



Team Assisted Individualization Learning Model Assisted with Student Worksheet Toward Mathematical Knowledge Competence

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ABSTRAK

Kemampuan siswa untuk memahami setiap materi-materi yang ada pada pembelajaran matematika belumlah maksimal. Masih ditemukannya kendala seperti kurangnya rasa percaya diri siswa untuk percaya bahwa dirinya mampu mengikuti setiap pembelajaran matematika yang diberikan. Hal ini menyebabkan siswa menjadi ketergantungan dengan siswa lain disetiap pembelajaran. berdasarkan permasalahan tersebut, dilakukanlah penelitian ini dengan tujuan untuk mengetahui pengaruh yang signifikan Model Pembelajaran *Team Assisted Individualization* Berbantuan Lembar Kerja Siswa terhadap kompetensi pengetahuan matematika kelas V SD Gugus Letkol Wisnu. Penelitian ini merupakan penelitian eksperimen dengan desain penelitian *Nonequivalent Control Group Design*. Populasi penelitian ini adalah seluruh kelas V SD gugus Letkol Wisnu yang terdiri atas 10 kelas dengan banyak siswa 334. Teknik sampling yang digunakan dalam penelitian ini adalah *Cluster Sampling*, dengan hasil SDN 5 Peguyangan dengan banyak siswa 28 orang sebagai kelompok eksperimen dan SDN 6 Peguyangan dengan banyak siswa 25 orang sebagai kelompok kontrol. Data kompetensi pengetahuan matematika dikumpulkan melalui tes esai sebanyak 5 soal yang valid dan reliabel. Hasil analisis uji-t menunjukkan $t_{hitung} > t_{tabel}$ yaitu $3.27 > 2.01$ pada taraf signifikan 5% dan $dk = 51$, sehingga H_0 ditolak dan H_a diterima, dengan demikian dapat disimpulkan Model Pembelajaran *Team Assisted Individualization* Berbantuan Lembar Kerja Siswa berpengaruh secara signifikan terhadap kompetensi pengetahuan Matematika siswa kelas V SD Gugus Letkol Wisnu.

ABSTRACT

The ability of students to understand every material available in mathematics learning is not yet optimal. There are still obstacles, such as the lack of self-confidence of students to believe that they can participate in any given mathematics learning. It causes students to become dependent on other students in each lesson. Based on these problems, this research conducted to analyse the significant effect of the Assisted Individualization Team Learning Model Assisted by Student Worksheets on the competence of the fifth-grade mathematics competencies of the SD Gugus Letkol Wisnu. This study is an experimental study with the Nonequivalent Control Group Design research design. The population of this study was 334 students. This study's sampling technique was cluster sampling—data of mathematical knowledge competence collected through essay tests with five valid and reliable questions. The t-test analysis results showed $t_{count} > t_{table}$ ie $3.27 > 2.01$ at a significant level of 5% and $dk = 51$, so H_0 rejected, and H_a was accepted. Thus it can be concluded that the Learning Model Assisted Individualization Team Assisted Individualization Assisted by Student Worksheets significantly influenced the competence of Mathematical knowledge fifth-grade students of the Lt. Col. Wisnu Cluster Group.

1. Introduction

Education is the main foundation of every human being to build a nation's civilisation. Education is a factor that determines the quality of national life and creates an intelligent life (Dr. Desak Putu Parmiti, 2016). Education can be defined as changing people's behaviour or group through teaching and educational actions. As times progress, science is also developing. Knowledge obtained from the learning process carried out in schools, homes, and the community. Learning is a complex activity between teachers and students in schools with different learning meanings (Drs. I Ketut Dibia, 2016). Many factors can affect education quality, creating effective learning (Prabaningrum & Putra, 2019).

In education itself, the curriculum, which is the teacher's reference, is periodically refined. The curriculum discusses plans and arrangements for all matters relating to the learning process. The curriculum is a guideline for implementing an education (Dr. Desak Putu Parmiti, 2017). The improvement of the curriculum was overwhelming for teachers. The teacher's task at school is not only as a teacher who is in charge of transferring knowledge but also to educate students to develop their potential (Cahyaningsih, 2019). The teacher plays an important role in learning because the teacher is in control of the learning process. The teacher must manage everything present during the teaching and learning process, such as student activity and involvement.

The learning process in several schools generally uses an agreed conventional learning model. However, the conventional learning model used is sometimes not suitable for students' conditions. It causes students' understanding to be less than optimal, and their competence is not satisfactory. Teachers can improve student understanding by using persuasive sentences to be motivated during the learning process (Diantari et al., 2014). This persuasive sentence can be used as positive reinforcement for students. With positive reinforcement, students are encouraged and can desire to improve math competence so that students are motivated to be consistent in learning every day (Triwinarni et al., 2017).

Every day students at school will get different subjects. One of the subjects that became the focus of discussion was mathematics. Mathematics is a scientific discipline that includes numbers, symbols and formulas (Prof. Dr. Ni Ketut Suarni & Dr. I Komang Sudarma, 2016). Mathematics is one of the basic components in other subject areas found at every level of education and is very important in helping logical thinking (Astuti & Sari, 2017). This subject deals with the calculation and thinking processes needed to solve various problems. It hoped that learning mathematics could help students help them in their daily lives, but it is not easy to instil this because mathematics presented abstractly (Putri Wahyuni et al., 2019). Mathematics has an important role in everyday life, helping students improve their reasoning power (Agustika et al., 2019). Students' understanding of understanding subject matter, especially mathematics, is quite difficult to equate because they have different memory, abilities and competencies. One of the factors that cause different students' knowledge competencies is that students are not used to solving a problem because most subjects tend to focus on memorisation (Maretayani et al., 2017).

There is an assumption that students' mathematical knowledge is low, one of which is that students do not understand the basic concepts of mathematics well, students' inability to solve problems, and how they explain the material (Sunita et al., 2019). It is, of course, a problem, because mathematics requires a fairly high understanding ability. Students are very difficult to understand mathematics because they must calculate various problems (Krismayeni, 2016). It is not unusual for mathematics to be one of the subjects that students consider difficult. It is very visible when making observations. Students who score above the Minimum Completeness Criteria (KKM) are the same students (that's all), and these students take lessons outside of learning hours (based on the results of interviews with the homeroom teacher) so that it helps them to understand the existing material better. Of course, it is very clear that students' understanding is not equal

Not a few students complain that the material in mathematics is difficult. When the teacher provides practice questions, many students cannot answer the questions correctly. They said the exercise was too difficult, so they asked a friend who knew better for help. When students who do not understand taught by their friends who understand better, students who do not understand can answer practice questions confidently and accurately. However, after being given practice questions with a higher level of difficulty than before, students who did not understand could not do it alone and asked to do it in groups. With the help of friends who better understand (peer tutors), students who do not understand become more understanding and confident so students are more confident and understand when learning carried out with groups. The problems that the students felt caused their competence in mathematical knowledge to be less. SD Gugus Letkol Wisnu has 334 fifth-grade students, of which 201 students have incomplete scores based on the minimum completeness criteria (KKM). The percentage of students who have not

completed is 66.83%; the data obtained from the Middle Semester Assessment (PTS) scores shown by each school's fifth-grade homeroom teacher. To address this, the teacher can do various things, one of which is to use various learning models.

According to Isrok'atun et al. in (Wardani & Wijayanti, 2019), the learning model is a learning model that designed in such a way with learning steps to help students construct and build thought patterns and ideas in achieving learning goals. According to the student's condition, the teacher can use many learning models to run well in the learning process. Learning models that are attractive and appropriate for certain student conditions will cause the learning process to run effectively and efficiently.

The advantage of the right learning model is that the teacher can easily control the learning process without requiring more energy. Students can also easily understand the subject matter because the learning process follows students' conditions and needs. It can build student activity in each learning process to feel the learning benefits students carry out every day. The teacher's ability to master learning models and materials can support effective learning. A good learning process can create effective learning with multi-way communication between teachers and students and between students and other students. The alternative of teaching is to use a learning model suitable for the students' condition. The learning model is Team Assisted Individualization.

The Team Assisted Individualization learning model follows students who are comfortable studying with friends/groups but still improve their competence. Slavin (2005) Team Assisted Individualization learning model designs a lesson that can make students learn in cooperative groups, which provides benefits for each student. The Team Assisted Individualization learning model is a combination of group and individual learning consisting of individuals (students) with various abilities and taught in several groups that provide benefits for each student.

In the Team Assisted Individualization learning model, students divided into several small groups with four students heterogeneously in their ability to solve problems (Laksmi et al, 2017). This learning model is very closely related to the heterogeneous ability group model (Riswanto, 2018) because students will rely on each other between group members. According to Shoimin (2017), the advantages of the Team Assisted Individualization learning model are that each student can learn to be responsible, cooperate, help solve problems and improve abilities and skills. Students become confident without having to be afraid of the possibilities that occur. Students can exchange ideas to become more active in the learning process because, in group learning, students also learn to discuss, debate and express their opinions, and increase sympathy and mutual respect for friends who have differences in the learning process.

According to Faturrohman (Harsanti, 2017), this learning model's characteristic is that different individuals will be united in small groups to discuss and solve problems with each member's responsibility. The problem-solving and discussion process in groups carried out by collaboration and communication between group members and the problem-solving results are then transferred and used as new knowledge to solve other problems (Puspawati et al 2017). With the Team Assisted Individualization (TAI) learning model, students with weak and intelligent individual abilities can be helped (Ayu & Gusmania, 2018). The application of this learning model will solve student problems so that the learning model is very influential in student understanding.

The stages of the Team Assisted Individualization learning model according to Lestari and Yudhanegara (2017: 50), namely the Placement Test: A placement test based on the score of a report card or previous test scores to find out the strengths and weaknesses of students, Teams: Formation of heterogeneous groups of 4-5 students in which in each group there is at least one superior (smart) student, Student Creative: Carrying out tasks in a group by creating a situation where individual success is determined or influenced by the success of the group, Team Study: Students study in groups assisted by smart students of the group members individually, exchange answers, share resulting in a discussion. Teachers provide individual assistance to students in need, Team Score and Team Recognition: Score the results of group work and provide award criteria for successful and superior groups, Teaching Group: Teachers provide material briefly, Fact Test: Implementation of small tests based on facts obtained by students, and the Whole-Class Unit: Providing a summary of the material by the teacher at the end of the lesson.

Apart from the learning model, the teacher can also make additional teaching materials. Teaching materials support the learning process to improve learning quality (Ardina & Sa'dijah, 2016). One of the teaching materials that can be used is Student Worksheets. Student worksheets materials in printed form can be made by the teacher (et al., 2018). In the learning process, students already have Student Worksheets which contain all the material taught in that semester in one book, but some students complain that the Student Worksheets cannot be used properly. Many typographical errors occurred, and the questions were considered complicated and not understood by students. Based on this, the teacher

can make teacher-made Student Worksheets that follow the material with the right level of questions and minimise typing errors. Maharani et al (2017) students can easily find concepts and apply them because, on student worksheets, there are instructions that help students achieve learning goals.

The Team Assisted Individualization learning model conducted on previous research. Laksmi's relevant research reinforces this research et al. (2016) on fourth-grade students of SD Gugus Raden Ajeng Kartini for the 2016/2017 academic year Team Assisted individualisation learning model affects the mathematical knowledge competence of fourth-grade elementary school students. Raden Ajeng Kartini Group for the 2016/2017 Academic Year. Based on the results of data analysis obtained $t_{count} = 7.65$, while at the 5% significance level and $dk = 98$, the score of $t_{table} = 1.980$ so that $t_{count} = 7.65 > t_{table} = 1.980$. The equation used in this study is a learning model, namely the Team Assisted Individualization learning model and the thing under study, namely the competence of mathematical knowledge. Whereas the difference from this study is the variation of the models used in learning, the research implementation class is the fourth grade. The research location is SD Gugus Raden Ajeng Kartini, and the academic year is 2016/2017. In this study, the variation of the model used in learning assisted by Student Worksheets measured knowledge competence. The class studied was grade five, the research location was SD Gugus Letkol Wisnu, and carried out in the 2019/2020 school year.

There is also research conducted by [Ariestika et al \(2014\)](#) on fifth-grade students of SD Negeri 1 Tajun, Kabupaten Buleleng in 2014/2015 academic year. The Team Assisted Individualization (TAI) learning model assisted by structured Student Worksheets (LKS) improves student mathematics learning outcomes. Fifth grade SD Negeri 1 Tajun. It is known based on the class average, absorption, and classical learning completeness. The class average student learning outcomes reached 76 with an increase of 7 points from the previous, student learning completeness of the subject matter reached 100% with an increase of 48% from before. The equations used in this study are the learning model, variations in the learning model, and the class under study, namely the Team Assisted Individualization learning model assisted by Student Worksheets in the fifth grade. Meanwhile, the difference in this research is what is measured, namely learning outcomes, the place of implementation is SD Negeri 1 Tajun, and the academic year is 2014/2015. In this study, knowledge competence measured the place for conducting the research, namely SD Gugus Letkol Wisnu, and carried out in the 2019/2020 academic year.

Based on the description described, a study was carried out in applying the Team Assisted Individualization learning model with additional teaching materials in the form of Student Worksheets. The research title The Effect of Team Assisted Individualization Learning Models Assisted by Student Worksheets on Mathematical Knowledge Competencies in the fifth grade of the Letkol Wisnu Group Elementary School in the Academic Year 2019/2020.

The purpose of this study was to determine the significant effect of the Team Assisted Individualization learning model assisted by Student Worksheets on the competence of Mathematics knowledge in fifth grade SD Gugus Letkol Wisnu Academic Year 2019/2020.

2. Method

The Team Assisted Individualization learning model research conducted in the fifth grade of SD Gugus Letkol Wisnu. This research was conducted from October 2019 to March 2020 in the even semester of the 2019/2020 academic year, preparing a proposal to prepare a thesis. The research carried out by giving the treatment six times in each sample group.

The research method used is quantitative, data collected in numbers and processed using statistics ([Sugiyono, 2017](#)). The experimental design used is Quasi-Experimental Design. This design used because this research cannot fully control students' behaviour outside of school ([Widiasih, 2018](#)). The form of Quasi-Experimental design used in this research is Nonequivalent Control Group Design. The design used involved two groups, namely the experimental group that received special treatment with the Team Assisted Individualization learning model assisted by Student Worksheets and the control group using conventional learning.

The research begins with giving a PreTest to determine whether the two groups have the same mathematical knowledge competency and end with giving a Post Test to determine two mathematical knowledge groups' competency data. The research carried out in 3 stages, the experimental preparation stage, the experimental implementation stage and the final experimental stage. Before carrying out the research, population determination carried out first. According to ([Sugiyono, 2017](#)) population is an area of conclusions that the researcher determines has characteristics to be analysed.

This study's population were all fifth-grade students of SD Gugus Letkol Wisnu, which consisted of 10 classes with 334 students. After having a population, the next thing to do is determine the research sample. The sample is part of the population representing the population obtained based on certain

techniques (Agung, 2014). Meanwhile, according to (Sugiyono, 2017), the research sample is a population that has something in terms of numbers and characteristics. From the two expert opinions, the sample is a part of the population representing the entire population obtained by using certain techniques. Sampling to represent this population aims to facilitate research because it cannot use the entire population to be studied. It is due to limited funds, too much population, limited time and human resources. It was taking samples from the population using a certain technique called a sampling technique. This study's sample determined by the cluster sampling technique, namely the sampling technique by randomising the class or unit in the population. This technique used because the population consists of classes or units. Randomisation was carried out in the population to determine the two research samples. Then randomisation was carried out again to the group to determine the experimental group and the control group. The randomisation results stated SDN 5 Peguyangan as the experimental group and SDN 6 Peguyangan as the control group.

To analyse data distribution equality between the experimental and control groups, each group was given a PreTest. The pre-test results tested using the t-test formula, namely the Polled Variant, through the Polled Variant formula with a significance level of 5% and $dk = n_1 + n_2 - 2$, each group was declared equivalent. Before carrying out the t-test, each group must meet the prerequisite test, namely the normality test of data distribution using the Kolmogorov-Smirnov test (Rusydi Ananda, 2018) and the variance homogeneity test using the Fisher Test (F). The normality test results of the pre-test data distribution of the experimental group have a maximum score of $|F_t - F_s|$ equal to 0.22 at a significance level of 5%. The Kolmogorov-Smirnov table score of 0.250, the maximum score \leq the Kolmogorov-Smirnov table score so that the data normally distributed. The maximum score is 0.16 at the 5% significance level in the control group. The Kolmogorov-Smirnov table score is 0.270, the maximum score \leq the Kolmogorov-Smirnov table score so that the data normally distributed.

The next step after the data normally distributed is to test the sample group's variants' homogeneity with the F test. The F test results with dk 27.24 get F_{count} of 1.10 and F_{table} 1.93, then $F_{count} \leq F_{table}$ so that the variants of the two research samples are declared homogeneous. The prerequisite test fulfilled because the sample group data was normal and homogeneous, so the t-test with the Polled Variant formula was carried out. The results of the t-test get dk of 53, the score of $t = 1.82$, and $t_{table} = 2.01$. The results of the t-test state that $t_{count} < t_{table}$, then H_0 is accepted and the sample group is declared equivalent. So from these results SDN 5 Peguyangan as an experimental group was given the treatment of the Team Assisted Individualization learning model assisted by Student Worksheets and SDN 6 Peguyangan given conventional learning treatment.

The data collection of mathematical knowledge competence in the experimental group and the control group used a test instrument in an essay test. (Arikunto. Suharsimi, 2018) A test is a tool for gathering official information the essay test given as many as five valid and reliable questions. The questions were given to each sample group as a Post Test to collect mathematical knowledge competence data.

Content and item validity used in this study. Content validity measures learning objectives to match the subject matter provided (Arikunto. Suharsimi, 2018). The content validity test in this research is the curriculum and grid. Simultaneously, the item validity is a validity test related to the items' score with the total score. An item will be said to be valid if the item's score is equal to the total score (Arikunto. Suharsimi, 2018). The Pearson Product Moment (r_{xy}) correlation coefficient formula used to measure the validity of the mathematics' knowledge competency test items in an essay test. Reliability is the determination of an instrument given to different people, times and places but can give quite similar results (Lestari and Yudhanegara, 2017). The reliability of a test is related to the determination of a test result. The point is that if the results change, the change is said to be meaningless. Tests with consistent results generally have a high level of confidence. The reliability test is carried out after the validity test because the items tested are already valid. The Cronbach Alpha Coefficient formula determined the reliability test of a polytomous test. The following in table 1 presented the grid of the Post Test instrument.

Table 1. Post Test Instrument Grid

Satuan Pendidikan : Sekolah Dasar
 Tahun Pelajaran : 2019/2020
 Kelas/Semester : V/II
 Materi : Pengolahan Data
 Mata Pelajaran : Matematika
 Jumlah Soal : 5 soal

Basic Competency (KD)	Indicator	Cognitive Level						Type of question	Question number	Total question
		C1	C2	C3	C4	C5	C6			
3.7 Explain data relating to students or the environment and how it is collected	3.7.1 Describe personal or environmental data.	√						Essay	1	1
	3.7.2 Describe how data was collected.			√				Essay	3	1
3.8 Describe the presentation of data related to students' self and compare with data from the surrounding environment in the form of lists, tables, picture diagrams (pictograms), bar charts or line charts	3.8.1 explain the presence of personal data.			√				Essay	6	3
							√	Essay	7	
	3.8.2 Compare data from the environment.			√				Essay	5	
Total		1		3		1				5

3. Result and Discussion

The results of the research that had been carried out by being given six times each treatment at SDN 5 Peguyangan as an experimental group. Team Assisted Individualization learning model assisted by Student Worksheets and at SDN 6 Peguyangan as a control group applied conventional learning to obtain data on students' mathematical knowledge competencies. The Post Test data analysis of the Mathematics knowledge competence in the experimental group and the control group is as follows.

Table 2. Recapitulation of Results Description of Mathematical Knowledge Competency Data for Experiment Group and Control Group

Analysis result	Experiment Group	Control Group
Mean	85.89	76.20
Standard Deviation	9.53	12.01
Variation	90.84	144.33
Maximum Score	100	100
Minimum Score	70	50

The data on the competency score of Mathematics knowledge shows that groups taught through the Team Assisted Individualization learning model assisted by Student Worksheets have a higher average score than those taught using conventional learning. Furthermore, hypothesis testing can be done. In testing the previous hypothesis, it must meet the prerequisite test analysis, including the normality test of data distribution and the homogeneity of variance. The recapitulation of the normality test results of the competency data distribution of Mathematics knowledge of the experimental and control groups are presented in table 2. as follows.

Table 3. Results of Normality Test for Data Distribution for Experiment Group and Control Group

No	Sample	Total Sample	Maximum Score F _t - F _s	Kolmogorov-Smirnov Score	Information
1	Experiment	28	0.120	0.250	Normal
2	Control	25	0.110	0.270	Normal

Based on the experimental group's normality test, the maximum score obtained at the maximum score of $|F_t - F_s| = 0.120$. Then the maximum score is compared with the Kolmogorov-Smirnov table score with a significance level of 5% ($\alpha = 0.05$) = 0.250 and $n = 28$ so that the comparison of the scores $|F_t - F_s| <$ the score of the Kolmogorov-Smirnov table is $0.120 < 0.250$, meaning that the data distribution of the experimental group normally distributed. The normality test results for the control group obtained the normality test data for the control group's maximum score of $|F_t - F_s| = 0.110$. Then the maximum score is compared with the Kolmogorov-Smirnov table score at a significance level of 5% ($\alpha = 0.05$) = 0.270 and $n = 25$ so that the comparison of the maximum score $|F_t - F_s| <$ Kolmogorov-Smirnov table score is $0.110 < 0.270$, meaning that the control group normally distributed.

The experimental and control groups' data normally distributed, so the homogeneity test carried out. The homogeneity test intended to ensure that the differences in the t-test results obtained are true of the differences between groups. The homogeneity test of variance carried out using the F test (Fisher's test). A significance level of 5% with degrees of freedom in the numerator $n_1 - 1$ and degrees of freedom in the denominator $n_2 - 1$. With the provision that if $F_{count} > F_{table}$ then the sample is not homogeneous and if $F_{count} < F_{table}$ then the sample is homogeneous. The homogeneity test calculation results in the study sample group presented in table 3.

Table 4. Recapitulation of the Homogeneity Test of the Study Sample Variance

Highest S ²	Lowest S ²	dk	F _{hitung}	F _{tabel}	Information
144.33	90.84	0.250	1.59	1.93	Homogen

Based on the calculation of the homogeneity test results, the score of $F_{count} = 1.59$ obtained. The F_{table} score at 5% significance level with the numerator $dk n_1 - 1$ ($41 - 1 = 40$) and dk denominator $n_2 - 1$ ($36 - 1 = 35$) is 0.250 so a comparison of $F_{count} < F_{table}$ obtained so that the data testing of the experimental and control groups has variance homogeneous. The experimental and control group data results were normally distributed and had homogeneous variances based on the prerequisite test. The data collection has met the analysis prerequisite test to test the hypothesis using parametric statistical

analysis with the Polled Variance t-test. The following presented in table 4 of the t-test results with the Polled Variant formula.

Table 5. Recapitulation of the t-test

Sample Group	n	dk	Average	Variants	T _{hitung}	T _{tabel}	Information
Experiment	28	52	85.89	90.84	3.27	2.01	H ₀ rejected
Control	25		76.20	144.3			

The results of the t-test analysis of Polled Variants obtained tcount = 3.27 with ttable at the 5% significance level and dk = 28 + 25-2 = 51, namely 2.01. Based on these results, it can be see that tcount> ttable (3.27> 2.01) then H₀ is rejected and H_a is accepted so that it can be concluded that there is a significant difference in the competence of mathematical knowledge between the groups that were taught by applying the Team Assisted Individualization learning model assisted by Student Worksheets and groups that were taught by applying conventional learning in the fifth grade of SD Gugus Letkol Wisnu. The experimental group's learning with the Team Assisted Individualization learning model runs effectively, interactively, and conducive. The Team Assisted Individualization learning model helps students be more active and confident with their friends' help while participating in learning. The Team Assisted Individualization learning model helps students improve their understanding of the material taught on mathematical content.

The competency analysis of mathematics knowledge in the fifth grade SD Gugus Letkol Wisnu experimental and control groups was equivalent. After the groups were declared equal, each sample group give treatment. The experimental group gives treatment in applying the Team Assisted Individualization learning model assisted by Student Worksheets. In contrast, the control group give conventional learning treatment. After the two groups give treatment, the experimental group obtained higher mathematical knowledge competency results than the control group. It is because the experimental group received treatment in the form of a Team Assisted Individualization learning model.

Learning in the experimental group with the Team Assisted Individualization learning model was effective, interactive and conducive. The Team Assisted Individualization learning model helps students be more active and confident with their friends' help while participating in learning. The Team Assisted Individualization learning model helps students improve their understanding of the material taught on mathematical content. The material taught on mathematics content is CHAPTER V on Data Collection. Learning in the experimental group helped students learn more effectively, be fun, and increase their mathematical knowledge. Students continued to learn conducive but not too optimally in the control group taught using conventional learning. Students learn to five learning experiences, namely observing, gathering information, asking questions, communicating, and associating without various learning models/media. Learning like this causes students to tend to be bored and unable to improve their mathematical knowledge competencies. Students are less creative and tend to be embarrassed to ask questions that they do not understand. Students' opportunity to study with groups also reduced so that students cannot hone their ability to work together when learning takes place.

The results of the study were reinforced by relevant research by [Laksmi, et al. \(2016\)](#) which concluded that the Team Assisted Individualization learning model had an effect on the mathematical knowledge competence of fourth-grade students of SD Gugus Raden Ajeng Kartini for the 2016/2017 academic year and research by [Ariestika et al. \(2014\)](#) which concluded that Learning model of Team Assisted Individualisation assisted by structured Student Worksheets (LKS) can improve the mathematics learning outcomes of fifth-grade students of SD Negeri 1 Tajun for the 2014/2015 academic year.

Based on this explanation, it can be concluded that the Team Assisted Individualization learning model assisted by Student Worksheets affects the competence of fifth grade Mathematics knowledge of the SD Gugus Letkol Wisnu for the 2019/2020 Academic Year.

4. Conclusion

The Post Test data calculation results for the competence of mathematical knowledge state that the average score of mathematical knowledge competence in the experimental group is = 85.89 and the control group is = 76.20. Based on the results of the data analysis, it can be concluded that there is a significant difference in the competence of mathematical knowledge between the groups that were

taught by applying the Team Assisted Individualization learning model assisted by Student Worksheets and groups that were taught by applying conventional learning in fifth-grade students SD Gugus Letkol Wisnu. It proves by the score of $t_{count} = 3.27$ and $t_{table} = 2.01$ at a significant level of 5% and $dk = 51$. Based on these results, it can be seen that $t_{count} > t_{table}$ ($3.27 > 2.01$) then H_0 is rejected and H_a is accepted. The Team Assisted Individualization learning model assisted by Student Worksheets significantly affects fifth-grade mathematics knowledge competence at SD Gugus Letkol Wisnu for the 2019/2020 academic year.

Based on this study's results, several suggestions are suggested, namely to the teacher, so that this study's results can be considered for use in the mathematics learning process and can compile more interesting learning by applying innovative learning models and variations. For the principal, the results of this study can be considered to make this study a reference for teachers in developing an attractive learning program with innovative learning models and variations, and other researchers so that the results of this study can be used as references and input for other researchers to support similar research to realise learning, of interest to students.

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