

ABSTRACT

Tri Cahyono, Nanang, 2016. *“The Effects of Learning Styles on Reading Achievement (A Causal Comparative Research in The Eleventh Grade Students of SMA Negeri 1 Jenangan in Academic Year 2015/2016)”*. **Thesis**. English Education Department, Tarbiyah Faculty, State Islamic College of Ponorogo. Advisor: Pryla Rochmahwati, M.Pd

Keywords: Learning Styles, Reading Achievement.

Learning styles are important component in learning process especially for reading comprehension. Reading is complex activities which allow students to construct meaning. By understanding the way of learning, students are expected to comprehend reading easily. This objective of this study is to identify students' learning styles, to determine the students' reading achievement and to determine whether there is significant effect of different learning styles on their reading achievement of the eleventh grade students of SMA Negeri 1 Jenangan in academic year 2015-2016.

This research employed a causal comparative design and the population was the eleventh grade of SMA Negeri 1 Jenangan in academic year 2015-2016 which used population research as technique of sampling, in which all population was treated to be sample. This research applied questionnaire to reveal the students' learning style, and documentation to reveal students' reading achievement. Researcher used assumption test and testing hypothesis using SPSS 18 to analyze the data.

Findings showed that: (1) the number of visual, auditory, and kinesthetic learners was 43, 8, 16 respectively (2) 19.5% students are categorized into low level of reading achievement, then 61% and 19.5% students are categorized into medium and high level of reading achievement correspondingly (3) there is significant effect of students' learning styles on their reading achievement, it can be seen from the result of testing of hypothesis in which the value of significant was 0.000 and it was considered less than 0.005.

In line with the findings above can be summed up that there is a significant effect of Students' learning styles on their reading achievement of the eleventh grade students of SMA Negeri1 Jenangan in academic year 2015/2016. This research is expected to be useful for all teachers actually for English teacher. For students, it is important to be able to learn in the best way, and for researcher, it can be used as reference to conducting the next research about learning styles.

CHAPTER I

INTRODUCTION

A. Background of The Study

In the teaching and learning English, there are four language skills to be mastered: listening, speaking, writing and reading. Those skills are classified into two categories, namely receptive skills and productive ones. Receptive skills include understanding when we listen (listening skill) and read (reading skill). We receive the language and decode the meaning to understand the message. While productive skills are speaking and writing. We use the language that we have acquired and produce a message through speech or written text that you want others to understand.

Among four language skills, reading is the skill that is commonly first thought or learnt when someone studies a foreign language in educational institution. Reading is the process of constructing meaning by coordinating a number of complex processes that include word reading, word and world knowledge, and fluency¹. Students may find a lot of information in written language as manual book, newspaper, magazine, and so on. By reading, students can develop their creativity and critical thinking, improve their knowledge,

¹ Janette K. Klingner, Sharon Vaughn, and Alison Boardman, *Teaching Reading Comprehension to Students with Learning Difficulties*, (New York: Guilford Press, 2007),2.

and acquire new ideas, broaden their interest, get the message that the writer had expressed.

However, reading is a complex activity because it is a process of thinking and interpreting the information from via written text. According to Marianne Celce Murcia, reading is an individual process to construct meaning as result of transaction with written text that has been created by symbols that represent language.²

Reading in a foreign language is more difficult than native language because of the different language structure between the target language and the mother tongue. Indonesian students often consider reading as a difficult language skill to learn especially in comprehending the reading text.

In fact, the basic competence for the eleventh grade students of senior high school is that students should be achieved in Reading English subject is the students have ability to identify, understand, and respond the main ideas, the explicit and implicit information, the meaning of sentences, and the varieties of structure in simple function text and essay which are formed in report, narrative, descriptive text, news item, recount text, analytic exposition, spoof and hortatory exposition that used to access knowledge in context of daily activity³.

²Anne Ediger, Teaching English as Second Language :3rd Ed, ed.Marianne Celce-Murcia(Boston:Heinle &Heinle,2001),154.

³Silabus Bahasa Inggris SMA Kelas XI, www.depdiknas.go.id accessed 15 maret 2016.

In fact, the result of documentation for midterm test of the eleventh grade students of SMA Negeri 1 Jenangan (68 students), there 57% students who get score E (<40), 25% D (40-59), 16% C (60-74) ,and 1% B (75-90). It means that most of students have difficulty to learn reading.

As stated above, reading is an individual process to construct meaning as result of transaction with written text that has been created by symbols that represent language. It's not easy to construct the meaning actually for Indonesian student who have different structure of language with English and also the limitation of their knowledge and vocabulary. Besides, students have different characteristic and learning styles. This condition make more difficult to learn reading. But, with the different characteristic and styles, students have different way to learn. And when the students have known what their best way to learn, it's easier to learn reading or other subject. In education, the best way to learn is called by learning style⁴.

Rita and Kenneth Dunn define learning styles as a term that describes the variations among learners in using one or more senses to understand, organize, and retain experience⁵. Furthermore, David A. Kolb defines learning style as the generalized differences in learning

⁴M. Elia Flores, Teaching and Learning Style, 6.

⁵ Mohammed Ashour Jhaish, "The Relationship among Learning Styles, Language Learning Strategies, and the Academic Achievement among the English Majors at Al-Aqsa University," (Thesis, Al-aqsa University, Palestine) , 13

orientation based on the degree to which people emphasize the four modes of the learning process⁶. So, learning style is the style that students used as the best way to learn.

It is very important to understand learning styles. When the students have understood their best way to learn, students are hoped to be able to learn independently. Tutors should know about learning styles to be able to help learners identify their personal learning styles. A teacher who instructs only according to his own style makes more difficult for students. This knowledge will help learners to build self-confidence and to learn to manage their own learning⁷. In the general view, the students who understanding their learning style will have a well planned live, where they will more success in their job, have a better chance of avoiding problematic situation and they will be more able to target areas that need improvement.⁸ From those statements above can be said that understanding about learning style is very important for teachers and students. Teacher can accommodate and facilitate varieties of students' learning style and for students, understanding learning style is very important because when students understanding their best way to learn, they are expected to be easier to learn.

⁶ Selma Kara, "Learning Styles And Teaching Styles: A Case Study In Foreign Language Classroom," Conference of the International Journal of Arts and Sciences, (2009), 2.

⁷ Learning Styles & Strategies, Introduction to Family Literacy Why Learning Styles are Important (Manitoba Education & Training,1998),2.

⁸ Guy F. Workman, "Learning Styles: Fact or Fiction, A Literature Review of Learning Styles," (Thesis, United States Military Academy, West Point, NY, 2012), 4.

From description above, researcher is interested to determine types of students' learning style in SMA Negeri 1 Jenangan. And after it, researcher wants to conduct a research entitled The Effects of Learning Styles on Reading Achievement (A Causal Comparative Research in The Eleventh Grade Students of SMA Negeri 1 Jenangan in Academic Year 2015/2016)

B. Identification of Problem

From the background of the study above, some problems can be identified as follows:

1. The lack of understanding about learning style of students, so they cannot to be able to identify what the best way they learn.
2. Teachers cannot accommodate all diversity of learning style of the students.

C. Limitation Of The Study

The scope and setting of the research are necessary to limit, so that they will be effective. Besides that, in this research the researcher will also give limitation of the time and finance of the writer. The scope of this research is comparison of students with different learning styles and their achievement in reading.

The researcher takes and limits this study in comparative study: the comparison of students with different learning styles and their achievement in reading at Eleventh Grade Students of SMA Negeri 1 Jenangan in Academic Year 2015-2016.

D. Statement of The Problems

Depend on the statement about the background of study there are the statement of the problem formulated bellow:

1. What are learning styles of eleventh grade students of SMAN 1 Jenangan academic year 2015-2016?
2. How is the reading achievement of the eleventh grade students of SMAN 1 Jenangan academic year 2015-2016?
3. Is there any significant effect of different learning styles on their reading achievement at the eleventh grade students of SMA Negeri 1 Jenangan in academic year 2015-2016?

E. Objectives Of The Study

1. To identify students' learning styles of the eleventh grade students of SMA Negeri 1 Jenangan academic year 2015-2016.
2. To determine the students' reading achievement of the eleventh grade students of SMA Negeri 1 Jenangan academic year 2015-2016.
3. To determine whether there is significant effect of different learning styles on their reading achievement the eleventh grade students of SMA Negeri 1 Jenangan academic year 2015-2016.

F. Significances of The Study

The result of this research is expected to give contributions for educationalists presented as follows:

1. For Teacher

The result of this study is expected to be useful for all teachers actually for English teacher, particularly the English teacher of eleventh grade students of SMA Negeri 1 Jenangan. After read this study, English teacher is expected to be able to understanding the diversity of their students' learning style, after it, they can create and manage classroom which accommodate and facilitate all students' learning style.

2. For Students

The result of this study is expected to be useful for all students actually, particularly the English teacher of eleventh grade students of SMA Negeri 1 Jenangan in academic year 2015/2016. This study are able to help students to understanding their learning style, after they understanding their learning style, they are expected to be able to learn in the best way.

3. For Researcher

This study can be used as reference to conducting the next research about learning style.

G. Organization of The Thesis

This thesis report will be divided into five chapters; they are introduction, review of related literature, research methodology, classroom action research result, and conclusion and suggestion. The first chapter is Introduction. This chapter contains a global description

about the whole content of the thesis. It has purpose to help the reader understanding the background of study, research focus, identification of the problems, statement of the problems, objectives of the study, significance of the study and organization of the thesis.

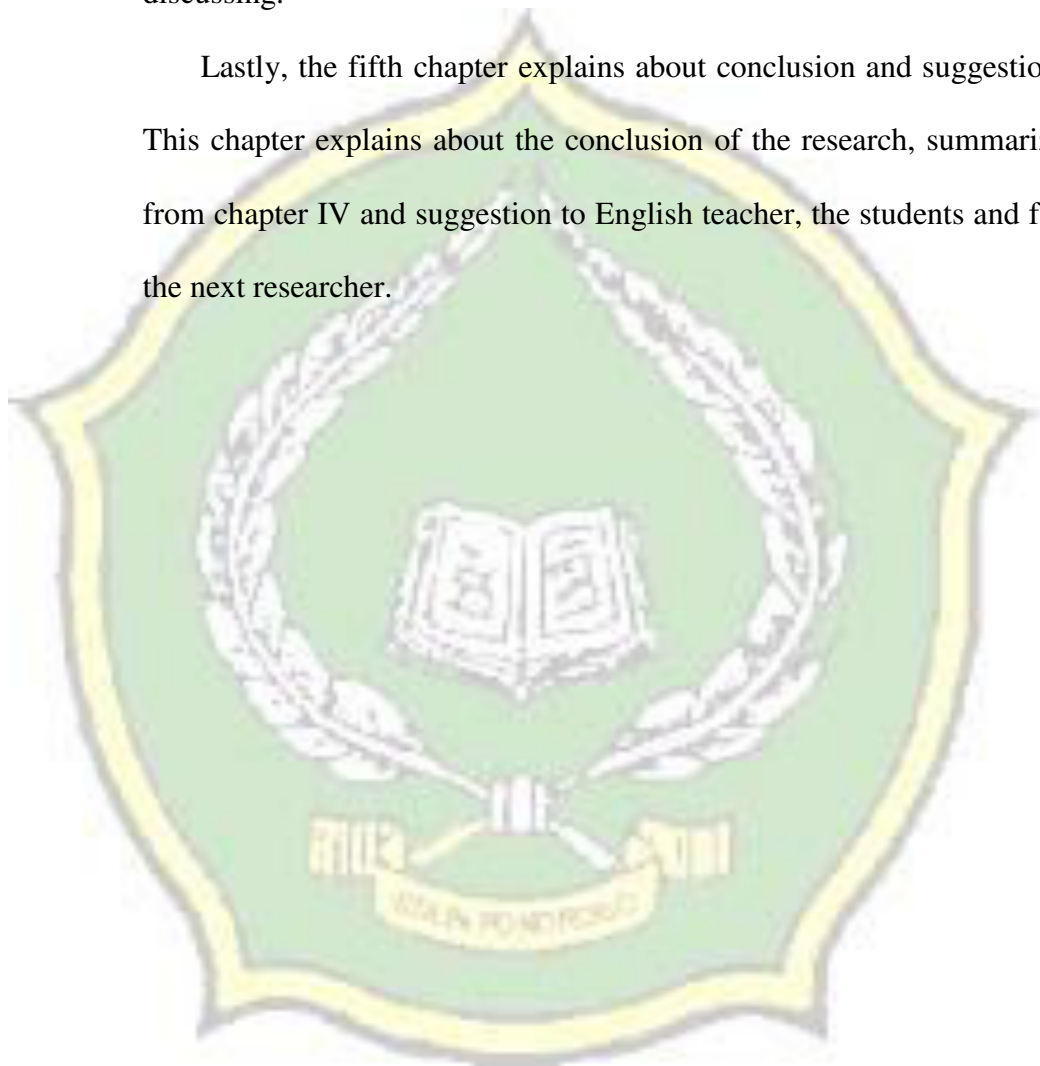
The second chapter is presenting the review of related literature. This chapter explains about theoretical background; definition of learning, the history, definition and the importance of learning styles learning, reading, the factor influencing reading achievement, theoretical framework and Previews study.

The next chapter is about research methodology. This chapter explains about research design, population, and sample, instrument of data collection, technique of data collection and technique of data analysis. The design of this research is quantitative research which observes the all population of the eleventh grade of SMA Negeri 1 Jenangan academic year 2015/2016 (68 students) as sample. To collecting data, researcher used instruments such as documentation of midterm score of the eleventh grade of SMA Negeri 1 Jenangan academic year 2015/2016, and the learning style questionnaire to determine students learning style. After collected the data, researcher will test the data using assumption test to determine the normality of the sample and after it, researcher will use regression analysis to determine the significant effect of different learning styles on reading

achievement the eleventh grade of SMA Negeri 1 Jenangan academic year 2015/2016.

Additionally, the fourth chapter presents about general description of research location (SMA Negeri 1 Jenangan), data description, and discussing.

Lastly, the fifth chapter explains about conclusion and suggestion. This chapter explains about the conclusion of the research, summarize from chapter IV and suggestion to English teacher, the students and for the next researcher.



CHAPTER II

THEORETICAL BACKGROUND

A. Theoretical Background

1. Definition of Learning

In the last decades, there are many theories of learning which emphasize on the behavioral change of subject. As Matthew H. Olson said, that “learning is the change on the behavioral potentiality as effect of reinforcement practice which relatively permanent⁹. Ngalim Purwanto states that learning is the activity to repair or to gain new ability and behavior¹⁰.

John Dewey, Kurt Lewin, Jean Piaget, William James, Carl Jung, Paulo Freire, Carl Rogers and others (developer of Experiential Learning Theory) defined learning as “the process whereby knowledge is created through the transformation of experience”. That definition is constructed from six definitions as follows:

1. Learning is best conceived as a process, not in terms of outcomes. To improve learning in higher education, the primary focus should be on engaging students in a process that best enhances their learning—a process that includes feedback on the effectiveness of their learning efforts.
2. All learning is relearning. Learning is best facilitated by a process that draws out the students’ beliefs and ideas about a topic so that they can be examined, tested, and integrated with new, more refined ideas.
3. Learning requires the resolution of conflicts between dialectically opposed modes of adaptation to the world. Conflict, differences, and disagreement are what drive the learning process. In the process of learning one is called upon to move back and forth between opposing modes of reflection and action and feeling and thinking.
4. Learning is a holistic process of adaptation to the world. Not just the result of cognition, learning involves the integrated functioning of the total person thinking, feeling, perceiving, and behaving.
5. Learning is the process of creating knowledge.
6. Learning is the process of creating knowledge¹¹.

⁹Hergenhahn, Matthew H. Olson, Theories of Learning (7th edition),2.

¹⁰ M. Ngalim Purwanto, Psikologi Pendidikan (Bandung: PT. REMAJA ROSDAKARYA),89.

¹¹ Alice Y. Kolb, David A. Kolb, (2005) Academy of Management Learning & Education: Learning Styles and Learning Spaces: Enhancing Experiential Learning in Higher Education ,. 194

Those definitions above became a basic construction of ELT (Experience Language Learning) which focus on the learning as the result from synergetic transactions between the person and the environment.

From the explanations above, the researcher tries to define learning as an activity of change to be better which occurs between the interaction between subject and the society.

2. Learning Style

a) Definition Learning Styles

Learning styles were conceptualized as a way to explain the differences between student performance levels. Many of these learning style theories were developed by educators and psychologists and have been widely accepted¹². Some definitions of learning styles are provided as follows:

1) Dunn and Dunn's theory

In 1976, the Rita Dunn and Kenneth Dunn developing learning style model. It was the first teaching model to introduce diagnostic testing for evaluation purposes¹³. The Duns were not the only researchers developing learning style constructs. During the 1970s Canfield and Lafferty (1970), Gregorc (1979), Hunt (1979), Kolb (1971), Ramirez and Castaneda (1974) and Schmeck (Schmeck, Ribich, & Ramanaiah, 1977) all developed varied definitions, models, instruments, and techniques for assessing students' characteristics. In some ways those models differed, but their many strands revealed essential similarities and were mutually supportive¹⁴.

The essence of those models described similar phenomena observed from different vantage points-much like the blind men who were explaining an elephant by reporting only certain parts of its body. Thus, learning style is the way in which each person absorbs and

¹²Ibid,2

¹³ Guy F. workman, Learning Styles: Fact or Fiction, A Literature Review of Learning Styles, (New York: United States Military university 2012),3.

¹⁴ Dunn, R., DeBello, T., Brennan, P., & Murrain, P. Learning style researchers define differences differently. Educational Leadership, 38 (1981). 372-375.

retains information and/ or skills; regardless of how that process is de- scribed, it is dramatically different for each person¹⁵.

Rita and Ken Dunn defined learning styles as a term that describes the variations among learners in using one or more senses to understand, organize, and retain experience¹⁶. The Dunn and Dunn's VAK learning style model uses the three main sensory receivers: Visual, Auditory, and Kinesthetic to determine the dominant learning style. The model is also sometimes known as VAKT (Visual, Auditory, Kinesthetic, & Tactile)

2) Myer-Briggs

People are classified on the Myers-Briggs Type Indicator®(MBTI) according to their preferences on four scales derived from Jung's Theory of Psychological Types :

1) Extraverts (try things out, focus on the outer world of people) or introverts (think things through, focus on the inner world of ideas). 2) Sensors (practical, detail-oriented, focus on facts and procedures) or intuitors (imaginative, concept-oriented, focus on meanings and possibilities). 3) Thinkers (skeptical, tend to make decisions based on logic and rules) or feelers (appreciative, tend to make decisions based on personal and humanistic considerations). 4) Judgers (set and follow agendas, seek closure even with incomplete data) or perceivers (adapt to changing circumstances, postpone reaching closure to obtain more data)¹⁷.

3) Honey and Mumford's Theory

Honey and Mumford's learning style questionnaire, known as Learning Style Questionnaire (LSQ) Theory has been widely used as an instrument of detecting students' learning style in higher education and management practices. Honey and Mumford spent four years experimenting with different approaches to assessing individual differences in learning preferences before

¹⁵ Rita Dunn, Theory into Practice, Vol. 23, No. 1, Matching Teaching & Learning Styles (Winter, 1984), 12.

¹⁶ Mohammed Ashour Jhaish, The Relationship among Learning Styles, Language Learning Strategies, and the Academic Achievement among the English Majors at Al-Aqsa University (Thesis, University of Al Aqsa, Palestine, 2012), 13.

¹⁷ Richard M. Felder, Rebecca Brent, Understanding Student Differences, 58

producing the Learning Styles Questionnaire in 1982. Honey and Mumford's Learning Style Questionnaire (LSQ) has been proposed as an alternative for Kolb's Experiential Learning Style Model (ELM) and a later refined version (LSI-1985). Honey and Mumford's learning style questionnaire has been widely applied in the fields of management training and education. The LSQ is designed to probe the relative strengths of four different learning styles: Activist, Reflector, Theorist and Pragmatist. Honey and Mumford's intention is that learners should become proficient in all four stages of the learning cycle. The authors are keen to emphasize that _no single style has an overwhelming advantage over any other. Each has strengths and weaknesses but the strengths may be especially important in one situation, but not in another¹⁸.

From those theories presented above, Dunn and Dunn's theory is chosen as the represented theory in learning process because three modalities of Dunn and Dunn's theory is used by most of students in the process of learning to receive and learn new information and experiences .However, according to the theory that describe by Sandra Penger, one or two of these receiving styles is normally dominant. This dominant style defines the best way for a person to learn new information by filtering what is to be learned. This style may not always be the same for some tasks. The learner may prefer one style of learning for one task, and a combination of others for a different task. While there is some evidence for modality specific strengths and weaknesses what has not been established is matching the instructional style to individual¹⁹.

There is no right or wrong to these preferences. The higher the percentage, the more strongly you prefer that learning style. If the percentages of two categories are similar or exactly the same, it simply means that you prefer to learn in more than one style.

¹⁸Sandra Penger, Metka Tekavic *Testing Dunn & Dunn's and Honey & Mumford's Learning Style Theories: The Case Of The Slovenian Higher Education System*, 8.

¹⁹Sandra Penger, et,al "Comparison, Validation And Implications Of Learning Style Theories In Higher Education In Slovenia: An Experiential And Theoretical Case", *International Business & Economics Research Journal* (December 2008), 31

b) Types of Dunn and Dunn's Learning Styles Theory

Rita and Kenneth Dunn defined learning styles as a term that describes the variations among learners in using one or more senses to understand, organize, and retain experience²⁰. The Dunn and Dunn's VAK learning style model uses the three main sensory receivers: Visual, Auditory, and Kinesthetic to determine the dominant learning style. The definition will describe as follows:

1) Visual Learning Styles

According to Tim Tutton, Visual learning style described as the learning style which preferred by seeing and memorizing visual components²¹. Furthermore, Ashour Jhaish described Visual learners as learners who “prefer to learn via the visual channel. Therefore they like to read a lot, which requires concentration and time spent alone. Visual students need the visual stimulation of bulletin boards, videos and movies. They must have written directions if they are to function well in the classroom.”²²

In addition, Sandra Penger and Metka Tekavcic made the characteristic of visual learning style as follows:

Table 2.1 Characteristic of Visual Learning Styles²³

Perception	Description/Characteristic of Dunn & Dunn's Learning Style Theory
Visual - Seeing	<ul style="list-style-type: none"> Mind sometimes strays during verbal activities

²⁰ Mohammed Ashour Jhaish, The Relationship among Learning Styles, Language Learning Strategies, and the Academic Achievement among the English Majors at Al-Aqsa University(Thesis , University of Al Aqsa, Palestine,2012),13.

²¹ Tim Tutton, Learning Styles and Sunday School Kids (Sinclair Way, 400 Lincoln Ave),8.

²² Mohammed Ashour Jhaish, The Relationship among Learning Styles, Language Learning Strategies, and the Academic Achievement among the English Majors at Al-Aqsa University,26.

²³ Sandra Penger, Metka Tekavic, *Testing Dunn & Dunn's and Honey & Mumford's Learning Style Theories: The Case Of The Slovenian Higher Education System*, 6.

	<ul style="list-style-type: none"> • Observes, rather than talks or acts; may be quiet by nature • Organized in approach to tasks • Likes to read • Usually a good speller • Memorizes by creating mental images • Thinks in pictures • Easily put off by visual distraction • May focus on the ‘big picture’ and use advanced planning • Finds verbal instructions difficult • Remembers faces • Strong on first impressions • Likes drawing and doodling, may have good handwriting • Enjoys using color • Notices details • Often a quick thinker
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2) Auditory Learning Style

According to Tim Tutton, auditory learning style described as kind of learning style which preferred by listening, remembering, and following instructions²⁴. Furthermore, Ashour Jhaish stated that “ Auditory learners are “students who enjoy the oral-aural learning channel. Thus they want to engage in discussions, conversations, and group work. These students typically require only oral directions²⁵.”

In addition, Sandra Penger and Metka Tekavic made the characteristic of auditory learning style as follows:

Table 2.2 Auditory Learning Style²⁶

Perception	Description/Characteristics of Dunn & Dunn’s Learning Styles Theory
Auditory-Hearing	<ul style="list-style-type: none"> • Talks to self aloud • Outgoing by nature

²⁴ Tim Tutton, Learning Styles and Sunday School Kids (Sinclair Way, 400 Lincoln Ave), 8.

²⁵ Mohammed Ashour Jhaish, The Relationship among Learning Styles, Language Learning Strategies, and the Academic Achievement among the English Majors at Al-Aqsa University,²⁶

²⁶ Sandra Penger, Metka Tekavic, *Testing Dunn & Dunn’s and Honey & Mumford’s Learning Style Theories: The Case Of The Slovenian Higher Education System*, 6.

	<ul style="list-style-type: none"> • Whispers to self while reading, may hum or sing while working • Likes to be read to • May be particular about the exact choice of words • Memorizes by steps in a sequence • Very aware of rhythm • Easily distracted by noises • May have difficulty with written instructions • Remembers names • May assess people by the sound of their voice.
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3) Kinesthetic Learning Style

According to Ashour Jhaish, auditory learning style implies total physical involvement with a learning environment such as taking a field trip, dramatizing, pantomiming, or interviewing²⁷. Moreover, Tim Tutton stated that kinesthetic learner Loves to explore and understands things by “playing around²⁸.”

In addition, Sandra Penger and Metka Tekavcic made the characteristic of visual learning style as follows:

Table 2.3 Characteristic of Kinesthetic Learning Styles²⁹

Perception	Description/Characteristics of Dunn & Dunn’s Learning Styles Theory
Auditory-Hearing	<ul style="list-style-type: none"> • In motion most of the time/fidgety • Outgoing by nature; expresses emotions by physical means • Taps pencil or foot/fiddles with objects while studying • Reading is not a priority • May find spelling difficult

²⁷ Mohammed Ashour Jhaish, The Relationship among Learning Styles, Language Learning Strategies, and the Academic Achievement among the English Majors at Al-Aqsa University,26

²⁸ Tim Tutton, Learning Styles and Sunday School Kids (Sinclair Way, 400 Lincoln Ave), 8.

²⁹ Sandra Penger, Metka Tekavic, *Testing Dunn & Dunn’s and Honey & Mumford’s Learning Style Theories: The Case Of The Slovenian Higher Education System*, 6.

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| | <ul style="list-style-type: none"> • Likes to solve problems by physically working through them • Very good body control, good timing and reflexes • Is affected by touch or lack of it • May need time to think (i.e. process the actions involved) • Will try new things – likes to get involved • Likes physical rewards • Remembers what they have done rather than seen/heard • May assess people and situations by what ‘feels right’ • Enjoys handling objects • Enjoys doing activities • Likes to use gestures and touch people while talking to them |
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c) The Importance of Learning Style in Learning Process

It is very important to understand about learning style. When the students have understood their best way to learn, students are hoped to be able to learn independently. For teacher, this condition is good condition for the learning process, because when teacher and students have known and understood about students' learning style, teacher is easier to apply method or mastery that have been already.

It is important to understand learning styles to ensure that tutors are instructing according to the learner's style and not the tutor's. A tutor who instructs only according to his own style makes learning more difficult for the learner. Tutors should know about learning styles to be able to help learners identify their personal learning styles. This knowledge will help learners to build self-confidence and to learn to manage their own learning. Tutors should know what their own personal learning style is. Because learning styles influence how tutor teach, tutor need to know just what that style is and how it compares to the learner's. Knowledge of learning styles should also help students to be aware of other styles and how to use other styles when in the tutoring environment³⁰.

³⁰ Learning Styles & Strategies Manitoba Education & Training, introduction to Family Literacy
Why Learning Styles are Important (1998)

According to Georgia University that has been published about the beneficial of learning styles in the students learning process as follows³¹:

- a) Students will have a better chance of avoiding problematic situations. Knowing how students learn and how students relate to the world can help students make smarter choices.
- b) Students will be more successful on the job. If students know how students learn, students will be able to look for an environment that suits students best and students will be able to work more effectively on teams.
- c) Students will be more able to target areas that need improvement. The more students know about students' learning styles, the more students will be able to pinpoint the areas that are more difficult for students."

From those statements can be stated that learning styles is very important in the learning process, besides that understanding the styles can show the best way to achieve the better achievement either in study or in real life.

Teachers have to design the environment of the class which accommodate the diversity of student's learning style as Ball A.L said, that "You can determine a lot about your own child's learning style, share the information with teachers, challenge any facile diagnosis or any remedial work that isn't working you can be instrumental in making educators realize children of different needs need to be taught differently³².

But it is very impossible if teachers have to discover each learning style. As Richard M. Felder and Rebecca Brent said that is impossible for teacher to discover everything that affects what a student learns in a class, and even if instructors could, they would not be able to figure out the optimum teaching style for that student the task would be far too complex. Moreover, even if a teacher knew the optimum teaching styles for all students in a class, it would be impossible to implement them simultaneously in a class of more than two students³³.

3. Reading

³¹ Guy F. workman, Learning Styles: Fact or Fiction, A Literature Review of Learning Styles, (New York: United States Military university 2012), 4.

³² Ball, A.L The secrets of learning styles-your child's and your own. Redbook (1982, November), 72.

³³ Richard M. Felder, Rebecca Brent, "Understanding Students Differences", Journal of Engineering Education, 94 (1), (2005), 57.

a) Definition of Reading

Reading is the process of constructing meaning by coordinating a number of complex processes that include word reading, word and world knowledge, and fluency³⁴. According to Andrew P. Johnson defined reading as follows:

- 1) Reading is the practice of using text to create meaning. The two keywords here are creating and meaning. If there is no meaning being created, there is no reading taking place.
- 2) Reading is a constantly developing skill. Like any skill, better readings are created by practicing and the result is skills may deteriorate.
- 3) Reading integrates visual and nonvisual information. During the act of reading, the visual information found on the page combines with the nonvisual information contained in your head to create meaning. In that way, what's in your head is just as important as what is on the page in the process of creating meaning (reading).
- 4) Reading is the act of linking one idea to another. Putting ideas together to create a sensible whole is the essential part of reading. It is not necessary to know every word in order to read³⁵.

From those definitions above can be said that the reading is the process to construct and understanding text with sustainable process which include practice activity.

b) Types of Reading

According to Douglas Brown, there are 4 types of reading. The types and definitions presented as follows:

- 1) Perceptive. In keeping with the set of categories specified for listening comprehension, similar specifications are offered here, except with some differing terminology to capture the uniqueness of reading. Perceptive reading tasks involve attending to

³⁴ Janette K. Klingner, Sharon Vaughn, and Alison Boardman, *Teaching Reading Comprehension to Students with Learning Difficulties*(New York: Guilford Press, 2007), 2.

³⁵ Andrew P. Johnson, *Teaching Reading and Writing: A Guidebook for Tutoring and Remediating Students* (Maryland: Rowman & Littlefield Publishers, Inc.,2008), 3-5.

the components of larger stretches of discourse: letters, words, punctuation, and other graphemic symbols.

- 2) Selective. This category is largely an artifact of assessment formats. In order to ascertain one's reading recognition of lexical, grammatical, or discourse features of language within a very short stretch of language, certain typical tasks are used: pictured-cue tasks, matching, true/false, multiple choice, etc.
- 3) Interactive. Included among interactive reading types are stretches of language of several paragraphs to one page or more in which the reader must.
- 4) Extensive. Extensive reading is messaged a little in order to encompass any text longer than a page. The purposes of assessment usually are to tap into a learner's global understanding of a text, as opposed to asking test-takers to "zoom in" on small detail³⁶.

Four types above can be used by to teach reading in the classroom. It can be combined between each type or maybe just used one type depends on what the teacher want to teach.

c) Complex Activities in Reading

Reading is a complex activity because it is a process of thinking and interpreting the information from via written text. According to Marianne Celce Murcia, in reading,

"An individual constructs meaning through a transaction with written text that has been created by symbols that represent

³⁶ H. Douglas Brown, *Language Assessment Principles and Classroom Practices* (Longman), 189-190.

language. The transition involves the reader's acting on or interpreting the text, and the interpretation is influenced by reader's past experiences, language background, cultural framework, as well as the reader's purpose for reading.³⁷

Furthermore, Geoffrey Broughton stated that:

The word reading of course has a number of common interpretations. It may mean reading aloud, a very complex skill, which involves understanding the black marks first and then the production of the right noises. Most people, if they are asked to read something aloud, like to have an opportunity to 'glance over' what it is they are being asked to read. In the actual process of reading aloud too they usually find that their eyes are several words if not lines ahead of their tongues. The process is something like A-C-B.³⁸

From those definitions above implied that reading is complex activity that forced reader not only to read but also understand the meaning. Reading difficult activities because reader has to construct the meaning by interpret written text that has been created by symbols that represent language.

B. Previous Research Finding

To construct good research, researcher has to find a good previous research as guidance. The previous research has to connect with research that researcher want to conduct. In this research, researcher chose the research as follows:

The previous research that researcher takes to conduct this study is the thesis of Mohammed Ashour Jhaish with entitle "The Relationship among Learning Styles, Language Learning Strategies, and the Academic Achievement among the English Majors at Al-Aqsa University". This thesis aims to identify the learning styles and learning 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 , strategy preferences and the academic achievement among the third year English majors at Al Aqsa University.

In constructed of research, Ashour Jhaish used quantitative approach to analysis his research problem. Research data was

³⁷ Marianne Celce-Murcia, Teaching English as Second language (3rd Ed) , 152

³⁸ Geoffrey Broughton, et.al 1980 (2nd edition) Teaching English as a Foreign Language

collected through two questionnaires, one of which aimed to identify students' learning style preferences and the other aimed to find out what strategies students seemed to prefer. The student's level of language achievement was determined by an achievement test designed by the researcher.

Second, thesis of Sylvia Indar Kartika entitled "The Comparative Study between Students' Learning Styles (Visual, Auditory, and Kinesthetic Students) on English Achievement of SMP Terpadu Ponorogo in Academic Year 2011-2012.

In this research, Sylvia wanted to determine whether there is significant different among three kinds of learning style between students of SMP Terpadu Ponorogo which variable control is English achievement.

Research design of Sylvia's research is comparative study which compare between learning styles and English achievement. Thesis of Sylvia Indar Kartika has same focus with this research in the comparison between students' learning style but Sylvia used English achievement as variable control and in this research, researcher used reading achievement as variable control because researcher.

Third, the dissertation of Jose Bernier entitled "The Relationship between Learning Styles and Online Education among Entry-Level Doctor of Pharmacy Degree Students"

Jose Bernier created research with focus on the relation between learning style and Online Education among entry-level doctor of pharmacy degree students. Bernier used correlation design to answer the research problem.

In the other hand, in my research, researcher want to determine whether any significant effect between students' learning style.

From previous research above, researcher was interested to conduct the research in the same topic, learning style but the researcher won't to correlate the Students' learning style with their achievement but, researcher wants to conduct causal comparative study which want to know the students understanding of their learning style.

C. Theoretical Framework

In the previous parts the researcher has discussed about the best way to learn of students and the importance of understanding the learning style. As researcher has discussed in the previous parts, learning style is the best way to learn. Every student has different way to learn, as Elia Flores states that learning style is the way we perceive and process thing the best.³⁹

After understanding their learning style, students are expected to learn more independent and learn with feeling enjoy because they learn with the best way of them.

For teacher, to know students learning style, teacher can construct learning style with variation situation that facilitate and accommodate all variation of students' learning style. But it is very impossible if teachers have to discover each learning style. As Richard M. Felder and Rebecca Brent said that is impossible for teacher to discover everything that affects what a student learns in a class, and even if instructors could, they would not be able to figure out the optimum teaching style for that student the task would be far too complex. Moreover, even if a teacher knew the optimum teaching styles for all students in a class, it would be impossible to implement them simultaneously in a class of more than two students⁴⁰

D. Hypothesis

In this research, researcher tries to predict the answer to the problem (learning style) as follows:

Ha: There is significance effect of students with Different Learning Styles on their Achievement in Reading at the eleventh grade students of SMA Negeri 1 Jenangan in Academic Year 2015-2016.

³⁹ (M. Elia Flores, M.Ed.,R.T.(R), Teaching and learning style , 6)

⁴⁰ Richard M. Felder, Rebecca Brent, "Understanding Students Differences", Journal of Engineering Education, 94 (1), (2005), 57.

CHAPTER III

RESEARCH METHODS

A. Research Design

In this study, researcher applied quantitative research which the data was quantified in the numerical data as process of analysis. Quantitative research is defined as numerical method of describing observation of material and characteristics. Quantitative research is 'Explaining phenomena by collecting numerical data that are analyzed using mathematical methods (in particular statistics).'⁴¹

in this present research, researcher applied causal comparative approach. Causal comparative research is a type of non-experimental investigation in which researchers seek to identify cause-and-effect relationship by forming groups of individuals in whom the independent variable is present or absent at several levels and then determining whether the groups differ on the dependent variable⁴². According to Donald Ary, et al, this method is called causal comparative because its purpose is to investigate cause-and-effect relationships between independent and dependent variables. Researchers use it in situations that do not permit the randomization

⁴¹ Daniel Muij, *Doing Quantitative Research in Education with SPSS* (London: Sage Production, 2004), 1.

⁴² Meredith D. Gall, et al, *Educational Research: An Introductory 7th edition* (Boston: Pearson Education, Inc, 2003), 296.

and manipulation of variables characteristic of experimental research⁴³. In line with Donald Ary, Andan Latief goes on to describe causal comparative research as the method to measure the cause and effect relationship without manipulating and controlling the independent variable⁴⁴.

From statements above can be said that quantitative research is design of research which collect numerical data to explaining the phenomena. Causal comparative research is design to identify the cause- and- effect of independent and dependent variable. The researcher is prohibited to manipulate and control the respondent in the collecting data because when researcher controlled the independent variable, the research design has to change into experimental research. In this research, the independent research is students' learning styles and the dependent variable is students' reading achievement

B. Population and Sample

1. Population

Population in educational research usually is defined as all the members of a real or hypothetical set of people, events, or objects to

⁴³ Donald Ary, et al, *Introductin to Research in Education* 8th edition, (Wadsworth: Cengage Learning, 2010), 332.

⁴⁴ M. Adnan Latief, *Research Methods on Language Learning : An Introduction* (Malang: UM Press, 2014),103.

which educational researchers wish to generalize the results of the research⁴⁵.

The population in this study is all students of eleventh grade of SMA Negeri 1 Jenangan academic year 2015/2016 which have amount 67 students from 3 classes (2 Science class and a Social class).

2. Sample

The smaller group or subset of population is called the sample⁴⁶. A sample is a subgroup of the population you are interested in. Sampling, therefore, is the process of selecting a few (a sample) from a bigger group (the sampling population) to become the basis for estimating or predicting the prevalence of an unknown piece of information, situation or outcome regarding the bigger group⁴⁷.

This research was sum up sample from all students of eleventh grade of SMA Negeri 1 Jenangan academic year 2015/2016. As according to statement above, hence all population students are made to be a sample (67 students). This sampling technique is called by population research. According to Suarsimi Arikunto, when all populations are made to be a sample, researcher used population research as sampling technique⁴⁸.

⁴⁵ Meredith D.Gall, et al, Educational Research: An Introductory 7th edition, (Boston: Pearson Education, Inc, 2003), 216.

⁴⁶ L. Cohen, L. Manion, K. Morrison Research Methods in Education (6th edition), (London: Routledge, 2007), 119.

⁴⁷ Ranjit Kumar, Research Methodology : Step-by-step guide for beginner : 3rd edition, (London: SAGE Publication Ltd, 2011), 177.

⁴⁸ Suharsimi Arikunto, Prosedur Penelitian (Jakarta: Rineka Cipta, 1992) 102

C. Instrument of Data Collection

Instrument of data collection can be defined as a tool to collect data. It has to be constructed and made to show the empirical data accurately as the real condition of the subject of the research. There are two kinds of data collection; primary sources and secondary sources. Primary resources are the source that used first approach, where the researcher collects data himself. In the other hand, documentation include in secondary resources. The sources use second approach where the researcher uses data from other researcher or previous data to collect data. There are many kinds of primary sources such as questionnaire, observation and interview, and documents are kind of secondary sources. In this case, researcher used questionnaire and documentation. Questionnaire is used to determine the students' learning styles and documentations of students' midterm test score is used to determine the students' reading achievement.

D. Technique of Data Collection

To get data of this study, researcher used test, questionnaire and document. For the definition among them as follows:

1. Questionnaire

Adnan latif states that questionnaire is written instrument a consisting of questions to be answered or statements to be responded by respondents. It is used to gather information

about fact or about opinion/attitude⁴⁹. The questionnaire is a widely used and useful instrument for collecting survey information, providing structured, often numerical data, being able to be administered without the presence of the researcher, and often being comparatively straightforward to analyze⁵⁰. From statements above can be said that questionnaire is the tool to collect research data which focus on numerical data. Questionnaire is always in form of written instrument which consist of question and answer. To answer the questions, researcher used Likert scale.

Likert scales are a non-comparative scaling technique and are unidimensional (only measure a single trait) in nature. Respondents are asked to indicate their level of agreement with statement by way of an ordinal scale⁵¹. The ordinal scales are often in kinds of several statements expressing favorableness or unfavorableness to a particular point of view are prepared with usually 5 provided alternatives: strongly agree, agree, undecided, disagree, to strongly disagree⁵². But in this research used 3 alternatives: always, often, and seldom.

In this research, researcher used closed-form questionnaire.

Closed-form questionnaire is a questionnaire contains of

⁴⁹ Adnan Latief, *Research Methods on Language Learnig: An Introduction*, 193

⁵⁰ Cohen, *Research Methods in Education* :6th edition, 119

⁵¹ Dane Bertram, *Topic Report: Likert Scale*, (New York: CPSC 61, 2012),1.

⁵² Adnan Latief, *Research Methods on Language Learnig: An Introduction*, 199.

several questions those are espoused the alternative answers that has been already provided. Based on Sandra Penger and Metka Tekavic, researcher made questionnaire's indicator as follows⁵³:

Table 3.1 Indicator of Questionnaire

Name	Categorized	Indicators	Number of item
Students' Learning Style	Visual	a. Learning by visual association	1,7,8,9, 10
		b. Neat and orderly	4
		c. Difficult to receive verbal instruction	2, 3,5,6
	Auditory	a. Learning by hearing	12,13,15, 16
		b. Poor in visual activity.	14
		c. Good in verbal activity.	11,18,19, 20,17
Kinesthetic	a. Learning by physical activity	29, 30	
	b. A lot of physical movement	21,22,23, 26, 27	
	c. Like to do "trial and error".	24,25, 28	

To check whether the instrument of data collection is good or not, researcher has to check with validity and reliability

⁵³ Sandra Penger, Metka Tekavic, *Testing Dunn & Dunn's and Honey & Mumford's Learning Style Theories: The Case Of The Slovenian Higher Education System*, 6

test. Validity traditionally has been regarded as a test characteristic, generally the most important quality of a test. But the current thinking of measurement experts is that validity should be associated with the use to be made of the scores from a test. In particular, validity refers to the appropriateness of making specific inferences or of making certain decisions on the basis of scores from a test.”⁵⁴ Validity is probably the single most important aspect of the design of any measurement instrument in educational research. However good our research design or sophisticated our statistical analyses, the results will be meaningless if we aren't actually measuring what we are purporting to measure⁵⁵.

From statements before, researcher tries to define that validity is the process to measure what we want to measure.

In this research, researcher used SPSS 18 program for windows to determine the validity of questionnaire. 25 students of the 12th grade student of SMA Negeri 1 Jenangan were taken as respondents to determine the validity of questionnaire. To interpreted where the valid item or not, researcher compare the value of SPSS (r_x) score with value of product moment (r_{table}). r_{table} is calculated from $n-2$ ($25-2=23$)

⁵⁴ Adnan Latief, *Research Methods on Language Learning : An Introduction*, 224.

⁵⁵ Daniel Muijs, *Doing Quantitative Research in Education with SPSS*, (London: Sage Production, 2004), 66.

and look on the product moment table in significance level 5% = 0.396. If $r_x > r_{table}$ questionnaire is valid, if $r_x < r_{table}$ is not valid and the result as follows:

Table 3.2 Result of Validity Test

No	r_x	r_{table}	Interpretation
1	0.470	0.396	Valid
2	0.484	0.396	Valid
3	0.638	0.396	Valid
4	0.406	0.396	Valid
5	0.338	0.396	Invalid
6	-0.237	0.396	Invalid
7	0.553	0.396	Valid
8	-0.067	0.396	Invalid
9	0.514	0.396	Valid
10	0.290	0.396	Invalid
11	0.550	0.396	Valid
12	0.506	0.396	Valid
13	0.428	0.396	Valid
14	-0.351	0.396	Invalid
15	0.366	0.396	Invalid
16	0.274	0.396	Invalid
17	0.586	0.396	Valid
18	0.161	0.396	Invalid
19	0.534	0.396	Valid
20	-0.120	0.396	Invalid
21	0.423	0.396	Valid
22	0.137	0.396	Invalid
23	0.327	0.396	Invalid
24	0.514	0.396	Valid
25	-0.208	0.396	Invalid
26	0.653	0.396	Valid
27	0.489	0.396	Valid
28	0.641	0.396	Valid
29	0.767	0.396	Valid
30	0.363	0.396	Invalid

We use the word 'reliable' very often in our lives. When we say that a person is reliable, what do we mean? We infer that

s/he is dependable, consistent, predictable, stable and honest. Reliability in quantitative research is essentially a synonym for dependability, consistency and reliability over time, over instruments and over groups of respondents. It is concerned with precision and accuracy; some features, e.g. height, can be measured precisely, while others, e.g. musical ability, cannot. For research to be reliable it must demonstrate that if it were to be carried out on a similar group of respondents in a similar context (however defined), then similar results would be found⁵⁶. Adnan Latief goes on define reliability as referring to consistency of the scores resulted from the assessment⁵⁷.

From the statements above, researcher wants to construct the definition of reliability referring to preciseness and consistency of the result of the test that representing actual level of the test.

Furthermore, to analysis the reliability of the questionnaire, researcher used SPSS. Questionnaire is determined as reliable If $r_x > r_{table}$ questionnaire is reliable, if if $r_x < r_{table}$ is not reliable and the result as follows:

Table 4.3 Reliability of Questionnaire

Reliability Statistics	
Cronbach's Alpha	N of Items

⁵⁶Cohen, Research Methods in Education (6th edition), 165.

⁵⁷ Adnan Latief, Research Methods on Language Learning : An Introduction,213.

Reliability Statistics

Cronbach's Alpha	N of Items
.782	30

Because the value of r_x is 0.782 and r_{table} is 0.396 means that r_x is higher than r_{table} . So, questionnaire is reliable.

2. Documentation

Documents are prepared for personal rather than official reasons and include diaries, memos, letter, and field notes and so on. Documents close to speech require more contextualize interpretation. Document is all kind of written content or movie. It's used as the data source for many reasons, for the example in many sides are help the researcher to testing, interpreting even predicting. Researchers who base their studies on documents may make considerable use of secondary data; that is, data which has already been collected, and possibly also analyzed by somebody else⁵⁸.

From statements above can be said that documentations is the instrument of data collection that in form of written text or movie. Documentation is also called secondary data because data has already been collected by somebody else. In this research, researcher took the midterm test score of eleventh

⁵⁸ Loraine Blaxter, Cristina Hughes, and Malcolm Tight, *How to Research*: 4th edition (New York: Open University Press, 2010), 187.

grade students of SMA Negeri 1 Jenangan academic year 2015/2016.

E. Technique of Data Analysis

In quantitative research the main emphasis in data analysis is to decide how researchers are going to analyze information obtained in response to each question that you asked of your respondents⁵⁹.

Approach of this study is quantitative approach and it emphasizes on causal comparative study. To analysis data, researcher chose the technique using statistic. Statistic is the criterion of sample, means, standard deviation, coefficient correlation⁶⁰. Firstly, researcher has to use assumption test to determine data whether normal or not. To determine it, researcher used normality test. Interpretation of normality test is if $F > t_{tabel}$, H_a is accepted. If $F < t_{tabel}$ H_o is accepted.

Secondly, to testing hypothesis, researcher used regression analysis. Regression analysis is the way to analysis data which used to determine the pattern of relationship among independent and dependent variable. After collecting the data, the researcher used regression to analyze the data. This research is used to determine whether there is significant effect or not between students' learning style with reading achievement. To determine this interpretation,

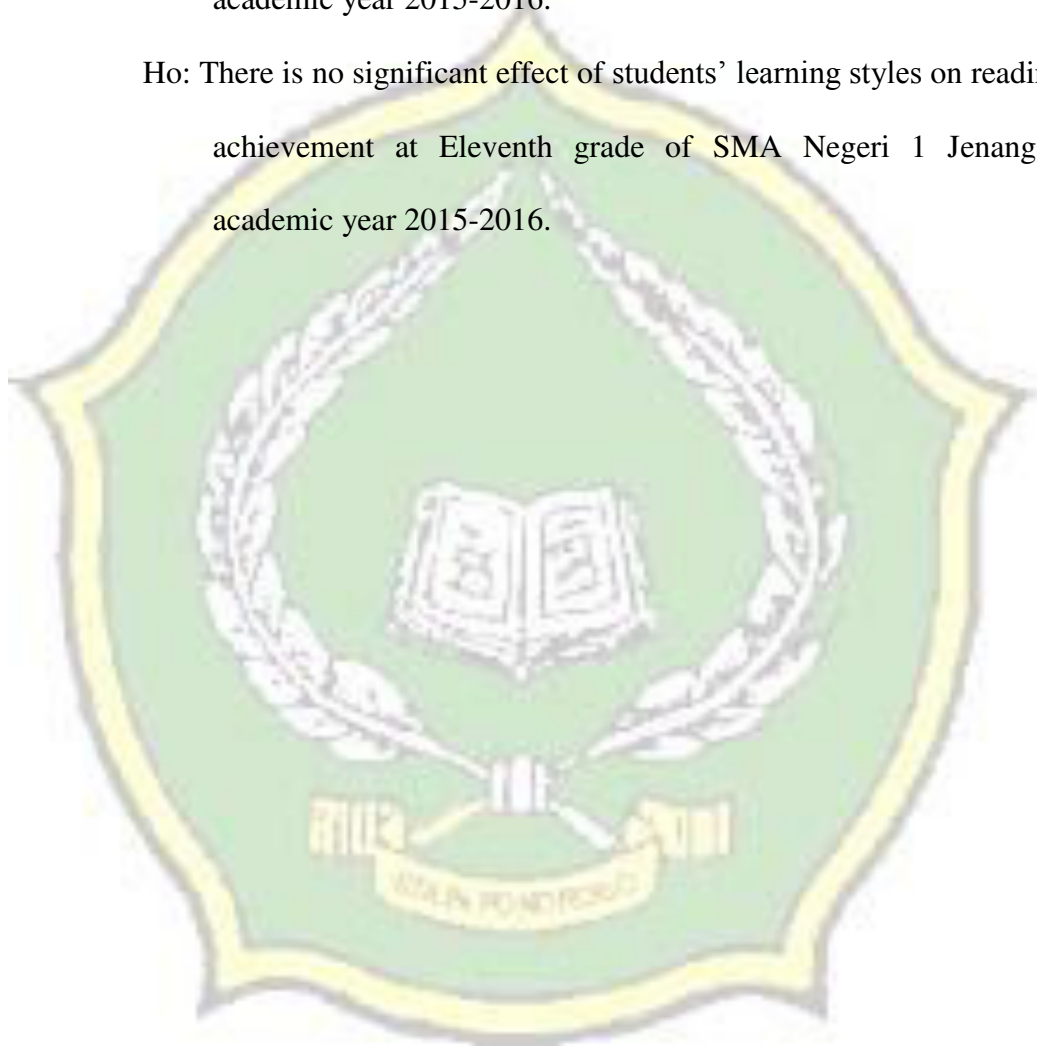
⁵⁹ Ranjit Kumar, Research Methodology : Step-by-stepguide for beginner :3rd edition, 227.

⁶⁰ Retno Widyaningrum, Statistika (edisi revisi) (Yogyakarta: Pustaka Felicha, 2013), 2.

researcher has to calculate normality test and testing hypothesis. In this research, researcher used SPSS 18 program for windows.

Ha: There is significant effect of students' learning styles on reading achievement at Eleventh grade of SMA Negeri 1 Jenangan academic year 2015-2016.

Ho: There is no significant effect of students' learning styles on reading achievement at Eleventh grade of SMA Negeri 1 Jenangan academic year 2015-2016.



CHAPTER IV

RESEARCH FINDINGS AND DISCUSSION

A. General Research Findings

To collect data of this research, researcher took a research in the SMA Negeri 1 Jenangan where the population and sample of this research is the eleventh grade students of SMA Negeri 1 Jenangan in academic year 2015/2016.

SMA Negeri 1 Jenangan is one of the many senior high schools in Ponorogo. SMA Negeri 1 Jenangan was established on 13 years ago or certainly on May, 29th 2003. SMA Negeri 1 Jenangan were build by government as a problem solver for the student in Semanding who want to continue to the senior high school, because more difficult for the most of student to continue their study to senior high school because of their limitation to reach cheapest and nearest senior high school.

SMA Negeri 1 Jenangan is located on the road of Ngebel-Semanding. The location of this senior high school is on the leg of Dangean hill. Because of this location, SMA Negeri 1 Jenanganis also calledSMADangean. The area of this senior high school is very large because the location is still natural and the house of the villager is little.

As senior high school in generally, SMA Negeri 1 Jenangan has vision and mission that have to seize, and the vision and mission shows as follows:

1. VISION

Actualizing the cultural of achievement with life skill and noble morals.

2. MISSION

- a) Educating the students discipline culture through go green, and work hard culture.
- b) Encouraging religious, discipline and smart character for developing students' potential in the maintaining of natural environment.
- c) Increasing understanding of religious values as a way of life.

- d) Developing active, creative and innovative learning using development of science and technology and cultural environment caring.
- e) Developing students' abilities through extracurricular programs for developing students' life skill through education, environment, and entrepreneurship.

B. Specific Research Findings

Sample in this research were 67 students of the eleventh grade of SMA Negeri 1 Jenangan academic year 2015/2016. The variables of this research consisted of an independent variable namely Students' Learning Styles (X) and Reading Achievement (Y) is dependent variable.

1. Learning Styles.

Researcher used formula to determine distribution frequency. The formula can be shown as follows:

- a) Determine Range (R). Range is calculated from highest score minus lowest score. ($R = \text{highest} - \text{lowest score}$). In this research, the highest score is 45 and the lowest is 21, so $R = 45 - 24$, $R = 21$
- b) Determine amount of class. It calculated used formula, $k = 1 + 3.3 \log n$. In this research n or number of cases is 67, so $k = 1 + 3.3 \log 67$; $k = 1 + (3.3 \times 1.826)$; $k = 7$
- c) Determine interval. $i = R/k$. in this research $i = 21/7 = 3$

After got data above, researcher made table of distribution frequency as follows:

Table 4.1 Learning Styles' Distribution Frequency

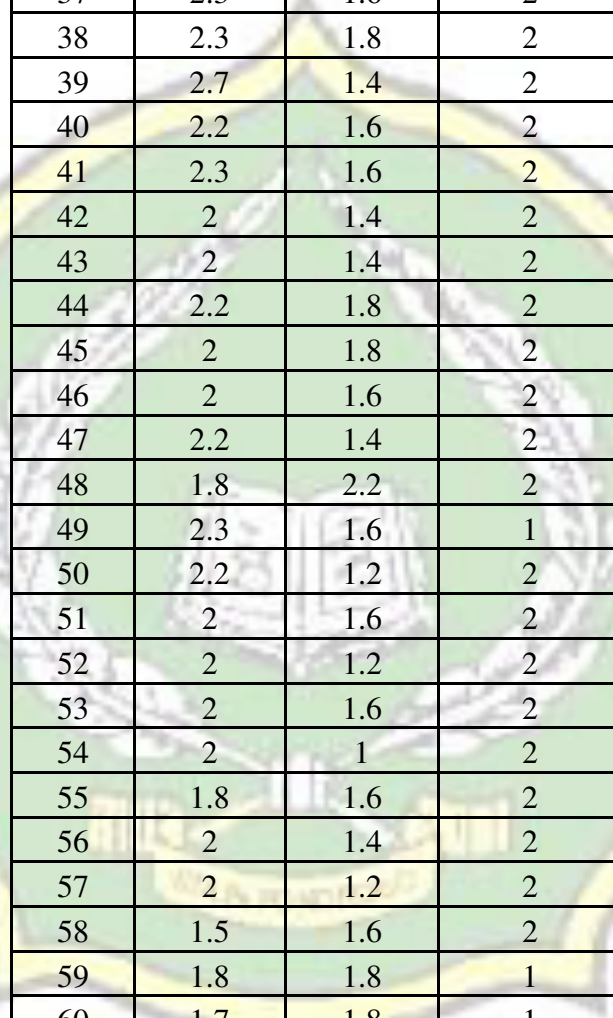
Class (k)	Interval (i)	Frequency (f)
1	24-26	6
2	27-29	9
3	30-32	14
4	33-35	26

5	36-38	7
6	39-41	1
7	42-45	4
N		67

Then, researcher made categorization of students' learning styles using analysis of mean, and the result can be seen as follows.

Table 4.2 Analysis of learning styles' mean

No	Visual	Auditory	Kinesthetic
1	2.7	2.2	3
2	2.8	2.4	3
3	2.7	2.4	3
4	2.7	2.2	3
5	2.7	1.8	3
6	2.5	2.2	2
7	2.5	2	2
8	2.5	2	2
9	2.2	2.2	2
10	2.2	2.2	2
11	2.3	2.2	2
12	2.3	2.2	2
13	2.5	2	2
14	2.2	1.8	2
15	2.2	1.4	2
16	2.2	1.8	2
17	2.3	2.2	2
18	2.2	1.8	3
19	2	2.2	2
20	2.2	1.8	2
21	2.3	1.6	2
22	2	1.2	2
23	2	1.4	3
24	2.5	1.6	2
25	2.3	1.6	2
26	2.3	1.8	2
27	2	2.2	2
28	2.2	1.6	2
29	2.2	1.8	2



30	2.3	1.6	2
31	2.3	1.8	2
32	2.3	1.8	2
33	1.8	2	2
34	1.8	2	2
35	2.5	1.4	2
36	2.2	1.8	2
37	2.3	1.6	2
38	2.3	1.8	2
39	2.7	1.4	2
40	2.2	1.6	2
41	2.3	1.6	2
42	2	1.4	2
43	2	1.4	2
44	2.2	1.8	2
45	2	1.8	2
46	2	1.6	2
47	2.2	1.4	2
48	1.8	2.2	2
49	2.3	1.6	1
50	2.2	1.2	2
51	2	1.6	2
52	2	1.2	2
53	2	1.6	2
54	2	1	2
55	1.8	1.6	2
56	2	1.4	2
57	2	1.2	2
58	1.5	1.6	2
59	1.8	1.8	1
60	1.7	1.8	1
61	2.2	1.4	1
62	1.8	1.4	1
63	1.7	1.8	1
64	1.7	1	2
65	1.5	1.4	2
66	1.7	1	2
67	1.5	1.2	2

Based on the analysis of the result of the questionnaire of students' learning using analysis of mean, there are 43 students are classified as visual, 8 students are auditory, and 16 students are kinesthetic. From this result can be stated that 64% are visual, 12% are auditory, and 24% are kinesthetic learners. For more description can be shown on the table as follows:

Table 4.3 Learning Styles' Categorization

No	Categorized	N	Percentage
1	Visual	43	64%
2	Auditory	8	12%
3	Kinesthetic	16	24%

From the table above, then researcher made the histogram students' learning styles and the result as follows:

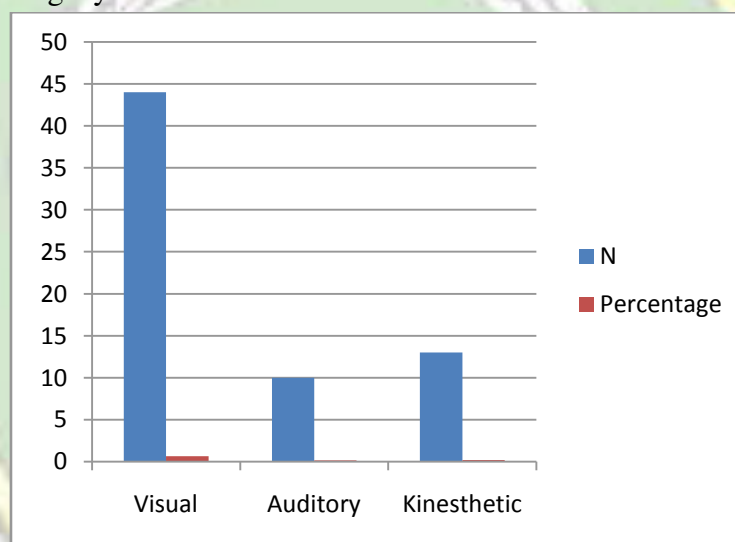


Figure 4.1 Histogram of Learning Styles' Categorization

From histogram above shows that the majority of students' learning styles are visual which have 43 students, next is kinesthetic styles which have 16 students and auditory have 8 students.

2. Reading Achievement

Researcher could determine table of distribution frequency. Researcher used formula to determine distribution frequency. The formula can be shown as follows:

- a) Determine Range (R). Range is calculated from highest score minus lowest score. ($R = \text{highest} - \text{lowest score}$). In this research, the highest score is 83 and the lowest is 9, so $R = 83 - 9 = 74$
- b) Determine amount of class. It calculated used formula, $k = 1 + 3.3 \log n$. In this research n or number of cases is 67, so $k = 1 + 3.3 \log 67$; $k = 1 + (3.3 \times 1.826)$; $k = 7$
- c) Determine interval. $i = R/k$. in this research $i = 74 / 7 = 11$

After got data above, researcher made table of distribution frequency as follows:

Table 4.4 Distribution Frequency of Reading Achievement

Class (k)	Interval (i)	Frequency (f)
1	9-19	16
2	20-30	12
3	31-41	11
4	42-52	10
5	53-63	14
6	64-74	3
7	75-85	1
N		67

From data on the table above can be informed that the highest frequency is 16 students, who have score in range score 9-19, and the lowest frequency is 1 student in range score 75-85. Based on table above, researcher is able to make a histogram of reading achievement and the histogram can be seen as follows:

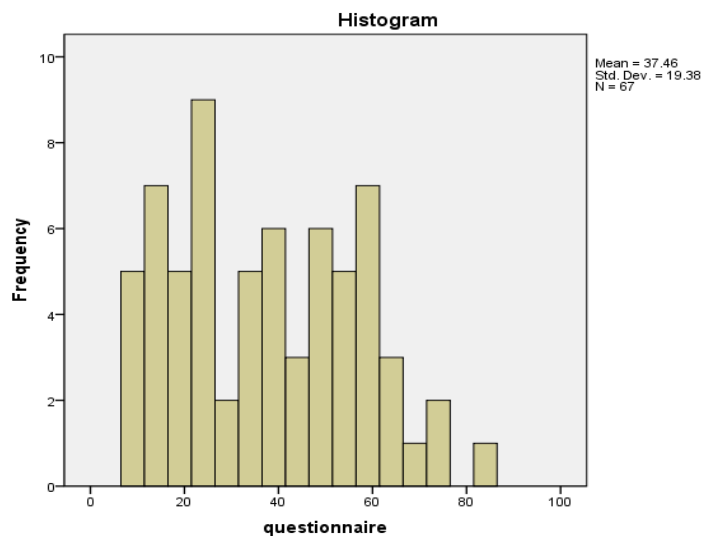


Figure 4.2 Histogram of reading achievement

From the histogram above, it is stated $M = 37.46$ and $SD = 19.38$. To determine the category of reading achievement was good, medium or poor, the researcher grouped scores using the standard as follows:

- 1) More than $M + 1.SD_x$ ($37.46 + 19.38 = 57$) is categorized into good
- 2) Between $M - 1SD$ to $M + 1.SD_x$ (18 to 57) is categorized into medium.
- 3) More than $M - 1.SD_x$ ($37.46 - 19.38 = 18$) is categorized into low

Thus it can be seen that the scores which are more than 57 is considered good, while the scores which are less than 18 is categorized into low and the score of between 18 to 57 is categorized into medium. That categorization can be clearly seen in the following:

Table 4.5 The Categorization of Students' Reading Achievement

No	Score	Frequency	Percentage	Category
1	More than 57	13	19.5%	Good
2	18 to 57	41	61%	Medium
3	Less than 18	13	19.5%	Low
Total		68	100%	

From the such categorization can be seen that the students' questionnaire on reading achievement showed that 19.5% in the good category, 61% in a medium category and 19.5% in a low category.

C. Data Analysis

To determine whether there is significant effect of different learning styles on reading achievement, there are some steps of calculation to be done. Firstly, researcher used assumption test. Assumption test is used to determine the normality and homogeneity of the data. In this case, researcher just used normality test

Normality test is used in order to measure whether the data is normal or not. It is one of the most common assumptions made in the development and use of statistical procedures.⁶¹ The hypotheses of this normality test are:

H₀= the data have normal distribution.

H_a= the data have un-normal distribution.

H₀ is accepted if $a_1 \text{ maximum} < D_{\text{table}}$ and H_a is accepted if $a_1 \text{ maximum} > D_{\text{table}}$. D_{table} is calculated on significance level 5% and the pattern is $\frac{1.36}{\sqrt{n}}$, and in this research D_{table} is $\frac{1.36}{\sqrt{67}}$. The result of D_{table} is 0.166

In this research, researcher using test used Kolmogorof-Smirnov on the SPSS 18 to calculate normality test.

a) Normality of learning styles' questionnaire of the students

Researcher used SPSS 18 to calculate the normality of learning styles' questionnaire of the students, and the result can be shown as follows:

Table 4.6 Normality of Learning styles' questionnaire

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
Questionnaire	.119	67	.020	.957	67	.022

From data above showed that $a_1 \text{ maximum}$ is 0.020, and $D_{\text{table}} = 0.166$ calculated by $\frac{1.36}{\sqrt{67}}$. So, it can be stated that H₀ is accepted and the data of students' learning styles questionnaire were normally distributed because $a_1 \text{ maximum} < D_{\text{table}}$.

b) Normality of Reading Achievement

⁶¹ Henry C. Thode, Testing for Normality, (New York: Marcel Dekker, Inc, 2002), 1.

To calculate the normality of the reading achievement, researcher used SPSS 18 and the result as follows:

Table 4.7 Normality of Reading Achievement.

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
nilai	.113	67	.033	.950	67	.009

From data above, the a_1 is 0.03 and D_{table} is 0.166. This result shows that H_0 is accepted because $a_1 < D_{table}$. So, the reading achievement of the students was normally distributed.

Secondly, researcher want to interpret the hypothesis used testing hypothesis. In this case, researcher used regression analysis. Regression analysis is used to determine whether there is significant effect between independent and dependent variable. In this research, the independent variable is students' learning styles and the dependent variable is reading achievement of students. To calculate regression, researcher used SPSS 18 and the result as follows:

Table 4.8 Model Summary Learning Styles' Effect on the Reading Achievement

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.954	.910	.909	5.857

Based on table above, the value of R as symbol coefficient correlation showed 0.954. It means that the correlation between two variables in this research namely students' learning styles as independent variable and students' reading achievement as dependent variable is categorized into high. Moreover, the value of R squared as coefficient determination informs about how well the independent and dependent variable interacted. The R square above showed 0.910. It implies that the independent variable (students' learning styles) give

91% contribution on the dependent variable (students' reading achievement), then 9% is influenced by other factors.

Then the analysis focus on the linearity of each variable, namely students' learning styles as independent variable toward the students' reading achievement as dependent variable. And the result can be showed from the ANOVA table below:

Table 4.9 Table ANOVA of Learning Styles' Effect on the Reading Achievement

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	22558.839	1	22558.839	657.598	.000
	Residual	2229.818	66	34.305		
	Total	24788.657	67			

Referring to the table above, the significant value is 0.000. It means that the regression model equation is significant because it has already fulfilled the criteria of linearity. The criteria can be linear if the significant value less than 0.05.

Then the analysis focus on the effect of the independent variable (students learning styles) toward dependent variable (students' reading achievement), and the result can be showed on the table below:

Table 4.10 Coefficient of Learning Styles' Effect on the Reading Achievement

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-100.193	5.416		-18.501	.000
	questionnaire	4.213	.164	.954	25.644	.000

Data above gives a clear description about the equational regression model through Unstandardized Coefficient B. therefore, the regression model is $Y = -100.193 + 4.213X$. It means that every increasing 1 value of students' learning styles as independent variable, there students reading achievement as dependent variable will increase 4.213. From

table above can be seen if the significant value of t is 0.000. Because the significant value of t is less than 0.005 can be concluded H_a is accepted. It means that there is significant effect of different learning styles with reading achievement of the eleventh grade of SMA Negeri 1 Jenangan academic year 2015/2016.

And after it, researcher determined the value of significant difference of each learning styles (visual, auditory, kinesthetic). To determine this case, researcher compared the result of regression analysis among them using SPSS 18 program for windows, and the result as follows:

Table 4.11 ANOVA of Visual Styles' Effect on the Reading Achievement

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	12697.366	1	12697.366	209.746	.000
	Residual	2542.544	42	60.537		
	Total	15239.909	43			

Table above described that the value of F is 209.746 in the significant level $0.000 < 0.005$. From this table can be used to make equational regression model. Equational regression model can be used to predict the students' reading achievement, and the result can be seen as follows:

Table 4.12 Coefficient of Visual Styles' Effect on the Reading Achievement

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-145.748	12.676		-11.498	.000
	questionnaire	5.998	.414	.913	14.483	.000

From table 4.12 can be made the equational regression model through Unstandardized Coefficient B and the regression model is $Y = -145.748 + 5.998X$. It means that if there is no value of visual styles, so the value of students' reading achievement is -145.748. The value of

regression coefficient is 5.998; it shows that every increasing 1 value of student learning styles, so the students' reading achievement will increase 5.998. And the significant value of t is 0.000. It means that the regression model equation is significant because it has already fulfilled the criteria of linearity. The criteria can be linear if the significant value is less than 0.005. Referring the result of analysis through SPSS 18 for Windows can be concluded that visual styles as independent variable significantly affected the students' reading achievement as dependent variable.

Table 4.13 ANOVA of Auditory Learning Styles' effects on Reading Achievement

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	791.919	1	791.919	60.057	.000
	Residual	92.303	7	13.186		
	Total	884.222	8			

Table above described that the value of F is 60.057 in the significant level $0.000 < 0.005$. From this table can be used to make equation regression model to predict the students' reading achievement as dependent variable, and the result can be seen as follows:

Table 4.14 Coefficient of Auditory Learning Styles' Effect on Reading Achievement

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-129.455	23.389		-5.535	.001
	Questionnaire	4.242	.547	.946	7.750	.000

From table coefficient, the value of Constanta (a) is -129.455, and the value of learning styles (b) is 4.242. From this data can be made

equational regression model that can be used to predict students' reading achievement, and the equational regression model is $Y = -129.455 + 4.242X$. It means that the arrow of regression model is positive because the value of auditory learning styles is positive. It implies that every increasing 1 value of learning styles, the reading achievement will increase 4.242. From table above also can be seen that the significant value of t is 0.000. From this value can be determined the answer of hypothesis. Because the significant value of t is less than 0.005, so the auditory learning styles as independent variable significantly effects the students' reading achievement as dependent variable.

Table 4.15 ANOVA of Kinesthetic Learning Styles' Effect on Reading Achievement

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2482.751	1	2482.751	6.039	.027
	Residual	6166.779	15	411.119		
	Total	8649.529	16			

Referring to the table above, the value of F is 6.039 in the significant level $0.000 < 0.005$. From this data can be used to make equational regression model. The model can be used to predict the dependent variable (students' reading achievement).

Then the analysis focus on the effect of the independent variable toward dependent variable, and the result can be showed on the table below:

Table 4.16 Coefficient Kinesthetic Learning Styles' Effect on Reading Achievement

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	-82.072	49.798		-1.648	.120
Questionnaire	3.328	1.354	.536	2.457	.027

Data above gives a clear description about the equational regression model through Unstandardized Coefficient B. Therefore, the regression model is $Y = -82.072 + 3.328X$. It means that if there is no value of kinesthetic learning styles as independent variable, so the value of reading achievement is -82.072. Coefficient of Regression X is 3.328; it implies that every increasing 1 value of kinesthetic learning styles, the reading achievement as dependent variable will increase 3.328. And the significant value is 0.000. It means that the regression model equation is significant because it has already fulfilled the criteria of linearity. The criteria can be linear if the significant value is less than 0.005. Referring the result of analysis through SPSS 18 for Windows can be concluded that H_a is accepted. It implies that kinesthetic styles are significantly effects the students' reading achievement.

After it, researcher wanted to determine whether any significant different effect among three learning styles above by compare the F value and the result as follows:

1. The F value of visual learning styles = 209.746.
2. The F value of auditory learning styles = 60.557
3. The F value of kinesthetic learning styles = 6.039

From description above can be stated that there is different effect of each learning style on reading achievement, in which the visual learning styles has highest effect on students' reading achievement.

D. Discussion of The Research Findings

Based on the result of analysis, it is found that learning styles have effect to the students' reading achievement of the eleventh grade students of SMA Negeri 1 Jenangan academic year 2015/2016. It's shown from the table 6.1 that adjusted R square is 0.909. It means that the effect of independent variable (learning styles) to dependent variable (reading achievement) is 90.9% and the other is affected by other variable.

From the table 4.9 can be used to make equational regression to predict the students' reading achievement. From table coefficient showed that the value of Constanta (a) is -100.193 and the value of learning styles (b) is 4.213. Furthermore, the equational regression model is the regression model is $Y = -100.193 + 4.213X$. It means that the arrow of regression model is positive because the value of auditory

learning styles is positive. It implies that every increasing 1 value of learning styles, the reading achievement will increase 4.213. This data also showed that if there is no value of learning styles, so the value of reading achievement is -100.193. Then, the significant value of t is 0.000. It means that the regression model equation is significant because it has already fulfilled the criteria of linearity. The criteria can be linear if the significant value is less than 0.005. Referring the result of analysis through SPSS 18 for Windows can be concluded that H_a is accepted. It means that there is significance effect of different learning styles with reading achievement of the eleventh grade of SMA Negeri 1 Jenangan academic year 2015/2016.

This result is related to the Guy F. Workman who stated that “the students who understanding their learning style will have a well planned live, where they will more success in their job, have a better chance of avoiding problematic situation and they will be more able to target areas that need improvement”.⁶² Furthermore, it supported Becky L. Spivey’s statement that everybody has a preferred style of learning. Knowing and understanding their learning style helpsthem to learn more effectively. It can capitalize on their strengths and improve their self-advocacy skills⁶³.

Then, the researcher conduct thorough analysis of different effect of each learning styles on reading achievement. To determine them, researcher compared the F value from analysis of ANAVA used SPSS 18 for windows programs. And the result that there is different of each learning style in which the highest effect is visual styles with value of F is 209.746, next is auditory with value of F is 60.557 and the lowest is kinesthetic styles with value of F is 6.039. This result didn’t mean that the visual learning style is considered the best style or the kinesthetic is called the worst stylesfor reading mastery. This view is accordance withBecky L. Spiveybwho claims, “there is no right or wrong to these preferences. The higher the percentage, the more strongly you prefer that learning style. If the percentages of two categories are similar or exactly the same, it simply means that you prefer to learn in more than one style.”⁶⁴

⁶²Guy F. Workman, “Learning Styles: Fact or Fiction, A Literature Review of Learning Styles,” (Thesis, United States Military Academy, West Point, NY, 2012), 4.

⁶³Becky L. Spivey, “What are Learning Styles?”, Educational Handout for teachers and parents, 369(2012), 4.

⁶⁴*Ibid.*, 7.

CHAPTER V CONCLUSION AND RECOMMENDATION

A. Conclusion

Referring to the finding and discussion from previous chapter, the researcher concluded that:

- 1) From 67 students who observed, there are 43 students considered having visual styles, 8, 16 students have auditory and kinesthetic learning style respectively.
- 2) The majority of students' reading achievement is medium category in range score 18-57 which have 41 frequencies. 13 students are categorized good in range score more than 57 and the other are low in the range less than 18.
- 3) The students learning styles (independent variable) give 91% contribution on students' reading achievement (dependent variable), and the other are influenced by other factors. Then the regression model equation is $y = -100.193 + 4.213X$, it means that if there is no value of students' learning styles, so the value of students' reading achievement is -100.193. The value of regression coefficient is 4.213; it shows that every increasing 1 value of student learning styles, so the students' reading achievement will increase 4.213. Next, significant value of t is 0.000. The value of t is less than 0.005 and it means that H_0 is accepted or in the other word means that there is significant effect of students learning styles (independent variable) on their reading achievement (dependent variable). Furthermore, there is different effect of each

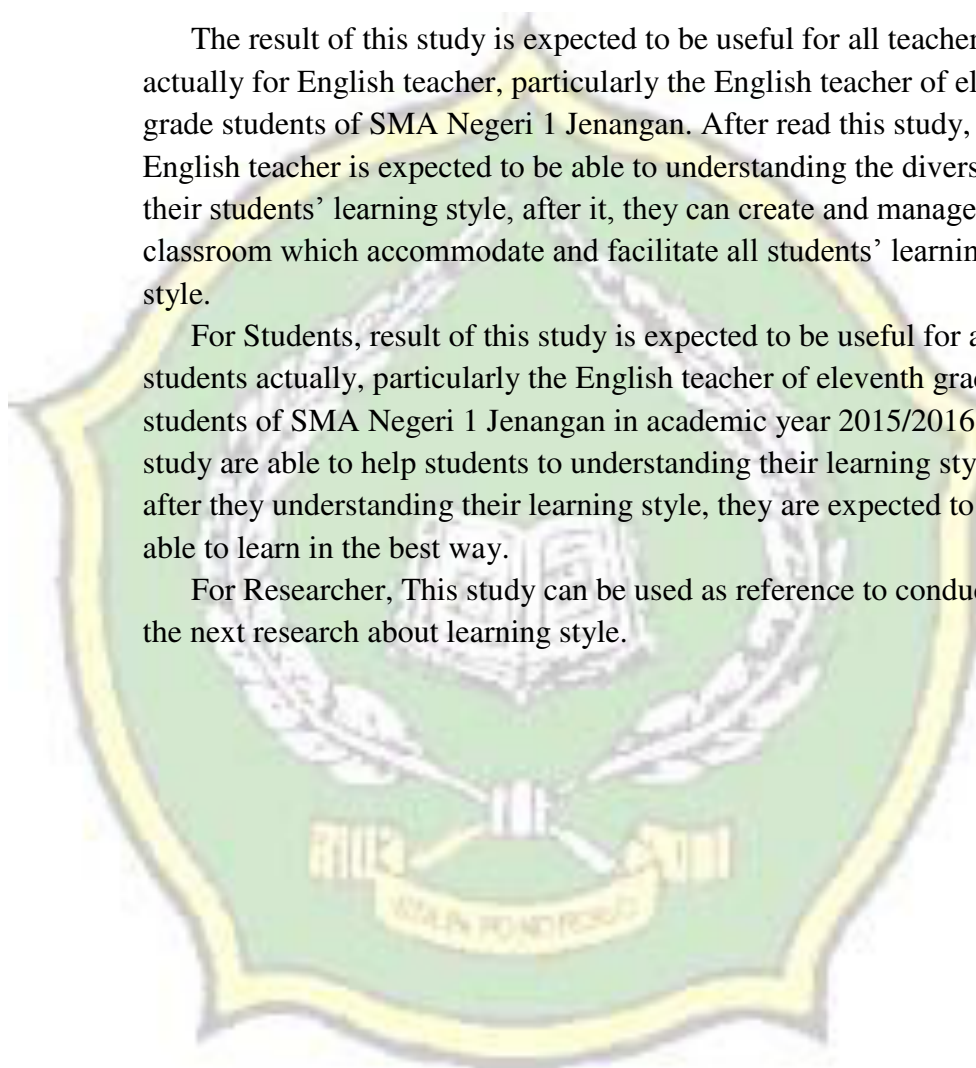
learning style on reading achievement where the highest effect is visual styles which have value of F is 209.76, then is auditory and kinesthetic which have value of is 60.557, 6.039 corepondingly.

B. Rekomendation

The result of this study is expected to be useful for all teachers actually for English teacher, particularly the English teacher of eleventh grade students of SMA Negeri 1 Jenangan. After read this study, English teacher is expected to be able to understanding the diversity of their students' learning style, after it, they can create and manage classroom which accommodate and facilitate all students' learning style.

For Students, result of this study is expected to be useful for all students actually, particularly the English teacher of eleventh grade students of SMA Negeri 1 Jenangan in academic year 2015/2016. This study are able to help students to understanding their learning style, after they understanding their learning style, they are expected to be able to learn in the best way.

For Researcher, This study can be used as reference to conducting the next research about learning style.



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