

THE CORRELATION BETWEEN LEARNING STYLE AND STUDENTS' ENGLISH ACHIEVEMENT

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Abstract :

The purpose of the study is to determine the correlation between students' learning styles and their English achievement. The research focuses on four learning styles based on the VARK model: Visual, Auditory, Read or Write, and Kinesthetic. A quantitative method with a correlational approach was used, involving eleventh-grade students from one class at a senior high school. The instruments used in this study were a learning style questionnaire consisting of 28 items (7 items for each learning style) and an English achievement test in the form of 30 multiple-choice questions. The data were analyzed using Spearman Rank Correlation to determine the relationship between each learning style and students' English achievement. The results showed that there was no significant correlation between the four learning styles and students' English achievement. These findings indicate that learning style preferences may not be strong predictors of students' academic performance in English. Therefore, it is suggested that teachers implement more varied and inclusive teaching strategies that can accommodate different learning preferences and consider other factors that may influence student achievement

Keywords : Learning Style, English Achievement, VARK

Abstrak :

Tujuan dari penelitian ini adalah untuk mengetahui korelasi antara gaya belajar siswa dan prestasi mereka dalam bahasa Inggris. Penelitian ini berfokus pada empat gaya belajar berdasarkan model VARK: Visual, Auditori, Membaca atau Menulis, dan Kinestetik. Metode kuantitatif dengan pendekatan korelasional digunakan, melibatkan siswa kelas sebelas dari satu kelas di sekolah menengah atas. Instrumen yang digunakan dalam penelitian ini adalah kuesioner gaya belajar yang terdiri dari 28 item (7 item untuk setiap gaya belajar) dan tes prestasi bahasa Inggris berupa 30 soal pilihan ganda. Data dianalisis menggunakan Spearman Rank Correlation untuk menentukan hubungan antara setiap gaya belajar dan prestasi bahasa Inggris siswa. Hasil penelitian menunjukkan bahwa tidak terdapat korelasi yang signifikan antara keempat gaya belajar dan prestasi bahasa Inggris siswa. Temuan ini menunjukkan bahwa preferensi gaya belajar mungkin tidak menjadi prediktor yang kuat terhadap kinerja akademik siswa dalam bahasa Inggris. Oleh karena itu, disarankan agar para guru menerapkan strategi pembelajaran yang lebih bervariasi dan inklusif yang dapat mengakomodasi berbagai preferensi belajar serta mempertimbangkan faktor-faktor lain yang dapat memengaruhi prestasi siswa

Kata Kunci: Gaya Belajar, Hasil belajar Bahasa Inggris, VARK



INTRODUCTION

English plays a crucial role in modern education, particularly in the current era of globalization and rapid technological advancement (Adawiyah, 2022). As a global language, English serves not only as a mandatory subject in the school curriculum but also as a gateway to international knowledge and intercultural understanding (Putri & Sari, 2020). Proficiency in

English is increasingly vital for students aiming to pursue higher education, engage in global communication, or enter the international workforce (Sajjadi & Elahi, 2025). Consequently, mastering English has become essential from the early stages of formal education, especially at the senior high school level.

At this level, English instruction typically focuses on four core skills, they are: speaking, writing, listening, and reading which are taught in an integrated manner to support students' communicative competence (Tukhtaeva, 2024). However, despite these instructional efforts, many students still struggle to learn English due to various issues such as limited vocabulary, grammatical difficulties, or an inability to comprehend context. These challenges often hinder students' academic performance.

One factor that may influence student performance is learning style. Learning style refers to the unique way individuals prefer to receive and process information (Sartika et al., 2023). According to the VARK model developed by (Fleming, 2001), learning styles are categorized into four types: visual, auditory, reading/writing, and kinesthetic. Visual learners tend to grasp information better through images, diagrams, and charts. Auditory learners absorb information more effectively through listening, such as lectures or discussions. Reading/writing learners prefer learning through written texts and note-taking. Kinesthetic learners, on the other hand, understand concepts more deeply through physical experience and hands-on activities.

The alignment between instructional methods and students' learning preferences can influence learning outcomes. Maya et al., (2021) found that academic performance tends to improve when teaching strategies match students' preferred learning styles. Similarly, (Dunn & Dunn, 1978) argue that learning styles are shaped by a range of personal factors – including emotional, social, and environmental elements – making each student's learning approach unique. Academic achievement itself refers to measurable learning outcomes, often represented by test scores or grades (Steinmayr et al., 2014). In this study, English achievement is measured through students' scores on a structured English test designed to reflect material taught during the semester.

The relationship between learning preferences and academic outcomes can also be explained through theoretical frameworks. (Skinner, 2011) behaviourist theory posits that learning is influenced by external stimuli and reinforcement.

When students receive positive reinforcement such as feeling comfortable with a learning strategy that suits their preferences, they are more likely to stay motivated and perform better. Research supports this, showing that kinaesthetic

learners often excel in hands-on tasks, while visual learners perform better with visually presented materials (Peace, 2024).

Furthermore, the constructivist theory by Vygotsky (1980) and Gardner (1993) theory of multiple intelligences both emphasize that effective instruction should be tailored to students' individual cognitive and developmental needs. These perspectives highlight the necessity of differentiated instruction that accommodates how students learn best, particularly in complex subjects like English.

In line with this, Indonesia's Merdeka Curriculum promotes personalized and inclusive education that prioritizes the individual needs and strengths of students (Najah & Suasti, 2024). The curriculum encourages educators to move beyond uniform instruction and instead tailor their methods to student diversity, especially in language learning where multiple input modalities are involved (Delgado et al., 2023). The inclusion of the reading/writing category in the VARK model makes it more comprehensive than the older VAK model and especially relevant for English instruction.

Despite the theoretical and empirical support, many studies in the Indonesian context continue to use the older VAK model, omitting the reading or writing component that may significantly impact language learning. Moreover, there is limited research applying the VARK model to examine how students' learning styles relate specifically to English achievement at the senior high school level. This is a critical gap, particularly among eleventh-grade students who are transitioning to more advanced academic expectations and facing increasing demands in English learning (Chodhori & Diastama, 2024).

To address this gap, the current study aims to explore the correlation between students' learning styles based on the full VARK model and their English achievement. A multiple-choice test was used to measure English achievement, reflecting students' understanding of material delivered throughout the semester. It is anticipated that the findings will offer both theoretical and practical contributions. Theoretically, this study can enrich discussions about differentiated instruction in language education. Practically, it may help teachers design learning activities that better align with students' individual preferences and inform policymakers of the importance of inclusive and flexible instruction in support of the Merdeka Curriculum.

RESEARCH METHOD

This study examined the relationship between students' learning styles and their English proficiency using correlational research as an explanatory research approach. According to (Creswell, 2012), correlational research is used to describe and measure the degree of association (or relationship) between two or more variables. The steps in this study were as follows: First, a questionnaire based on the VARK model (Fleming, 2001) was used to determine the learning preferences of the students. Second, information about students' proficiency in English was gathered through their English achievement scores, obtained from

school documentation. Based on the findings from the questionnaire and documentation, the Statistical Package for the Social Sciences (SPSS) was then used to assess the relationship between learning styles and English achievement, which aligns with the use of statistical analysis tools in quantitative research (Pallant, 2020). Lastly, a thorough explanation and interpretation of the results were provided to draw conclusions about the relationship between the variables under study.

In this study, the group of people from whom the data is gathered and examined is referred to as the sample. According to (Creswell, 2012), a sample is a subgroup of the target population that the researcher plans to study for the purpose of generalizing findings. Convenience sampling is the strategy used in this study, which involves selecting individuals who are easily accessible to the researcher (Etikan, 2016).

This approach was chosen because the selected class met the study's criteria and was readily available to the researcher. The chosen sample consists of students from a single Grade 11 at SMA Negeri 1 Sukodadi. Practical considerations such as time, accessibility, and the availability of relevant data required for the study were taken into account in the selection process.

By using convenience sampling, the researcher aims to efficiently collect relevant data while still obtaining insights into the correlation between students' learning styles and their English academic achievement (Fraenkel et al., 2012).

The research sample consists of 32 students in Grade 11 at SMA Negeri 1 Sukodadi. The convenience sampling method was chosen because the class was easily accessible to the researcher and met the criteria required for the study. Although not randomly selected, this sample is considered suitable for exploring the relationship between students' learning styles and their academic achievement in English

The research instruments used to collect data in this study consist of two main types. The questionnaire is designed to identify students' learning styles based on the VARK model (Visual, Aural, Read or Write, Kinesthetic) developed by (Fleming, 2001) In addition, students' English achievement test scores were used as indicators of their English achievement. Learning Style Questionnaire instrument is a Likert scale questionnaire 4 point consisting of 28 items, with each learning style (Visual, Aural, Read or Write, Kinaesthetic) represented by 7 items. The questionnaire is designed to allow students to select the statements that best represent how they understand information and learn in the classroom. The questionnaire was adapted from the VARK Learning Styles Questionnaire by (Fleming, 2001) and has been modified to suit the context of senior high school (SMA) students.

English Achievement Test, Students' academic achievement data were obtained through of the English achievement test administered by the researcher for Grade 11. The test consists of 30 items multiple choice. These test results were used as indicators of students' academic achievement in English and are considered valid because they were designed based on the curriculum and measured relevant competencies.

The collected data were analysed using quantitative methods. Each student's learning style score was calculated by summing their responses for each style category. The English test scores were recorded based on the number of correct answers. Spearman's rank correlation coefficient was used to examine the relationship between each learning style (Visual, Auditory, Read/Write, Kinaesthetic) and students' English achievement scores. This non-parametric test was chosen due to the ordinal nature of the Likert scale data and the small sample size. All analyses were conducted using SPSS version 31. The level of significance was set at 0.05. If the significance value (p-value) was above this threshold, the null hypothesis was accepted, indicating no significant correlation

FINDINGS AND DISCUSSION

Findings

This section presents the results of the investigation concerning the correlation between learning styles and English achievement among eleventh-grade students at SMA Negeri 1 Sukodadi. The study involved 32 students from one class, with data collected through two primary instruments: a 28-item VARK-based learning style questionnaire and a 30-item multiple-choice English achievement test.

Table 1. Descriptive Statistics Test

No.	Learning Style	N	Minimum	Maximum	Mean	Std. Deviation	Description
1	Visual	32	12	19	15,97	1,534	Tends to be high, with low variability
2	Auditory	32	6	14	10,19	2,023	Tends to be low, less preferred
3	Read or Write	32	14	23	18,09	2,146	Relatively high and stable
4	Kinesthetic	32	14	26	20,97	3,095	The highest, with greater data variation
5	English achievement	32	24	28	26.84	.847	High average score with very low variability

Descriptive statistics indicated variation in learning style scores among participants. The Kinaesthetic learning style yielded the highest mean score (M = 20.97, SD = 3.095), followed by Read/Write (M = 18.09, SD = 2.146), Visual (M = 15.97, SD = 1.534), and Auditory (M = 10.19, SD = 2.023). English achievement scores ranged from 24 to 28, with a mean score of 26.84 (SD = 0.847), indicating relatively high and homogeneous performance among students.

Table 2. Hypothesis Testing

Learning Style	Correlation Coefficient (r)	Sig. (2-tailed)	Description
Visual	-.808	.665	Not Significant
Auditory	.164	.370	Not Significant
Read or Write	.115	.531	Not Significant
Kinesthetic	-.041	.822	Not Significant

Spearman's rank-order correlation was utilized to examine the relationship between each learning style and English achievement. The correlation coefficients were as follows: Visual ($r = -0.080$, $p = 0.665$), Auditory ($r = 0.164$, $p = 0.370$), Read/Write ($r = 0.115$, $p = 0.531$), and Kinesthetic ($r = -0.041$, $p = 0.822$). None of the results reached statistical significance ($p > 0.05$), leading to the acceptance of the null hypothesis across all learning styles. These findings indicate the absence of a significant correlation between students' preferred learning styles and their English achievement.

Discussion

This stage aimed to determine whether there was a significant relationship between students' learning styles and their achievement in English subjects. Based on the hypothesis testing results using Spearman's correlation, it was found that none of the four types of learning styles visual, auditory, read or write, and kinesthetic showed a significant relationship with students' English achievement. The visual learning style had a correlation coefficient of $r = -0.080$ with a significance value of 0.665, indicating no significant relationship. Similarly, auditory ($r = 0.164$, sig. = 0.370), read or write ($r = 0.115$, sig. = 0.531), and kinesthetic ($r = -0.041$, sig. = 0.822) learning styles also did not demonstrate significant correlations.

Table 3. The Correlation

Learning Style	Correlation Coefficient ®	Sig. (2-tailed)	Description	Hypothesis Decision
Visual	-.808	.665	Not Significant	H ₀ Accepted
Auditory	.164	.370	Not Significant	H ₀ Accepted
Read or Write	.115	.531	Not Significant	H ₀ Accepted
Kinesthetic	-.041	.822	Not Significant	H ₀ Accepted

Referring to the initial hypotheses:

- H₀ (Null Hypothesis): There is no significant correlation between students' learning styles and their English achievement.
- H_a (Alternative Hypothesis): There is a significant correlation between students' learning styles and their English achievement.

It was concluded that the null hypothesis (H₀) was accepted for all four learning styles since none of the correlations reached statistical significance. Thus, the alternative hypothesis (H_a) was rejected for each learning style.

This finding indicated that students' preferred learning styles whether visual, auditory, read or write, or kinesthetic did not have a measurable impact on their English achievement in this study. One possible explanation was that classroom instruction may not have consistently aligned with students' dominant learning styles, causing students to adapt their strategies regardless of preference. Furthermore, students' performance may have been influenced more strongly by other factors such as learning motivation, prior knowledge, the effectiveness of instructional methods, or the classroom environment.

CONCLUSION

Based on the analysis results using Spearman's rank correlation, it was found that none of the four learning styles had a statistically significant relationship with students' English achievement. The correlation coefficients and significance values for each learning style were as follows: visual ($r = -0.080$, $p = 0.665$), auditory ($r = 0.164$, $p = 0.370$), read or write ($r = 0.115$, $p = 0.531$), and kinesthetic ($r = -0.041$, $p = 0.822$). Since all significance values exceeded the threshold of 0.05, the null hypothesis was accepted for all variables.

This study did not use a dominant learning style approach. Instead, it examined the correlation of each individual learning style with English achievement. The use of this approach was considered more suitable to avoid overlooking the possible influence of multiple learning preferences, particularly for students who tend to have multimodal learning styles. Therefore, the findings offer a more detailed view of the individual contribution of each learning style.

There are several possible reasons why no significant correlation was found between learning styles and English achievement in this study. First, the sample size was limited to one class with 32 students, which may have reduced the statistical power to detect significant relationships. A larger sample might yield different results. Second, many students may not have a single dominant learning style but rather a combination of styles (multimodal), making it difficult to isolate the influence of a single style on academic achievement. This is supported by Fleming (2001), who stated that most learners tend to show multimodal preferences, meaning they do not rely on only one learning style when processing information. Third, the instruments used to measure both learning styles and English achievement were refined during the research process, as some items were excluded due to not meeting validity criteria. As a result, the limited number of valid items may have impacted the reliability and comprehensiveness of the measurement. Lastly, due to time constraints, the researcher was unable to redistribute the questionnaire or conduct a follow-up to confirm the data, which might have affected the depth and accuracy of the findings.

Based on the findings and limitations of this study, several suggestions are proposed. First, for English teachers and educators, it is recommended to avoid focusing solely on one learning style when designing instruction. Second, for future researchers, it is suggested to expand the research by involving more participants from multiple classes or schools to obtain more representative data. Third, the development of instruments should go through more rigorous testing phases to improve the validity and reliability of the data.

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