Effect of Learning Techniques Using Summary and Learning Styles in Indonesian Language Learning Outcomes of Indonesian Students

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Abstract

This study aimed to determine the effect of learning techniques using summary and learning styles in Indonesian language learning outcomes of Indonesian students who studied at PGSD FIP UNIMED. The research was implemented at the third semester of the academic year 2003/2004. Methods which used in this research was a quasi-experimental study with a 2 x 2 factorial design. Instruments which used to collect the data were results of learning test and learning styles test. The results showed: 1) There are no differences in Indonesian-language learning outcomes between students who obtain verbal summary with students who obtain the schematic summary learning techniques; 2) There are no differences in Indonesian-language learning outcomes between students who have impulsive learning styles with students who have reflective learning styles; and 3) There is no interaction between the technical summaries learning techniques and students'learning styles which can give impact on students' Indonesian-language learning outcomes. Thus the results of this study indicate that the learning techniques of verbal and schematic summary suitable given to students who have impulsive and reflexive learning styles.

Keywords: technical summary; learning styles; learning outcomes

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1.   Introduction

One of the problems which occurred in teaching methods lately is the fact that many students have difficulties in studying and learning which is shown by the lower results on their learning outcomes. Speaking of which, the main problem which related to students difficulties in learning can be caused by the quality of learning design. The ultimate objective of learning design is to facilitate students to easily learning their lessons/courses on which the main goals of the courses can be achieved. Gagne and Briggs has said that the main concept of teaching is a set of events which created and developed in order to motivate students to learn [1]. More specifically Dedeng defined teaching as a way to educate students [2]. Thus the important skills which a teacher or lecturer has to possess is the skills involving creating and developing learning design strategies in achieving learning objectives; whilst there is no such one-size fits all strategies to achieve learning objectives, the need for a creative lesson plan which can be used to achieve learning objectives and therefore affect students' ability to learn is absolute.

Teaching disciplines have been paying attention to the efforts to improve understanding and learning process. The main objective is to establish the optimal learning strategies to encourage learning initiative [3]. This discipline is seen as a bridging applied science learning theory and teaching practice. Therefore, these disciplines is an important aspect and is expected to help the teacher/lecturer in performing its functions, especially as instructional designer.

According to the aforementioned statement, in general, PGSD UNIMED's lecturers, who are lecturing Indonesian-language course, are still using a conventional teaching method in their learning process. Lecturers are using text books as the main teaching materials. The books contents so many materials which can be difficult to deliver it all to students, and also will be difficult for students to be able to master all the materials. The difficulties with regard to the efforts to understand the main ideas of the material being taught, as well as keeping the memory of previous materials. Those kind of teaching methods are not the optimal strategy to increase students' ability in learning and not improving students' in-depth understanding which in the end affecting their learning outcomes.

The fact as stated above was appeared in the teaching of Indonesian language in PGSD FIP UNIMED. Based on observations, turned up that students'learning outcomes of this course was still low. It can be seen from students' data in the faculty which mostly earned low mark on Indonesian-language subject, that can be caused by a variety of factors, both internal and external factors that affect Indonesian-language learning outcomes. Therefore, in order to improve and increase students' learning outcomes specifically on Indonesian-language subject, lecturers can use summary learning techniques.

According to Reigeluth summary as one component strategy elaboration theory in which this summary is intended to express the main ideas presented, so that students more easily understand the content presented [3]. Summary can be used in helping students who do not understand the basic learning content, either in the composition or the relationship between multiple concepts or principles proposed, then in this case summary will add to the understanding of the material presented. Summary in this case not only as a repetition but also

improve understanding for students who have previously been understood, the summary will serve as learning and learning again briefly. Sherman said that the summary is a concise statement that aims to repeat the amount of information that must be remembered and to direct thema in ideas of the information [4]. Furthermore Donald suggested that by continuously learning the materials briefly, students' retention on the subject will be improved [5]. This is in line with what is proposed by Romiszowski in order to improve retention of learning that is by making or writing a summary which contains the main ideas of a text book; that way it can help students to keep those ideas in their memory [6]. By implemented summary learning techniques, the results of students' learning outcomes on Indonesian-language subject was expected to be improved.Therefore it is necessary to get empirical data on the effect of learning techniques to the students'learning outcomes in Indonesian-language courses, especially for students studying on PGSD FIP UNIMED.

In addition to learning techniques, students' ability on Indonesian-language also essential to be acknowledged in order to improve students'learning outcomes on Indonesian-language course.Indonesian-language capability is very important skill which must be owned by PGSD students, because it is one of main lessons that will be teached on elementary schools. Through learning Indonesian-language students of PGSD FIP UNIMED, who are the candidates of being elementary schools teacher, are required to have the ability to teach and educate their students to be a good quality Indonesian children. Language is a medium which can be used to think logically, to deliver thoughts and insights, as well as to reveal feelings.

Of the many learning techniques used in the learning process of Indonesian-language subject at PGSD FIP UNIMED, there are two techniques that are discussed in this study, they are summary of verbal and schematic learning techniques. Verbal summary is a brief repetition of the important ideas of the learning materials content, and is also used to indicate a sequence, the contents of teaching materials [7].

2. The Literature Review

2.1. Summary Learning Techniques

Keraf suggested that the summary is an effective way to present a lengthy essay in the form of a short writing [8]. For a summary departed from the original presentation of a work briefly, then the summary is a skill to hold the reproduction of the results from existing ones. Word summary that is used for this sense means cut or trim. In other words, taking the essence of an article or learning material. Therefore, a summary of the learning material or a long essay can be summarized by not repeating the meaning of the sentence. Making a summary is an important part in the teaching process because it can help and facilitates the students to understand the main ideas of the presented material. So that students can more easily memorize the presented material and have better retention of it. Besides, the use of summary learning techniques is basically a way of manipulating the message of teaching in the learning process.

Reder and Anderson suggests the need for a summary of learning caused by: 1) the amount of information conveyed in learning which made students difficult to keeping in all the information presented, 2) the student must divide their time as students must pay attention to information that is more important, 3) students had to work hard to summarize the important things that can be remembered in details, 4) facilitate the students for

memorizing the main ideas of the presented material. In accordance with the above opinion, there is the need for efforts to improve the quality of learning in particular on Indonesian subject [9].

Bloom suggested learning outcomes related to two main factors, namely students charasteristics and quality of teaching [10]. Like wise Reigeluth said that the learning outcomes associated with the interaction between teaching methods and teaching conditions that could includes tudents charasteristics which affecting the quality of learning information [3]. One of students charasteristics that influence learning outcomes is learning style. Style of learning is a consistent manner which student has in capturing stimulior information, such as memorizing information, thinking, and problem solving [11]. Learning style consists of three aspects:1) field dependence/independence, 2) impulsive/reflective,and 3) perceptive/perceptive-systematic/intuitive. Thus this study focused on impulsive and reflective learning styles. Students who have impulsive learning styles make decisions quickly without thinking deeply. Instead students with reflective learning styles consider all alternatives before making a decisionin a situation that does not have a good explanation. Both learning styles will serve as a moderator variable on this study, and the objective of this research is focus on the way students receive and understand information.

According to Davies the following things should be considered in order to develop aneffective summary: 1) it should be brief and concise, 2) it contains the main ideas, 3) it records information in form of notes or graphics, 4) it should be able to build and develop lessons, 5) it use scolor to high light things that need to be emphasized, 6) interesting and readable [7]. Furthermore Davies suggests that there are five types of summaries that can be used in a lesson, namely: 1) a verbal summary, it is widely used. The materials are arranged in a systematic way [7]. Long words should be avoided so that the paragraphs structure of a given information can be easily to understand.In general, this type of summary is numbered, 2) a tabulation summary, this kind of summary is use ful when list is needed, and of tenused in discussion groups. The format is paring with words, long lists should be avoided because it would be boring and saturate. This type of summary is rarely use in explaining one's own purposes, 3) a clump of trees summary, it is very useful to describe classification and of tenused toi llustrate organizational structures, 4) diagrams summary, it is useful to effectively describe a system and its components, and 5) schematic summary, it is often used to portray something with an interesting way to look at. Generally scheme is used to show relationships.

Sherman suggests there are six to be done in developing a good summary: 1) eliminate unnecessary information, 2) eliminate redundant information, 3) combine information, 4) select main ideas of information, 5) create and find main ideas, and 6) create a summary for test [4]. Additionally Tulving suggested nine ways to make a summary for learning purpose, namely, 1) summarize the material which already learned, 2) evaluate the materials that have been studied, 3) answer the questions of the material that has been studied, 4) do exercises optimally, 5) jot down the main ideas of each tasks, 6) makes the question of the material being studied, 7) presentation in the class, 8) use charts, diagrams, graphs, and tables form, and 9) to plan and organize activities [12].

From the aforementioned types of summary, verbal and schematic summary is used for the purpose of this study. Presentation of verbal summary by drafting materials is systematically arranged by avoiding long words

so that the structure of the given information and paragraph can be used. While the schematic summary is used to illustrate the relationships appoint a sequence. Furthermore, both types of summary chosen considering their compatibility with Indonesian-language subject.

2.2 The Nature of Learning Styles

Nasution defines learning styles is a consistent manner which student has in capturing stimuliorin formation, such as memorizing information, thinking, and problem solving [11]. Everyone has different learning styles in the level of skills, solve problems, level of intelligence or the ability to think creatively, students also differ in the way of acquiring, storing and processing information. Eutwistle said that students who have implusive learning styles answer quickly but make many mistakes, contradict to students who have reflective learning style who answer the question slowly with just a few mistakes [13].

Woolfolk suggested that learning style is preferred way of learning for some one tolearn fromone's environment or from learning environmental [14]. From the definition can be said that a person's learning style is the way to process information, how to remember and solve problems. Not everyone has the same way, each of which shows the differences. In this study discussed on impulsive and reflective learning style. The difference between reflective and impulsive learning styles are as follows: reflective learning styles namely consider all alternatives before making a decision in a situation that has no easy solution [11]. Some testing can be done to investigate whether someone use reflective learning style or not, such as noticed how they examining a given picture for example geometric shapes, houses design, cars and so on. Then show some other images with various place which content the similar or identical picture on it. People who have a reflective learning style will put more attention to the pictures and look thoroughly before choosing one and identical to the first given picture. In another condition for example multiple-choice tests, students who have reflective learning style will feel paralyzed by the pressure of time where they cannot think carefully and deeply. While as for the impulsive type, they are taking decisions quickly without thinking deeply. People who implusive can be investigated by testing among others noticed a picture example of geometric shapes, design houses, cars and so on. Then considered a number of other images with various shapes. If the observed images, people who have impulsive learning styles looked at the pictures set of in a glance with no intention to linger at the pictures and quickly choose the one which is identical to the first image.

Based on that theory, for multiple choices test, the number of questions and the time should be arranged in such a way that students who have reflective learning style have enough time to think without such high pressure of time. In this study, JPL Tellier instruments was used to identify students learning styles. This instrument give evidence about different ways of learning styles that compatible for each students because they use a different policy and assessments. Differences in the way of learning gave different benefit in respect of each students' ability to respond to written symbols and understand what they read.

3.   **Methods**

The research was conducted at University of Medan from August to October 2003. The method used in this

study is a quasi-experimental method. This method is used to determine the extent of the influence of independent variables on the dependent variables. Design research is experimental factorial design 2 x 2 which means study only involves two levels factor, namely: a) learning technique that consists of a verbal summary and schematic learning techniques, and b) learning styles which consists of impulsive and reflective learning styles.

Some tests were conducted to see the differences in students' learning styles. Those tests obtained by using specific instruments which can provide various information on the compatible learning styles for each students.The researcher cooperated with BKBP UNIMED to run the necessary tests. The population was FIP UNIMED-PGSD students which amount was 425 people. Of the overall population, 60 people sample was randomly assigned. As for data collection technique,the achievement tests was used, with condition that the trial tests was done first before the real test/exam.

The requirements test which include normality test with Lilifors test and test of Homogeneity of Variances with Barlett [15] and after that the research's data were analyzed using statistic tools. Analysis of variance with a 2 x 2 factorial design with the method of unweighted mean by Fergusson was used to test the hypothesis of the research [16].

4.   Results

The following are descriptions of FIP UNIMED-PGSD students' learning outcomes data on Indonesian-language subject.

Table 1: Descriptive of Data Learning Outcomes

Method / Learning style	Verbal summary	Schematic summary	$\sum$
Impulsive	n = 8	n = 8	n = 16
	$\dot{X}$= 14.75	$\dot{X}$ = 17.62	$\dot{X}$ = 16.19
	S =3.19	S = 3.89	S = 3.16
Reflective	n = 22	n = 22	n = 44
	$\dot{X}$ = 16.59	$\dot{X}$ = 17.27	$\dot{X}$ = 16.93
	S =3.10	S =3.83	S =3.16
$\sum$	n = 30	n = 30	n = 60
	$\dot{X}$ = 15.67	$\dot{X}$ = 17.44	$\dot{X}$ = 16.56
	S =3.17	S =3.05	

Description:

N = Amount ofsamplesof eachgroups

X = Average scoreof learning outcomes

S = Standard deviation

Σ = Total

Table 2: Summary of Results of ANOVA Learning Scorefor Indonesian-language Subject

Sources ofvariation	Total quadrate	Degree of freedom	Middle quadrate	F_o	F_t $\alpha = 0,05$
InterColumn (Summary Technique)	7.13	1	7.13	1.13	4.00
InterLine (Learning Styles)	6.13	1	6.13	0.97	4.00
ColumnsandRows(interaction)	0.75	1	0.75	0.11	4.00
In Group	352.30	56	6.29		
Total	366.31	59			

Based on two lines Anova calculations above, it can be concluded as follows:

4.1 First Hypothesis

Based on the results of which obtained in the hypothesis testing, there is no significant difference on students' learning outcomes who study the Indonesian-language between students who learning with verbal learning techniques summary and students who learning with schematic learning techniques summary. The results shown were probably due to the limitation of the research and the various factors that may not be controlled in the implementation of the study treatment. In addition,the limitation of this research was that it was limited by time, in which the meeting was held for treatment studies only happened in six sessions plus one session for the exam. Another possibility was the amount of the students was too little where the amount of students with verbal summary learning techniques was 22 students and as for the students with schematic summary learning techniques was 22 students. Furthermore, the controlling during treatment could not be done in strictly manner, it might happened because there were some communications occurred outside the classrooms where the verbal and schematic summary learning techniques been discussed with the subjects research.

Indonesian-language learning outcomes results showed that the average value of a group of students who obtain a verbal summary is not different from the average value of a group of students who obtain a schematic summary. This is acceptable because the study was conducted with a short and limited time which made the teachers who conduct the subject were not yet fully trained themselves with the learning techniques. The teaching methods which were usually used and implemented by the teachers is varied from discussion, question-answers, and lecture. The results of this hypothesis shown by the statistical tools were possible because there were not enough time for the teacher to make the summary at the beginning or at the end of the course. These results fit the findings of Hartley and Trueman on the effect of giving the summary of text book before reading the book or after [17]. One of the findings shows that giving summary after or at the end of the reading is more effective. Therefore the result of this hypothesis can be acceptable whilst not proven that there is no significant

difference between students who usea verbal and schematic summary learning technique.

4.2 Second Hypothesis

Based on the calculation of 2 x 2 factorial ANOVA concludes that Ho is accepted. Thus there is no significant difference on students' learning outcomes on Indonesian-language subject between students who have an impulsive learning style compared to students who have reflective learning style. This may imply that students who have reflective learning style obtain the same learning outcomes with students who have implusif learning styles when they taught using summary learning techniques.

Learning style is charasteristics possess by studentsin order to process information. Therefore it can be said that every students has relatively permanent way of observing, organizing and memorizing information. From these results, students with implusive and reflective learning style has no significant different on their learning outcomes for Indonesian-language course. This shows that every students still has charasteristics in other fields such as cognitive style independent and preseptive/receptive-systematic/intuitive that can affect learning outcomes specifically on Indonesian-language course. This is the possible reason on why there is no significant difference on students' learning outcomes even though the learning styles is different.

In addition, verbal and schematic summary was not planned to be given at the beginning or the end of the lesson. This result suggests that the findings of Hartley and Trueman on the effect of giving a summary of the textbook, which stated that the summary given at the end of reading the text book is more effective than a summary given before reading, but either of the summary is quite effective for intermediate students [17].

Based on the above mentioned reason, the results on the second hypothesis can be accepted which shown that there is no significant difference of Indonesian-language learning outcomes between students who have impulsive learning styles and the students with reflective learning styles.

4.3 Third Hypothesis

Based on the research results of 2x2 factorial ANOVA gives the conclusion that there was no significant interaction between summary learning techniques and students learning style on Indonesian-language learning outcomes. This hypothesis was not proven due to the limitations of the study as well as a variety of factors that cannot be controlled during the research process. Various reasons can be found on why this hypothesis was not tested, one of it was due to the amount of sample of the students used in this research was considered to be too small which consists of 60 students. Of the 60 students, 44 students possess reflective learning style and the rest possess implusive learning style. The difference in the number of sample which being used for the learning style could lead to unproved hypothesis where there is no interaction between learning style and summary learning technique on the learning outcomes of Indonesian-language course. Summary learning technique which been given to students on purpose results on significant difference of the learning outcomes of Indonesian-language course without the influence from students learning style, and vice versa.

Elaboration model can be used to facilitate information processing that is by organizing the learning methods to

be parallel with memorizing process [2]. In line Salomon which stated that the presentation strategy on teaching method that can improve attention is a critical need to improve the learning process [18]. The strategy is associated with an increase in the attention of students in each section of information processing track, namely the acceptance, perceptions, short-term memories, processing and long-term memories on the received information.

Learning methods using summary learning technique shows the main ideas of the material presented and aims to provide a more focused sense of the knowledge that has been keep in memory and is expected to further deepen the knowledge acquired. In addition, learning techniques using the summary can serve as a guide on the information that must be considered, so this guide will help facilitate the processing of information for students who have both implusive and reflective learning styles.

Many experts in education have found many varieties of teaching methods that aim to improve student learning outcomes. But there is no one-size method which can be suitable for all circumstances. Since each methods has its own advantages and disadvantages depend on the learning condition. In other words, that each methods is only suitable and effective for a particular condition. Based on that theory this study hypothesized whether there is interaction between learning techniques using summary and the learning styles. The results showed that summary learning technique is suitable for both students who have reflective and impulsive learning style. It is shown by the average score of learning outcomes both by students with reflective and impulsive learning style which not shown any significant differences on the score. These results are not in line with what was proposed by Woolfolk that the reflective learning style runs slower but make less mistakes [14].

The results of this study showed that there was no difference in learning outcomes between students who receive verbal and schematic summary learning techniques. This was probably caused by the small sample size. Another possibility was a very short treatment time. These results indicate that the learning technique with a verbal summary of the overall did not differ when compared with schematic learning techniques. These findings demonstrated with an average score of students who obtained a verbal summary of the learning technique is not different when compared with students who obtain a schematic summary of the learning techniques.

According to Hamid finding sconcluded that teaching which accompanied by the provision of a verbal summary instruction is not necessarily different from the instruction accompanied by a diagram summary [19]. Furthermore, his research results also concludes that there is no interaction between teaching with giving verbal, diagrams and without a summary of the cognitive styles of students. That findings can support this study results where there is no difference between the learning outcomes of students who obtain a verbal summary of the teaching techniques and the schematic one.

The above mentioned explanation propose clarification ofthis study that says there is no interaction between summary learning techniques and students' learning styles of the learning outcomes of Indonesian-language course.

5. Conclusions

The following conclusions can be summarized:

1- There are no differences in Indonesian-language learning outcomes between students who obtain verbal summary with students who obtain the schematic summary learning techniques.

2- There are no differences in Indonesian-language learning outcomes between students who have impulsive learning styles with students who have reflective learning styles.

3-There is no interaction between the technical summaries learning techniques and students'learning styles which can give impact on students' Indonesian-language learning outcomes.

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