



LEARNING STYLES AND VOCABULARY ACHIEVEMENT

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Sri Minda

UIN Syekh Ali Hasan Ahmad Addary
Padangsidempuan
sriminda@uinsyahada.ac.id

Purnama Rika Perdana

UIN Sultan Maulana Hasanuddin Banten
purnama.rikaperdana@uinbanten.ac.id

Abstract: *This study aims to determine whether there is an influence of learning styles on the acquisition of English vocabulary. This study investigates whether there is an effect of visual, auditory and kinesthetic learning style on English vocabulary. This type of research is correlation research. The population of this study were second grade senior high students. The number of samples in this study were 50 students who were randomly selected. To collect data, the researcher administered a questionnaire and a vocabulary test. Questionnaires were given with the aim of knowing student learning styles. The researcher made observations in class when there was an English subject. Pearson Product moment was applied to analyze if learning styles correlates with vocabulary achievement or not. Then, t-test was applied to examine the significance of the correlation. Based on the calculation, it was obtained $r\text{-value} = 0.726$ and $r\text{-table} = 0.502$. $r\text{-value}$ is higher than $r\text{-table}$ ($0.726 < 0.502$), so the H_0 is rejected. It implies that there is a correlation between learning styles and vocabulary achievement. The result of t-test showed that t obtained ($0,820$) is higher than t table ($0,317$) at the level of significance $0,05$ with two-tailed test. It is directly defined that H_a is accepted. Therefore, there is positive correlation between the two variables. It means that there is significance correlation between learning styles and vocabulary achievement.*

Keywords: *visual, auditory, kinesthetic, and vocabulary achievement.*

INTRODUCTION

Teachers' acknowledge in recognizing and understanding the students' character become a big part in influencing the outcome of the learning activities. Teachers' awareness of students' character and needs is a big deal in creating effective learning process (Maria and Kingsley, 1998: 84). One of the characteristics of students that influence learning outcomes is learning style. Learning style is defined as behavior that is felt interesting by students in performing learning activities, both when they are alone or in a study group with school friends. (DePorter, B., And Hernacki, M, 1992: 51). Learning style is a very important learning



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modality. Learning style is an association of how a person gathers and then arranges and processes information (Marantika, 2022). Learning styles are not only in the form of aspects when dealing with information, seeing, hearing, writing and speaking but also aspects of sequential, analytic, global or left-brain and right-brain information processing. Another aspect is when responding to something in the learning environment (abstract and concrete absorption). "Efforts to improve student learning outcomes should require effective learning" (Payaprom & Payaprom, 2020). Effective learning should be educators able to recognize students psychologically and educators will find it easier to deliver material. The influence that arises from this is to increase learning achievement. An educator must know what the learning styles of his students are, how they tend to receive information, so that the teaching and learning process can be carried out effectively for each student. So that student learning outcomes can be maximized.

Liksman (1998: 23) says that learning styles are a mixture of nature and nurture. Moreover Gunawan (2005: 139) also argues that from some studies done by other researchers have shown that the students who learn by using their dominant learning style will achieve a much higher score than they who do not learn with their learning style.

Learning styles are divided into three major groups. They are visual, auditor, and kinesthetic (Widharyanto & Binawan, 2020). The Students were supposed to recognize their learning style because they need to be more comprehensive in learning. information optimally depending on learning taking place according to their learning style. As for the teacher, so that he can accommodate the lesson which match the students' style. That is, every subject teacher must understand that information often appears in verbal and visual forms, and most of the information will be lost to someone who does not function these two skills well. The learning essentials are more meaningful if the students feel comfortable in class. The more pleased the students in class the more powerful the class

activities will be. It can be concluded that best learning process will count every single thing that the students really want and need.

Therefore, the purpose of education is supposed to assist students to develop their abilities, both in preferred and less preferred learning styles. The various learning styles used will provide a good framework for designing teaching with a broad perspective. The objective is to ensure that the learning needs of students in each learning style types are match, at least for part of the class time. This is similar to as "teaching around the cycle" (Newton, 2015).

Student learning styles that match the way they carry out learning activities will have a positive impact, such as being able to increase their learning achievement. Therefore, teachers in teaching must pay attention to student learning styles. By recognizing student learning styles, teachers can design learning activities with a variety of appropriate models, strategies and methods.

These various learning activities will create a learning atmosphere that is conducive, fun, and in accordance with the needs and abilities of students (Chen et al., 2020). Of course, it also makes it easier for students to absorb information so as to increase their interest and learning achievement. In the end, learning styles are very essential in acquiring the studies. Appropriate learning activities with the students' preferred learning behavior will surely affect the quality of students' understanding.

All of us, in some cases, use these three learning styles. But, most of people show preference/inclination to a certain learning style. A study which did by Manolis and his colleagues (Manolis et al., 2013) investigated more than 5.000 students in USA, Hong Kong and Japan, grade 5 to 12, shows that they are Visual (29%), Auditory (34%) and Kinesthetic (37%). However, when they have grown to adults, the preference to visual learning style is more dominant. It is caused by the fact that 70% of our sensory receptor are in our eyes.

Every individual has a different learning style (Childs-Kean et al., 2020). Some people learn best by using their auditory skill to process

information which they heard (auditory learners). Some use more their visual skill to process information (visual learners). Others like to use their physical skill or experience (kinesthetic learners). If someone knows his/her learning style, he/ she can select the effective learning strategy which is adjusted to his/her respective learning style.

By knowing the students' learning style, the teacher can help the students to maximize their respective learning styles and make the teaching learning process more comfort and efficient. The teacher should care to each student's learning style. The teacher cannot do this for everyone all the time, but he/ she is expected to have the ability in creating integrated learning skills regularly throughout every learning sequence (Rasheed & Wahid, 2021). If the teacher does, the students can increase their learning achievement.

The correlation between learning styles and students' English learning achievement is parallel (Gholam-Shahbazi, 2019). It has positive correlation because the correlation between the two variables has the same direction. It means that if the category of students' learning style is high, the students' English learning achievement is also high, and if the category of students' learning style is low, the student's vocabulary achievement is also low.

In connection with the problem explained above, the writer is interested in finding out if there is a significant correlation between learning styles and students' vocabulary achievement.

In accordance with the previous background, the problem of the study investigated whether there is correlation between learning styles and students' vocabulary achievement or not.

RESEARCH METHOD

Research Design

This study was conducted by using correlational research design. Correlation research is non experimental research that studies the

direction and strength of relationships among variables (Ary, Jacobs, & Sorensen, 2001, p. 365). The purpose of this research was to test the relationship between variables. The variables were learning styles as the independent variable (X) and students' vocabulary achievement as the dependent variable (Y). Correlation study particularly bivariate correlation was carried out to investigate the relation of learning styles and vocabulary achievement.

Participants

The research was conducted at the second grade senior high school students. There are 278 students at this grade. They consist of 162 female students and 116 male students aged about 17 years old. In determining the sample, the researcher conducted simple random sampling. There were 50 students became the sample.

Research Instruments

Questionnaire and test were applied to gain the data. The data is students' score from both of the instruments. The instruments for collecting data in this study are questionnaire and test. The questionnaires were distributed to the students. The aim of questionnaire is to get a clear information about the students' learning style. The researcher could classify each student based on the learning style types. The students had about 25 minutes to complete the questionnaire. It has 30 statements in which every type consists of 10 questions. Before the instruments were distributed to the students, they were examined through validity and reliability test. The questionnaire used Likert's (5-1). The ranges are *strongly agree*, *agree*, *undecided*, *disagree* and *strongly disagree*. The hypothesis is formulated as "there is significance correlation between learning styles and students' vocabulary achievement".

RESEARCH RESULTS

The data of this study was students' score gained from the questionnaire and test. After the data had been collected, it could be analyzed that there were 14 students (28%) as visual learners, 13 students (26%) are auditory learners and 23 students (46%) are kinesthetic learners. The mean of the questionnaire scores was 61, and the Standard Deviation (SD) was 7.

The level of students' learning style was grouped into 3 categories (Azwar, 2000) by applying the following formula:

- a. High : $\text{mean} + 1 (\text{SD}) < X$
- b. Moderate : $\text{mean} - 1 (\text{SD}) < X < \text{mean} + 1 (\text{SD})$
- c. Low : $X < \text{mean} - 1 (\text{SD})$

Table 1. The level of students' learning style can be seen in the table below:

Variables	Range of Score	Category	Sum	Percentage
Learning Style	$68 < X$	High	10	20
	$54 < X < 68$	Moderate	34	68
	$X < 54$	Low	6	12
Total			50	100

Based on the presentation above, it can be inferred that, for the level of learning style, 20 % students are high category, 68 % students are in moderate category, and 12 % students are in low category.

Pearson Product moment was applied to calculate how many contributions of X variable to Y variable. Based on the analysis, it was obtained $r\text{-value} = 0.726$ and $r\text{-table} = 0.502$. $r\text{-value}$ is lower than $r\text{-table}$ ($0.694 < 0.468$). It can be defined that H_a is accepted which implies that variable X correlates with variable Y. In the other words, it can be implied that there is relationship between learning styles and vocabulary achievement.

The result of t-test showed that t obtained (0,820) is higher than t table (0,317) at the level of significance 0,05 with two-tailed test. It is directly defined that h_a is accepted. Therefore, there is positive correlation between the two variables. It means that there is significance relationship between learning styles and vocabulary achievement.

A fifty-item multiple choice tests were examined to the students to know about the vocabulary achievement. The students had a half an hour to complete the test. The point was like 1 for correct answer and 0 for wrong answer. Before the both of the instruments were given to students, they were examined through validity and reliability test. The researcher took grade XI students of SMA Negeri 1 Padangsidempuan in Academic Year 2018/2019.

Based on the data, the students' score from questionnaires are associated with the students' vocabulary achievement. It means that if the category of students learning style is high, the student's vocabulary achievement is also high, and vice versa. Thus, it can be verified that there is a positive correlation between learning styles and vocabulary achievement.

DISCUSSION

Based on the results of the analysis, it can be seen that there is an relationship between learning styles and students' vocabulary achievement. These results indicate that the learning styles applied by students in terms of style visual learning, auditory style and kinesthetic style provide support in efforts to improve learning achievement. The influence of learning styles on student learning achievement shows that so far when examined through visual learning styles it shows that students' ability to remember the material provided by the teacher and students have creativity in participating in the learning process will provide support for students' abilities to understand related to the material delivered by the teacher.

According to (Widharyanto & Binawan, 2020) the visual learning style is more enjoyable by seeing what is being learned. Images or visualizations will help those with a visual learning style to better understand the ideas in the information presented explanation form. When someone explains something to people who have explained by that person. In this case the teaching methods used by the teacher should be

more or more focused on demonstrations or media, invite them to objects related to the lesson, or by showing the props directly to students or depicting them on the blackboard (Nurhaliza & Sari, 2023). In this case the teaching methods used by the teacher should be more or more focused on demonstrations or media, invite them to objects related to the lesson, or by showing the props directly to students or depicting them on the blackboard.

When viewed from the auditory style, it shows that with students who are always active in responding to the material provided, students enjoy reading, learning by listening and discussing, like doing group assignments and prefer learning through practice can improve student achievement.

According to (Altamimi et al., 2022) states that children who have an auditory learning style can learn faster by using verbal discussions and listening to what has been said by the teacher. Auditory children can digest meaning which is conveyed through voice intonation, pitch (high and low), speed of speech in other auditory matters. Written information sometimes has minimal meaning for auditory learners. Auditory learners usually memorize faster when reading text aloud or listening to tapes.

Furthermore, when viewed from the kinesthetic learning style it is also shown by always being active to do something according to the teacher's directions, memorizing by walking and seeing and liking to use various equipment and media can encourage students to learn with better results.

According to Deporter and Hernacki (2000), individuals have learning style tendencies audiorials are likely to learn better by listening. They absorb information or knowledge means that the child must hear, only then can remember and understand the information received.

According to ,(Kamal et al., 2021) learning style is a process of behavior, appreciation, and the tendency of a student to learn or acquire knowledge in a separate way. Learning style is a combination and how it absorbs, and then organizes and processes information. Learning style is

one of the keys to developing performance at work, at school and in interpersonal situations. When students are aware of how others absorb and process information, students can make learning and communicating easier with their own learning style (Alduais et al., 2018). It means that if students are familiar with their own learning styles, then students can take important steps to help students learn faster and more easily. Each individual has his own way that is considered quite optimal in learning new information, including students. Learning styles no longer apply to learning in certain fields, but also to other fields, including student learning styles in the teaching and learning process, both at school and at home.

The results of this study also support previous research conducted by (Dong et al., 2019), (Wanna & de Jesus Simões, 2021) and (Pardamean et al., 2022) which states that there is an influence of learning styles on student achievement. Every student has their own behavior in learning. It is essential to clarify the students' learning style to meet their learning preferences, so that the aims of learning are easily to be reached.

CONCLUSION

The calculation results of correlation between the two variables are:

1. It was obtained that $r\text{-value} = 0.726$ and $r\text{-table} = 0,502$. Since $r\text{-value}$ is higher than $r\text{-table}$, it verifies that there is correlation between learning styles and students' vocabulary achievement.
2. T-test resulted that $t\text{-obtained}$ is higher than $t\text{-table}$ in which $t\text{-obtained}$ is 0.820 and $t\text{-table}$ is 0.317. It clarifies that H_a was accepted and H_0 was rejected. In line with this, it is known that there is a significant correlation between learning styles and the students' vocabulary achievement.

Suggestions

Based on the findings, it is suggested that:

1. Teachers, especially English teacher, have to recognize the students' learning styles.

2. Teachers are supposed to be able to integrate more teaching styles into their class preparation even though they may not feel entirely comfortable using them. For example, if the teacher knows that many of their students are kinesthetic learners, he/she might plan language lessons in which students can participate in “hands-on” ways.
3. Teachers should also encourage their students to stretch their learning style in order to become more empowered in a variety of learning situation.
4. Students need to be aware of their own learning styles and to cooperate with teachers in matching teaching and learning styles.

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