

## **Development of Learning Model of Islamic Education Based On Mind Mapping to Improve Vocational School Student Learning Outcomes**

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**Abstract :** *This research aimed to acquire an overview of learning and the effectiveness of the learning model of Islamic Education in SMK Negeri 1 South Sulawesi based Mind Mapping. This research used Research and Development approach, the type of research was quasi-experimental design with Nonequivalent Control Group Design. The population of this research is XI class students of SMK Negeri 1 South Sulawesi. The techniques used random sampling. The sample was XI class of Engineering Technology 1 of SMK Negeri 1 South Sulawesi as experimental class and XI class of Engineering Technology 2 as control class. Data analysis in this study is the analysis of the data at the stage of preliminary studies, development models, and model evaluation stage. Analysis Test of the effectiveness of the model used t-test of pretest and posttest the outcomes of the study. Based on the results of research, the development of model-based Islamic education learning Mind Mapping: validation with enough valid categories, regarding Practicality and terms of withdrawals by category. The second test of the effectiveness of the model was done through quasi-experimental research test results-t on the score on Post-Test indicates that there is a difference between knowledge of the control class with a class experiment thus learning in Islamic Education demonstrate effective and good implementation of model-based learning Mind Mapping.*

**Keywords:** *Learning Model, Mind Mapping, Learning Outcome, and Islamic Education.*

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### **I. Introduction**

Effective and meaningful learning can take place if it can deliver success for students as well as teachers. Learning is seen as influencing students to study, or it can be said that learning to provide instruction to students, due to the looks of action learning is students can learn something they will not learn without acts of learning. Islamic religious education is a conscious effort to prepare the students to understand the philosophy of Islam (knowing), skillfully perform or practice philosophy of Islamic (doing), and practiced philosophy of Islamic in daily life (being).

Refers to the sense of the above can be understood that the purpose of education is to improve understanding of the philosophy of Islamic, practice skills, and improve the practice of the teachings of Islam in daily life. So, in summary, it can be said that the main purpose is Islamic Education, which being a Muslim religious with intensity seriousness and based on a strong faith.

Efforts in realizing the human figure as stated in the definition of education above were not created suddenly. That effort has to go through a process of education and life, especially religious education and religious life. The process lasts a lifetime, in an environment of family, school, and community. One of the problems faced by the World Islamic Education at the moment is how the delivery of the subject matter of religion to the learners so that the retrieved maximum results. In a note in the process of the development of Islamic education, one of the most prominent barriers to the implementation of Islamic education is a problem of methodology. The method is a critical part and an integral part of all other educational components, such as the purpose, content, evaluation, and other situations. Therefore, in the implementation of Islamic education required a knowledge of the methodology of Islamic Education, with the goal of keeping any educator can get better understanding and ability as a professional educator.

The reality of that was happening at SMK Negeri 1, South Sulawesi is that Islamic Education learning impressed are conventional, both methods used as well as the spatial arrangements are still monotonous. It makes the learning process has not been able to touch on the realm of the dimensions of the learners themselves, how the actual process of student learning (learning to learn). In the sense of a more substantial, that the learning process is currently still gives the dominance of the teacher and do not provide access for students to thrive.

Every teacher in the field of Islamic Education should have enough knowledge about the various methods that can be used in certain situations appropriately. Teachers should be able to create a situation that can facilitate the achievement of the objectives of education. Create a situation means giving motivation to attract the interest of students towards religious education being delivered by the teacher. Mind mapping as a model of learning that requires concentration of students in memory mapped lesson faced would produce a better memory than previous methods, so as to improve exhaustiveness learning of students in Islamic Studies.

By applying this method is expected to make changes in the expected learning. It is a learning orientation which was originally centered on the teacher (teacher centered) switch is centered on the pupil (student centered); the methodology that was originally more dominated expository changed to participatory; the original approach and more are transformed into textual contextual. All these changes are intended to improve the quality of education, both regarding process as well as outcomes of education. (Trianto, 2007, p.2). From the explanation above gave rise to new idea, how is it that the outcomes can be changed to be repaired. All existing problems can be done using the research development, i.e. as an alternative to the settlement of these challenges. Development of the research effort is expected to create a culture of learning that is fun and not boring among educators and learners, so it makes the student excited and active to study Islamic education.

## II. Literature Review

**The Definition of Learning Model:** The learning model is a term used to describe the Organization of the teaching and to learn the process from beginning to end. In the model of education already reflect the application of an approach, methods, techniques or tactics of learning at the same time. According to Mulyatiningsih (2013, p.227), learning model is a conceptual framework that describes systematic procedures in organizing the learning experience to achieve a particular goal. The model serves as a guideline for teachers in planning and implementing teaching and learning activities. Thus, one of the learning models can use several methods, techniques, and tactics of learning at the same time.

The learning model is essentially a form of learning that is imaged from beginning to end typically presented by the teacher. In other words, the learning model is a wrap or frame of the application of an approach, methods, and techniques of learning. (Komalasari, 2011, p.57)

Mills, argued that "model is an accurate representation of shape as the actual process that allows an individual or a group of people trying to act on that model." The model is an interpretation of the results of observation and measurement obtained from multiple systems. The learning model can be interpreted as a pattern that is used to draw up the curriculum, manage content and giving guidance to teachers in the classroom.

The learning model is a pattern used as a guide in planning the learning of processed as well as tutorials. According to Arend, learning model refers to the approach to be used, including learning objectives, the stages in the learning activities, and classroom management. Learning can be defined as a conceptual framework that describes the systematic procedures in organizing the learning experience to achieve the learning objectives (Suprijono, 2010:54-55). While Joyce and Weil argued that the learning model is a plan or pattern that can be used to form a curriculum (lesson plan long term), designing learning materials, and guide learning in the classroom or another. The learning model can be used as pattern selection, meaning that teachers may choose appropriate learning model and efficient way to achieve the purpose of education. (Rusman, 2011, p.136)

**The Definition of Mind Mapping:** Mind mapping is a way of noting the creative, effective, and literally will map a person's thoughts. Mind map also is a great route for memory, allows one to compile facts and thoughts so that the workings of the brain was involved from the beginning (Buzan, 2012, p.5)

Other accounts say that mind mapping is a good way to generate and organize ideas before beginning to write (Joyce, 2004, p.83). Meanwhile, according to Bobbi De Porter in his book *Quantum Learning*, the mind map is overall utilization techniques of the brain by using visual imagery and other graphic tools to form an impression. (Potter 2002, p.153). Mind mapping is a way of delivering lessons conducted by teachers by connecting a concept common to other more specialized concept for training the ability to present content in the specific meaning (Mulyatiningsih, 2013, p.238). Mind mapping is also commonly referred to as concept maps, one method of teaching a fun, active and creative. The learning mind mapping model does not make the teacher as a center of learning, but with the learners required active and creative in developing potential and train the memory in students.

Further, Mulyatiningsih (1995, p.238) state that mind mapping or commonly referred to as concept maps (mind mapping) is a technique of summarizing material that needs to be studied, and projecting the issues facing into the shape of a map or graph technique, so it is easier to understand. This activity as an effort that can optimize the function of the left and right brain, which was then in its application is very helpful for understanding issue quickly because it has been mapped. Mind mapping results in the form of mind map. The mind map is a diagram that is used to present the words, ideas, tasks, or a more associated and arranged to surround your keywords the main idea.

Some of the opinions presented above, it can be concluded that mind mapping is a model of learning by way of noting that creative by using color, images, symbols and curved branches so as to make it easier to memorize a lot of information to achieve the learning objectives. Mind Mapping was first developed by Tony Buzan, head of the Brain Foundation. A mind map is a method of noting the creative that we keep a lot of information. Once completed, the notes are made to form a pattern of interrelated ideas, with the main topic in the middle, while the sub-topic and details into its branches (Nasih, 2009, p.110).

### III. Research Methods

This research was designed to use the approach to research and development, research development model chosen is a model developed by Borg and Gall. Stages of research consists of three stages, namely (1) the preliminary research Stage, which is the research and information collecting activities have two main activities, namely the study of literature and field studies. (2) The development stage, model, is a combination of the planning and development stage of the preliminary from of product. The stages of the development model of learning Mind Mapping in detail include some activities that are putting together the initial design models, validation expert, testing the model, model testing, and a major revision of the model. (3) Evaluation stage of a product that is a test of the effectiveness of the model used a quasi-experimental design with Nonequivalent Control Group Design. Research and development were done in SMK Negeri 1 South Sulawesi. Data analysis conducted in the research is to include: analysis of data on stage of preliminary studies, the analysis of data on stage of development models, and data analysis in the evaluation of the model.

The population of this research is XI class students of SMK Negeri 1 South Sulawesi. The techniques used random sampling. The sample was XI class of Engineering Technology 1 of SMK Negeri 1 South Sulawesi as experimental class and XI class of Engineering Technology 2 as control class. Data analysis in this study is the analysis of the data at the stage of preliminary studies, development models, and model evaluation stage. Analysis Test of the effectiveness of the model used t-test of pretest and posttest the outcomes of the study.

The instruments developed in this study were: (1) the test used limited trials, tests and validation phase of the model. The tests are intended to measure a learner's knowledge on the subjects of Islamic education. The form of the test used the test objective multiple choice model. So that the quality of the test is good and can measure the ability. The things to do was make the lattice problem, validate the question to some experts, and conduct tests to question tests. After the reserved had tested in class XI class of Engineering Technology 3 of SMK Negeri 1, South Sulawesi conducted an analysis of item validity, namely: power difference, index lurch, and reliability tests. Analysis of the validity of the item used the correlation formula product moment, and reliability using alpha formula. (2) The guidelines for the observation of teachers' activities and students used to collect data at the trial stage. Teacher activity observation guidelines used to assess teachers in implementing measures appropriate learning mind mapping model developed. (3) Interview Guidelines used at the time the preliminary studies to deepen and complete data and information from teachers and students learning about the condition of the existing Islamic education at present.

This research used the qualitative and quantitative analysis approach because the data also obtained in the form of qualitative data and quantitative data. The data analysis used in the study were covered: (1) data analysis at the stage of preliminary studies, (2) data analysis at the stage of development models, and (3) data analysis at this stage of the evaluation of the model.

Retrieval of parametric statistical analysis results concluded with two paired samples t-test on each group of experimental and control group. T-test analysis used the test norms: If the chance of confusion ( $\text{sig./}\alpha$ )  $< 0.05$ , means significant, it means that the working hypothesis ( $H_a$ ) received, and the zero hypothesis ( $H_o$ ) declined. Instead if the chance of confusion ( $\text{sig./}\alpha$ )  $> 0.05$ , means not significant, it means that the working hypothesis ( $H_a$ ) rejected and the zero hypothesis ( $H_o$ ) accepted (Santoso, 2014, p.79).

### IV. Results

**Limited Trial Results Data:** After the model developed in the form of Mind Mapping-based learning model is validated by experts, then conducted trials limited to see the product's effectiveness in improving learning outcomes:

**Table 1.** Statistical data pre- Test and Post Test limited trial

	<i>Pre-test</i>	<i>Post-test</i>
Mean	62,67	70,20
Median	63,00	73,00
Mode	60	73

In Table 2. Seen that the results of the Post-test XI class of Engineering Technology 2 of SMK 1 on limited trials that studied Islamic studies with model-based learning Mind Mapping to the value of the KKM in classical is 70. From the results of the study note that the average student is on the value of the KKM because

average value was seen increased from Pre-Test to Post-Test of 62.67 to 70.20, shows that at intervals of 60 – 74 (Arikunto, 2012:281) criteria the results of the study of Islamic Education is fair category.

*Extensive trial results Data*

**Table 2.** Statistical Data Pre-Test and Post Test Extensive Trial

Class	Pre-test			Post-test		
	Mean	Median	Mode	Mean	Median	Mode
Experiment	68,82	70,00	67	79,09	80,00	83
Control	69,27	70,00	73	72,85	73,00	70

In Table 2 it looks that the average score of the overall student learning outcomes in experimental class higher than control class. On experimental class shows that the results of the study note that the average student was at a value of KKM. It can be seen from the average value was regarded increased from pre-test to post-test from 68.82 to 79.09 shows that intervals (75-84) the criteria the results of the study in the category of "good". On the control class shows that the average student was at a value of KKM because average value showed the increase from pre-test to post-test of 69.27 to 72.85 shows that on the interval (60-75) criteria the results of the study in the category of "fair".

The results mean the results of the study on extensive trials show that the results of the experimental class is higher than control class. It can be seen in the figure below:

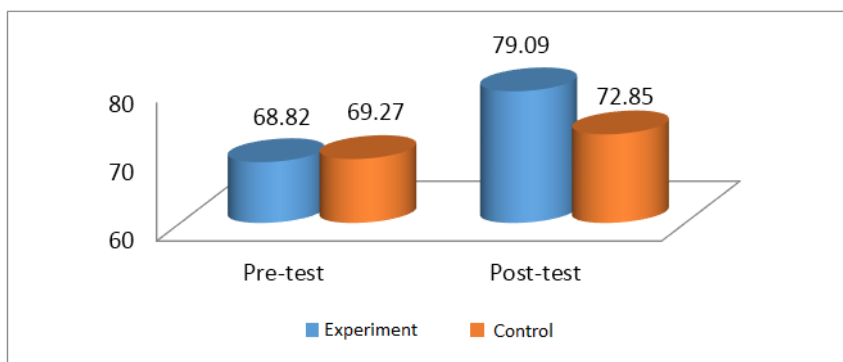


Figure 1. The Average of the Results of Extensive Trial Study

*T-Test score of Pre-Test of Experimental Class and Control Class*

T-test results of studying Islamic education at Experimental class and Control class were conducted to find out the capabilities of the previous two groups, whether there is a difference in learning knowledge result or not. Based on the obtained data processing summary t-test result data of Pre-Test of Islamic education.

**Table 3.** T-Test Score of Pre-Test of Experimental Class and Control Class

Class	t	Sig.
Experiment	0,493	0,625
Control		

In table 3 can be seen that the value of the Sig (2-tailed) is 0.625 with df 32. The value of the Sig (2-tailed) compared to the Sig. 0.05. It shows that  $0.625 > 0.05$  then declared there was no difference (Santoso, 2014:79). In other words, the basic knowledge of Islamic education both groups was homogeny.

*T-Test score of Post-Test of Experimental Class and Control Class*

Test-t results of studying Islamic education between experimental class and control class carried out to determine whether or not there is a difference.

**Table 4.** T-Test score of Post-Test of Experimental Class and Control Class

Class	t	Sig.
Experiment	3,690	0,001
Control		

In table 3, it can be seen that the value of the Sig (2-tailed) is 0.001 with df 32. The value of the Sig (2-tailed) compared to the Sig. 0.05. It shows that  $0.001 < 0.05$  then declared there a significant difference (Santoso, 2014:79). In other words, the State of knowledge after using the learning Mind Mapping model to the study of Islamic education both groups there is a difference of the t-test results show that there is a difference of

the t value = 0,493 at Post-Test of control Class then t value = 3,690 at Post-Test of Experimental Class. Therefore, the researchers concluded that learning by using Mind Mapping model can improve the results of the study on the education and training of Islamic Education, especially in SMK Negeri 1, South Sulawesi.

## V. Discussion

This research is developing research of the learning model of Islamic education based on Mind Mapping as has been expressed. Based on the results of validation experts revealed that this learning model developed can be categorized so that valid enough decent tested on students of SMK Negeri 1 South Sulawesi.

This section puts forward the discussion results of the product being developed concerning the achievement of the objectives of research to find out the steps the development of learning model based on Mind Mapping based on validity and effectiveness has been tested.

Product development following the steps of the research consisted of two stages, namely the research and development stage. Research phase includes problem identification, data collection, product design and design validation. Development stage encompasses design, revision, revision product tests product tests and usage.

The second phase is the development of step after revised conducted trials of the product to find out the level of effectiveness by conducting pretest and posttest. Based on the results of the tests then the prototype revealed effective product developed is ready to use in the learning process.

The results of the analysis of validation experts retrieved the results the expert model validator results while the study categorized quite valid. Student response to the media and learning is very positive.

The effectiveness of the learning model developed product is measured by passing score classical learning. By the results of the tests of the product developed six material stated with satisfaction, a sixth of the material tested was declared completely which means this learning model is declared effective.

## VI. Conclusion

Based on the findings of the study in SMK Negeri 1 South Sulawesi gained that the basic problem that needs to be attempted solution is a model of learning which is done by a teacher especially in the field of Islamic studies. The teachers are still using the traditional model of learning that still, which means that teachers use lectures and granting noted, so this can make students less interested in so that may give rise to a sense of saturation against Islamic education subjects.

Development of model-based Islamic education learning Mind Mapping based preliminary study results or (pre-survey) that the study of literature and field observation conducted with school majoring in computer technology then developed a model-based learning Mind Mapping validation of the results by category is quite valid, regarding Practicality and Interest by category is good.

Test the effectiveness of the model was done through quasi-experimental research results of t-test on the score on Post-Test indicates that there is a difference between knowledge of the control class and experimental class thus learning Islamic education showed the good effectiveness of applying model-based learning of Mind Mapping.

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