



Ing Ngarsa Sung Tuladha Learning Model

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ABSTRACT

This paper aims to describe a design of cooperative learning models that emphasize exemplary criteria in conveying information or concepts / ideas in the classroom. In conveying information or concepts, teachers as educators and leaders must be truly prepared and know well that the examples of the concepts to be conveyed are good and true. Realizing that a teacher or leader who determines the direction is a role model, and as a role model, the people around him will follow, so as a leader must be able to give a survey and who cling to his responsibilities, is expected to be aware of his actions, behavior, ways of thinking, even the habit will be followed by many people. Ing Ngarsa Sung Tuladha is a leadership aspect that has a group learning leader. These aspects are capable of moving and directing group members to determine the direction and purpose of learning. This study uses descriptive, comparative and development research methods. Descriptive and comparative methods to support empirical research. With the development research method the learning environment will be developed and evaluated to test the effectiveness of the model design. Based on the testing criteria for the two mean differences are if the acquisition is $p. sig. value < 0.05$ then H_0 is rejected. Because of the acquisition of $p. sig. value = 0.00 < 0.05$ so H_0 is rejected, meaning that the learning outcomes of students who use Ing Ngarsa sung Tuladha's cooperative learning model are better than ordinary learning. Learning outcomes of students who get the Ing Ngarsa Cooperative Learning model are better than students who do not use it. Overall students have good attitudes and morals.

Keywords: Ing ngarsa, Tuladha, Learning Model.

INTRODUCTION

Cooperative Learning Model

The cooperative learning model is not a new thing in the world of education. Cooperative learning, since it was first implemented and then reported in the 1980's up to now, provides great benefits in reducing the gap between students who are smart and less intelligent (Saija, 2010). Roseth et al and Johnson & Johnson (2008) as reported by Gillies (2016), from the meta-analysis of 148 studies, found that high school student learning outcomes (adolescents) and peer relationships were better at cooperative learning, when compared to individual learning who are competitive. Whereas according to Slavin, cooperative learning is learning done in

groups, students in one class setting small groups by observing the diversity of group members as a forum to work together and solve a problem through social interaction with peers, providing opportunities for students to learn something well at the same time and he became a resource person for other friends. Malone and Krismanto (Hutagaol, 2013) state that there is a fact that students have a positive development and good perception about learning with groups. Based on the research they did, the use of study group activities was recommended to encourage students' motivation in learning.

Furthermore Duren and Cherrington (in Hutagaol, 2013) explained that there is a significant difference in long-term memory (students long-term retention) between students who learn to exercise in groups compared to those who work alone. By giving the same questions to the two groups, a few months after the learning process, it was found that students who in their learning worked in small groups turned out to be better able to master the subject matter compared to participants who worked individually. But in reality, when cooperative learning is implemented and students are asked to learn with their groups, many students in groups do not cooperate and expect their friends to work or some students who feel cooperative learning as a time to party. Whereas many teachers who cannot control learning run well and cooperative learning becomes messy (Slavin, 2014). This is due to the lack of attention to the principle of cooperative learning in which each group must be formed with responsible members who feel dependent on each other to achieve the same goals.

Efe and Efe (2011) explained that leaders need to be selected for each group, in their research found that group leaders influence the motivation of other group members in various ways. That means the role of group leaders is as important as the role of the teacher, namely as a facilitator. Because leadership is a social ability that will affect group success (Johnson and Johnson, 1995). In other words, group leaders must be chosen so that cooperative learning can work well.

One of the leader's criteria can be drawn from the idea of education leaders in Indonesia, Ki Hajar Dewantara. His very valuable ideas are: 1) Ing Ngarsa Sung Tuladha gives meaning when in the front gives an example. 2) Ing Madya Mangun Karsa means if you are building your will. 3) Tut WuriHandayani, if behind gives support or encouragement. The idea for a leader was Ing Ngarsa Sung Tuladha, this idea was designed as a model in cooperative learning. The draft of this idea is the answer to Soejadi's (1999) question which asks: Is it impossible to develop learning models or methods that rely on the philosophy of the Indonesian nation? Then

he said, once again, it was not impossible that new developments in learning models in Indonesia would later affect the learning in Indonesia.

Ing Ngarsa Sung Tuladha is a leadership aspect that has a group learning leader. These aspects are capable of moving and directing group members to determine the direction and purpose of learning. Leadership is a process that influences group activities that are regulated to achieve common goals. Samko and Yasumi (2010) revealed that learning group leaders, having working skills, have the skills to establish the right communication. Also has the ability to build a dialogue in study groups, to spark and express ideas among group members about a particular topic, so that what happens is that knowledge or concepts are not forcibly implanted but found together by group participants.

In conveying information or concepts, educators as leaders in the class must be fully prepared and know well that the examples of concepts that will be given are good and right. Realizing that a leader who determines direction is a role model, as a role model, the people around him will follow. A leader must be able to give example and hold fast to his responsibilities, always aware of his actions, his behavior, ways of thinking, even the habits will be followed by many people. Ing Ngarsa Sung Tuladha is a leadership aspect that has a group learning leader. These aspects are capable of moving and directing group members to determine the direction and purpose of learning. Leadership is a process that influences group activities that are regulated to achieve common goals.

Ing Ngarsa Sung Tuladha Learning Model

Ing Ngarsa Sung Tuladha means that in the future, Sung comes from the word Ingsun which means me, and Tuladha means example. So the meaning of Ing Ngarsa SungTuladha is to be a leader (teacher) must be able to provide role models for the people around him. A good figure of a leader (teacher / teacher) is to be a role model or role model, (Syakhudin, 2012). The idea has been carried out in Taman Siswa which gives an overview of the function of an educator. Teachers/educators are placed or positioned as leaders, always doing good examples, noble examples to those they lead. (Soedjadi, 1999). The teacher who functions as the leading leader of Sung Tuladha, he must be truly prepared and know well that the examples of information or concepts conveyed to students are good and true. Realizing that a leader who determines direction is a role model, then as a role model, the tendency that people around him will follow him. A leader must be able to give role models to stick with his responsibilities, always be

aware of his actions, his behavior, his way of thinking, even the habits will be followed by many people.

The teacher interacts directly in the teaching and learning process which can change the mindset or character of students. Bandura in Alfaiz, (2014) explains that humans learn from their social life both directly experience (direct experience) or indirect aspects of experience (vicarious experience) and all become information that is then obtained by humans in the form of cognitive abilities and manifested in human behavior in the environment. These two aspects interact with each other which changes the human mindset, motivation, affection and actions. Direct experience from teacher/leader as facilitator becomes a direct example imitated by students.

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Teachers should have their own curriculum in directing, and in developing the potential of each student, namely by treating each child according to their abilities. Students are not always able to develop their own potential without the help of others, but with a hidden curriculum (different ways of treating each child according to their needs), the leader Ing Ngarsa Sung Tuladha is ready to accept, ready to embrace his students, with provide examples that are appropriate or relevant to the experience of each student. Teachers are always ready to direct old experiences to understand new experiences that participants have not yet known. This is in line with Suwanto's statement, (2018), which states that in the learning process, students are not always able to understand and develop their own potential without the help of others, this is the role of a tutor or teacher as a facilitator is always ready to help, to inform for example, this is the meaning of Ing Ngarsa Sung Tuladha. The teacher will play a role in helping to generate old understanding or knowledge to understand new knowledge.

In addition to building cognitive abilities of students, it is necessary to build and shape affective abilities. In shaping the affective abilities of students is to shape their attitudes and morals. Affective ability is not learned as a lesson to hone cognitive and psychomotor skills, but needs

a process, one of which is through the *Ing Ngarsa Sung Tuladha* aspect of the teacher / leader as a direct or indirect instructor in education. Affective education cannot be learned and assessed by numbers, but through the learning process of the social environment. Educators must be a model or example that students will observe and imitate when in class and school environment.

Observational learning is one learning that is not managed textually, but occurs naturally, and is one of the ways in providing affective learning. There are several variables that influence it so that the stronger the effect of this observational learning process is for students, namely: 1) *Attentional Process*; Individuals will pay attention to models that are considered effective, attractive, capable compared to other models, (Bandura: 1986). 2) *Retentional Process*; The model that is considered provides information that is stored cognitively and can be called again when the information is needed. Observational learning is closely related to the capabilities of students according to their expertise. Thus the task of the teacher as an educator *Ing Ngarsa Sung Tuladha* must be able to provide effective learning, able to display continuously how to be noble and be honest, which is a role model, because the teacher / leader is the model that is imitated, cared for and become a source of information for students.

The task of the teacher / leader *Ing Ngarsa Sung Tuladha* is able to provide effective learning is that the task of the teacher / leader is not just teaching, but more emphasis on learning and educating. The direction of learning should focus on learning, such as: learning to know, learning to do, learning to be, learning to live in a peaceful and harmonious togetherness (learning to live together in peace and harmony), (UNESCO in Hutagaol, 2010). This is in line with effective learning *Snowball Throwing* which is a paradigm of effective learning which is a UNESCO recommendation, namely: learning to know, learning to do, learning to live together, and learning to be yourself (Rijal, 2016).

Through the learning process to know, the teacher / leader uses a hidden curriculum, so that each student is directed to understand facts, concepts, ideas, principles, laws, theories, and others meaningfully, both the relationship between ideas and the underlying reasons, by eliciting old knowledge in accepting new ideas, concepts (information). Through the learning to do process, students are encouraged to learn to carry out the information process they receive (doing) actively to spur increased intellectual development. Through the learning to be process, students appreciate or have an appreciation of the values and beauty of the product and process of a particular concept, which is shown by the attitude of being happy, working hard, resilient, patient, disciplined, honest, and having high achievement motives, and confident. Through the

learning to live process together in peace and harmony, students socialize and communicate between group members and outside group members. This is done through working and learning together in small groups, respecting the opinions of others, accepting different opinions, learning to express opinions or being willing to share ideas with others in learning activities.

Ing Ngarsa Sung Tuladha's Cooperative Learning Model was designed based on the Vygotsky constructivism learning theory, which emphasizes social interaction as a mechanism to support cognitive development. In addition, this model is also supported by learning theory meaning David Ausubel, cognitive learning theory of Jean Piaget, Jerome Bruner's learning theory. In its design the Ing Ngarsa Sung Tuladha cooperative learning model helps students to more easily receive the information obtained, because the information process or concept will be supported by the interaction that occurs in the study group.

The group leader chosen in Ing Ngarsa Sung Tuladha's cooperative learning group is a leader who has good communication skills, and besides having cognitive abilities also has good affective abilities, so that his social abilities are good which can affect the success of each group. In other words, that group leaders must be chosen so that cooperative learning can succeed in accordance with the expected plan. The cooperative learning model that has group leaders is the Snowball Throwing cooperative learning model. Each study group represented by the leader or group leader to get assignments from the teacher, then each student makes a question that is formed like a ball (question paper) then thrown to another student, each student answers the question of the ball obtained. In this design the author designs the Ing Ngarsa Sung Tuladha cooperative learning model, which is relevant to the Snowball Throwing cooperative learning model.

Steps in the Ing Ngarsa Sung Tuladha cooperative learning model:

1. Formation of groups with heterogeneous cognitive abilities consisting of 4-5 students. To form heterogeneous student groups, rank students based on their cognitive abilities, from the highest to the lowest. Next, divide the students who have been sorted according to their rank in the same group of students who are planned in one group. Next form a study group consisting of one student from each ranking group.
2. The determination of Tuladha that meets the criteria of Ing Ngarsa Sung Tuladha. The amount of Tuladha is the same as the number of groups of students formed in class.
3. The teacher explains the concept / subject matter in front of the class.

4. Each group of students gets LKS to complete. At this stage, group members will try to solve the problems given to them based on their initial understanding of the material being discussed. This initial understanding is obtained by group members from the textbook or from the information given by the teacher.
5. Every Tuladha was called in front of the class and noticed the example given by the teacher. Giving examples is expected to increase Tuladha's understanding of the learning material discussed.
6. Every Tuladha returned to his group and saw what his friends could do.
7. Tuladha explained again the example given by the teacher and invited his friends to come back together to solve the problems contained in the LKS until they were finished. In the event that a problem has not been solved, Tuladha will again ask the teacher and explain it back to his group of friends.
The teacher gives the group representatives the opportunity to discuss the questions in the LKS in front of the class.
8. Tuladha sent a group of friends to come to the front of the class.
9. Teachers and students conclude lesson material together.

Questionnaire and Cognitive Creative Instruments for the Election of the Leaders of Tuladha

In determining the leader (Tuladha) is provided in the form of sample questionnaire forms and cognitive creative question sheets as follows:

QUESTOINNAIRE FOR DETERMINING LEADERS (TULADHA)

Charging Instructions:

1. Please fill in part A, the respondent's identity.
2. In section B you will be asked to answer each statement by giving a cross (✓) in the most appropriate column and in accordance with the actual situation. The following are scale criteria:

Positive assessment:	Negative assessment:
Always : 4	Always : 1
Often : 3	Often : 2
Sometimes : 2	Sometimes : 3
Never : 1	Never : 4

Part A. Respondent’s Identity

NAME	
AGE	
GENDER	

Part B. Student Perspective

AFFECTIVE ASSESSMENT QUESTIONNAIRE

No.	Statement	Scoring Scale			
		4	3	2	1
1.	If I promise my parents, I have to try to fulfill it.				
2.	If I promise to a small child, I don't have to comply.				
3.	When there is an empty hour, because the teacher cannot attend, then my friends and I immediately leave the class.				
4.	I always try to be on time in every activity.				
5.	When I got the assignment from the lecturer, I felt happy and enthusiastic about the task.				
6.	When working in groups, I hope the group's friends complete the task.				
7.	I always try to overcome my own difficulties before asking for help from others.				
8.	I feel comfortable asking for help from others in any case.				
9.	I always try to understand the subject matter given by the lecturer in the class.				
10.	I feel comfortable even though I don't have a student handbook.				
11.	When I saw a lot of garbage that had smelled scattered in front of the neighbor's house, I hoped that they would immediately clean up the garbage.				
12.	I carry out the school picket schedule happily.				
13.	I keep my attitude good wherever I am.				
14.	I often postpone school assignments given to me.				
15.	I believe that students' learning achievements are difficult to improve.				
16.	I believe that change brings improvements.				
17.	I have difficulty following subjects ...				
18.	I don't have an easy way to understand / memorize a concept.				

(Hutagaol, et al. 2018. Padeagogik Journal, p. 101,102,ISSN: 2614-3267).

METHODS

This study uses descriptive methods and comparative methods. Comparative methods are carried out to support the results of empirical studies. An empirical study is planned and ongoing involving 3 students of Mathematics Education Study Program and 3 students of English Language Study Program. Researchers used the Ing Ngarsa Sung Tuladha Cooperative Learning Model as one treatment and compared it to other models. The next stage that will be carried out is a comprehensive study, can we apply the Ing Ngarsa Sung Tuladha Cooperative Learning Model as a learning model? The provisional guess: Ing Ngarsa Sung Tuladha's Cooperative Learning Model can improve: attitude and character, learning outcomes, teamwork, ability to lead teams, students' ability to make questions and provide answers to questions, and be considered as a cooperative learning model. Ing Ngarsa Sung Tuladha's Cooperative Learning Model is in accordance with the elements of Indonesian culture and social elements. The results of empirical studies are very important to support the application of the Ing Ngarsa Sung Tuladha Cooperative Learning Model. Empirical research is conducted in higher education, high schools, junior high schools, and elementary schools in the West Java region, with the time the research is in progress. The target population of tertiary education is students of the Faculty of Economics in West Java who study Mathematics Economics, and students of elementary, middle and high school in West Java. Furthermore, the results of this empirical research want to know: attitudes and character, learning outcomes, teamwork, ability to lead teams, students' ability to make questions and provide answers to questions.

RESULTS

The study was conducted on students of the Faculty of Economics, Adventist University of Indonesia, with a sample of two classes, using the Ing Ngarsa Sung Tuladha (Ing Ngarsa) Cooperative Learning Model with Tuladha and Cooperative leaders in Small Groups (Ordinary). To find out the extent to which the learning outcomes of both classes, data processing with the lowest score (X_{\min}), the highest score (X_{\max}), average (\bar{x}) and standard deviation (s) are presented in full in Table 3.1.

Table 3.1. **Score, Average and Standard Deviation**

Group	Max Test Score	X_{\min}	X_{\max}	\bar{x}	S
Ing Ngarsa	100	75	100	89,215	6,001
Ordinary	100	60	100	77,272	10,681

Table 3.1, shows that the average learning outcomes of students who use the Ing Ngarsa Cooperative learning model is higher and the scores are more collected, clinging around the mean, this is evident from the acquisition of standard deviations that are smaller than the average using the Cooperative Learning Model in small groups (Ordinary).

Furthermore, to find out the differences in mean learning outcomes in both classes, the two sample mean difference test statistical analysis was carried out, but the normality test and homogeneity test were first carried out. The normality test criteria used are, if P. Sig. Value > 0.05 then the data is normally distributed. Calculation of SPSS results for normality test is presented in Table 3.2, the calculation results show that the data of learning outcomes from both classes are from a population that is normally distributed.

Table 3.2. Normality Test Results

Group	P. Sig Value	α	Conclusion
Ing Ngarsa	0,226	0,05	Normal
Ordinary	0,150	0,05	Normal

Then homogeneity test with criteria is carried out: if P. Sig. Value > 0.05 then the spread of homogeneous data. Homogeneity test calculations are presented in Table 3.3 and the results of the calculation of P.Sig. Value = 0.179 > 0.05 so the data variance of both groups is homogeneous.

Table 3.3. Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	T	Df	Sig. (2-tailed)
Equal variances assumed	1.839	.179	5.698	81	.000
Equal variances not assumed			5.205	48.640	.000

Based on the results of the calculation of the SPSS Program, it was found that the learning outcomes of the two groups were normal and homogeneous. Furthermore, parametric matrix test can be performed. The testing criteria for the two mean differences are if the acquisition is P. Sig. Value < 0.05 then H0 is rejected. Because of the acquisition of P. Sig. Value = 0.00 < 0.05 so H0 is rejected, meaning that the learning outcomes of students who use Ing Ngarsa sung Tuladha's cooperative learning model are better than ordinary learning.

Overall the achievement of student learning outcomes is summarized in Table 3.4 below.

Table 3.4. **Grouping Results**

Category	Tuladha	Ordinary
Enough	4%	50%
Good	50%	30%
Very Good	36%	20%
Complete	Classically	Individually

From Table 3.4, it can be said that the achievement of learning outcomes that use the Tuladha Leader shows better results, based on percentages that have less, sufficient, good, and very good category values, with rules if the scores () obtained by students in a row: < 60 , $60 < 75$, $75 < 90$ and more than 90.

Trianto (2010) revealed that students are considered to be completely studied individually, if they are able to achieve learning objectives of at least 65% of all learning objectives, and are considered to be completely classical, if they are able to achieve learning goals at least 85% of all learning goals. The author considers that grades above Grade C already have mastery learning. The grade C has a range of 60% - 65%. Thus the percentage of completeness is calculated using the formula P (percentage of completeness), namely: $P = ((\text{Total students who have a value of } > 65) / (\text{total of all students})) \times 100\%$. From the results of the calculation of completeness, learning that the completeness of learning in classes that use Ing Ngarsa Sung Tuladha's Cooperative Learning Model can achieve mastery learning classically, while in classes that use ordinary methods achieve completeness individually. Based on the calculation of the learning completeness of the Ing Ngarsa Sung Tuladha students, it was 70%. Whereas in the Ordinary group the learning completeness score was 20%. Both the attitude and ability to give questions and answers to questions given to students in the class using the Ing Ngarsa Sung Tuladha learning model is better than the Ordinary.

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