motivation to learn.

Based on the above background, researchers have identified problems and tried to solve them based on theoretical and empirical studies. Researchers will apply the TAI learning model in learning the practice of making a stand collar in class XI Fashion at SMKN 3 Probolinggo. So, the researcher formulated the proposal titled 'Implementation of Cooperative Learning Model Type TAI (Team Assisted Individualization) to the Clothing Sewing Element of a Stand Collar in Class XI SMKN 3 Probolinggo.'

Research Method

Quantitative research is a method used to take concrete data and data in the form of numbers that can be measured using statistics to obtain conclusions (Sugiyono, 2018). It can be concluded that quantitative data is data in the form of numbers, which are then calculated using statistical measurement tests as the final result of the research. The research design uses a pre-experimental design with a one-group pretest post-test design. A pre-experimental design is a research design that examines only one group given a pre-and post-test. The one-group pretest post-test design was conducted on one group without any other group as a control and comparison group (Sugiyono, 2018). The scheme of research is:



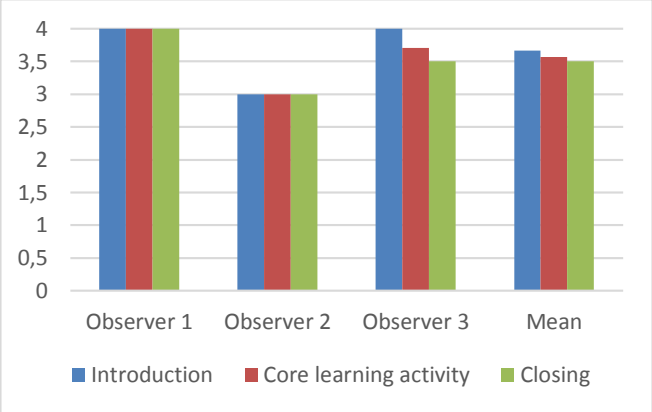
Note:
O_1 : Before treatment
X : Treatment
O_2 : After treatment

Result and Discussion

Observation Results

Descriptive statistics are used to analyze data by describing a picture as it is without making conclusions that apply to the public. Observers looked at the learning stages, including the introduction, core activities, and closing. Based on the data obtained from the observers regarding implementing the Team Assisted Individualization (TAI) type cooperative learning model. The highest average results were obtained in the preliminary activities with a score of 3.6; from these results, the researchers carried out the initial activities well and according to the learning syntax. The average results in the core activities obtained a middle average of 3.5, which was included in the excellent category. The lowest average results were obtained in the closing activities section, with a score of 3.4 and a good category. Based on this explanation, it can be concluded that the results of observations of teacher activity in applying the TAI-type cooperative learning model can be categorized as excellent by obtaining an overall average of 3.5. The calculation results from the observer are described as follows :

Table 1.1 Observer results on TAI method learning



Learning Results

Table 1.2 Normality test

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pretest	.167	32	.024	.921	32	.022
Posttest	.176	32	.013	.922	32	.024

*This is a lower bound of true significance.

a. Lilliefors Significance Correction

The pretest and post-test learning outcomes data were proved by paired samples T-test. The linearity test was conducted after the normality test (Shapiro-Wilk) as a requirement for statistical tests. Data based on the normality statistical test results table with the normality test (Shapiro-Wilk) shows that the data is usually distributed. It is known that in the normality test figure, the pretest significance value is 0.022 and the post-test significance value is 0.024, indicating that both data are more than 0.05 normally distributed and qualify to continue in the linearity test process.

Table 1.3 Anova table

ANOVA TABLE

		Sum of Squars	df	Man Squar	F	Sig.
Between Groups	(Combined)	374.338	4	93.584	4.212	.009
	Linarity	308.619	1	308.619	13.891	.001
	Den from Linarity	65.719	3	21.906	.986	.414
Within Groups		599.881	27	22.218		
Total		974.219	31			

Based on the results of the linearity test, it is known that Sig. Deviation from linearity is 0.414, which means 0.414> 0.05. So, it can be concluded that there is a linear relationship between variables. The data shows that it meets the requirements to continue in the t-test process (paired-samples t-test).

Table 1. 4 Paired Sample t-test

Paired Samples Test

	Paired Differences							
				95%Cinfidence Interval of the Difference				
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pretest - Posttest	-10.3125	5.37880	.95085	-12.25176	-8.37324	-10.846	31	.000

Based on the paired samples t-test results, the Sig value. (2-tailed) shows 0.000. Based on the decision-making basis of the paired samples t-test results, H0 is rejected if Sig. (2-tailed) <0.005. From these results, it can be concluded that H0 is rejected and Ha is accepted, which means that there is an effect of the application of the TAI (Team Assisted Individualization) learning model on the learning outcomes of students on the sewing element of fashion products in the form of stand collar.

Table 1.5 Student's learning results

	Complete Score	Incomplete Score	Mean	Percentage
Pretest	12	20	69,9	37,5 %
Post-test	29	3	80,1	90,6 %
Total Students	32	32		

The learning outcomes of students after the application of the TAI-type cooperative learning model showed a difference in the average value of the initial test (pretest) of 69.8 with a completeness percentage of 37.5%, while the average value of the final test results (post-test) was 80.1 with a completeness percentage of 90.6%. With these results, it can be said that there was an increase in student learning outcomes after applying the TAI-type cooperative learning model.

Student's motivation results

Data on students' learning motivation is obtained from a questionnaire of students' motivation. Data analysis was conducted using the motivation questionnaire to get the initial motivation value and the final motivation of students' learning. The results of the students' motivation questionnaire can be seen in Table 1.6.

Table 1.6 Student's motivation results

No.	Indikator	Motivasi Awal	Motivasi Akhir
1.	Adanya hasrat dan keinginan untuk berhasil	73,8% (Tinggi)	85,1% (Sangat tinggi)
2.	Adanya dorongan dan kebutuhan belajar	78,9% (Tinggi)	85,9% (Sangat tinggi)
3.	Adanya harapan dan cita-cita masa depan	67,1% (Tinggi)	85,9% (Sangat tinggi)
4.	Adanya penghargaan dalam belajar	55,4% (Sedang)	78,1% (tinggi)
5.	Adanya kegiatan yang menarik dalam belajar	71,4% (Tinggi)	84,7% (Sangat tinggi)
6.	Adanya lingkungan belajar yang kondusif	43,7% (Sedang)	86,3% (Sangat tinggi)
Rata-rata		**65,05% (Tinggi)**	**84,33% (Sangat tinggi)**

The data from the student motivation questionnaire were tested for normality, linearity, and paired samples t-test. The normality test results are presented in Table 1.7.

Table 1.7 Normality test

Tests of Normality

	Kolmogorov-Smirnov[a.]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pretest	.146	32	.083	.931	32	.042
Posttest	.167	32	.023	.962	32	.308

*This is a lower bound of true significance.

a. Lilliefors Significance Correction

Based on the table of statistical normality test results using SPSS 25 with the normality test (Shapiro-Wilk) shows that the data is usually distributed. It is known that in the normality test figure, the pretest significance value is 0.042 and the post-test significance value is 0.308, indicating that both data are normally distributed and meet the requirements to continue the linearity test process.

The following data analysis is the linearity test between variables. To test whether the variables are in one linear. The results of the linear test can be found in Table 1.8.

Table 1.8 Anova table

ANOVA TABLE

		Sum of Squars	df	Mean Squar	F	Sig.
Between Groups	(Combined)	32.625	10	3.263	.605	.792
	Linarity	.063	1	.063	.012	.915
	Deviation from Linarity	32.562	9	3.618	.671	.726
Within Groups		113.250	21	5.393		
Total		145.875	31			

Based on the results of the linearity test, it is known that Sig. Deviation from linearity is 0.726, which means 0.726> 0.05. So, it can be concluded that there is a linear relationship between variables. From this data, it can be declared eligible to continue in the paired-sample t-test process.

The results of the paired t-test on the results of the student motivation questionnaire are presented in Table 1.9

Table 1.9 Paired sample T-test

Paired Samples Test

	Paired Differences							
				95%Cinfidence Interval of the Difference				
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pretest - Posttest	-4.46875	3.52854	.62376	-5.74092	-3.19658	-7.164	31	.000

Based on the paired samples t-test results, the Sig value. (2-tailed) shows 0.000. Based on the decision-making basis of the paired samples t-test results, H0 is rejected if Sig. (2-tailed) <0.005. From these results, it can be concluded that H02 was denied, and Ha2 was accepted, which means that there is an effect of applying the TAI (Team Assisted Individualization) learning model on the learning motivation of students on the sewing element of fashion products in the form of teak collars.

The results of students' motivation after applying the TAI-type cooperative learning model show the difference in the average motivation of students from the beginning (pretest) of 29.47 or 65.05% with a high category. In comparison, the final average value (post-test) is 33.94 or 84.33%, with a very high category. Based on these results, it is concluded that there is an increase in students' motivation to learn after implementing the TAI cooperative learning model.

Conclusion

The results of this study show that the application of the Team Assisted Individualization (TAI) type cooperative learning model on sewing elements of fashion in the form of upright collars that have been carried out in class XI of SMKN 3 Probolinggo obtained the following conclusions: The implementation of the TAI type cooperative learning model on the element of sewing fashion products in the form of upright collars shows an average of 3.5 with a suitable category, there is a positive effect of the application of the TAI type cooperative learning model on learning outcomes up to 90.06% completed, there is a positive effect of the application of the TAI type cooperative learning model on student learning motivation up to 84.33%.

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