CONSTRUCTING VISUAL LEARNING STYLE STUDENTS' READING COMPREHENSION USING METACOGNITIVE STRATEGY INSTRUCTIONS

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ABSTRACT

Mainly, visual learners learn best using their eye sight. This type of learners tends to be fast talkers. They also tend to have a difficulty with verbal instruction. Seeing and reading are reflected to be important for visual learners, for example handouts, pictures, tables, demonstrations, and mind maps are very helpful for them. Considering that learning English includes learning to read written passages, this articlefinds out the possible strategy to assist them improve their reading achievement. This is critical because empirical evidence shows that visual learner is excellent in learning visually, especially using lecture notes, textbooks, pictures, films, text illustration, chart, diagram, and other written text is the most useful way of learning. The teacher can focus their attention appropriately in order to help visual learner achieve success in the classroom. Strategy use is fundamental to help determine how and how well learners learn a second/foreign language. To solve the problem, meta-cognitive strategies are believed to be the most suitable to help them learn to read better. This is because meta-cognitive strategies take care of how learners regulate their learning intentionally. As a result, this is the authority of the teacher to teach them to become regulators of their learning to read and use them to cope with different reading tasks selectively and appropriately in a more flexible way according to their need. So, metacognitive strategy instructions (MSI) can help learners use suitable strategy to make them strategic readers. As a result, being able to control over their reading process, EFL learners are expected to use these strategies as resources to pursue the goal of reading activities in English classes as a personal interpretation or meaning making rather than confining their experience or learning to an understanding or acquisition of English linguistic knowledge only. 27visual students were grouped by conducting VAK Questionnaire. Then, all subjects were administered the pre-test and after getting MSI training they got post reading comprehension test. The results showed that therewas no statistically significant higher between the pre and post-test mean reading score of the visual EFL Indonesian students after being taught using Metacognitive Strategy Instruction, because the significance value was (p = .731/2 = .3655) and it was far above the significance value $\alpha < .05$. It expressed that visual learning style did not predispose the step-up of reading skill after being trained with Metacognitive Strategy Instruction.

Keywords: Metacognitive Strategy Instruction, reading skill, visual learning style

1. INTRUDUCTION

Numerous studies have demonstrated that reading is a big matter for students. Even though students have spent many years studying English, they say that they still have a lot of reading comprehension problems. Probably this is because they have not received adequate instruction in how to effectively read and acquire knowledge. The potential causes of low reading performance for these learners may include dysfunctional beliefs about reading, low strategy use, and motivational barriers including poor learner self-concept and self-efficacy (Pressley, 2000). Today studies have shown that students use many different learning strategies to improve their reading skills, such as, previewing, predicting, skimming and scanning, guessing, and paraphrasing. Therefore, the teacher has to find ways to assist students in developing their reading comprehension ability through learning strategy. One of learning strategy that is used in this research is Metacognitive Strategy Instruction (MSI). It is different among other learning strategies, using MSI for reading strategy can make EFL students become regulators of reading strategies and use reading strategies selectively and flexibly according to different reading tasks they face. In the meantime, being able to control over their reading process, EFL students are expected to use these strategies as resources to pursue the goal of English reading as personal interpretation or meaning making rather than confining their experience or learning to an understanding or acquisition of English linguistic knowledge only (Carrell et al., 1998).

Most essentially, metacognition is knowing about knowing, and it is most broadly defined as awareness and control of one's cognition (Baker & Brown, 1984). O'Malley and Chamot (2004) stated that "metacognitive strategies involve thinking about the learning process, planning for learning, monitoring of comprehension or production while it is taking place, and self-evaluation of learning after the language activity is completed". Metacognitive strategies also involved readers' deliberate mental behaviors for directing and controlling their cognitive strategy processing for successful performance (Phakiti, 2003).

It is critical for a single person to know his/her learning style. The reason is that one of the most significant issues in learning to learn, or in becoming effective in the process of learning, is an individual's taking the responsibility for his/her own learning. For this purpose, the individuals should know what their own learning styles are and what characteristics this style has and they should thereby behave according to this style. In this way, the individual can acquire the constantly changing and increasing amount of information without need for the assistance of others (Coffield et. al, 2004).

In order to help students to intercommunicate with the MSI, detecting the profiles of the students, the way on which they learn, their strengths and weaknesses, is a crucial one. In this context, learning styles arise as useful indicators as they are defined as the characteristic of cognitive, affective, and psychological behavior that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment (Keefe, 1988). Numerous studies report that the use of learning styles in teaching is an important factor that can improve the quality of education (Felder &Spurlin, 2005; Hawk & Shah, 2007). Among these studies, Layman, Cornwell, and Williams (2006) propose an evaluation of the instructional focused around learning styles and the personality types. Language learning styles and strategies are among the fundamental elements that help determine how – and how well – our students learn a second or foreign language.Based on the background of the study presented, the main research question of this study is:Is the post-test average reading score of the visualEFL Indonesian students after being taught using Metacognitive Strategy Instruction higher than their pre-test score?

The MSI training comprises of practicing basic reading strategies (O'Malley, Chamot, Stewner-Mazanares, Russo, and Kupper 1985), such as 1) *planning*, including: predicting - such as based on what is already known and how it related to what might happen next, finding the main idea of a paragraph, recognizing topic sentences, distinguishing the main idea from supporting details; 2) *monitoring*, including: clarifying - such as concentrating on key words and guessing their meaning from the context, ; 3) *evaluating*, including: summarization - such as key people, key place, key information or key ideas; use semantic map to visualizing; questioning - such as what was the main idea, what was happening, what would you do if…? In addition, the training will also contain interactive group activities that invite the subjects to observe their own reading process and that of their peers, including observing and discussing the strategies they apply to understand. In order to encourage the students to apply the strategies presented during the training in their independent reading, after each lesson, the subjects will be given reading assignments to work on at home and record their reading in the reading strategy journal.

Furthermore, MSI are identified with how we think and learn (Ashman & Conway, 1993), incorporating three skill techniques: planning, monitoring and evaluation (Cross & Paris, 1988). Before beginning any reading assignment, students must be educated on the most proficient method to enhance and utilize their planning, monitoring and evaluation skills. It is very important to enhance the addressing abilities of students in the process of teaching metacognitive strategies (Hutt,1997). Students need to pose the accompanying inquiries with a specific end goal to be fruitful in reading comprehension (Blakey & Spence, 1999): 1. What is the main idea of reading text? 2. How many supportive ideas are there in the reading text? 3. How can supported details be explained? 4. What kind of examples are given? 5. Are the examples clear and understandable enough to enable me to understand the main idea? 6. What are the important names, places and dates mentioned in the text? 7. Do I need to read the text again? Should I check the dates, names, concepts, etc., in the text again? Such questions will ensure that the students focus on the reading text.

Studies on metacognition and reading comprehension reveal the strong relation between the use of strategies, awareness and reading comprehension. Successful readers are more aware of strategic reading and they probably use strategic reading techniques. The awareness and reading skills of students who are trained on metacognitive strategies improved (Garner, 1987). Awareness about reading strategies is an important cognitive gain. The present research was designed in the light of above-mentioned facts.

Metacognitive strategies (e.g., identifying one's own learning style preferences and

needs, planning for an L2 task, gathering and organizing materials, arranging a study space and a schedule, monitoring mistakes, and evaluating task success, and evaluating the success of any type of learning strategy) are employed for managing the learning process overall. Among native English speakers learning foreign languages, Purpura (1999) found that metacognitive strategies had "a significant, positive, direct effect on cognitive strategy use, providing clear evidence that metacognitive strategy use has an executive function over cognitive strategy use in task completion".

A given strategy is neither good nor bad; it is essentially neutral until the context of its use is thoroughly considered. What makes a strategy positive and helpful for a given learner? A strategy is useful if the following conditions are present: (a) the strategy relates well to the L2 task at hand, (b) the strategy fits the particular student's learning style preferences to one degree or another, and (c) the student employs the strategy effectively and links it with other relevant strategies. Strategies that fulfill these conditions "make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations" (Oxford, 1990). When left to their own devices and if not encouraged by the teacher or forced by the lesson to use a certain set of strategies, students typically use learning strategies that reflect their basic learning styles (Oxford&Ehrman, 1995). However, teacherscan actively help students "stretch" their learning styles by trying out some strategies that are outside of their primary style preferences.

Within the framework of various instructional methodologies, styles and strategies help determine a particular learner's ability and willingness to work. It is hard to think that a single L2 methodology could possibly fit an entire class filled with students who have arange of stylistic and strategic preferences. Instead of choosing a specific instructional methodology, So, L2 teachers would do better to employ a broad instructional approach, notably the best version of the communicative approach that contains a combined focus on form and fluency. Such an approach allows for deliberate, creative variety to meet the needs of all students in the class.

The term of learning style refers to the preferred way(s) in which an individual approaches a task, a learning situation or tries to solve a problem (Cassidy, 2004; Cohen, 2003). Kolb (1984) argues that "Individual learners have particular strengths which form the basis of their preferred learning style". According to Keefe (1979), learning styles are rather stable behaviors or ways of functioning that indicate how learners perceive and interact with the learning environment. Learning styles have cognitive, affective, personality-related, and physiological characteristics (Ehrman& Leaver, 2003; Keefe, 1979). Emphasizing the cognitive component, Reid (1987) describes learning styles as the individual's preferred, habitual ways of learning, i.e., of processing and retaining new information and developing skills.

In the VAK model, learners with visual learning style learn best using their eye sight. This kind of learners tend to be fast talkers. They also tend to have a difficulty with verbal instruction. Seeing and reading are reflected to be important for visual learners, for example handouts, pictures, tables, demonstrations, and mind maps are very helpful for them. Especially lecture notes, textbooks, pictures, films, text illustration, chart, diagram, and other written text is the most useful way of learning. It is easy to supplement those things in the learning environment and therefore it is simple to visually learning students to use and study in actual environment. Thematic entities are crucial to this kind of learners (Kanninen, 2009).

While, MSI can help learners use suitable strategy to make them strategic readers, EFL learners are expected to use these strategies as resources to pursue the goal of reading activities in English classes as a personal interpretation or meaning making rather than confining their experience or learning to an understanding or acquisition of English linguistic knowledge. To confirm the postulation, using three skill techniques of MSI: planning, monitoring and evaluation, teachers are suggested to find empirical evidence by conducting a study to find out the effect of MSI on learners' reading comprehension of the visual learning style.

In order to find out the effect of MSI on learners' reading comprehension of the visual learning style, one group pre-test post-test design experiment research will be conducted. The reading strategy being used in this study is Metacognitive Strategy Instruction (MSI). Meanwhile, the students' learning styles observed in this study isvisual learning styles.All participating students were pretested using VAK (Visual VisualVisual) Questionnaire adapted from Chislett& Chapman (2005) in order to categorize the students' learning styles. The pre reading comprehension test will be conducted to get the scores of reading skill before MSI treatment. After MSI treatment, the students will get the post reading comprehension test to get the scores of reading skill.

2. METHODS

To obtain research data, this study is conducted at one private university in Bireuen Regency, Aceh Province, Indonesia. 27visual learning style students group is selected and grouped by conducting VAK (Visual VisualVisual) Questionnaire. The MSI training lasts 10 meetings, 100 minutes for each meeting. The samples of this research are all the students of 5th semester of English Department.

In each class hour they were taught metacognitive strategies and they applied them to the passages. The MSI training consists of practicing basic reading strategies (O'Malley, Chamot, Stewner-Mazanares, Russo, and Kupper 1985), such as 1) *planning*, including: predicting - such as based on what is already known and how it related to what might happen next, finding the main idea of a paragraph, recognizing topic sentences, distinguishing the main idea from supporting details; 2) *monitoring*, including: clarifying - such as concentrating on key words and guessing their meaning from the context, ; 3) *evaluating*, including: summarization - such as key people, key place, key information or key ideas; use semantic map to visualizing; questioning - such as what was the main idea, what was happening, what would you do if…? Moreover, the training also includes interactive group activities that engage the subjects to observe their own reading process and that of their peers, including monitoring and discussing the strategies they apply to understand. In order to promote the students to apply the strategies presented during the training in their autonomous reading, after each lesson, the subjects were given reading assignments to work on at home and record their reading in the reading strategy journal.

The treatments include Metacognitive Strategy Instruction training in learning style groups. The content in each group is equivalent. In order to eliminate the pitfalls of an experimental study, one instructor was recruited in this study. One English teacher from the university was recruited to participate in the study due to her interest and willingness to try a different approach to English teaching and thus she was the instructor for the groups. To measure reading skill, the researcher will use the same measurement for each learning style student category. For each correct answer in the post and pre-test, the students were scored 10, and for each wrong answer in the post and pre-test, the students will be scored 0. After MSI treatment, the students got the post reading comprehension test to get the scores of reading skill.

A one tailed before and after paired sample t-test was established to answer the research question. Before conducting t-test, a normality test is used to specify whether sampledata has been drawn from a normally distributed population (within some tolerance). If the assumption of normality is not valid, the results of the tests are unreliable. When the error variances of the independent variable are normally distributed, it can be referred to normality of the data distribution in the dependent variable. For this purpose, Kolmogorov-Smirnov test and Shapiro-Wilk test were utilized to check whether the assumption of normality could be fulfilled. If the value of p ≥ α, the error variances are considered normally distributed. In other words, the assumption of normality is met if the result of assumption testing is not statistically significant.

3. FINDINGS AND DISCUSSION

The descriptive analysis data of pre and post-test gained by 27 students of participants was conducted. The result of descriptive statistics analysis is presented in Table 1. As seen on Table 1, in the pre and post reading comprehension test, visual learning style students performed the highest mean scores as 86.96 and 82.61. Concerning to standard deviation, visual learning style students carried out the standard deviations in pre and post-test as 17.476 and 16.8975. It was meant that the post-test score was more homogeny than the pre-test score. The mean difference of pre and post-test was – 0.9667.

Table 1 Descriptive statistics analysis of students' score

Test Sets	Mean	Standard Deviation	Number of Data	Minimum Score	Maksimum Score
Pre-Test	49.2759	17.476	27	21.74	86.96
Post-Test	50.2426	16.8975	27	21.74	82.61

To examine whether the distribution as a whole deviated from a comparable normal distribution, the Kolmogorov-Smirnov test and Shapiro-Wilk test were done. The pre reading comprehension test scores gained by visualleranersD(27) = .090, p = .200 (Kolmogorov-Smirnov), D(25) = .970, p = .609 (Shapiro-Wilk), were statistically normal (see Table 2).

Table 2 Kolmogorov-Smirnov Test and Shapiro-Wilk Test of Normality of Pre-Test Scores Data Distribution

	VAK	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
PreTest_Scores	Visual	.090	27	.200*	.970	27	.609

a. Lilliefors Significance Correction
*. This is a lower bound of the true significance.

A one tailed before and after paired sample t-test was established to answer the research question number one. The results showed that there was no statistically significant higher between the pre and post-test mean reading score of the visual EFL Indonesian students after being taught using Metacognitive Strategy Instruction, because the significance value was (p = .731/2 = .3655) and it was far above the significance value α < .05

Table 3 The one group pre-test and post-test t-test of Visual EFL Indonesian student analysis

		Paired Differences						df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		the t		
					Lower	Upper			
Pair 1	PreTest_Visual - PostTest_Visual	-.96667	14.43787	2.77857	-6.67810	4.74476	-.348	26	.731

The result showed that the mean reading score of visual EFL Indonesian students after being taught using Metacognitive Strategy Instruction descriptively higher than their pre-test score. The mean score reading pre-test score was 49.276 and the mean score reading post-test score was 50.2426. Visual learners gained the highest mean reading score among 3 groups of learning styles at pre-test and post-test. This a proof that visual learners loved to read, as Hsu and Chen (2016) stated that a visual student prefers information provided in visual form. They remember and understand better through reading. During lecture or discussion, these students prefer to take notes to comprehend the material.

Nevertheless, although visual learners' mean reading score increased and gained the highest score, there was non-significant higher of the post-test mean reading score of the visual EFL Indonesian students after being taught using metacognitive strategy instruction compared to their pre-test score. As statistically analyzed in Chapter Three, conducting one group before and after t-test, the significance value was (p = .731/2 = .3655) and it was far above the significance value α < .05.

Although visual learners like to read books, evidently they turned out to be incapable enough using Metacognitive Strategy Instruction of practicing basic reading strategies: planning, monitoring, and evaluating. This is in accordance with the results of research by Tabanlioglu (2003) appointed that visual learner was not significantly correlated with Metacognitive Strategy at probability p = .546 < α = .05. Tabanlioglu conducted a research in 2003 identifying the learning styles and strategies of students, to check whether there are significant differences in the learning style and strategy preferences between male and female learners, and investigate whether there is a relationship between students' learning style and strategy preferences. A total of 60 students were asked to complete two questionnaires. One was used to identify students' perceptual learning style preferences and the other was used to identify students' learning strategies. In addition, think aloud protocols were held to establish the cognitive and metacognitive strategies students used while reading. The analysis with refer to the relationship between learning styles and strategies declared that none of the learning styles had a significant relationship with metacognitive strategies. Meanwhile, Pei-Shi (2012) conducted a study about the effect of learning styles on learning strategy use by EFL learners. The results showed that visual learners did not influence the use of metacognitive strategy.

4. CONCLUSION

The post-test mean reading score of the visual EFL Indonesian students after being taught using Metacognitive Strategy Instruction is not significantly higher than their pre-test score. It expressed that visual learning style did not predispose the step-up of reading skill after being trained with Metacognitive Strategy Instruction.

Teachers should select the right tools to identify their student' learning styles and strategies and then the results should not be put sideward. Conversely, teachers should make use of such results to adopt the most suitable teaching style. Of course, adopting teaching techniques that will serve the needs of all the students might be hard but if teachers become considerate to their students' learning style and equilibrate their instruction by making use of a wide variation of tasks in the classroom, they will have treated the students equally. Besides utilizing instruments, teachers should always observe students very closely so that s/he can identify any changes in the learning profiles of the students.

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Penulis:

Silvi Listia Dewi
Mendapatkan gelar Doktor dari Universitas Negeri Malang. Saat ini bekerja pada Prodi Pendidikan Bahasa Inggris Universitas Almuslim.