The Influence of the Strategy of Organizing the Content of Learning with Hypermedia-Assisted Elaboration Model

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ABSTRACT

The aim of this study is to test and analyze learning results acquisition of students who are taught using a strategy of organizing elaborate hypermedia-assisted learning and nonhypermedia. The design of this research uses quasi experiment according to test the effect of the treatment (treatment) of free variables against variable depends. This study uses a control group that designs do not match or pretes-postes nonequivalent control group design. The subject of research as much as 62 students drawn from 2 classes, namely class C (32 students) as a group of experiments and class D (30 students) as a control group. The data analysis used is variants of two lines (Two Way Anova) and test results of t. research found that there is a significant difference in the results of a study on the subjects of media study among a group of students who were given the treatment strategy of organizing learning content elaboration and hypermedia-assisted group of students with a strategy organizing learning content elaboration nonhypermedia. This is indicated by the value of the significance of the results of the study with the use of hypermedia-assisted learning strategies of non-assisted 0011 and hypermedia of 0.012 which value their significance and value of 0.05 < average results Learn which obtained using hypermedia-assisted learning organizing strategy of 81.82 is greater than the average value of the results of the study are obtained by using the strategy of organizing non-assisted learning Hypermedia of 78.68.

Key words: Strategy of Organizing the content, Elaboration Model, Hypermedia

INTRODUCTION

One of the variables that should be considered by the designer i.e. variable content has been determined in advance based on the objectives to be achieved. The strategy elaboration related to learning how the arrangement of teaching at the level of the structure of the content i.e., with regard to how to select, organize, and denotes a interrelation between the content of the teachings. Variable learning strategies are classified into: 1) organizing strategy variable (organizational strategy variables)

Reigeluth (1993) as developer of the elaboration theory States that when the
teaching is organized through the learning strategy elaboration will then generate learning, synthesis and higher retention as a result of learning. The learning process with the strategy elaboration of learning materials in the form of delivery of public things, starting from the structure of the contents of the fields of study that are studied (epitome) then elaborate on parts that are in the epitome in more detail (Hamid, 2007). In the use of strategies of pem-belajaran elaboration, learners will always associate each sub part to part and each part into a broader context. Thus pembelajar will easily understand the subject matter and figure out between the parts in the material so that the expected with the use of this strategy can improve the results of the study.

In order to achieve the learning objectives, required the existence of an effective learning. Of the many factors, one of which is the method and the media used in the study. The use of media in pem-belajaran intended to support the quality of learning. The function of the media is as an introduction message from the source of the message to the recipients of the message. Advances in computer-based multimedia technology is an opportunity in creating learning materials to support the learning process. These technological advances provide ease in designing learning media to bring real phenomena, in the form of video the fact of everyday life into the classroom.

Anitah (2008) suggests that hypermedia is the media that has the material composition of the sequence. Hypermedia refers to computer software that uses elements of text, graphics, video and audio are connected in ways that could make it easier for users to switch to information. Hypermedia is an extension to other media that combines hypertexts into the text. Hypermedia system, authors can create a material that hooks-Habib Dehghani, that include text, graphics, sound or graphic image animation, videos, music and other Arsyad (2005).

Some related research elaboration theory within the hypermedia provide elaboration theory, finding a good fit is used as a framework for hypermedia information due to mutual material related, more structured so that power Remember students longer, and have the results of a study of understanding the concept and the fact that higher (Chuang and Chen, 2002; Tau, 2000).

The efforts of organizing learning content needed teachers by posting notice of such student characteristics, motivations, interests, cognitive styles, the ability of remembering, and others who might join in influencing learning outcomes. Merril (1993) says that the learning situation variables including the characteristics of the students or the condition called learning in combination with the contents of the variable learning and learning strategies is essential in order the acquisition of a better learning results.

Based on the exposure of the problem above, it can be noted that the purpose of the research is to find out, calculate, and analyze learning results acquisition differences of students who are taught using a strategy of organizing hypermedia-assisted elaboration and learning nonhypermedia.

THE STUDY OF THEORY
1. Organizing Learning Content Strategy

To know further what is the strategy of organizing the content of learning, we must first understand the meaning of strategy. Explanation of the meaning of the strategy according to Tarigan (1993) is the approach and methods. From the definition of the strategy, then we can understand that the learning strategy is the common teaching approaches applicable in different areas of the material that is used to meet the learning objectives (Eggen, 2012). Meanwhile, according to Sabri (2005) learning strategies is politics or tactics used by the teacher in the learning process processed.
Learning strategies are defined as a plan to help pelajar their learning effort on each learning objectives, which can be a matter of learning plan or one production unit as a medium of learning (Gagne, Briggs, and Wager, 1992). Media selection, sorting and cutting the material, the material covered in the learning strategies. Seels and Richey (1994) add that learning strategies are the specs to choose and sort events and learning activities.

To realize the learning process that is in accordance with tujuanya, needed a strategy of organizing learning content and learning material based on directional on a course. As has been expressed Uno (2012) that a strategy of organizing learning content is said to be structural strategies referring to the sequencing or how to create an order of the presentation of the contents of the fields of study and synthesizing (synthesize) konssep, facts, procedures, and principles contained in the majors and related issues.

More Romiszowki (Miarso, 2009) claims about the strategy of organizing learning content as an overarching approach is distinguished into two basic strategies, namely ekspositori (explanations) and discovery (discovery). From both the strategy can be dipersfektifkan as the two ends of the opposite in a kontinium strategy. Both ends still there strategy alin used in the learning process.

Reigeluth, Bunderson and Meril (Degeng, 2013) stated the strategy of organizing learning is a method of mengorgan contents isasi has been selected for the study. Organizing learning content refers to an action such as the selection of content, arrangement of contents, creation of charts, formatting, and other level with it. Organizing further learning strategies can be distinguished into two types, namely, the strategy of macro and micro strategies. More macro strategy refers to a method for organizing the contents of learning that revolved around a concept, procedure, or principles. Macro-strategies dealing with how to select, organize, make an order and synthesizing learning content summary.

There are three important component in learning, namely: (1) the conditions of learning, (2) learning methods, and (3) learning outcomes. The conditions of learning is defined as the factors that influence the use of banning certain methods to improve the learning results (Reigeluth, Bunderson and Meril in Degeng, 2013)

2. Elaboration and Model Theory

Elaboration of the Elaboration can be defined as the development of learning materials for making learning so that it is more meaningful for learners. Elaboration theory mengorganisasikan way of learning by following the order of the General to the specific. Elaboration of models according to Degeng (2013) are as a way to mengorganisasikan the learning that begins with the awarding of the framework and content of subjects taught.

Elaboration and model theory is closely related to the strategy of organizing learning material content or level of a macro (organizational strategy variables), known as "the four SS: selecting, sequencing, shnytesizing, and summarizing of subject mater content ". In this variable is described as a method to select, sort, summarize, and mensintesiskan.

Reigeluth and Stein (Degeng, 2013) divided into seven components are integrated in the strategy elaboration theory, namely:

1. The order of the Elaboratif (a special type of simple to complex sequences)

Preskripsi staple in the elaboration of the theory is the use of a sequence of simple to complex with special characteristics. The special characteristics are: (a) a more general section mengepitomasi a more detailed section, (b) contained only the epitome in one field of study content types (concepts, procedures, or principles. The contents of the fields of
study that will be organized should be examined carefully to find out which type to be the characteristics of the contents of these fields of study.

2. The order of Prerequisite Learning (learning prerequisite sequence)

The sequence of prerequisite learning within the context of elaboration theory worth the learning structure or hierarchy of learning. The structure of the study that demonstrates the concepts, procedures, or other principles that can be learned.

3. Summary (summarizes)

Summary the strategy elaboration is a component which is used for systematically reviewing what has been learned. This is very important because it can help maintain retention and learning outcomes. There are two types of conclusion, namely: (a) internal summary provided at each end of the learning that summarizes the content of the subjects or the new facts presented, (b) a summary of the given external after learning that several times contains all the subjects that have been studied (Degeng, 2013).

4. Pensintesis (synthesizers)

Is the elaboration of the strategy components that serve as the hook and pengintegrasi a type of subjects that relate to a number of concepts, procedures, and principles. Pensintesis serves to: (1) provide useful knowledge, (2) provide a deeper understanding on subjects by way of comparing, (3) improving the meaningfulness and the influence of motivasional on pebelajar that shows the wider context, (4) improve retention, which makes the link between new knowledge and knowledge that has been owned by the pebelajar.

5. The analogy (analogies)

The analogy illustrates the parallels between the new knowledge with other knowledge beyond the scope of the knowledge learned. This can help the understanding of the knowledge that is difficult to understand by pebelajar.

6. Activation of Cognitive Strategies (cognitive strategy activator)

Cognitive strategies are necessary skills pebelajar to organize its internal processes while he was learning, remembering, and think (Gagne, 2005). According to Rigney (Degeng, 2013), there are two ways to activate a cognitive strategy, i.e. with embedded strategy and semi-detached strategy. Embedded strategy done with designing learning such that pebelajar is forced to gunakannya. How this can be done by using pictures, analogies on the phrase, and mnemonic, could also using guiding questions or also known as semi-detached with strategy, namely an attempt to ask the pebelajar showed what was already studied.

7. Control Study (a learner control format)

Merril (Degeng, 2013) describes the conception about learning control refers to the freedom of choice to do pebelajar and determination against: (1) content of the studied or content control, (2) the pace of learning, (3) the components of the strategy learning that you want to use pebelajar, (4) cognitive strategies used pebelajar when interacting with learning.

3. the Hypermedia

The term hypermedia in computer science, is a system of integrating graphics, sound, video, and animation into a single document or a file that is linked by a system known as hyperlinks that connect it to the file – file related (Brickman, 2002). Hypermedia is one form of computer-based multimedia technology. Smaldino, et al (2005) and Roblyer (2006) suggests that hypermedia is computer software containing components of multimedia (text, graphics, video, and audio) that are associated with each other in such a way so that the user is easy to move in to access the information.

Hypermedia is a system that integrates or blending components multimedia (Dabbagh, Bannan, &Rithland, 2005). Clark and Mayer (2003) outlines in more detail the multimedia components into two, namely words (words) that can be either a narrative (audio) or text on the
screen, and the graphics comprising the illustration, photo, animation or video. Although more multimedia refers to the use of various media, hypermedia can be defined from the two words that make up the term. Hyper meaning nonlinear or random and the media refers to the information that is represented in many formats.

Roblyer and Doering (2010:170) States that: “The combination of media such as video and audio with text makes them multimedia. The ability to get from one another makes them hypermedia. Thus, according to Roblyer&Doering if only a combination of video, audio and text then called multimedia, and if it has the ability of interaction, then the media into hypermedia.

Hypermedia as well as learning devices for other e-learning, in addition to loading content (content or information) also includes learning methods to help learn (Clark and Mayer, 2003). Thus, hypermedia is not solely a static device, but also the tools to deliver learning (delivering). In this case, may be a form of hypermedia intact from the theory of instructional design.

METHOD

This study will test the acquisition of problem-solving learning outcomes students use learning content organizing strategy elaboration hypermedia-assisted. For that purpose, quasi experimental design was chosen because according to test the effect of the treatment (treatment) of free variables against variable depends. This study uses a control group that designs do not match or pretest-posttest nonequivalent control group design (Tuckman and Harper, 2012).

In the study, both groups of students follow the courses learning with media content, purpose and the same learning time. The first group as a group treatment implement the learning process with a strategy of organizing elaborate hypermedia-assisted model, while the second group or group control implement the learning strategy organizing model elaboration nonhypermedia. Each group did a study on space and similar environmental conditions and with the same lecturer.

The subject of research as much as 62 students of Islamic religious education courses of the Faculty of Islamic University JurulJadid who take courses of learning media. The number of such students is drawn from 2 classes, namely class C (32 students) as a group of experiments and class D (30 students) as a control group. The data obtained were analyzed using analysis of two variant lines (Two Way Anova) seen from t-test and analysis of deskriftif seen from the average number of student learning outcomes.

RESULTS AND DISCUSSION

1. Research results

The research was conducted in two groups, the experimental group one class and another class of the control group. Grouping students based on learning strategies are used in the learning process. Results of the study carried out using the SPSS program-aided calculations by looking at the 0.05 significance value < can be presented in the following table 1:

<table>
<thead>
<tr>
<th>Independent Samples Test</th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Hasil Belajar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.045</td>
<td>.333</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>2.605</td>
<td>56.883</td>
</tr>
</tbody>
</table>
Based on the chart above, showing the value of the significance of the results of the study with the use of hypermedia-assisted learning strategies of non-assisted 0.011 and hypermedia of 0.012. The significance number less than the alpha value of 0.05, (p. < 0.05). Thus, the null hypothesis is rejected, and it can be concluded that the value of post test learning outcomes understanding of the concept simultaneously shows the real difference on both learning strategies (berbatuan hypermedia and nonhypermedia). Where on the basis of the average value of the post test students by organizing the learning strategy elaboration hypermedia-assisted showed higher than the value of the post test students by organizing the learning strategy elaboration nonhypermedia, which can be seen in the following table:

<table>
<thead>
<tr>
<th>Group Statistics</th>
<th>Strategi Pengorganisasian Pembelajaran</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hasil Belajar</td>
<td>Hypermedia</td>
<td>34</td>
<td>81.82</td>
<td>4.635</td>
<td>.795</td>
</tr>
<tr>
<td></td>
<td>Non Hypermedia</td>
<td>28</td>
<td>78.68</td>
<td>4.808</td>
<td>.909</td>
</tr>
</tbody>
</table>

Refer to the table above, it is clear that the average value of the results of the study are obtained using hypermedia-assisted learning organizing strategy of 81.82 is greater than the average value of the results of the study are obtained with using a strategy of organizing non-assisted learning hypermedia of 78.68. This means that, groups of students studying with the use of hypermedia-assisted learning organizing strategies there is a noticeable difference on the results of his studies, where the results of his studies better than the non-assisted hypermedia.

As for the comparison of the average value of the post test average value of learning results obtained using the strategy of organizing learning hypermedia-assisted and non hypermedia can be presented in the form of images as follows:

The picture above can be known that the average value of the post test groups of students use learning strategies hypermedia showed higher than average value of post test learning strategies by non hypermedia.

Based on the results of the calculation of the significance value obtained 0.011 for hypermedia-assisted learning strategies and 0.12 for non-assisted hypermedia. Each of the significance value smaller than 0.05 alpha. Thus, it means there is a rejected H0 a significant difference between the results of the learning of students who are taught by using a strategy of organizing elaborate hypermedia-assisted learning as compared to nonhypermedia. It is also reinforced by looking at the average value of understanding on two groups of students indicate that the average value of the results of a study group of students studying...
learning strategies using hypermedia-assisted greater 81.82 the average value of a group of students studying with IE nonhypermedia learning strategies of 78.68. Thus it can be concluded that in general the results of learning among students studying learning students are taught using the strategy of organizing elaborate hypermedia-assisted learning better than the nonhypermedia.

2. The deliberations of the

The calculation of the results of research that has been done, note that the results of a study group of students taught by using a strategy of organizing elaborate hypermedia-assisted learning better than to use non Hypermedia. This difference occurs because the class due to experiments using hypermedia-assisted learning organizing strategies, students are presented with a system of multimedia technologies in the learning process, which makes it easy to students to gain knowledge interactively and exploratory with the provision of information and the development of existing concepts. While in the class control that uses the strategy of organizing non-assisted learning hypermedia, a student is presented without the aid of technology in the process of pembelajaranya, so that students are less interactive and explorative due to the process of pembelajaranya the monotony.

Based on the hypothesis test indicates that there is a difference between learning results acquisition group of students who were given preferential treatment by the use of hypermedia-assisted elaboration and model groups students who were given the treatment with using the model elaboration nonhypermedia. It can be seen from the extent of their significance value of 0.011 to model hypermedia-assisted elaboration and 0.012 to model elaboration nonhypermedia.

Significant differences between the groups of experiments with the control group shows that the acquisition of the learning outcomes are affected by the learning process using hypermedia. Where, the average value of the learning outcomes of students who use elaborate hypermedia of 81.82 while using elaborations of non hypermedia has an average of 78.68. It means that by using hypermedia average student learning better results compared with non hypermedia. So the strategy of organizing learning content becomes one of hypermedia-assisted solutions in improving learning outcomes for the better.

Organizing learning content strategy elaboration and hypermedia-assisted model nonhypermedia that will be packaged in the research are the two strategies that have the characteristics of learning the same, but a different emphasis upon its use. The use of the strategy of organizing the elaboration of learning on the learning media courses very precisely because in the learning process, starting from the common things to a more detailed then forwarded by outlining more depth dependent the depth of the subsequent material forwarded with a synthesis and summary.

Organizing learning content strategy elaboration can improve the ability of pebelajar in their learning results acquisition (Anitah, 2002; Hasan, 2014; Widodo, 2015). Elaboration of models is one of the strategies of peng-organisasian learning contents based on the view of invalid constructivisme, where learning is defined as the process of construction of knowledge by pebelajar based on knowledge which is owned earlier and interrelated.

Study according to the view of Constructivism is an active pebelajar in the process of constructing meaning. The learning process is characterized by: (1) learning means shaping of meaning, (2) the construction of meaning is a process of continuous learning, (3) is not the activity of collecting facts, but rather a development of thinking by making sense of the new, (4) the actual learning process occurs at the time of someone’s schemata in doubt which may stimulate further thinking, (5) the acquisition of learning results is influenced by the experience of the pebelajar with the physical world and the environment, and (6)
the earnings results belajar a person depending on what has been known, purpose, and motivation that affect the interaction of pebelajar with the materials studied (Suparno, 1997).

As a result of earlier research noted that the use of hypermedia in more effective learning to construct knowledge and understand the content of the material presented. This indicates that pebelajar prefer the use of hypermedia learning compared to conventional and pebelajar are more active during the following process of learning (Jonassen, 2000; Mayes, 1993; Turner and Handler, 1997; Yildirim, 2004). In addition, the acquisition of the learning outcomes with the use of hypermedia is higher compared to that do not use hypermedia (Kirna, 2012).

Interactivity and richness of the format of the information owned by hypermedia make very flexible hypermedia utilized in learning. Four of the learning potential of hypermedia is delivered through: (a) to support the visualization explanation, (b) learning to use simulations to facilitate the mastery of the material, (c) the learning of problem solving which features feedback automatically, and (d) integration between collaborative learning with standalone (Clark and Mayer, 2003). Hypermedia can be used to support troubleshooting by users by presenting representation problem (Parkes, 1994).

CONCLUSIONS AND RECOMMENDATIONS

A summary of the results of the research there is a significant difference in the results of a study on the subjects of media study among a group of students who were given the treatment strategy of peng-organisation assisted elaboration of learning content Hypermedia and student groups organizing the learning contents with strategy elaboration nonhypermedia. It can be seen from the test t significance level that is done of the extent of 0.012 0011 and their significance less than 0.05 and the views of the average value of the results of learning hypermedia is bigger than the non hypermedia. Thus it can be said that a strategy of organizing learning content elaboration hypermedia-assisted better in improving student learning outcomes in this understanding of the concept.

The recommendations can be given in this study is the learner needs to use a strategy of organizing learning content elaboration to enhance student learning outcomes by following the elaboration of the model sequences. Need to improve the quality of learning by developing a learning strategy-oriented 21st century skills such as the use of hypermedia. Implementing the use of hypermedia can increase the independence of the student in gaining knowledge. The use of hypermedia in this research has not been done optimally so that need further research regarding satisfaction and results in higher learning.

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