

## THE DEVELOPMENT OF GUIDED DISCOVERY LEARNING BY TALKING STICK SOCIAL SCIENTIFIC GROUP TO INCREASE THE CREATIVITY OF STUDENTS OF PEER GROUP C IN THE LCS GROBOGAN CENTRAL JAVA

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**Abstract:** The purpose of this study is: (1) Knowing about social studies learning model that has been used of peer Group C in the SKB Grobogan Central Java, (2) Determine the validity of the model of guided discovery learning with talking stick the students packet C programs. And (3) Test the effectiveness of the model guided discovery learning with talking stick to enhance students' creativity. The method used is research and development designed by in Sukmadinata. The results of this study is learning by guided discovery model of learning by talking stick is designed based on the objectives, materials/teaching materials, methods, media, and evaluation of learning. Obtaining the average value in the study categorized well, and effectively used in learning.

**Keywords:** Development, guided discovery learning. talking stick. creativity.

### INTRODUCTION

Education has a strategic role in improving the quality of resources and the realization of the Indonesian people in general welfare and educating the nation. The government formulated the Law of the Republic of Indonesia Number 20 Year 2003 on National Education System who explained that the aim of education is: "the national education serves to develop the ability and character development and civilization, aimed at the development potential residents to learn to become a man of faith and devoted The Almighty God, having noble morals, healthy, knowledgeable, skilled, creative, independent, and become citizens of a democratic and responsible.

Some of the things that cause low quality of education in Indonesia, including the effectiveness, efficiency and standardization of education. Education is said to be effective if education enables learners or learners to learn easy, fun and achievable objectives as expected.

In order to get the maximum results necessary to input a good and mature process, in the process of an educator or tutor must know the objectives to be achieved so as to have a clear picture of the educational process. Before going through the process of learning a teacher or tutor must already prepare the curriculum, syllabus and lesson plans so that the process of learning more planned, if the preparation process is not passed by a tutor, the process of learning activities

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will run pointless. Teaching is not easy, because in teaching is not just a matter of rote but include cognitive, affective and psychomotor as well. Therefore, teaching should be able to choose appropriate learning models so that all aspects of the objectives can be achieved. The model is one of the methods of learning. The learning method is a method used in presenting the material to tutor students (learners).

According to Dalyono (2009) cognitive development largely depends on how far the child actively manipulating, and actively interact with their environment. Dalyono sure that the experiences of physical and environmental manipulation is vital to the development changes. While the interaction with peers, especially arguing and discussion helps clarify thoughts that eventually load it into logical thinking.

Ormrod (2000) emphasized the importance of the role of the cultural environment and social interaction in the development of the properties and types of man (in Slavin, 2000). Furthermore, Ormrod (2000) states that, *children's cognitive development is promoted and enhanced through Reviews their interaction with more advanced and capable individuals*. Ormrod stated that students should learn through interaction with adults and peers who are more capable. Social interaction has spurred the formation of new ideas and enrich the intellectual development of learners, especially in the Study Group of Packet C.

In improving learning outcomes residents learn particular learning outcomes in social studies urgently need the capability of learning outcomes. In social studies, the required ability of the tutor to develop creative teaching, able to attract learners to learn Social Scientific. Thus, tutor is not only transferring his knowledge but also to consider the aspect of intelligence and learning readiness of citizens to learn, so that learners do not experience such mental depression, drowsiness, frustration and even antipathy to social studies.

In general, the boredom experienced by residents Packet C is a learning process caused by: (1) the nature of tutors who impressed dominate the current provision of the subject matter, without interspersed actions that make people learn to relax and enjoy participating in the learning process; (2) the presentation of learning materials more demand people learn to remember and memorize information so learners are less creative in obtaining information; (3) the pattern of the selected learning in learning is still going monotonous and less varied as people learn only required to memorize knowledge; and (4) the characteristics of the stage of development of affective, cognitive and psychomotor learning X class citizens who are more interested in the fun learning process. With the advent of boredom lead to lack of absorption of the material that students are taught so that effect on learning outcomes. Similarly, the case in Study Group Packet C-class x in SKB

Grobogan Central Java based on observations that have been made it is found the results of social studies is low, based on the observation on 18 November 2013 is still a lot of learners that scored below the Standard of minimum completeness of mastery learning is the 70.

Based on the indicators of low yields on citizens to learn social studies class X Study Group Package C, the authors are interested in doing this study with *Guided discovery learning model learning with the talking stick*. The use of appropriate teaching model is a alternative in growing sense of fun for the learners to follow the lesson so that it can learn the material in an integrated manner with a sense of fun, building a sense of the idle mind to absorb knowledge provided tutors.

Results of research conducted Alaudin (2008) in implementing the *Talking Stick* learning model can improve the ability of citizens to learn to understand the subject matter has been given. It is characterized by increasing the number of learners who dare to appear in front of the class, courage learners communicate the results of the discussion, and the courage of learners to communicate the results of their discussion, and courage learners in answering question. From the description above, as an effort to improve learning outcomes Social Studies class X steps that can be taken, among others by improving teaching and learning more interactive.

The problems of this study are (1) How to model learning fun for residents to learn the tenth grade study groups Packet C (2) Is the development model of *guided discovery learning* with talking stick in class X Packet C; (3) whether the model of *guided discovery learning with talking stick* effectively enhance the creativity of learners Packet C. The purpose of this study was to assess: (1) model of learning fun. (2) The validity of the model *guided discovery learning* by implementing *talking stick*. (3) the effectiveness of the model of *guided discovery learning with the talking stick* to improve the creativity of learners.

Theory of the results of the study indicated that the factors that influence learning on the subjects of social sciences (IPS) is influenced by two factors: intrinsic and extrinsic factors from inside the learners, the external factor of tutors, parents, communities and so on. Therefore, one of the tutor role is to master the material taught and skilled in presenting it. Both of these factors affect each other in the process individual learning that determines the quality of learning outcomes. Factors such intrinsic motivation, the learning process is very important because anyone is not motivated to learn, it will not be possible learning activities effectively. This is a sign that something will be done it is uncertain needs. Everything that attract others is not necessarily appeal to certain people as long as it is not in touch with their needs.

### GUIDED DISCOVERY LEARNING

According to Mayer. (2004), the guided discovery learning (*Guided Discovery Learning*) combines didactic instruction with more directed on citizens and task-based learning. The Model of guided discovery leaning puts tutor as a facilitator. Tutor guiding residents to learn where it is needed. In this model, learners are encouraged to think for themselves, analyze themselves so that they can “ find “ the general principles based on materials or data that has been provided teacher (tutor). *Discovery learning* is one instructional models of cognition. *Discovery learning* according to actively search for knowledge by the learners and of itself give good results. Starts to look for solutions and the accompanying knowledge will produce meaningful knowledge (Dalyono, 2009).

*Guided discovery* is one form of a method of *discovery learning*, which is one form of teaching methods that allow citizens to learn more able to develop the power of creativity and the desire to move wider and freely so that the role of tutor kept to a minimum while the role of the learners are given the freedom as much as possible, In the Guided Discovery, tutor serves as a facilitator. Tutor acts as a guide and assist learners to be able to use any ideas, concepts and skills they have learned before to discover new knowledge. Residents are encouraged to learn to think and analyze their own so that they can find general principles based on material or data provided tutors. Implementation of learning with this method does require a relatively long time, but if done effectively, this method tends to produce long-term memory and transfers better than learning with expository method (Jacobsen, dkk. 2009).

*Discovery Learning* (Learning invention) is the instructional approach (between tutors and learners) strong that guide and motivate learners to explore information and concepts in order to develop new ideas, identify new relationships and create new models of thinking and behavior. When the study is well designed, the study findings provide experience and interactive. They use stories, games, simulation, visual maps and other techniques to get attention, build interest and lead citizens to learn on the journey towards the discovery of new thinking, actions and behavior.

### TALKING STICK

Another learning model is the *talking stick*, which is one model of cooperative learning. The learning method is performed with the aid of a cane, who's holding the stick have to answer questions from the tutor after learners learned studying its subject matter. Learning *Talking Stick* is very suitable to be applied to every citizen to learn whenever hierarchically (equivalent to elementary, junior high, high school equivalent). In addition to practice speaking, these activities will create a pleasant atmosphere and make people more active learning.

Suprijono (2009) revealed that “*Talking stick* method to encourage citizens to learn to dare express opinions”. *Talking stick* method is very appropriate for use in the development of the learning process as PAIKEM theory that is participatory, active, innovative, creative, effective, and fun. PAIKEM learning is meaningful learning developed in a way to help people learn to build linkages between information (knowledge) with the experience (other knowledge) that have been owned and controlled by the learners. Cooperative learning is a teaching strategy that involves people learn to work collaboratively to achieve goals (Isjoni, 2012).

By applying the learning *talking stick* expected after residents learned the learning process he can think creatively so that it can gain a lot of knowledge and skills. Residents learn to be motivated to study harder, learning becomes fun and not boring.

*Talking Stick* is generally intended that people learn to know where the problem so that in the end the learners will be able to do the questions/problems with the instructions given by the tutor. Thus, residents are expected to learn not to repeat the same mistakes while working on a similar matter. Tutors should be immediately corrected and give an evaluation of the work of the learners. Furthermore, immediately return it to the participants. This method will be more effective because learners can immediately correct the error in the work on the problems.

Balim research results, A., G. (2009) showed that there are significant differences in favor of the experimental group over the control group. Students who use the experimental group, guided *learning discovery* models to be effective teachers, can improve the success of students achievement and discovery capabilities. Similarly, the results of research Udo (2011) showed that the method of solving a problem with guided discovery is a teaching strategy that is most effective in improving student performance in redox reactions and a strong determinant in understanding the concept.

In learning mathematics, the results Khasnis, B.Y. and Aithal, Manjunath. (2011) concluded: (a) Teachers can teach mathematics using different methods and suitable; (b) The method of guided discovery may offer an opportunity to provide a new experience for the students to develop their creative thinking abilities; (c) guided discovery method can add a sense of fun within reach. While the value of student performance data that comprises the value pretest and posttest in mathematics. Location: High School Bijapur city selected as samples.

This finding was also supported by Alfieri, Louis et. al., (2011) who found that learning the invention without aid, unfavorable learners, whereas feedback, working by examples and explanations necessary instructions. Opportunity to learn constructive may not present themselves when learners are left without assistance. While data: various types of learning identified discovery of articles that use PsycINFO, ERIC, and Dissertation Abstracts via international computerized literature search. Location: University of New York, Kingston University.

## RESEARCH METHODS

Test subjects in this study is the Packet C in LCS Grobogan of Center Java. This is a research *Research and Development* (R & D). Sukmadinata (2010) outlines a ten-step through the stages of model development: (1) research and data collection; (2) planning; (3) development of a draft product; (4) The initial field trials; (5) revise the test results; (6) field trials; (7) revisions to product field test results; (8) test the implementation of the field; (9) the improvement of the final product; (10) the dissemination and implementation. The population in this study was taken using technique *Cluster Random Sampling*, where each class is located in the population have equal opportunities to be taken as a sample study sample selected is a second-class unit  $x$  group learning package C there is a class A as an experimental class and B-class control, The class breakdown are as follows:

TABLE 1: DETAILS OF RESEARCH SAMPLES

No	Class	Number of Samples
1	X . A	20
2	X . B	19
3	Teacher/Tutor	10

### Phase I and Phase Identify Potential Problems (For Trial)

Step work on phase 1 include: (1) collect references about the development model of learning, assessing cognitive learning theory, sosiokultur and invention; (2) collecting literature review on models *Guided Discovery Learning*; (3) conduct a study of the models *talking stick*; (4) identify the study of creativity; and (5) reviewing the literature of various journals and relevant research in the development of models *Guided Discovery Learning with the talking stick*.

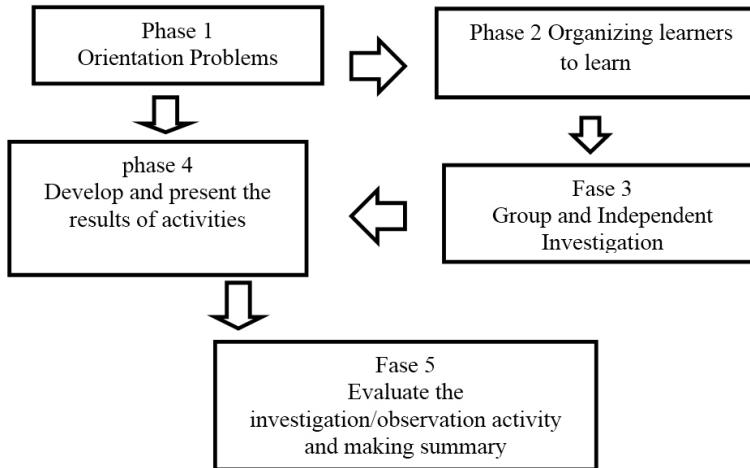
### Phase II Phase Data Collection

Step 2 phase is to identify the needs perceived by the learning model of learning and learners performed by means of submitting a questionnaire relating to the need *Guided Discovery Learning models with the talking stick* to improve the creativity of children. Before the questionnaire was delivered, first consulted with experts. The first step in the data collection phase, namely: (1) the feasibility of the model; (2) the validity of the instrument learning model; (3) the instrument of acceptance model of learning; and (4) the effectiveness of the instruments of learning model for the creativity people learn.

### Preparation Phase Phase III Prototype

Design product (prototype) that was developed are as follows:

(Gambar 1):



#### **Phase IV Phase Vaslidasi Design (Validity Prototype)**

The step in the validation phase is to request consideration of the weaknesses of the prototype has been developed. Validation activities carried out by the validator that have expertise in the field of learning model development.

#### **Phase V Phase Revised Prototype**

Revisions were made based on the advice of experts. Based on the results of the revision researchers then fix the flaws. Improvements recommended only in part.

#### **Phase VI Phase Test Product Usage**

Revisions were made based on the assessment and advice of experts. Trials to compare the conventional learning model learning model developed. In the first trial class is done without the use of learning products, while the other trial class applied learning by using products developed. The effectiveness of the product looks after comparing the results of learning between the two.

#### **Phase VII Phase Revised Field Test Results**

Completion of the product is done once known the results of *pretest and post-test control group design* (in the experimental group and the control group). To test the effectiveness of the products developed, made by looking at significant assay results from the application of learning models. Stage 8 experiments performed at this stage using X-class research subjects in Study Group Package C are 39 residents learned from two classrooms and 10 teachers. The activities are to apply



in evaluating the effectiveness of learning by using a measuring instrument in the form of questionnaires, observation, interviews and analysis of the results.

### **Phase IX Revision Stage of Product**

Activities undertaken in this phase of improvements to the product based on feedback from the test field in the implementation phase of a predetermined time.

### **Phase IX Revision Stage Of Massive Product**

Activities undertaken in this phase of improvements to the product based on feedback from the test field in the implementation phase of a predetermined time.

## **RESULTS AND DISCUSSION**

The results showed: (1) learning model applied by the tutor is still dominant with a lecture and have not facilitate learners to be able to develop their creativity; (2) the presentation of learning materials more demanding citizens to learn to remember and memorize information so learners are less creative in obtaining information; (3) the pattern of the selected learning in learning is still going monotonous and less varied as people learn only required to memorize knowledge; and (4) the characteristics of the stage of development of affective, cognitive and psychomotor learners who are more interested in learning more creative.

Learning by some residents identified with rote learning of the material but not followed with the understanding that the concept could be applied when residents learned to deal with the new situation in life. After using the model of guided *discovery learning* with *talking stick* is expected that residents can learn to construct concepts and materials to be able to think creatively.

Instructional design with the development of learning tools with models guided *discovery learning* with the *talking stick* as applied to the Basic Competency (KD), so designed based on the theory of experts making it suitable to be applied to the teaching materials that have been arranged by connecting the content of academic subjects with the knowledge that has been owned learners previously. Final products are developed in this study a tutor books and books of learners. Tutor book includes guidelines and the contents of the development model of *guided discovery learning with talking stick* while learning residents includes book o guidelines and worksheets that contain material learners *guided discovery learning models with a talking stick*.

The impact of the application of *guided discovery learning* model of learning by *talking stick* can activate the learning so that citizens learn to define creativity to be increased. This is in line with the opinion of Khasnis and Aithal (2011) which offers the opportunity to provide new experiences for students in developing creative thinking abilities.



### Validity Design *Guided Discovery Learning Model Learning by Talking Stick*

The results of the validation of the learning is done 5 validator that three expert lecturers, one principal and one tutor classes can be seen in Table 2. Learning device model *guided discovery learning* with *talking stick* obtaining a positive score in both categories. Rate validator to the development of the syllabus obtained an average final score of 35 categories of good, development RPP obtained an average final score of 78 categories of good, development of teaching materials obtained an average final score of 34 categories of good, development LKPD obtained an average final score of 26 categories very good, and the development of test item obtained an average score of the final 18 category very well.

**TABLE 2: VALIDITY OF THE MODEL**

No.	Validator Ratings	Score	Category
1	Development of syllabus	35	Great
2	RPP Development	78	Great
3	Development of Teaching Material	34	Great
4	Development LKPD	26	Extremely Great
5	Development of test	18	Extremely Great

Source: Data analysis and field.

### Efektivitan *Guided Discovery Learning Model Learning by Talking Stick*

Mastery test the effectiveness of the learning device with a contextual approach aided map pikirandilakukan the experimental class. Increased yield pretest - posttest study with paired samples *t* test. Results of paired samples *t* test on the above data obtained by value *t* count < *t* table ( $-8.280 < -2.074$ ) and significance < 0.05 ( $0.000 < 0.05$ ), then  $H_0$  is rejected. Thus, it was concluded that there are differences in the average scores between before and after being treated as seen in the Table 3 below.

**TABLE 3: THE ACHIEVEMENT OF LEARNING OUTCOMES**

No.	The average results of learning	Score	Classical exhaustiveness
1	Value pretest	53,78	43%
2	Value postes	83,17	78%

Source: Data Analysis and Field.

On average empirical value is 53.78 and the value pretest post test 83.17 it can be seen that the average post-test score is high or rising. Learning through *guided discovery learning* with *talking stick* it easier for citizens to learn the mastery of concepts and materials. This is in line with Mayer (2004) which states that "*guided discovery is effective Because it helps students meet two important criteria for*

*active learning: (a) activating or constructing Appropriate knowledge to be used for making sense of new incoming information and (b) integrating new incoming information with an Appropriate knowledge base”.*

Model *guided discovery learning* is effective in that it contains two important criteria in active learning, which is building the appropriate knowledge to facilitate an understanding of the new information and enhance the new information with the appropriate knowledge base.

Analysis of the test results obtained by calculating the *gain was normalized* using a formula based on the acquisition of *N-gain* average score of *pretest and posttest*. *N-gain* test experimental class obtained value of 0.63 with the medium category. This shows there is a difference in enhancing creativity residents learned after using *guided discovery learning* model learning with the *talking stick*.

Mastery learning classical calculated using one *sample t test*. The results of the above data obtained by value *t* count  $< t$  table ( $-2.074 < -2.201$ ) and significant ( $0.001 < 0.05$ ), then  $H_0$  is rejected. The average score of 83.17 empirical classical completeness score  $>$  Standard of Minimum Completeness Score of Mastery Learning score of 75, meaning that 30 students (78%) had complied and 9 learners (21%) has not met.

Creativity of learning emphasizes citizens in the process of creative thinking is defined as the process used in synthesizing learners (establish) ideas, build new ideas, plan and implement it. The conclusions of each meeting that has been done shows that creative thinking skills of learners on the category of citizens are quite creative. That learners are able to make a different answer than the common practice though not flexible or eloquent, or be able to demonstrate a variety of different ways completion fluently despite the resulting answer is not new. This is because the learning process has been implemented not familiarize learners to stimulate their creative thinking skills.

### **Model Acceptance Guided Discovery Learning with Talking Stick**

*Guided discovery learning* model of learning by *talking stick* can be received with positive responses in learning tutors and learners in the high category (see Table 4). Residents learn to love to learn or motivated for an active role in learning. *Talking Stick* includes one cooperative learning. Cooperative learning is a teaching strategy that involves people learn to work collaboratively to achieve goals (Isjoni, 2012).

**TABLE 4: PERCENTAGE OF TUTOR AND STUDENT REACTION**

<i>No</i>	<i>Respon</i>	<i>Skor</i>	<i>Category</i>
1	Respon tutor	77,18%	High
2	Respon Warga belajar	77,25%	High

*Source:* Data Analysis and Field.

Limitation response tutors and learners acceptable response is the acquisition of a response score greater than 75%. Results tutor response percentage 77.18% and 77.25% response of learners who both clearly greater than 75% and can be concluded from the results of the learning device received field trial in which all citizens can learn to use the model of guided discovery learning with *talking stick* well ,

From the results of these studies demonstrated that the learning activities that have been implemented already reflect learning activities by using a contextual approach aided the mind map. Because tutors and learners are already conducting activities *guided discovery-stage model of learning with the talking stick*. Activities tutors and learners at each stage of learning is generally performing well. Guided discovery learning model of learning by *talking stick* is a learning process fun for residents to learn, it is seen from the enthusiasm of the learners to follow learning especially when they are in doing a mind map ordered by the tutor.

This fact is also consistent with the results of the research Siswoyo (2010) who found that the ability tutor was not the only factor that could impact the residents to learn, there were other factors that influence it. The results of this study are described as a function of the interaction between the inputs (*input*), a process that depends on the input instrumental and environment, and finally output (*output*). In the instrumental role entries include tutors, curriculum, or teaching materials, facilities and infrastructure, strategy or model of learning. Environmental components include parental participation and support of the school community.

Thus, the condition factor learners need attention. Furthermore, in this activity, residents learn to write direct instructional material they learned at that time that at this stage the learners will more easily understand the material being studied. The learning process like this has never been implemented before the learners so that the learning with contextual approach aided the mind map is a learning process that is new, challenging, and enjoyable for residents to learn.

Learning through *guided discovery learning* models with a *talking stick* can be significantly improved compared with using conventional methods of learning. This finding confirms that this method of learning has an important role in developing the learning achievement and the ability to think people learn. The use of *guided discovery learning model of learning by talking stick* can connect the capabilities acquired learners in improving the understanding of concepts, liveliness and creative thinking skills/creativity.

This is because the model of *guided discovery learning* with learning by *talking stick* begins with the division of the group with the material being studied and can make learners to learn the process of discovery. Learners should learn to use how or what path should be taken with the guidance of a tutor to come to the invention so that they can issue an opinion in drawing a conclusion based on the knowledge that has been owned by the learners. This happens because Residents learn to feel

happy with the new learning model that is considered, so that the learners are interested to participate in learning.

Practicality learning device known from the percentage In answer tutors and learners *guided discovery learning* models with a *talking stick*. The results of the analysis show based on: (1) observation of the tutors during the learning process, the tutor did not find it difficult to apply the model of learning by using guided discovery learning with the talking stick. But there are few obstacles in time to explore the knowledge management, monitoring and guiding citizens to learn when the discussion process; and (2) The role of the tutor began to decline in learning.

Tutor serves as a facilitator, guide and motivate learners in learning, and the tutor tried to gain knowledge of citizens to study and problems that can cause the curiosity of learners. With the help of *talking stick models*, activity and interaction of learners with tutors develop better when compared to conventional learning. This increase shows that people learn more active in learning and have the opportunity to develop their knowledge so as to improve their creativity.

## CONCLUSIONS AND SUGGESTION

### Conclusions

Conclusions of the results of this study are:

*First*, this model is designed based on the objectives, materials/teaching materials, methods, media, and evaluation.

*Second*, devices guided discovery learning model learning with the *talking stick* is developed is valid. Development of syllabus obtained an average score of the final end 35 categories of good, development Lesson Plan obtained an average final score of 78 categories of good, development of teaching materials obtained an average final score of 34 is good, development worksheet learners obtained an average final score of 26 categories is very good, and development of test item obtained an average score of the final 18 category very well.

*The third*, model of learning by guided discovery learning models with a *talking stick*. Test shows paired sample *t* test obtained an average empirical value is 53.78 and the value pretest posttest 83.17 so there are differences in the average scores between before and after being treated. N-gain test experimental class obtained value of 0.63 with the medium category. Test classical completeness obtained an average score of 83.1739 empirical classical completeness score > standard of minimum completeness of mastery learning score of 75, meaning that 30 students (78%) have met the standard of minimum completeness of mastery learning and 9 learners (21%) have not met the standard of minimum completeness of mastery learning. Creative thinking skills/creativity of the learners in the category of creative enough.

*The fourth*, model of learning by *guided discovery learning* models with the *talking stick* is acceptable. Limitation response tutors and learners acceptable response is the acquisition of a response score greater than 75%. The analysis shows the percentage of the acquisition of 77.18% response tutors and learners 77.25% response means learning device with the model of *guided discovery learning with the talking stick* in both categories.

### Suggestion

Based on the research results, suggestions delivered are:

1. Based on the success of learning by using *guided discovery learning*, tutor suggested to better provide an opportunity to the participants to be able to find and prove yourself on a new relationship on the concept of which is owned by the problems faced;
2. Expected tutor can improve fatigue indicator of the ability pmahaman people learn by applying the concept of *guided discovery learning by talking stick* optimally;
3. Tutors should be optimized to provide a conceptual understanding of matter, because to understand the new concepts necessary prerequisite understanding of concepts before; and
4. The need for further research as the development of this research.

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