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The Effect of the Cooperative Model With the Assistance of LKS on Class III Students' Learning at SDN Bumianyar II

Yeni Puji Astuti^{1*}

^{1*}Elementary School Teacher Education Study Program, STKIP PGRI Sumenep, East Java, Indonesia

yenipuji@stkipgrisumenep.ac.id

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Abstract

Learning in general is a process of interaction between educators, students and their environment. Learning is a series of complex activities, in essence not only conveying subject matter but also requires the teacher to use all the basic skills in teaching. This study aims to examine: 1) significant differences in learning outcomes using the cooperative model with the help of LKS and conventional learning; 2) student activities in learning by using cooperative models with the help of worksheets. This type of research is experimental research. This experimental research design uses a control group pre-test-post-test design pattern. Data collection techniques using observation, interviews, documentation and tests. The data analysis technique uses the t-test statistical test formula and the percentage of student activity. The results of this study showed that there was a significant difference between learning outcomes using the Cooperative Model with LKS Assistance and conventional learning, as well as the percentage value of student activity while participating in learning using the Cooperative Model with classical LKS Assistance of 78.43% included in the active criteria. The conclusion of this study is that there is a significant difference between learning outcomes using the Cooperative Model with the help of LKS and conventional learning in Class III students of SDN Bumianyar II Academic Year 2020/2021 and the learning activities of class III students of SDN Bumianyar II Academic Year 2020/2021 while participating in learning using The Cooperative Model with the Help of LKS is included in the active category.

Keywords – Cooperative Model; LKS; Students



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1. Introduction

Learning in general is a process of interaction between educators, students and their environment. Learning is a series of complex activities, in essence not only conveying subject matter but also requires the teacher to use all the basic skills in teaching. In addition, in the learning process the teacher must also be able to create a comfortable learning environment so that students are able to participate in learning activities effectively and efficiently. Komalasari (2013: 3) states that "learning is a system or process of teaching the learner that has been planned, implemented and evaluated systematically so that the learner can achieve learning objectives effectively and efficiently". Based on the explanation above, learning must be supported by the components involved in order to achieve the goals to be achieved.

The achievement of learning objectives to the fullest is supported by innovative and creative teachers. Innovative and creative teachers here can be demonstrated by using various learning models and being able to use efficient teaching aids. One good learning model applied in elementary schools is the cooperative learning model. According to Warsono & Hariyanto (2014: 161) states that "cooperative learning is a learning model that involves a number of small groups of students working together and learning together by helping each other interactively to achieve the formulated learning objectives".

According to Suprijono (2015), there are six main phases or stages in cooperative learning. As in Table 1 below.

Table 1. Cooperative Learning Model Phase

No.	Phase	Activity
1	<i>Present goals and set</i>	Explain the learning objectives and prepare students ready to learn
2	<i>Present information</i>	Presenting information to students verbally
3	<i>Organize students into learning teams</i>	Explain to students how to form study teams and help groups make efficient transitions
4	<i>Assist team work and study</i>	Helping study teams while students work on their assignments

5	<i>Test on the materials</i>	Testing students' knowledge of various learning materials or groups presenting their work
6	<i>Provide recognition</i>	Prepare ways to recognize individual and group efforts and accomplishments

In addition to using learning models, the success of learning objectives can also be helped by the use of Student Worksheets (LKS). According to (Astuti, Elce & Aris, 2021: 117) "LKS is a sheet that contains material and assignments that must be done by students". The function of LKS as stated by Prastowo (2012: 205) "LKS functions as teaching materials that can minimize the role of students but activates students more, as teaching materials that make it easier for students to understand the material provided, as teaching materials that are summarized and rich in assignments to practice, and facilitate the implementation of teaching to students".

From the results of observations at SDN Bumianyar II, it was found that there was a problem during the learning process, namely that some students often walked around the class, often talked to their classmates, and were passive when given the task of expressing opinions. In addition, the teacher in conveying subject matter still uses the lecture method, so the use of learning models does not vary. This is evident from the value of student learning outcomes, only about 40% are complete, while 60% are incomplete.

From these problems, researchers offer a solution to overcome learning problems, namely by implementing a cooperative model with the help of worksheets. In the cooperative model phase there is group work, so that students who often walk in class will concentrate more on their group members. In addition, the characters of elementary school age children still like to play and study together. LKS is a teaching aid to make it more well coordinated. This is in accordance with the opinion of Syaodih (2007: 21) that "the cooperative learning model can be used in class III SD, but requires more intensive teacher attention in its implementation, because class III students have limited abilities, their

attention is easily swayed, their cooperative skills are still needs to be developed, thus requiring more intensive control, supervision, and tutoring. Meanwhile, LKS according to Anggraini, et al (2016: 2) states that "The role of Student Worksheets (LKS) in learning is one of them as teaching materials that can minimize the role of educators but activate students more. Therefore, to improve students' interest in learning, the teacher can do this by making LKS more systematic, colorful and illustrated to attract attention in studying the LKS".

This study aims to examine: 1) significant differences in learning outcomes using the cooperative model with the help of LKS and conventional learning; 2) student activities in learning by using cooperative models with the help of worksheets.

According to Ningtyas & Emy (2017: 4) states that "learning outcomes are the maximum effort to achieve the process of changing behavior in students that can be observed and measured in the form of changes in knowledge, attitudes and skills that students acquire through learning activities". Meanwhile, according to Sardiman (2004: 96) states that "learning activities are student activities that support successful learning". So, in this study what will be examined about learning outcomes and student learning activities in the learning process

2. Method

This type of research is experimental research. According to Arikunto (2006: 86), experimental research is a type of research that is considered good because it meets the requirements, namely the existence of another group that is not subject to experimentation but also gets observations, which is commonly called the control class.

This experimental research design uses a control group pattern pre-test-post-test design (Arikunto, 2006: 86), with the following pattern:

E	O ₁	X ₁	O ₂
K	O ₃	X ₂	O ₄

Picture 1. Research design control group pre-test post-test design

Information:

E = experimental group

K = control group

O₁ = pre-test results in the experimental class before being given treatment

O₂ = post-test results in the experimental class after being given treatment

X₁ = treatment of the teaching and learning process using the Cooperative Learning Model with the help of worksheets in the experimental class

X₂ = treatment of the teaching and learning process using conventional learning models in the control class

O₃ = pre-test results in the control class before being given treatment

O₄ = post-test results in the control class after being given treatment

Data collection techniques using observation, interviews, documentation and tests. The data analysis technique uses the t-test statistical test formula, where the t-test statistical test is a statistical test that can measure the differences in the learning outcomes of two classes, namely the learning outcomes of the experimental class and the learning outcomes of the control class. The formula is as follows (Arikunto, 2006:311):

$$t_{tes} = \frac{(M_x - M_y)}{\sqrt{\left(\frac{\sum X^2 + \sum Y^2}{N_x + N_y - 2}\right) \left(\frac{1}{N_x} + \frac{1}{N_y}\right)}}$$

Information:

$M_x - M_y$ = mean difference between the experimental class and the control class

$\sum X^2$ = deviation of individual values from the experimental class

$\sum Y^2$ = deviation of individual values from the control class

N_x = the number of samples in the experimental class

N_y = the number of samples in the control class

To examine student activity during the teaching and learning process using the Cooperative Model with LKS Assistance, the percentage of student activity (P_a) is used with the formula:

$$P_a = \frac{A}{N} \times 100 \%$$

Information:

P_a = Percentage of student learning activities and outcomes

A = Total score obtained by students

N = Maximum number of scores

With activity criteria as in the following table:

Table 2. Criteria for Student Activity

Activity Percentage	Criteria
$P_a \geq 80\%$	Very active
$60\% \leq P_a < 80\%$	Active
$40\% \leq P_a < 60\%$	Pretty active
$20\% \leq P_a < 40\%$	Less active
$P_a < 20\%$	Not active

(Basir, 1988:132)

3. Result and Discussion

This study used a class III population at SDN Bumianyar II consisting of Class III A and III B Odd Semesters of the 2021/2022 Academic Year. From the existing population, then the saturated sample method is used, meaning that all members of the population are used as research samples. The class that became the sample in this study was class III A which was used as the experimental class and class III B as the control class.

The problem to be analyzed is that there are significant differences in learning outcomes using the cooperative model with the help of worksheets and conventional learning, as well as student activities. The experimental class and the control class were given the same material, namely Theme 1 Growth and Development of Living Things, Sub Theme 4 Plant Growth and Development. In the experimental class (III A) using the cooperative model with the help of

worksheets and in the control class (III B) using the conventional model. The conventional model in question is the learning model that the teacher (homeroom teacher) usually applies in teaching. According to Sudarsana (2018: 7) states that "PBM with conventional learning models still relies on rote classes, which tolerate convergent responses, emphasize concept information and practice questions in the text". The experimental class and the control class were given the same material, namely Theme 1 Growth and Development of Living Things, Sub Theme 4 Plant Growth and Development.

The problems to be analyzed using the t test, while the statistical hypothesis t test is as follows:

H_0 = There is no difference in student learning outcomes between the use of the Cooperative Model with LKS Assistance and conventional learning.

H_a = There are differences in student learning outcomes between the use of the Cooperative Model with LKS Assistance and conventional learning.

The summary of the t test can be seen in table 3. below.

Table 3. Summary of pre-test and post-test results in the control class and experimental class

Control Class		Experimental Class	
$\sum X_1$	1460	$\sum Y_1$	1400
$\sum X_2$	1930	$\sum Y_2$	2660
$\sum X$	470	$\sum Y$	1260
$\sum X^2$	11900	$\sum Y^2$	49400
M_x	12,70	M_y	33,16

Based on the results of calculations using the t test, the value of $t_{tes} = 3,06$ is obtained. This t_{tes} value is consulted with the t_{table} value which has a value of db = 73 at a significance level of 5%. The value of db = 73 lies between db = 60 which has a value of $t_{table} = 2.00$ and db = 120 which has a value of $t_{table} = 1.98$ so that the value of t_{table} with db = 73 is 1.996. Thus, the value of $t_{count} > t_{table}$ so that the null hypothesis (H_0) is rejected and the working hypothesis (H_a) is accepted. From these

results it can be stated that there is a significant difference between learning outcomes using the Cooperative Model with LKS Assistance and conventional learning.

Observation data in this study is in the form of student activity data while participating in learning using the Cooperative Model with the Help of LKS. A summary of student activities while participating in learning using the Cooperative Model with the Help of LKS can be seen in table 3.2 below.

Table 4. Percentage of student activity for each indicator (Meetings I, II, III, IV, V, and VI)

No	Student activity	Meetings						Average
		I	II	III	III	IV	V	
1	Paying attention to the teacher's explanation	80,70	82,46	83,33	85,09	88,85	83,33	83,96
2	Cooperation in groups	82,84	86,84	85,09	82,46	82,46	82,46	83,69
3	Help friends in the group to understand the material	82,45	82,45	83,33	82,45	80,70	85,96	82,80
4	Draw conclusions	80,70	85,09	83,33	83,33	82,46	88,59	83,33
5	Ask	64,03	54,39	57,02	54,39	57,02	54,39	83,92
	Average	78,14	78,25	78,42	77,54	78,30	78,95	-

From the data in table 4., it can be seen that the average percentage of student activity from highest to lowest for each indicator can be sorted as follows: paying attention to teacher explanations, making conclusions, working in groups, helping friends in groups to understand material, and ask. From table 3.2 it can be calculated the percentage of student activity in the classical experimental class,

namely:

$$P_a = \frac{78,14 + 78,25 + 79,42 + 77,54 + 78,30 + 78,95}{6} \times 100\% = 78,43\%$$

From the data above, the percentage value of student activity while participating in learning using the Cooperative Model with the help of LKS in a classical manner is 78.43%. If it is adjusted to the criteria for student activity as shown in table 3.2, then the activity value of 78.43% is included in the active criteria.

The Cooperative Learning Model is a learning model that conditions students to study in small groups, where each group is heterogeneous to work together in a team. According to Sariayu & Yalvema (2020: 3) states that "Cooperative learning is very suitable for students because it will be easier to find and understand difficult concepts if they discuss with each other students regularly work in groups to help each other in solving complex problems". Cooperative learning prioritizes cooperation between group members to achieve learning goals. Using this cooperative model turns passive learning into active, because in learning the teacher is only a facilitator while students study and work in groups to achieve learning goals. Penerapan model kooperatif dengan bantuan LKS ini bertujuan untuk membantu proses pembelajaran lebih terarah dengan bantuan LKS. Pada saat siswa bekerja dalam kelompok lebih fokus pada LKS yang berikan guru, karena dari LKS yang mereka dapatkan berisi tentang materi serta petunjuk kerja yang jelas.

This research is an experimental research that aims to examine the significant differences between learning outcomes using cooperative models with the help of worksheets and conventional learning and student activities in learning using cooperative models with the help of worksheets. The problem in this study is whether there is a significant difference between the learning outcomes of students who use the Cooperative Model with LKS Assistance and conventional learning. To answer these problems, namely by comparing the increase in learning outcomes in the experimental class and the control class using the ttest.

The results of the research and data analysis showed that the results of testing using the t test obtained the value of $t_{count} > t_{table}$ at a significance level

of 5%, namely $t_{test}=3.06$ and $t_{table}=1.996$. The increase in learning outcomes achieved by students was obtained from the difference between the pre-test and post-test scores in both classes, namely the experimental class of 33.16 and the control class of 12.70. This shows that there are significant differences between learning outcomes using the Cooperative Model with the help of LKS and conventional learning.

This significant difference is because students are more motivated to take part in learning using the Cooperative Model with the help of LKS, where students are more active in learning in groups and students are required to be able to express the main concepts of the material being studied. So that students have a high enthusiasm to really understand the material being studied. This is in line with the opinion of Ardianto & Bibin (2016: 7) which states "working in groups besides being able to facilitate a job also allows students to interact with each other and knowledge transfer occurs". Opinion Astuti, Yeni (2019: 2) states that "this cooperative model aims for group success, because in practice students are invited to study in groups to work on assignments given by educators by actively exchanging opinions with group members".

LKS assistance makes it easier for students to understand the content of the material and makes it easier for students to learn because the LKS contains work instructions that will be carried out by each group. This is in line with the opinion of Christiani & Mintoari (2014: 10) which states that "the application of the Small Group Discussion Method with the Cooperative Learning Model triggers students and teachers to be more active in finding their own concepts related to learning objectives"

The material provided is Theme 1 Growth and Development of Living Things, Sub Theme 4 Growth and Development of Plants. In this material the explanation is very broad, so that students with the help of LKS are more helpful in understanding the content of the material, because in LKS the material is presented in an outline.

The second problem in this study is student activity in learning using cooperative models with the help of worksheets. The percentage of student activity in paying attention to the teacher's explanation in table 3.2 is 80.70%; 82.46 % ; 83.33%; 85.09%; 88.85 % ; and 83.33 %. In this activity students must pay attention to the teacher's explanation from the beginning of teaching and learning activities to the end of learning activities. The highest percentage of these activity criteria was 88.85% at the fifth meeting. This shows that the Cooperative Model with the help of LKS can stimulate students to be actively involved in the learning process, students can follow the teacher's explanation well from the initial activity to the final activity the teacher closes the lesson.

The percentage of student activity in group work in table 3.2 from the first to the last meeting is 82.84%; 86.84 % ; 85.09 % ; 82.46 % ; 82.46 % ; and 82.46%. In group collaboration activities students are required to cooperate with their group mates through a process of cohesiveness in discussing with their group. Each group member has the responsibility to help a groupmate who is experiencing difficulties and the same responsibility for the success of the group.

The percentage of student activity in helping friends in the group to understand the material in table 3.2 is 82.45%; 82.45 % ; 83.33 % ; 82.45 % ; 80.70 % ; and 85.96 %. From the first meeting to the third meeting there was an increase, from the fourth and fifth meetings it experienced a slight decrease and increased at the sixth meeting. An increase in the percentage of student activity in helping friends in the group to understand the material indicates good cooperation in the group. This shows that the Cooperative Model with the help of LKS can stimulate students to be more active in uniting opinions and exchanging ideas to better understand the material.

The percentage of student activity in making conclusions in table 3.2 is 80.70%; 85.09 % ; 83.33 % ; 83.33 % ; 82.46 % ; and 88.59 %. The increase in the percentage of student activity in making conclusions in the last meeting proved that students were well able to make conclusions. This shows that the Cooperative Model with the help of LKS can stimulate students to be more active

in expressing important concepts in the material being studied. From the results of the increase in the percentage of this activity in accordance with the opinion of Putri, et al. (2017: 3) which states that "Increased student activity will affect student learning outcomes".

The percentage of student activity in asking questions in table 3.2 is 64.03%; 54.39 %; 57.02 %; 54.39 %; 57.02% and 54.39%. From the first meeting to the third meeting decreased. This decrease in asking activity occurred because the students in the previous meeting were motivated to learn so that before the teaching and learning activities they had prepared the material to be studied. So that when learning they are really ready to accept the material and students are more understanding in understanding the material, this is evident when students present the main points of the material being studied and are able to express conclusions well. This shows that the Cooperative Model with the help of LKS can stimulate students to be more actively involved in the learning process, besides that it can also motivate students to study the material before learning activities so that students understand better when learning takes place.

From the results of the analysis of the percentage of student activity in each meeting in table 3.2, it can be seen that there is a balance in the percentage of student activity, namely 78.14%; 78.25 %; 78.42 %; 77.54 %; 78.30 % and 78.95 %. This shows that the Cooperative Model with the help of LKS makes students more active and creative in participating in learning. The percentage of student activity was obtained at 78.43%, if the percentage of student activity is adjusted to the criteria for student activity as shown in table 2.2, then the activity is included in the active criteria. This is in accordance with the opinion of Hasanah, Z (2021: 11) which states that "cooperative learning can make students interact between students to give each other their knowledge in solving a problem presented by the teacher so that all students will more easily understand various concepts".

4. Conclusion

Based on the results and discussion, it can be concluded that there is a significant difference between learning outcomes using the Cooperative Model with LKS Assistance and conventional learning for Class III students at SDN Bumianyar II Academic Year 2020/2021. The learning activities of class III students at SDN Bumianyar II for the 2020/2021 Academic Year while participating in learning using the Cooperative Model with the Help of LKS are included in the active category. Suggestions put forward for teachers as an alternative in teaching to apply the Cooperative Model with LKS Assistance, because the Cooperative Model with LKS Assistance is proven to improve student learning outcomes and activities.

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