



The Correlation Between Visual, Auditory, and Kinesthetic Student's Learning Styles and Writing Skill

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Abstract

Students study in a variety of ways or styles. Understanding and learning challenges may be impacted by this learning style. One of the numerous types of research is on learning style. Student's learning styles and diverse learning methods might help them become better writers in English. This research aims to demonstrate how students' learning styles and the development of their writing skill are related. The participants in this research are VIII-A graders at one of the Muhammadiyah private schools in Sidoarjo. This correlation study used a Likert scale questionnaire as the instrument. The answers to the questionnaire were then connected with the students' writing scores using a quantitative research strategy and the correlation with IBM SPSS 26. The researchers found that the result of testing the hypothesis (r_{count}) was 0.641 and the score (r_{table}) was 0.515 indicating that the score of $r_{count} > r_{table}$ was $0.641 > 0.515$. This means that H_a is accepted and H_0 is rejected which has a positive meaning or there is a significant relationship between students' visual, auditory, and kinesthetic learning styles and students' writing skill. This study implies that each student has certain learning style so that in the classroom instruction the teachers need to be aware their different characteristics to optimize the students' learning outcomes including in English writing class.

Keywords: Learning styles, Writing, Connection

DOI : doi.org/10.24903/bej.v5i2.1352

Received : July 2023

Accepted : July 2023

Published : August 2023

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1. INTRODUCTION

Every student in our country has the right to an education, which should be provided in a setting that fosters learning and encourages pupils to maximize their potential. Students' potential development will aid in the growth of the country. Students' potential emerges from the elements and interactions they receive from good intellect. If learning can meet students' demands, it will be able to accommodate their needs while still maintaining its effectiveness. The distinctiveness or distinctions between students are related to special needs (Papilaya & Huliselan, 2016). As individuals, students learn in different ways. Most of us are currently learning to accomplish things in a variety of styles and ways. However, there is unquestionably one approach that we prefer. Students are the same way; they each have diverse hobbies. Students might observe and act the same thing at the same moment, but it doesn't mean they will have the same opinion as us. This applies even if they study in the same school and class. Regardless of the approach used, the differences in learning styles show the quickest and greatest manner for each person to be able to take in information from sources other than themselves.

Whatever method is employed, everyone can integrate information from sources other than oneself more quickly and effectively using variances in learning styles. People with different learning styles also tend to have distinct strengths, all of which can be crucial when using the technique that's opinion according to (McCabe et al., 2012). Therefore, it might be simpler for us as teachers if one day, for instance, we have to help someone choose the proper learning style and produce the best outcomes for him if we can appreciate how diverse each person's learning style is. The learning method chosen by students is referred to as a learning style. If the learner follows his preferred method of learning, the content will be mastered quickly. The process of absorbing, processing, and storing knowledge or subject matter and concentration in studying it will be higher for students who learn in accordance with their learning preferences. A person's learning style is generally considered to be influenced by personality traits such as cognitive and psychological, socio-cultural background, and educational experience. When a student is admitted to the educational institution in which they will reside, the diversity of their learning preferences must be considered from the outset (Wassahua, 2016).

Learning style is a process of behavior, appreciation, and one's propensity to learn or gain knowledge in its own method, according to (Anggrawan, 2019). Based on cognitive preferences, IQ profiles, and sensory preferences, many different specialists describe learning styles. Visual, auditory, and kinesthetic learning styles were used in this research as sensory preferences. Sensory preferences are justified because students can perceive learning events through their senses. According to preferred senses, kinesthetic learners learn by movement, work, and touch, whereas auditory learners learn by hearing and visual learners receive the best and most effective information through the sense of sight. Every learner has all three learning styles; however, one style tends to dominate (Rambe & Yarni, 2019). Writing skill is a rare talent that enables the writer to communicate his ideas in meaningful ways and engage the reader on a deeper level. The majority of the teaching profession is aware of the diverse backgrounds and unique characteristics of students. Consequently, these variations will affect how students learn to write (Mulinti, 2020). According to the just-mentioned theory, every student will constantly try to attentively study in order to meet his learning objectives. Each youngster uses a variety of learning styles to try to accomplish their academic objectives. The development of students' writing skill will benefit if a teacher is able to recognize each student's preferred learning style. Some teachers explore English class activities by using media to identify students learning styles as stated by (Avivi & Megawati, 2020; Muntiari & Megawati, 2021). For example, they used online media Instagram and offline media use board games to stimulate students to write paragraphs and the responses are various depending on the students learning style.

The researchers had read and discovered four earlier studies. The association between learning styles and students' reading skills is covered in three research studies, and the relationship between learning styles and students' vocabulary is covered in one study. Research (Erginer, 2014) has results showing that reading comprehension will increase, even if slightly when reading activities are supplemented with the help of memory learning styles. In the second study belonging to (Karmila, 2018) the result that there is a correlation between learning styles and reading comprehension is very significant. The third study belonging to (Maulana, 2020) with the results of a significant relationship between students' learning styles and students' vocabulary mastery. In Nisa's latest research (Nisa, 2016) the results of student learning styles did not have an important relationship to students' understanding of narrative

texts or the significance of student learning styles could be ignored in reading comprehension of narrative texts. Therefore, researchers want to make a difference and renewal from several previous studies by examining the relationship between learning styles and writing skills in junior high school students. Based on these issues, research titled "The Correlation Between Visual, Auditory, and Kinesthetic Student's Learning Styles and Writing Skill" has been conducted.

The results of this research can be used by teachers to determine whether there is a relationship between students' different learning styles and improving their writing skills. If student learning habits can help students become better writers. Adaptable to a variety of learning techniques, which inspires students to develop their writing skill. Examining each student's progress on their writing assignments and test results will reveal this. Other interconnected skills within student integrate skill assist their mastery of English language skill. Because a language cannot develop without writing, this guideline is crucial for learning English (Kusumawarti et al., 2020). The contribution of this research is to strengthen the previous studies about visual, auditory, and kinesthetic learning styles and to encourage English teachers to adapt learning to different student learning styles in the classroom and improve students' writing skills by English teachers. The research question, which is derived from the research title about the connection between learning styles and students' writing skill, is "is there a correlation between visual, auditory, and kinesthetic student's learning styles and the writing skill of eight graders at one of the Muhammadiyah private schools in Sidoarjo?". The researchers hope to determine from these inquiries whether students' descriptive text writing scores are significantly correlated by their visual, auditory, or kinesthetic learning styles.

2. METHODOLOGY

2.1 Research Design

Numerous methods, including processes, hypotheses, observations, documentation, questionnaires, and data findings up to the writing employing measurement, computation, formulae, and the certainty of numerical data, are needed for quantitative research. The direction and focus of a research project are determined by theoretical testing, building or accumulating facts and data, statistical descriptions, clarity of relationships, and forecasts in the quantitative approach. As (Gay et al., 2012) stated, correlation research can be used to ascertain whether and how much a relationship exists between two or more variables.

In this work, researchers used quantitative techniques with a correlational design. This relates to the study's principal goal, which is to ascertain the connection between students' learning styles and their writing skill. Finding correlations between variables or using connections to create predictions is the goal of a correlation study (Zulianti & Asari, 2022).

2.2 Data and Source of Data

Student questionnaires regarding their learning preferences and records of the grades assigned to the students' writing skill will be used to gather data. The use of a questionnaire to gather research data, according to (Rambe & Yarni, 2019), gives respondents a set of questions or written statements to respond to. As according to (Husna & Suryana, 2017), questionnaires offer options that respondents can select or closed questions, as well as those that request opinions that respondents themselves describe or open questions with no right or wrong responses. Data for this research will be gathered via a questionnaire containing closed-ended questions. The questionnaire's questions and statements make an effort to cover all potential responses that a respondent might provide. Because the questions posed to each respondent were identical, the data gathered was easier to evaluate.

In this research, a tool with a Likert scale was employed. The Likert scale was utilized in the questionnaire design to gather data on the independent variables in this research, which were visual, auditory, and kinaesthetic learning styles as said by (Husna & Suryana, 2017). Each instrument question has four possible responses on a Likert scale: Strongly Agree, Agree, Disagree, and Strongly Disagree. The results of the students' writing skill, which served as the dependent variable in this research, were gathered through documentation. To ascertain the connection between students' skills and learning styles, the proof is provided in the form of file test scores from the students' class teachers. The data source to be used is data from class 8-A with a total of around 26 students. By taking the eighth grade because the teacher said there, the class that had received writing material was students in grade 8-A and the students in that class had pretty good writing scores.

2.3 Data Collecting Technique

So that the veracity of the information data gathered can be accounted for, the process of gathering data for research that researchers conduct must have a way or technique to gain good, structured, and correct data or information from everything that is researched. The techniques in this research's data gathering as well as the instruments that will be used to do

so are covered in this section. Data gathered using a variety of data collection approaches will be collected by researchers. The research's data comes from a questionnaire on students' learning styles and records of information on scores of their writing skills from their descriptive text. The researchers employ a questionnaire with closed-ended questions and a non-test approach. Students are requested to complete this question by marking the options that best reflect their typical behaviour as it relates to the truth. In this research, students were asked to respond to the questionnaire through the paper that had been given, and they were instructed to select an answer based on an explanation of the numbers that ranged from 1 to 4. Strongly Agree, Agree, Disagree, and Strongly Disagree are the four options.

Researchers gathered documentation data by asking class teachers for test results on students' writing prowess in order to determine students' skill scores. The items of questionnaire that the researchers adopted from (Nisa, 2016) research questionnaire that contains 30 questions on different student learning styles will be utilized as the instrument for gathering data. This questionnaire will apply Likert scale instead of "yes" and "no" because school statisticians and researchers initially thought of the Likert scale as an ordinal scale, according to (Joshi et al., 2015) they contend that the options or answers are ranked in some way. The original Likert scale consists of a number of statements or items that are provided for the actual or fictitious event being researched. Participants were reportedly asked to rate their level of agreement with the claims (items) on a metric scale, from strongly disagree to strongly agree. Questionnaire information is arranged in the following way: statement numbers 1,2,3,4,5,6,7,8,9, and 10 relate to visual learning styles; statements 11,12,13, 14, 15, 16,17,18,19, and 20 relating to auditory learning styles; and statement number. 21, 22, 23,24,25,26,27,28,29, and 30 are kinaesthetic learning styles. To avoid misunderstandings and make it simpler for students to respond, questionnaires were created in Indonesian.

In addition, the researcher gathered soft files of the student's writing skill with descriptive text scores from their teacher. The English teacher for class 8-A gives instructions to students to do the task of making a descriptive text about "Daily Activities" for students in the student handbook. The results of student answers will be assessed by their teacher. That way the student's grades are used in this research.

2.4 Data analysis

The methods used to analyze the data gathered in order to provide answers to the research questions are presented in this part. Processing the results of questionnaire responses and rating the writing skill of the students served as the basis for data analysis approaches. The researchers of this study employed quantitative analysis. Quantitative data analysis requires statistical analysis. According to (Gravetter et al., 2021), the definition of statistics defines procedures for gathering, analyzing, and interpreting data.

Inferential statistics and descriptive statistics are the two main classifications for statistical approaches, according to (Gravetter et al., 2021). Statistical methods used to summarize, organize, and simplify data are referred to as descriptive statistics. However, inferential statistics refers to specific methods that let researchers examine a sample and extrapolate the results to a particular population. To make the classification and presentation of the data more understandable when performing this research, researchers used descriptive statistics. The IBM SPSS statistics version 26 with the Pearson Product Moment Correlation Coefficient formula has been used to examine the research's data. There are conditions or test criteria in any statistical test that are used to evaluate or describe the significance of the values collected during the test. The researchers examined the r_{count} by contrasting the r_{count} with the r_{table} in order to determine the link between the X and Y variables in this correlation test. If $r_{count} > r_{table}$, then H_a is accepted and H_0 is rejected, meaning that the two variables have a positive relationship or result. If $r_{count} < r_{table}$ then H_a is rejected and H_0 is accepted meaning that the two variables have no relationship or the results are negative.

3. FINDINGS

3.1 Different Student Learning Styles

After the researchers analyzed the different learning styles of students through 4 Likert scales given to 26 VIII-A grade students. In summary, there are three learning styles that differ from one student to another. The average total score of the three learning styles is presented on Table 1.

Table 1. The Distribution Percentage of Student's Learning Style

Learning Style	Frequency	Percentage
Visual	11	42.3%
Auditory	9	34.7%
Kinesthetic	6	23%
Total	26	100%

The explanation that can be concluded from the table above is that all students in class VIII-A have different learning styles. It can be seen that 11 students learn to use a visual learning style, 9 students learn to use an auditory learning style and 6 students learn to use a kinesthetic learning style. After the student questionnaire scores were tabulated, it was found that the highest student learning style score was 96 and the lowest student learning style score was 70 and the researchers classified student learning styles into visual, auditory and kinesthetic. In the visual learning styles the highest visual learning style score is 83 and the lowest visual learning style is 70, the auditory learning style the highest score is 96 and the auditory learning style the lowest score is 71 and finally the highest kinesthetic learning style score is 94 and the lowest kinesthetic learning style score is 81. then the researchers calculated the percentage of students' learning styles.

From Table 1 above we can see that the percentage of student's learning styles in visual is 42.85%, auditory style is 37.15% and kinesthetic learning style is 20%. Thus, it was concluded that the dominant learning style of class VIII-A students at one of the Muhammadiyah Middle Schools in Sidoarjo for the 2022-2023 school year is the visual learning style.

3.2 The Results of the Student's Writing Skill Score

To obtain data on students' writing skill scores, the researchers obtained students' writing skill scores from the VIII grade English teacher at the school. The teacher gave scores of student assignments to the researchers as information aids in data retrieval. The results of the student's writing skill score are:

Table 2. The Distribution of Students' Writing Skill Scores

No.	Range Score	Total Students
1.	0 - 30	0
2.	31 - 60	0
3.	61 - 85	13
4.	86 - 100	13
	Total	26

As shown in table 2, we can see that all students with a total of 26 students in class VIII-A scored above the average value of the assignment. The lowest score obtained by students in that class was 85. The total number of students who scored 85 was 13 students, which means that the remaining 13 students scored above 85. The highest score obtained by students in class VIII-A was 92 and those who received grades The highest is only one child. It can be ensured that students understand the material on the tasks given by their English teacher which makes students able to master the task of writing their descriptive text.

3.3 The Result of Calculating Between Learning Style and Writing Skill

After the researchers gave a questionnaire and got a score of students' writing skill, the researchers calculated both of them on the IBM SPSS version 26 statistics using the Pearson Product Moment formula. The results of calculating the correlation between student learning styles and students' writing skill are written in the following table:

Table 3. The Result of Correlation Calculation

		Learning styles	Writing skill
Learning styles	Pearson Correlation	1	.641**
	Sig. (2-tailed)		.000
	N	26	26
Writing skill	Pearson Correlation	.641**	1
	Sig. (2-tailed)	.000	
	N	26	26

** . Correlation is significant at the 0.01 level (2-tailed).

As shown in Table 3, the calculation shows that the correlation value above shows that the correlation coefficient (r_{count}) is 0.641 of the total students ($N = 26$) at a significant level of two variables 0.01 or 1% on the side with degrees of freedom ($df = 24$ ($26-2$)), then the critical value (r_{table}) is 0.515. If $r_{count} > r_{table} = H_a$ is accepted, then H_0 is rejected indicating there is a positive result between the two variables, and if $r_{count} < r_{table} = H_a$ is rejected, then H_0 is accepted indicating there is a negative result between the two variables. The correlation results can be known by using the statistical hypothesis correlation. Based on the score (r_{count}) is 0.641 and the score (r_{table}) is 0.515 indicating that the score $r_{count} > r_{table}$ is $0.641 > 0.515$. This means that H_a is accepted and H_0 is rejected or there is a significant relationship between student's learning styles and student's writing skill. It can be interpreted by researchers with an index value r_{count} 0.641, Product Moment table "r" shows that the correlation value is at medium or sufficient size, which is between 0.40-0.70.

4. DISCUSSION

Researchers have analyzed the results of the correlation between students' learning styles and students' writing skill and it can be found that there is a significant relationship between students' learning styles and students' writing skill. It can be said that the two variables have a positive relationship. Based on the description of the data, class VIII-A students at one of the Muhammadiyah Middle Schools in Sidoarjo for the 2022-2023 school year have forty-two-point three percent of students who are visual learners. To put it simply, visual learners are people who learn by seeing, reading, observing, and other methods to better absorb new concepts or information. Then there are thirty-four-point-seven percent of students learn in an auditory manner. Simply, hearing is how students learn best, whether it be through music or movies. While the kinesthetic style is twenty-three percent. With this method of learning, individuals prefer practicing and engaging in physical activity to learn. The description provided demonstrates that class VIII-A students at one of the Muhammadiyah Middle Schools in Sidoarjo have a higher percentage of visual learners than any other learning style. On another view, the results of this research are different from some of the theories described and presented by several experts. An example is the research conducted by (Agusta, 2019) it was found that students' learning styles did not have a significant effect on students' writing achievement. According to what he said, several elements contributed to the success of students writing achievements. In addition, the research conducted by (Kurniawan, 2017) also supports the truth of Agusta's research that there is no significant relationship between students' learning styles and students' writing achievement. This finding also implies that students' successful management of their learning styles and application of those skills to the process of learning to write does not ensure that they will produce writing that is satisfactory in quality.

In contrast, the results of the two studies above are very different from the results of research from (Ramadian et al., 2019) which state that the majority of class X students have an average grade as indicated by the VAK learning style. The VAK learning style has a relevant role in strengthening knowledge among students who are participants in the research and trains students in the skill to write texts. In addition, other research from (Lista et al., 2015) has results by stating that the eighth graders of their research students are interested in learning the writing process using the VAK learning style. Most of the student responses in the experimental group can be categorized as "very interested". Therefore, it can be concluded that learning styles are related to students' writing skill.

In short, the interpretation of the data shows that student learning styles are related to students' writing skill in grade eighth at one of the Muhammadiyah schools in Sidoarjo for the 2022/2023 academic year.

5. CONCLUSION

This research looked into the connection between students' writing skill and their preferred learning style. The results from the student learning style questionnaire and the students' writing skill scores are described in this research using correlational research. The research data obtained were then calculated using IBM SPSS statistics version 26 with the Pearson Product Moment Correlation Coefficient formula. Looking at this research question, the results show that there is a strong correlation between students' learning styles (X) and students' writing skills (Y). The statistical hypothesis also shows that H_a is accepted and H_0 is rejected which is based on the score (r_{count}) being 0.641 and the score (r_{table}) being 0.515 indicating that the score $r_{count} > r_{table}$ is $0.641 > 0.515$. The value of $r_{count} > r_{table}$ means that the correlation between variable X and variable Y is strong or sufficient according to the Guidelines for the Degree of Relationship with the level (0.40-0.70). This research claims that results are that student learning styles have a positive correlation with students' writing skill or the significance of student learning styles can be improved and enhanced by the English teacher on students' writing skill at one of the Muhammadiyah Middle Schools in Sidoarjo.

Future research needs to continuously strengthen the shortcomings of this study. The study's shortcomings include the use of limited sample size and focus on examining students' writing skill. Therefore, based on the evidence and weaknesses of this research, the researchers would like to provide some suggestions to teachers and other researchers. Recommendation that can be given to the teacher is that the teacher should try to find out the learning style of each student in the class to determine the learning media that suits the student's learning style. Therefore, teachers must have a lot of media and learning methods that are used according to student learning styles. Teachers must often give writing assignments to students so that students will always practice their writing skills. The final suggestion is for other researchers so that other researchers can continue or strengthen this research even better. It is hoped that other researchers can find out about the correlation of student learning styles with other English skills.

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