THE EFFECT OF ADJUSTED LEARNING STYLE ACTIVITY ON STUDENTS' READING ACHIEVEMENT AT THE SECOND SEMESTER STUDENTS OF STBA TEKNOKRAT

A Thesis

HARITS SETYAWAN



MASTER ENGLISH STUDY PROGRAM TEACHER TRAINING AND EDUCATION FACULTY UNIVERSITY OF LAMPUNG 2016

ABSTRACT

THE EFFECT OF ADJUSTED LEARNING STYLE ACTIVITY ON STUDENTS' READING ACHIEVEMENT AT THE SECOND SEMESTER STUDENTS OF STBA TEKNOKRAT

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This research was intended to find out whether or not there was a significant difference in students' reading achievement after being taught through activities adjusted to their learning styles. There were 18 students involved as the samples of the research. They were chosen purposefully by using learning style questionnaire and reading test. The students were then taught based on their learning styles and given a test every three meetings. The result shows that when visual students were taught through activities adjusted for visual students, they got better mean score than auditory and kinesthetic students did. Similarly, when auditory students were taught through activities adjusted for auditory students, they got better mean score than visual and kinesthetic did. Furthermore, when kinesthetic students were taught through activities adjusted for kinesthetic students, they got better mean score than visual and auditory students did. However, there was no significant difference in students' reading achievement after they were taught through activities adjusted for visual and auditory students. The finding of the research implies that learning styles give slight effect on students' reading achievement. However, teaching students by considering their learning styles helps the students to comprehend things or absorb information better.

Keywords: VAK Learning Style, Reading Achievement, College Students

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HARITS SETYAWAN

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In

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Dengan ini saya menyatakan dengan sebenarnya bahwa:

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CURRICULUM VITAE

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MOTTO

"I don't know what you choose, but mine; I will fight till the end."

(My Self)

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Bandar Lampung, June 2016

The Writer

Harits Setyawan

DEDICATION

This thesis is dedicated to:

- His beloved father and mother: Ujang Kurniawan, S.Pd., and Kristina Dewi.
- His beloved sister and brothers: Marlina Anggraeni, Irwan Setiadi, Nabil
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I. INTRODUCTION

This chapter is divided into six sub chapters. They are Background of the Problem, Research Question, Objective of the Research, Use of the Research, Scope of the Research, and Definition of Term.

1.1. Background of the Problem

Reading is one of four language skills which are taught to English students at colleges. As a primary subject, it is taught continuously for several semesters. It is even one of language skills which are tested in TOEFL and TOEIC. Obviously, reading is very essential for English students to get along with. Achievement in reading is commonly related with how well the students comprehend a written text. However, in comprehending things, the students themselves differ in some ways which characterize how they learn things or absorb information most effectively.

Brown (2000: 113-114) states that the way we learn things in general and the way we attack a problem seem to hinge on a rather amorphous link between personality and cognition; this link is referred to as cognitive style. When cognitive styles are specifically related to an education context, where affective and physiological factors are intermingled, they are more generally referred to as learning styles. In addition, Oxford in Celce-Murcia (2001: 359) defines learning styles as the general approaches for example, global or analytic, auditory or

visual that students use in acquiring a new language or in learning any other subject.

Dörnyei (2005:140) categorizes learners' learning style according to sensory preference into several types: visual, auditory, kinesthetic or tactile. He explains that learners with visual learning style absorb information most effectively if it is provided through the visual channel. Thus, they tend to prefer reading tasks and often use colorful highlighting schemes to make certain information visually more salient. Learners with auditory learning style absorb information most effectively through auditory input such as lectures or audiotapes. They like to talk the material through by engaging in discussions and group work. Kinesthetic learners will learn most effectively through complete body experience such as body movement, whereas tactile learners like a hand-on, touching learning approach.

Researches on learning styles are mostly organized to investigate students' learning style categories. Saleh and Al Faki (2014: 98) identify the learning styles of students according to three main styles: visual, auditory, and kinesthetic. The most important findings are that the majority of students' learning styles are auditory, few are visual, and only three out of 16 are visual auditory; while one candidate is visual kinesthetic. Similarly, Gilakjani (2012: 104) states that his study is an analysis of learning styles for Iranian EFL university students. Over 100 students completed a questionnaire to determine if their learning styles are auditory, visual or kinesthetic. The finding showed that Iranian EFL university students preferred learning style was visual.

Furthermore, Gilakjani (2012: 107) states that Reid found Chinese university students (N = 90) studying in the USA favored Kinesthetic and Tactile styles, and disfavored Group styles. Melton found that Chinese (PRC) university students (N = 331) favored Kinesthetic, Tactile and Individual styles, and disfavored Group styles. Jones found that his Chinese (Taiwan) university students (N = 81) favored Kinesthetic and Tactile styles, and disfavored Individual styles.

Referring to the theories about the learning styles, it emphasizes that students with visual learning style comprehend things better through visual input, students with auditory learning style comprehend things better through auditory input, and students with kinesthetic comprehend things better through engaging themselves in activities. In the other words, students with visual learning style will comprehend things better than the others if the teacher uses visual input. Similarly, students with auditory or kinesthetic learning style will comprehend things better than the other if the teacher uses auditory or kinesthetic input. However, many studies about learning styles investigate only students' learning preferences and determine if the students are visual, auditory, or kinesthetic students. The studies have not revealed much evidence whether or not visual students absorb information better through visual input, auditory students absorb information better through auditory input, and kinesthetic students absorb information better through kinesthetic input. Therefore, this study which was intended to find out the effect of adjusted learning style activity on students' reading achievement was accordingly conducted.

1.2. Research Question

The research questions are formulated as follows:

- 1. Is there a significant effect of adjusted visual learning style activity on students' reading achievement?
- 2. Is there a significant effect of adjusted auditory learning style activity on students' reading achievement?
- 3. Is there a significant effect of adjusted kinesthetic learning style activity on students' reading achievement?

1.3. Objective of the Research

The objectives of the research are formulated as follows:

- To find out whether or not there is a significant effect of adjusted visual learning style activity on students' reading achievement.
- 2. To find out whether or not there is a significant effect of adjusted auditory learning style activity on students' reading achievement.
- 3. To find out whether or not there is a significant effect of adjusted kinesthetic learning style activity on students' reading achievement.

1.4. Use of the Research

This research is expected to bring the following benefits:

1. Theoretically, it enriches and confirms previous theories about the effect of adjusted learning style activity on students' reading achievement.

Practically, the finding of the research will help future researchers in conducting further researches about the effect of adjusted learning style activity of students' reading achievement.

1.5. Scope of the Research

The research was intended to investigate whether or not adjusted learning style activity had a significant effect on students' reading achievement. The adjusted activity involved activities for visual learners, activities for auditory learners, and activities for kinesthetic learners. The activities for visual learners are activities which are adjusted to help visual learners to learn more easily. The activities for auditory learners are activities which are adjusted to help auditory learners to learn more easily. The activities for kinesthetic learners are activities which are adjusted to help kinesthetic learners to learn more easily. This research was administered at Teknokrat College. The samples of the research were chosen purposefully by using a learning style questionnaire and a reading test. They were the second semester students of STBA Teknokrat. The number of the samples was 18 students out of 50 students.

1.6. Definition of Terms

- 1. Reading is a process of acquiring knowledge through written texts.
- Reading achievement is the amount of knowledge that students acquire from reading written texts.
- 3. Learning style is a students' preference in acquiring a new knowledge.
- 4. Visual learning style is a preference in acquiring a new knowledge by seeing.

- 5. Auditory learning style is a preference in acquiring a new knowledge by hearing.
- 6. Kinesthetic learning style is a preference in acquiring a new knowledge by doing.
- 7. VAK learning style questionnaire is a questionnaire which is used to determine students' learning styles which involve visual, auditory, and kinesthetic learning style.
- 8. Effect is the result of learning through activities which are based on students' learning styles. There is an effect if the reading achievement is higher after they are given treatments which are adjusted to their leaning styles compared with the other ones.

II. FRAME OF THEORY

This chapter is divided into eight sub chapters. They are Concept of Learning, Concept of Learning Style, Concept of VAK Learning Style, Concept of VAK Learning Style Questionnaire, Concept of Reading, Concept of Reading Activity Design, Theoretical Assumption, and Hypothesis.

2.1. Concept of Learning

Learning and learners are the main focus of second language acquisition (SLA) rather than teaching and teachers. Gas and Selinker (2008: 1) define second language acquisition as the study of how learners create a new language system with only limited exposure to a second language. It is the study of what is learned of a second language and what is not learned; it is the study of why most second language learners do not achieve the same degree of knowledge and proficiency in a second language as they do in their native language; it is also the study of why only some learners appear to achieve native-like proficiency in more than one language. Similarly, Yufrizal (2008:2) states that it is the study of how second languages are learned.

Furthermore, Saville-Troike (2006:2) state that second language acquisition (SLA) refers both to the study of individuals and groups who are learning a language subsequent to learning their first one as young children, and to the process of learning that language. The additional language is called a second

language (L2), even though it may actually be the third, fourth, or tenth to be acquired. It is also commonly called a target language (TL), which refers to any language that is the aim or goal of learning.

2.2. Concept of Learning Style

Learning styles can initially be defined in a seemingly straightforward and intuitively convincing manner. According to the standard definition, they refer to "an individual's natural, habitual, and preferred way(s) of absorbing, processing, and retaining new information and skills" (Reid in Dörnyei, 2005); thus, they are "broad preferences for going about the business of learning" (Ehrman in Dörnyei 2005). In other words, the concept represents a profile of the individual's approach to learning, a blueprint of the habitual or preferred way the individual perceives, interacts with, and responds to the learning environment (Dörnyei, 2005: 121).

Furthermore, Ehrman in Celce-Murcia (2001: 360) states that learning styles are not dichotomous (black or white, present or absent), but generally operate on a continuum or on multiple, or intersecting continua. For example, a person might be more extroverted than introverted, or more closure-oriented than open, or equally visual and auditory but less kinesthetic and tactile. Few if any people could be classified as having all or nothing in any of these categories.

From the two definitions about learning styles above, it can be concluded that learning styles are preferences through which learners absorb information when they are learning certain materials. Furthermore, there is no absent or present in

learning styles. It means that students with certain learning preferences will be able to learn with methods or techniques which do not really fit with their learning preferences. However, the students will be able to absorb information or learn more effectively if they are taught through methods or techniques which fit with their learning styles or their learning preferences.

2.3. Concept of Visual, Auditory, and Kinesthetic Learning Style

Oxford (1990: 40) states that while many language learners benefit from visual imagery, others have aural (sound-oriented), kinesthetic (motion-oriented) or tactile (touch-oriented) learning style preferences and therefore benefit from linking verbal material with sound, motion or touch. Furthermore, learning style is the biologically and developmentally imposed set of characteristics that make the same teaching method wonderful for some and terrible for the others (Duhn and Griggs in Celce-Murcia, 2001: 359).

Dörnyei (2005: 140) explains the characteristics of learning styles based on sensory preferences. According to him, In general, visual learners like visual stimulation such as films and videos, and if some large chunk of information is presented orally (e.g., in a lecture) their understanding is considerably enhanced by a handout and various visual aids, such as overhead transparencies, as well as by taking extensive notes.

Auditory learners use most effectively auditory input such as lectures or audiotapes. They also like to 'talk the material through' by engaging in discussions and group work. They benefit from written passages to be read out

and they often find that reciting out loud what they want to remember (even telephone numbers or dates) is helpful. Not surprisingly, they find teaching tapes very useful and, as Ehrman in Dörnyei (2005:140) observed, they prefer oral practice without their books.

The kinesthetic style refers to learning most effectively through complete body experience (e.g., whole-body movement), ... Kinesthetic learners thus require frequent breaks or else they become fidgety—sitting motionless for hours is a real challenge for them. They often find that walking around while trying to memorize something helps.

The explanation implies that when teachers teach their students by using visual aids such as pictures and videos, students with visual learning style will be able to comprehend things or absorb information more easily. When teachers use audio input, such as lectures and audiotapes, students with auditory learning style will be able to comprehend things or absorb information more easily. When teachers apply complete body experience in teaching, students with kinesthetic learning style will be able to comprehend things or absorb information more easily.

2.4. Concept of Visual, Auditory, and Kinesthetic Learning Style Questionnaire

Visual, auditory, and kinesthetic (VAK) learning style questionnaire is a test in form of a questionnaire which is used to find out if a student has visual, auditory, or kinesthetic learning style. Reid in Celce-Murcia (2001: 360) demonstrated that ESL students varied significantly in their sensory preferences ... Students from

Asian cultures, for instance, were often highly visual, with Koreans being the most visual. Furthermore, Oxford in Celce-Murcia (2001: 360) adds that many studies, including Reid's, found that Hispanic learners were frequently auditory. Reid discovered that Japanese were very non auditory.

From studies which have been conducted previously, it is clear that students vary in their learning preferences. Therefore, determining students' learning preferences is important since it can help teachers decide what to do in the classroom. The teachers will be able to teach more effectively because they know how their students learn things more easily. Besides that, knowing their learning preferences will make the students aware of their strengths and weaknesses. The students will be able to find out how to maximize their strengths and minimize their weaknesses. Thus, they will become better students.

2.5 Concept of Reading

Reading is one of four skills in a language. Al-Hajaya (2012: 235) states that reading is a core receptive skill that foreign language learners utilize to gain input for learning a language or any other subjects inside or outside the classroom. It lies at the heart of any language learning process because it offers an open window to further knowledge, learning and development.

Furthermore, classroom reading performance can be classified into oral and silent reading. Brown (2000: 312-313) explains that at the beginning and intermediate levels, oral reading can (a) serve as an evaluative check on bottom-up processing skills, (b) double as pronunciation check, and (c) serve to add some extra student

participation if you want to highlight a certain short segment of a reading passage. Meanwhile, silent reading may be subcategorized into intensive and extensive reading. Intensive reading is usually a classroom-oriented activity in which students focus on the linguistic or semantic details of a passage, while most extensive reading is performed outside of class time.

Grabe and Stoller in Celce-Murcia (2001:191) explain three stages to deal with in reading. (1) Pre-Reading. It helps students to access background knowledge, provides specific information needed for successful comprehension, stimulates students interest, sets up student expectations, and models strategies that the students can use later on their own. (2) During-Reading Instruction. It guides students through texts; often focusing on understanding difficult concepts, making sense of complex sentences, considering relationships among ideas or characters in the text, reading purposefully and strategically. (3) Post-Reading. It typically extends ideas and information from the text while also ensuring that the major ideas and supporting information are well understood.

2.6 Concept of Reading Activity Design

There are three procedures of teaching reading which are formulated in this research, namely teaching reading for visual students, auditory students, and kinesthetic students. Each of the activities will be described as follows.

2.6.1 Text and Activity for Visual Students

Learners with visual learning style absorb information most effectively through visual channel. Therefore, they tend to prefer reading tasks which use colorful highlighting schemes to make information visually more salient (Dörnyei, 2005:

140). Referring to the characteristics of visual learners, the researcher will use a descriptive text and a video. The descriptive text and the video have the same topic. For illustration, if the text is about *Budapest*, the video will be about *Budapest* as well. In the class, the students are asked to watch the video. After they watch the video, they are asked to read the text. To ensure that the text has similar difficulty level, descriptive texts which each paragraph has no more than fifteen sentences are chosen. Furthermore, vocabulary such as verb, noun, and adjective in the descriptive texts should be commonly used words that can be found in English dictionaries. Tenses which are used in the sentences should not be too complicated and finally the descriptive text level difficulty is statistically analyzed based on Gunning Fog index online. Descriptive texts which level is hard to read and suitable for students whose age is around 18 years old are chosen.

2.6.2 Text and Activity for Auditory Students

Learners with auditory learning style absorb information most effectively through auditory input such as lectures or audiotapes. They like to talk the material through by engaging in discussions and group work (Dörnyei, 2005: 140). Referring to the characteristics of auditory students, the researcher will use a narrative text and an explanation as a teaching technique. For illustration, the teacher plays an audio about the story in the text. After that, the students read the text and answer the questions. To ensure that the text has similar difficulty level, narrative texts which each paragraph has no more than fifteen sentences are chosen. Furthermore, vocabulary such as verb, noun, and adjective in the narrative texts should be commonly used words that can be found in English dictionaries. Tenses which are used in the sentences should not be too complicated and finally

the narrative text level difficulty is statistically analyzed based on Gunning Fog index online. Narrative texts which level is hard to read and suitable for students whose age is around 18 years old are chosen.

2.6.3 Text and Activity for Kinesthetic Students

Kinesthetic learners will learn most effectively through complete body experience such as body movement (Dörnyei, 2005: 140). Referring to the characteristics of kinesthetic students, the researcher will use a procedure text and retelling as a technique in teaching reading. For illustration, the students are asked to work in group and have discussion about the text. After that, they are asked to come to the front of class and retell the result of their discussion. To ensure that the text has similar difficulty level, procedure texts which each paragraph has no more than fifteen sentences are chosen. Furthermore, vocabulary such as verb, noun, and adjective in the procedure texts should be commonly used words that can be found in English dictionaries. Tenses which are used in the sentences should not be too complicated and finally the procedure text level difficulty is statistically analyzed based on Gunning Fog index online. Procedure texts which level is hard to read and suitable for students whose age is around 18 years old are chosen.

2.7 Assumption about Learning Style and Reading Activity

If visual students are taught through activities which are adjusted to visual learning style, their reading achievement will be different from auditory or kinesthetic students. Therefore, it is assumed that their scores will be better than auditory or kinesthetic students' scores if the learning activities are adjusted to visual learning style.

Similarly, if auditory students are taught through activities which are adjusted to auditory learning style, their reading achievement will be different from visual or kinesthetic students. Therefore, it is assumed that their scores will be better than visual or kinesthetic students' scores if the learning activities are adjusted to auditory learning style.

In the same way, if kinesthetic students are taught through activities which are adjusted to kinesthetic learning style, their reading achievement will be different from auditory or visual students. Therefore, it is assumed that their scores will be better than auditory or visual students' scores if the learning activities are adjusted to kinesthetic learning style.

Before the students are grouped in one class, they are given a learning style test. Six persons are chosen from each learning style. Then, there are eighteen students in the class. There will be three meetings for each learning style and in after the three meetings there will a test. Therefore, the students' achievement in reading can be compared.

2.8 Hypothesis

The hypotheses of the research are formulated as follows.

Hi1: There is a significant effect of adjusted visual learning style activity on students' reading achievement.

Ho1: There is no significant effect of adjusted visual leaning style activity on students' reading achievement.

- Hi2: There is a significant effect of adjusted auditory learning style activity on students' reading achievement.
- Ho2: There is no significant effect of adjusted auditory learning style activity on students' reading achievement.
- Hi3: There is a significant effect of adjusted kinesthetic learning style activity on students' reading achievement.
- Ho3: There is no significant effect of adjusted kinesthetic learning style activity on students' reading achievement.

III. RESEARCH METHOD

This chapter is divided into eight sub chapters. They are Research Design, Population and Sample, Research Procedure, Schedule of the Research, Data Collecting Technique, Data Collecting Instrument, Data Treatment, and Hypothesis Testing.

3.1. Research Design

This research used one group repeated measures design. It was used because this research was intended to find out the effect of learning style based activity on students' reading achievement. First of all, the researcher gave the students a learning style questionnaire and a reading test to make sure that the samples involved visual, auditory, and kinesthetic students and that the samples had similar reading comprehension. The number of the samples was eighteen students; six visual students, six auditory students, and six kinesthetic students. After the samples were determined, the researcher gave them treatments. The first three treatments were activities adjusted for visual students. The second three meetings were activities adjusted for auditory students. The last three meetings were activities adjusted for kinesthetic students. The overall teaching and learning process was nine times and the students were taught in the same class. After three treatments were given to the students, there was a test. Therefore, the test was given three times. Finally, the students' scores were analyzed to find out whether

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or not adjusted learning style activity had a significant effect on students' reading

achievement. Referring to the description above, the design of the research was

formulated as follows.

X1 T1 X2 T2 X3 T3

X: Treatment

T: Test

If we have more than two variables, for example T1, T2, and T3 with three kinds

of treatment, we can use parametric analysis repeated measures ANOVA

(Setiyadi, 2006: 134).

3.2 Population and Sample

The population of the research was the second semester students of English

Literature, STBA Teknokrat. The sample of the population was 18 persons which

involved both male and female students. They were chosen by using a learning

style questionnaire and a reading test. There were six visual students, six auditory

students, and six kinesthetic students. They were taught in the same class. There

was no differentiation in age and gender. However, the students had the same

length of study or semester.

3.3 Research Procedure

The procedures of the research are formulated as follows.

1. Determining the sample

The sample was determined through a learning style questionnaire and a

reading test. From the questionnaire and the test, six visual students, six

auditory students, and six kinesthetic students with similar reading scores were chosen.

2. Conducting treatment

The treatment was conducted nine times; three times through activities adjusted for visual students, three times through activities adjusted for auditory students, and three times through activities adjusted for kinesthetic students.

4. Giving Test

The test was given to the students three times. Reading test 1 was used to find out whether or not there was a significant effect of adjusted visual learning style activity on students' reading achievement. Reading test 2 was used to find out whether or not there was a significant effect of adjusted auditory learning style activity on students' reading achievement. Reading test 3 was used to find out whether or not there was a significant effect of adjusted kinesthetic learning style activity on students' reading achievement.

5. Analyzing data

All collected data were statistically analyzed by using SPSS to find out whether or not adjusted visual, auditory, and kinesthetic learning style activities had a significant effect on students' reading achievement.

3.4 Schedule of the Research

In conducting the research, the researcher used the following schedule.

Table 01. Schedule of the Research

Meeting	Activity
Meeting 1	Administering the learning style
	questionnaire and reading test
Meeting 2	Teaching through activities adjusted
	to visual learning style
Meeting 3	Teaching through activities adjusted
	to visual learning style
Meeting 4	Teaching through activities adjusted
	to visual learning style
Meeting 5	Administering Reading test 1
Meeting 6	Teaching through activities adjusted
	to auditory learning style
Meeting 7	Teaching through activities adjusted
	to auditory learning style
Meeting 8	Teaching through activities adjusted
	to auditory learning style
Meeting 9	Administering Reading test 2
Meeting 10	Teaching through activities adjusted
	to kinesthetic learning style
Meeting 11	Teaching through activities adjusted
	to kinesthetic learning style
Meeting 12	Teaching through activities adjusted
	to kinesthetic learning style
Meeting 13	Administering Reading test 3

3.5 Data Collecting Technique

Data in this research were collected through tests. There were reading test 1, 2, and 3. The reading tests consist of forty eight items in form of multiple choices. The objectives of giving the tests were to find out whether or not there was a significant effect of adjusted visual, auditory, and kinesthetic learning style activities on students' reading achievement. Furthermore, in order for the

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objectives of the research to be found out, all collected data were then statistically analyzed by using SPSS (ANOVA).

3.6 Data Collecting Instrument

3.6.1 Reliability of the Instrument

In order for the test to have good reliability, it was tried out. To find out the reliability of the test, the researcher used Cronbach's Alpha Reliability. It was used to measure internal consistency so that the questionnaire consisted of items which had high reliability.

The standardized Cronbach's Alpha is defined as follows:

Cronbach's Alpha: rk / [1+(k-1)r]

Where k: number of items considered

r: the mean of the inter-item correlations

Cronbach's Alpha	Internal Consistency
$\alpha \ge .9$	Excellent
$.9 > \alpha \ge .8$	Good
$.8 > \alpha \geq .7$	Acceptable
$.7 > \alpha \geq .6$	Questionable
$.6 > \alpha \geq .5$	Poor
$.5 > \alpha$	Unacceptable

(George & Mallory in Matkar, 2012: 74)

The acceptable reliability or the alpha is ≥ 0.70 . Therefore, any item which alpha is ≤ 0.60 should be revised or omitted in order to achieve higher reliability. The alpha score is described as follows.

3.6.2 Validity of the Instrument

To fulfill the validity of the test, the researcher applied face validity, construct validity and concurrent validity.

A. Face validity

Face validity is fulfilled through experts' judgment by checking each word in the instrument to make sure that there is no mistyped word. Furthermore, mechanical aspects are also checked in order for the instrument looks tidy.

B. Content Validity

In order for the instrument to fulfill content validity, it must represent all things which should be tested. Therefore, the reading test should measure all skills in reading which involve micro skill and macro skill. The following table shows reading skills tested to the students.

Table 02. Reading Skill

Skill	Item
1. Main Idea	1, 2, 3, 17, 18, 19, 33, 34, 35
2. Specific Information	4, 5, 6, 7, 8, 20, 21, 22, 23, 24,
	36, 37, 38, 39, 40
3. Inference	9, 10, 25, 26, 41, 42
4. Reference	11, 12, 27, 28, 43, 44
5. Vocabulary	13, 14, 29, 30, 45, 46
6. Relevant or Irrelevant Information	15, 16, 31, 32, 47, 48

C. Construct validity

Construct validity is fulfilled if the test measures what should be measured. In this case, the researcher wanted to measure the students' reading achievement. Therefore, the valid instrument was a reading test. Furthermore, the researcher also asked judgments from lecturers who also taught reading.

3.6.3. Item Analysis

a) Difficulty Level

DL = R/N

DL = Difficulty Level

R = Number of students who got it right

N = Total number of students

The criteria of difficulty level are explained as follows:

- 1. Items falling between .15 to .85 are preferred items.
- 2. Items which are too easy or too difficult should be discarded.

(Shohamy, 1986: 79-80)

b) Discrimination Power

To find out the discrimination power, the researcher uses the following formula.

$$D = (PUS - PLS) / \frac{1}{2} T$$

D = Discrimination index

PUS = Proportion of upper student

PLS = Proportion of lower student

T = Total number of student

The criteria of discrimination power are explained as follows:

- 1. If the value is positive, it has positive discrimination. It means that a larger number of more knowledgeable students than poor students got the item correct. If the value is zero, no discrimination.
- 2. If the value is negative, it means that more low level students than high level students got the item correct.
- 3. In general, the higher the discrimination index, the better. In classroom situations, most items should be higher than .20 index.

(Shohamy, 1985: 81)

3.7 Data Treatment

After the students were given a treatment three times, there was a test. The test was statistically analyzed to find out whether or not adjusted learning style activity had a significant effect on students' reading achievement. The result of test 1 was used to find out whether or not visual students significantly outperformed both auditory and kinesthetic students after they were taught through activities adjusted to visual learning style. The result of test 2 was used to find out whether or not auditory students significantly outperformed both visual and kinesthetic students after they were taught through activities adjusted to auditory learning style. The result of test 3 was used to find out whether or not kinesthetic students significantly outperformed both visual and auditory students after they were taught through activities adjusted to kinesthetic learning style.

3.8 Hypothesis Testing

The hypotheses of the research are formulated as follows.

- Hi1: There is a significant effect of adjusted visual learning style activity on students' reading achievement.
- Ho1: There is no significant effect of adjusted visual learning style activity on students' reading achievement.
- Hi2: There is a significant effect of adjusted auditory learning style activity on students' reading achievement.
- Ho2: There is no significant effect of adjusted auditory learning style activity on students' reading achievement.

- Hi3: There is a significant effect of adjusted kinesthetic learning style activity on students' reading achievement.
- Ho3: There is no significant effect of adjusted kinesthetic learning style activity on students' reading achievement.

The criteria of hypothesis are explained as follows.

- 1. If the value is higher than 0.05, hypothesis alternative (Hi) is accepted. It means there is a significant difference in reading achievement among visual, auditory, and kinesthetic students after being taught through learning activities which are adjusted to their learning styles.
- 2. If the value is lower than 0.05, hypothesis null (Ho) is accepted. It means there is no significant difference in reading achievement among visual, auditory, and kinesthetic students after being taught through learning activities which are adjusted to their learning styles.

V. CONCLUSION AND SUGGESTION

This chapter is divided into three sub chapters. They are Conclusion, Suggestion, and Limitation of the Research.

5.1. Conclusion

Based on the finding of the research, it can be concluded that:

- 1. Visual students' reading achievement is not significantly higher than the others after they were taught through activities adjusted to visual learning style. However, the mean score of visual students is higher than the mean score of either auditory or kinesthetic students. It implies that learning styles do not significantly impact the students' reading achievement. However, it influences how the students learn or absorb information most effectively.
- 2. Auditory students' reading achievement is not significantly higher than the others after they were taught through activities adjusted to auditory learning style. However, the mean score of auditory students is higher than the mean score of either visual or kinesthetic students. It implies that learning styles give a slight impact on the students' reading achievement. Furthermore, it also implies that students can adapt with learning situations which are given to them. Therefore, they do not get a considerable problem though they are taught through activities which are not adjusted to their learning styles.
- 3. Kinesthetic students' reading achievement is significantly higher than the others after they were taught through activities adjusted to kinesthetic

learning style. Furthermore, the mean score of kinesthetic students is higher than the mean score of either visual or auditory students. It implies that the more teaching and learning process is given to the students, the better they become. It can be seen from the evidence that the f count was increasing. However, students will learn things and absorb information better if they are taught through activities which are suitable with their learning styles. It can be seen from the result of the tests in which visual students got better mean score in the reading test 1, auditory students got better mean score in the reading test 2, and kinesthetic students got better mean score in the reading test 3.

5.2. Suggestion

Based on the finding of the research, it can be suggested that:

- 1. Although learning style based activities give no significant effect on students' reading achievement, it is advisable for English teachers to consider their students' learning styles when they are teaching. It can help the students to learn things and absorb information better.
- 2. For further research which investigates the effect of adjusted learning style activities on students' reading achievements, it is advisable that the researchers consider using separated classes for visual, auditory, and kinesthetic students if there are sufficient rooms and samples. Therefore, the effect of previous treatments given to the students can be minimized.

 Variation in teaching reading seems to give the students more enthusiasm for studying. Therefore, it is advisable for English teachers to use multimedia and different techniques in teaching reading.

5.3. Limitation of the Research

For future research, it is suggested that the investigation towards the effect of adjusted learning style activities on students' reading achievement is done in separate classes. The result of this research shows that the f count is increasing. It implies that the students were getting better because of the treatments given to them. Therefore, they should be taught in different classes in order that the effect of previous treatments can be minimized.

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