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The Influence of VAK (Visual, Auditory, Kinesthetic) Learning Styles on Students' Learning Outcomes in AKL Practicum Subjects at SMK Pembangunan Jaya YAKAPI Jakarta

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Abstract

This study aims to determine whether there is an influence of VAK (Visual, Auditory, Kinesthetic) learning styles on students' learning outcomes in AKL Practicum subjects at SMK Pembangunan Jaya-YAKAPI Jakarta. This research was conducted at SMK Pembangunan Jaya-YAKAPI Jakarta and employed a quantitative associative approach. The population and sample of this study consisted of 69 students from the 10th and 11th grades of the Accounting and Financial Institution (AKL) program. Data analysis revealed a very low positive correlation with a multiple correlation coefficient value of 0.186. The contribution of VAK learning styles to learning outcomes, as measured by the coefficient of determination, was 3.5%, while the remaining 96.5% was influenced by other variables not examined in this study. Hypothesis testing was conducted for each variable: 1) Visual learning style (t-calculated = 0.414 < t-table = 1.997); 2) Auditory learning style (t-calculated = 0.992 < t-table = 1.997); 3) Kinesthetic learning style (t-calculated = 0.476 < t-table = 1.997). Simultaneously, hypothesis testing for VAK learning styles resulted in F-calculated = 0.767 < F-table = 2.74. The findings conclude that neither individually nor simultaneously do VAK (Visual, Auditory, Kinesthetic) learning styles significantly influence students' learning outcomes in AKL Practicum subjects at SMK Pembangunan Jaya-YAKAPI Jakarta.

Keywords: learning styles; VAK; visual; auditory; kinesthetic; learning outcomes

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INTRODUCTION

The development of science and technology (IPTEK) has significantly impacted various fields, including education. In the context of education, this rapid advancement requires the education system to adapt and align with the pace of progress. Supporting this progress demands high-quality human resources, which can only be achieved through quality education. Quality education is realized when the teaching and learning process is synergistic, involving effective interaction between teachers as educators and students as learners. However, this interaction often faces challenges, one of which is suboptimal student learning outcomes.

The success of the learning process is measured through students' learning outcomes, which are evaluated using daily assessments or semester exams. These evaluations are based on the Minimum Competency Criteria (KKM), a benchmark set by schools for each subject. The KKM is calculated using four main components: the essentiality of Basic Competencies (KD), material complexity, supporting resources, and student intake levels.

Learning outcomes encompass the cognitive, affective, and psychomotor achievements of students during the learning process. In simple terms, learning outcomes

reflect changes in students' knowledge, understanding, attitudes, and other aspects. Despite this, students' learning outcomes vary, ranging from excellent to poor. This variability is also observed among students in the Accounting and Financial Institution (AKL) department at SMK Pembangunan Jaya-YAKAPI Jakarta, particularly in AKL Practicum subjects. These subjects involve hands-on practice in applying accounting theory, such as recording transactions into specialized journals.

Based on a preliminary study through daily assessments in accounting theory, the average score of AKL students was 67, below the KKM of 75. This indicates that students' understanding of accounting theory is still lacking, which affects their overall learning outcomes in AKL Practicum subjects.

Low learning outcomes cannot solely be attributed to students, as various factors influence their achievements. These factors can be categorized as internal (from within the students themselves) or external (from the environment). One primary factor is learning style, which refers to how students absorb, process, and organize information. A suitable learning style can help students understand material more effectively.

There are three main types of learning styles: visual, auditory, and kinesthetic.

1. Visual learners rely on sight to absorb information.
2. Auditory learners process information through listening.
3. Kinesthetic learners prefer hands-on activities and physical movement.

Students at SMK Pembangunan Jaya-YAKAPI Jakarta exhibit diverse learning styles, such as taking notes (visual), listening to teachers' explanations (auditory), or learning through practice (kinesthetic).

Given these observations, this study seeks to explore the influence of VAK learning styles on students' learning outcomes, specifically in AKL Practicum subjects. This study is titled, *The Influence of VAK (Visual, Auditory, Kinesthetic) Learning Styles on Students' Learning Outcomes in AKL Practicum Subjects at SMK Pembangunan Jaya-YAKAPI Jakarta.*

METHODS

This research was conducted from March to June 2023 at SMK Pembangunan Jaya-YAKAPI Jakarta. The study employed a quantitative approach with an associative research design. The population consisted of 135 students, as detailed below:

Table 1. Student Population at SMK Pembangunan Jaya-YAKAPI Jakarta

Grade	Department	Number of Student
X	Accounting (AKL)	36
XI	Accounting (AKL)	33
XII	Accounting (AKL) 1	34
XII	Accounting (AKL) 2	32
Total		**135**

The sampling technique used in this study was purposive sampling, selecting students from grades X and XI of the Accounting (AKL) department, resulting in a sample size of 69 students.

The data collection methods included documentation and questionnaires, both of which underwent validity and reliability testing. Data analysis consisted of several steps:

1. *Preliminary Tests*: Classical assumption tests, including normality, homogeneity, linearity, multicollinearity, and autocorrelation tests, were conducted to ensure data suitability for regression analysis.

2. *Multiple Linear Regression Analysis*: This was used to determine the relationship between the independent variables (visual, auditory, and kinesthetic learning styles) and the dependent variable (learning outcomes).
3. *Hypothesis Testing: Both partial* (t-test) and simultaneous (F-test) hypothesis testing were performed.
4. Coefficient of Determination (R^2): To evaluate the proportion of variance in learning outcomes explained by the learning styles

RESULTS & DISCUSSION

Results

1. Classical Assumption Tests
   a. Normality Test

The normality test was conducted using the One-Sample Kolmogorov-Smirnov Test. The results are presented in the following table:

Table 2. Normality Test Results

		Unstandardized Residual
N		69
Normal Parameters	Mean	.0000000
	Std. Deviation	4.19711392
Most Extreme Differences	Absolute	.106
	Positive	.104
	Negative	-.106
Test Statistic		.106
Asymp. Sig. (2-tailed)		.051

The table shows that the significance value (Asymp. Sig.) is 0.051, which is greater than 0.05. This indicates that the data is normally distributed.

   b. Homogeneity Test

The homogeneity of variance was tested using the Levene's Test for Equality of Variances. The results are shown below:

T able 3. Homogeneity Test Results

Models		**LeveneStatistic**	**df1**	**df2**	**Sig.**
Gaya Belajar Visual Terhadap Hasil Belajar	Based on Mean	1.745	14	47	.078
	Based on Median	1.006	14	47	.463
	Based on Median and with adjusted df	1.006	14	33.326	.470
	Based on trimmed Mean	1.706	14	47	.087
Gaya Belajar Auditorial Terhadap Hasil Belajar	Based on Mean	1.510	16	45	.138
	Based on Median	.538	16	45	.912
	Based on Median and with adjusted df	.538	16	23.557	.898
	Based on trimmed Mean	1.399	16	45	.186

Gaya Belajar Kinestik Terhadap Hasil belajar	Based on Mean	1.690	17	42	.084
	Based on Median	.614	17	42	.862
	Based on Median and with adjusted df	.614	17	23.002	.847
	Based on trimmed mean	1.617	17	42	.103

The table indicates that the significance values (Sig.) for all variables are greater than 0.05, confirming that the data is homogeneous.

c. Linearity Test

The linearity test was conducted to determine the relationship between learning styles and learning outcomes. The results are as follows:

Table 4. Linearity Test Results

Models			Sum of Squares	Df	Mean Square	F	Sig.
Gaya Belajar Visual Terhadap Hasil Belajar	Between Groups	(Combined)	467.239	21	22.249	1.364	.186
		Linearity	13.137	1	13.137	.806	.374
		Deviation from Linearity	454.102	20	22.705	1.392	.174
	Within Groups		766.500	47	16.309		
	Total		1233.739	68			
Gaya Belajar Auditorial Terhadap Hasil Belajar	Between Groups	(Combined)	398.556	23	17.329	.934	.559
		Linearity	6.676	1	6.676	.360	.552
		Deviation from Linearity	391.880	22	17.813	.960	.527
	Within Groups		835.183	45	18.560	.	
	Total		1233.739	68			
Gaya Belajar Kinestik TerhadapHasil Belajar	Between Groups	(Combined)	434.517	26	16.712	.878	.631
		Linearity	21.670	1	21.670	1.139	.292
		Deviation from Linearit	412.847	25	16.514	.868	.641
	Within Groups		799.222	42	19.029		
	Total		1233.739	68			

The deviation from linearity for all variables shows significance values greater than 0.05, indicating a linear relationship between the variables.

d. Autocorrelation Test

The Durbin-Watson test was used to check for autocorrelation in the regression model. The results are presented below:

Table 5. Autocorrelation Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.186	.035	-.011	3.27013	1.975

With a Durbin-Watson value of 1.975, which falls between dU=1.7015 and 4−dU=2.29854 - dU = 2.29854−dU=2.2985, it can be concluded that there is no autocorrelation in the regression model.

e. Multicollinearity Test

The Variance Inflation Factor (VIF) was calculated to assess multicollinearity. The results are as follows:

Table 6. Multicollinearity Test Results

Model		Collinearity Statistics	
		Tolerance	VIF
1	Gaya Belajar Visual	.725	1.379
	Gaya Belajar Auditorial	.671	1.491
	Gaya Belajar Kinestik	.894	1.119

Since the VIF values for all variables are below 10 and the Tolerance values are above 0.1, there is no multicollinearity among the independent variables.

2. Multiple Linear Regression Analysis

The regression equation for the relationship between VAK learning styles and learning outcomes is as follows:

$Y=30.461+0.030X_1+0.059X_2+0.022X_3$

Where:

- Y: Learning outcomes
- X_1: Visual learning style
- X_2: Auditory learning style
- X_3: Kinesthetic learning style

The regression coefficients are presented in the table below:

Table 7. Multiple Linear Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	30.461	2.075		14.679	.000
	GBV (1)	.030	.072	.057	.414	.681
	GBA (2)	.059	.059	.138	.992	.325
	GBK (3)	.022	.047	.062	.476	.635

3. Coefficient of Determination (R^2)

The coefficient of determination (R^2) explains the proportion of variance in the dependent variable (learning outcomes) that can be attributed to the independent variables (visual, auditory, and kinesthetic learning styles). The results are as follows:

Table 8. Coefficient of Determination (R^2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.186	.035	-.011	3.27013

The R^2 value is 0.035, indicating that visual, auditory, and kinesthetic learning styles explain only 3.5% of the variance in students' learning outcomes. The remaining 96.5% is attributed to other factors not examined in this study.

This result demonstrates that the impact of VAK learning styles on students' learning outcomes is minimal, and other external or internal factors likely play a more significant role in influencing learning outcomes.

4. Hypothesis Testing
   a. Partial Hypothesis Testing (t-Test)

The t-test was conducted to determine the individual influence of each learning style (visual, auditory, kinesthetic) on students' learning outcomes. The results are as follows:

Table 9. Partial Hypothesis Testing Results (t-Test)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	30.461	2.075		14.679	.000
	GBV (1)	.030	.072	.057	.414	.681
	GBA (2)	.059	.059	.138	.992	.325
	GBK (3)	.022	.047	.062	.476	.635

1) *Visual Learning Style:* The t-calculated value is 0.414, which is less than t-table (1.997), and the significance value (0.681) is greater than 0.05. This indicates no significant influence of visual learning style on students' learning outcomes.
2) Auditory Learning Style: The t-calculated value is 0.992, which is less than t-table (1.997), and the significance value (0.325) is greater than 0.05. This indicates no significant influence of auditory learning style on students' learning outcomes.
3) Kinesthetic Learning Style: The t-calculated value is 0.476, which is less than t-table (1.997), and the significance value (0.635) is greater than 0.05. This indicates no significant influence of kinesthetic learning style on students' learning outcomes.

   b. Simultaneous Hypothesis Testing (F-Test)

The F-test was conducted to determine the simultaneous influence of visual, auditory, and kinesthetic learning styles on students' learning outcomes. The results are as follows:

Table 10. Simultaneous Hypothesis Testing Results (F-Test)

	Model	Sum ofSquares	Df	Mean Square	F	Sig.
1	Regression	24.621	3	8.207	.767	.516
	Residual	684.400	64	10.694		
	Total	709.021	67			

The F-calculated value is 0.767, which is less than F-table (2.74), and the significance value (0.516) is greater than 0.05. This indicates that visual, auditory, and kinesthetic learning styles, when considered simultaneously, do not significantly influence students' learning outcomes.

Discussion

The results of this study show that visual, auditory, and kinesthetic learning styles do not significantly influence students' learning outcomes in AKL Practicum subjects at SMK Pembangunan Jaya-YAKAPI Jakarta. Each learning style's specific findings and their implications are discussed as follows:

Visual Learning Style

The analysis reveals no significant influence of the visual learning style on students' learning outcomes. Visual learners typically rely on seeing and observing objects to understand the material (Safrianti, 2017). However, the AKL Practicum subject prioritizes hands-on practice in accounting tasks, such as manual or computerized transaction recording. Students find it more engaging and effective to practice directly rather than relying on textbooks or visual aids like videos. This finding differs from Anggraini (2021), who suggested that visual learning styles have a minimal yet positive impact on learning outcomes.

Auditory Learning Style

Similarly, the auditory learning style shows no significant impact on learning outcomes. Auditory learners depend on listening to explanations to process and retain information (Safrianti, 2017). The study indicates that students tend to pay less attention to teacher explanations and prefer immediate practice to understand the material better. This result contradicts Safrianti (2017), who found that auditory learning styles positively influence learning outcomes.

Kinesthetic Learning Style

The kinesthetic learning style also does not significantly influence learning outcomes. Kinesthetic learners prefer physical activities and hands-on experiences to learn effectively. While this aligns with the nature of the AKL Practicum subject, students' lack of seriousness in completing the provided instruments (e.g., questionnaires) may have affected the results. Hartati (2013) noted that students' lack of effort and sincerity in responding to assessments can undermine findings. These results contrast with Safrianti (2017), who reported a positive influence of kinesthetic learning styles on learning outcomes.

Combined Influence of VAK Learning Styles

The study finds that the combined influence of visual, auditory, and kinesthetic learning styles is also insignificant. This suggests that other factors may play a more substantial role in determining students' learning outcomes. Motivation from teachers, students' self-discipline, and external support systems are likely to have a more critical

impact. These findings are consistent with Prayogo (2020), who emphasized that factors beyond learning styles, such as teacher encouragement and a conducive learning environment, significantly affect student performance.

Additionally, Chania, Havis, & Sasmita (2020) found no correlation between learning styles and learning outcomes, which they attributed to students' lack of awareness of their learning styles and dishonesty in responding to assessments.

Implications

The results indicate the need for a more holistic approach to improving learning outcomes. Teachers should focus on identifying other influencing factors, such as student motivation, parental support, and effective teaching methods, to enhance academic performance. Schools could also provide workshops or counseling to help students better understand their learning preferences and how to utilize them effectively in different subjects.

CONCLUSION

This study concludes the following: 1) There is no significant influence of the visual learning style on students' learning outcomes in AKL Practicum subjects at SMK Pembangunan Jaya-YAKAPI Jakarta; 2) There is no significant influence of the auditory learning style on students' learning outcomes in AKL Practicum subjects at SMK Pembangunan Jaya-YAKAPI Jakarta; 3) There is no significant influence of the kinesthetic learning style on students' learning outcomes in AKL Practicum subjects at SMK Pembangunan Jaya-YAKAPI Jakarta; 4)There is no simultaneous significant influence of visual, auditory, and kinesthetic learning styles on students' learning outcomes in AKL Practicum subjects at SMK Pembangunan Jaya-YAKAPI Jakarta.

The findings indicate that factors other than learning styles may have a greater impact on students' learning outcomes. These factors include motivation from teachers and students themselves, the learning environment, and external support systems.

REFERENCES

Angraini, A. A. (2021). *Pengaruh Gaya Belajar Visual Terhadap Hasil Belajar Siswa Kelas X Jurusan Akuntansi pada Mata Pelajaran Ekonomi Bisnis di SMK Pembangunan Jaya-YAKAPI Jakarta Selatan*. Jakarta: Universitas Indraprasta PGRI.

Chania, Y., Havis, M., & Sasmita, D. (2020). Hubungan Gaya Belajar dengan HasilBelajar Siswa pada Pembelajaran Biologi Kelas X SMAN 2 Sungai Tarab Kabupaten Tanah Datar. *Journal of Saintek*, 81-82.

Hartati, L. (2013). Pengaruh Gaya Belajar dan Sikap Siswa Pada Pelajaran Matematika Terhadap Hasil Belajar Matematika. *Jurnal Formatif*.

Prayogo, G. (2020). *Pengaruh Gaya Belajar Siswa Terhadap Hasil Belajar di SMAPlus PGRI Cibinong.* Jakarta: Universitas Indraprasta PGRI.

Safrianti, S. D. (2017). *Pengaruh Gaya Belajar Visual, Auditorial, dan Kinestetik Terhadap Hasil Belajar Siswa Kelas X IPS Program Unggulan di MAN 1 Kota Malang*. Malang: Universitas Islam Negeri Maulana Malik Ibrahim.