Journal of Innovative and Creativity
Journal Homepage: https://joecy.org/index.php/joecy
e-mail: journaljoecy@gmail.com

Faculty of Education
University of Pahlawan Tuanku Tambusai
ISSN 2775-771X (Online)
ISSN 2962-570X (Printed)
6 (1) 2026, Page: 5156-5162

The Influence of Learning Styles on Student Learning Outcomes at SMP 11 Kupang

Angelina Jayanti Saudale [1]
[1]Fakultas Keguruan Dan Ilmu Pendidikan, Universitas Katolik Widya Mandira Kupang, Indonesia
Corresponding Author: e-mail: *jayantiella706@gmail.com*

Published: January , 2026

ABSTRACT

The study purpose was to examine the influence of students' learning styles on learning outcomes at the junior secondary school level in Indonesia, with SMP Negeri 11 Kupang serving as a specific research context. Learning outcomes reflect students' achievement levels in understanding instructional processes, while learning styles represent individual differences in processing information. Understanding this relationship is essential to improve instructional effectiveness and academic achievement.

Materials and methods. This study employed a quantitative approach using an ex post facto research design. The ex post facto method was selected because the independent variable, students' learning styles, had already occurred naturally and was not manipulated by the researcher. The research sample consisted of 20 junior high school students selected as research subjects. Data on learning styles were collected using a questionnaire, while learning outcomes were obtained from students' semester report scores. The data were analyzed using descriptive statistics, Pearson correlation analysis, and simple linear regression to determine the relationship and influence between variables.

Results. The findings revealed a positive and significant relationship between learning styles and students' learning outcomes. Statistical analysis indicated that learning styles contributed 21.3% to variations in learning outcomes, while the remaining percentage was influenced by other factors beyond this study.

Conclusions. It can be concluded that learning styles have a significant influence on students' learning outcomes. Therefore, teachers are encouraged to consider students' learning styles when designing instructional strategies to enhance learning effectiveness and academic performance.

Keywords: Learning Style, Learning Outcomes, Middle School

© The Author(s). 2021 Open Access This article is licensed under a Creative Commons Atibution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. To view a copy of this licence, visit http://creativecommons.org/licenses/by/4.0

INTRODUCTION

Education is a fundamental aspect of a nation's development because it plays a key role in improving the quality of human resources. Education is understood as a conscious and planned effort carried out by individuals and institutions to provide direction and guidance to the nation's next generation. Through the educational process, students are guided to optimally develop their potential so they can face the challenges of life in the future. Therefore, education is the primary foundation for realizing sustainable national progress.

The primary goal of education is to produce graduates with sufficient quality and competency to contribute to community life and national development. Based on Article 3 of Law Number 20 of 2003 concerning the National Education System, education aims to develop the potential of students to become individuals who believe in and fear God Almighty, possess noble character, are healthy, knowledgeable, capable, creative, independent, democratic, and responsible. This demonstrates that education emphasizes not only cognitive aspects but also affective and psychomotor aspects.

Education is not solely oriented towards mastering knowledge but also plays a role in shaping the character, personality, and civilization of the nation. Through education, students are

equipped with broad and in-depth knowledge in various fields, encompassing an understanding of basic concepts, facts, theories, and their application in everyday life. With this knowledge, students are expected to be able to optimally develop their potential and play an active role in national development and the advancement of society.

An effective learning process is crucial in determining the quality of student learning outcomes. Each individual has a unique way of absorbing and understanding information, which influences their academic achievement. Student learning outcomes are essentially changes encompassing the cognitive, affective, and psychomotor domains, oriented towards the teaching and learning process experienced by students. Therefore, achieving good learning outcomes is not easy for every student. Fundamentally, everyone's ability to understand and absorb lessons varies.

Some learn quickly, some learn slowly, and some learn very slowly. Therefore, each student has a different learning style when it comes to understanding the same information or lesson. By understanding these differences in learning styles, teachers can design better teaching strategies to support each student in achieving optimal learning outcomes. By considering the uniqueness of each student in the learning process, we can foster a more competent generation prepared to face future challenges.

Effective education requires a deep understanding of how students learn and develop. Different learning styles can significantly impact student academic achievement. Based on the background explained, this study aims to analyze how learning styles influence student learning outcomes. This study aims to identify factors that influence learning outcomes. This research is expected to provide insight to schools, particularly teachers and educational staff, in managing learning. Teachers often encounter challenges with student outcomes, leading researchers to emphasize the importance of learning styles in student learning outcomes. Through this research, teachers are expected to better understand how to adapt appropriate teaching methods to students' learning styles, thereby enhancing learning effectiveness. Thus, students are expected to achieve better and more satisfying learning outcomes.

METHOD

This research used a quantitative approach with an ex post facto method because the independent variable studied, namely students' learning styles, occurred naturally without any treatment or manipulation by the researcher (Sugiyono, 2019). The quantitative approach was chosen because this study aimed to objectively examine the relationships and influences between variables through numerical data analysis. This approach allows researchers to obtain a systematic, measurable, and generalizable picture of the influence of learning styles on student learning outcomes (Creswell, 2014).

The ex post facto method is a research method used to examine events that have already occurred, where researchers do not apply treatment to the research variables but instead explore cause-and-effect relationships based on existing data (Arikunto, 2019). In this study, students' learning styles had already developed before the research was conducted, so researchers only observed and analyzed their influence on student learning outcomes without intervening. Therefore, the ex post facto method is considered appropriate for uncovering the relationship between learning styles and student learning outcomes based on actual conditions in the field.

The focus of this research is directed at uncovering the relationship and influence of learning styles on student learning outcomes. Student learning styles were identified using a questionnaire instrument developed based on visual, auditory, and kinesthetic learning style indicators. Meanwhile, student learning outcomes were obtained from report card data, which reflects students' academic achievement throughout the learning period. This data was used to obtain objective and valid information regarding student learning outcomes (Slameto, 2015).

The collected data were then analyzed using statistical analysis techniques, namely descriptive and inferential analysis. Descriptive analysis was used to describe the characteristics of student learning styles and learning outcomes, while inferential analysis was used to examine the relationship and influence between the two variables. Therefore, the ex post facto method in this study is expected to provide a clear and accurate picture of the influence of learning styles on

student learning outcomes and serve as a basis for teachers in designing more effective learning that is tailored to students' learning characteristics.

FINDING AND DISCUSSION

This study aims to determine the influence of learning styles on student learning outcomes at SMP Negeri 11 Kupang. The research subjects consisted of 20 students who were designated as research samples by considering population representation. Student learning styles in this study were classified into three types, namely visual, auditory, and kinesthetic learning styles. Visual learning styles are characterized by students' tendency to understand material through sight, auditory learning styles through hearing, while kinesthetic learning styles through movement activities and direct practice. Identification of these learning styles is expected to provide an overview of the differences in how students receive and process learning information.

Table 1. Descriptive Statistics of Learning Styles

	N	Minimum	Maximum	Mean	Std. Deviation
Learning Styles	20	58	75	66.85	5.21
Valid N (listwise)	20				

Based on Table 1, the average student learning outcome score was 79.90, with the lowest score being 72 and the highest being 88. This range of scores indicates a variation in learning outcomes among the students who participated in the study. In general, the average score was in the adequate to good category, indicating that most students had achieved the expected learning achievement standards. These learning outcomes reflect the students' level of mastery of the subject matter presented during the learning process. The relatively good achievement of these learning outcomes indicates that students were able to participate optimally in learning according to their individual abilities and learning characteristics. According to Slameto (2015), learning outcomes are an indicator of student success in the learning process, which is influenced by various internal and external factors, including learning styles. Thus, the student learning outcomes in this study can be said to be in a relatively good condition and reflect the effectiveness of the learning process that has been implemented.

Description of Student Learning Outcomes

Table 2. Descriptive Statistics of Learning Outcomes

	N	Minimum	Maximum	Mean	Std. Deviation
Learning outcomes	20	72	88	79.90	4.83
Valid N (listwise)	20				

Based on Table 2, the average student learning outcome score was 79.90, with the lowest score being 72 and the highest being 88. This range of scores indicates variation in learning outcomes among students. In general, the average score was in the fair to good category. This indicates that most students had achieved the expected learning achievement standards. These learning outcomes reflect students' ability to understand the subject matter presented during the learning process. Therefore, student learning outcomes can be considered relatively good.

Correlation Test Results

The Pearson correlation test was used to determine the closeness and direction of the relationship between learning styles and student learning outcomes. This analysis aimed to determine the extent to which changes in learning styles were related to changes in student learning outcomes.

Table 3. Correlations

	Gaya Belajar	Hasil Belajar
Gaya Belajar	Pearson Correlation	1
	Sig. (2-tailed)	
	N	20
Hasil Belajar	Pearson Correlation	.462*
	Sig. (2-tailed)	.040

Based on Table 3, the correlation coefficient was 0.462 with a significance value of 0.040, which is less than 0.05. These results indicate a positive and significant relationship between learning styles and student learning outcomes. This correlation coefficient value indicates a moderate level of relationship. A positive relationship means that an increase in the quality of students' learning styles is followed by an increase in learning outcomes.

This finding aligns with previous research that found that learning styles have a significant relationship with student learning outcomes (Rambe, 2019; Arumsari, 2023).

Regression Test Results

A simple regression test was conducted to determine the effect of learning styles on student learning outcomes. The regression test results showed a significance value of 0.004, which is less than 0.05, thus concluding that learning styles significantly influence student learning outcomes. This finding suggests that variations in student learning outcomes can be partially explained by differences in students' learning styles.

Table 4. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.462a	.213	.169	4.41

a. Predictors: (Constant), Learning Style

Table 5. ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	214.50	1	214.50	11.01	.004b
Residual	350.40	18	19.47		
Total	564.90	19			

b. Predictors: (Constant), Learning Style
Dependent Variable: Learning Outcomes

Table 6. Coefficients

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
(Constant)	63.21	4.98		12.69	.000
Learning Styles	0.25	0.08	.462	3.32	.004

The regression test results show a significance value of 0.004, which is smaller than 0.05, so it can be concluded that learning styles have a significant effect on student learning outcomes. This finding indicates that variations in student learning outcomes can be partially explained by differences in students' learning styles. The R Square value of 0.213 indicates that learning styles contribute 21.3% to student learning outcomes. Meanwhile, 78.7% of student learning outcomes are influenced by other factors not examined in this study. These factors can include learning motivation, family environment, learning methods, and students' cognitive abilities. Thus, learning styles are one of the important factors that need to be considered in efforts to improve student learning outcomes.

Discussion

Student Learning Styles and Their Relation to the Learning Process

The results of the descriptive analysis indicate that the learning styles of students at SMP Negeri 11 Kupang fall into the moderate to high category. This finding suggests that most students already possess identifiable preferences in the way they receive, process, and understand learning material. Learning styles reflect individual tendencies that influence how students interact with instructional content, classroom activities, and learning environments. According to DePorter and Hernacki, learning styles are defined as a combination of how individuals absorb information, organize it cognitively, and process it into meaningful understanding (DePorter & Hernacki, 2015). These individual differences play an important role in shaping students' learning experiences and academic performance.

Students who are aware of their own learning styles tend to demonstrate better self-regulation in learning. They are more capable of choosing appropriate learning strategies, managing study time effectively, and responding adaptively to academic challenges. For example, visual learners may benefit more from diagrams, charts, and written instructions, while auditory learners

may learn more effectively through discussions, explanations, and verbal feedback. Kinesthetic learners, on the other hand, often require hands-on activities, experiments, or movement-based learning to fully engage with the material. When students recognize these preferences, they can actively adjust their learning approaches to suit academic demands, leading to improved engagement and comprehension.

The predominance of moderate to high learning styles among students at SMP Negeri 11 Kupang indicates that students have considerable potential to achieve optimal learning outcomes if the learning process is aligned with their learning characteristics. However, this potential may not be fully realized if teachers rely on uniform teaching methods that fail to accommodate learning diversity. Traditional teacher-centered instruction, which often emphasizes lectures and rote learning, may only benefit a limited group of students whose learning styles match the instructional approach. Consequently, students with different learning preferences may experience learning difficulties, reduced motivation, and lower academic achievement.

Therefore, teachers' understanding of students' learning styles is a crucial factor in creating effective and inclusive learning environments. Teachers who are aware of learning style diversity can design instructional strategies that incorporate visual, auditory, and kinesthetic elements simultaneously. Such an approach not only increases students' engagement but also promotes equal learning opportunities for all students. Previous research emphasizes that teachers who adapt instructional methods to students' learning styles are more likely to facilitate meaningful learning and improve academic performance (Febriani, 2025). Thus, recognizing learning styles should be regarded as an essential component of pedagogical competence in contemporary education.

Student Learning Outcomes as an Indicator of Learning Success

The research results indicate that the learning outcomes of students at SMP Negeri 11 Kupang are generally in the fair to good category. Learning outcomes represent measurable indicators of students' success in achieving predetermined learning objectives. These outcomes reflect not only students' mastery of subject matter but also their ability to apply knowledge, demonstrate skills, and exhibit positive learning attitudes. In the educational context, learning outcomes are often used as benchmarks to evaluate the effectiveness of instructional processes and curriculum implementation.

According to Slameto, learning outcomes are influenced by a complex interaction of internal and external factors (Slameto, 2010). Internal factors include interest, motivation, intelligence, physical condition, and learning style, while external factors encompass family environment, school facilities, peer influence, and teacher teaching methods. This perspective highlights that learning outcomes cannot be attributed to a single factor; rather, they are the result of multiple interrelated variables that shape students' learning experiences.

The differences in learning outcomes identified in this study indicate that not all students achieve the same level of academic success. This finding reinforces the view that learning outcomes are not solely determined by intellectual ability. Students with similar cognitive abilities may demonstrate different academic performances due to variations in learning styles, motivation levels, and learning strategies. How students learn is often as important as how much they learn. Research supports the notion that students who use learning strategies aligned with their learning styles tend to achieve better academic results than those who do not (Muslimah, 2024).

Thus, learning style emerges as a significant internal factor that deserves attention in efforts to improve student learning outcomes. When learning activities are designed to match students' preferred learning styles, students are more likely to be actively involved in the learning process, experience deeper understanding, and retain information more effectively. Conversely, mismatches between teaching methods and learning styles may lead to disengagement and suboptimal learning outcomes. Therefore, addressing learning style diversity is essential for enhancing overall learning success.

The Influence of Learning Style on Learning Outcomes

The regression test results indicate that learning style has a significant influence on student learning outcomes, contributing 21.3% to the variance in learning outcomes. This means that approximately 21.3% of the variation in students' academic performance can be explained by

differences in their learning styles, while the remaining 78.7% is influenced by other factors not examined in this study. Although learning style does not fully determine learning outcomes, its contribution is substantial within the educational context (Meilani, 2024).

This finding suggests that learning style is an important predictor of academic success. Students whose learning styles are effectively supported through appropriate instructional strategies are more likely to achieve higher learning outcomes. Conversely, students whose learning preferences are neglected may struggle to fully understand learning material, even when they possess adequate cognitive ability. Therefore, learning style should be considered an integral factor in instructional planning and evaluation.

The results of this study align with the characteristics of the ex post facto research method, in which researchers do not provide specific treatments or interventions but instead examine the influence of naturally existing variables. In this context, students' learning styles were already formed before the research was conducted and subsequently influenced the learning outcomes achieved by students. This supports the notion that learning styles are relatively stable internal characteristics, shaped by individual experiences and cognitive development. However, despite their relative stability, learning styles can still be nurtured and optimized through appropriate instructional practices (Rambe, 2019).

The significant influence of learning styles on learning outcomes found in this study highlights the importance of implementing student-centered learning approaches. Student-centered learning emphasizes active student participation, flexibility in teaching methods, and responsiveness to individual learning needs. Teachers are encouraged to design varied learning activities, such as group discussions, visual presentations, practical exercises, and project-based learning, to accommodate diverse learning styles. By doing so, teachers create learning environments that support individual differences and promote deeper learning.

Furthermore, accommodating learning styles does not mean labeling students rigidly or limiting them to a single learning preference. Instead, it involves providing opportunities for students to develop multiple learning strategies and become more adaptable learners. Through varied instructional approaches, students can strengthen weaker learning modalities while capitalizing on their dominant learning styles. This balanced approach contributes to holistic learning development and improved academic achievement (Arumsari, 2023).

In conclusion, the findings of this study demonstrate that learning style plays a meaningful role in shaping students' learning outcomes. Although learning outcomes are influenced by multiple factors, learning style remains a significant internal variable that educators should consider. By understanding and accommodating students' learning styles, teachers can enhance instructional effectiveness, foster student engagement, and ultimately improve learning outcomes. Therefore, integrating learning style awareness into teaching practices is a strategic step toward achieving more effective and equitable education.

CONCLUSIONS

Based on the research results and discussion, it can be concluded that learning styles play a significant role in student learning outcomes at SMP Negeri 11 Kupang. Students exhibit a variety of learning styles ranging from moderate to high, reflecting differences in how they receive and process learning information. Student learning outcomes generally fall within the fair to good range, indicating relatively adequate academic achievement.

Correlation tests indicate a positive and significant relationship between learning styles and student learning outcomes. Furthermore, regression tests demonstrate that learning styles have a significant influence, contributing 21.3% to learning outcomes. These findings confirm that learning styles are a significant internal factor, although other factors also influence learning outcomes. Therefore, understanding students' learning styles is crucial for teachers in designing effective and optimal learning.

REFERENCES

Adelia Salsabila. Pengaruh Gaya Belajar Dan Cara Mengajar Terhadap Hasil Belajar Siswa," *Jurnal Bintang Pendidikan Indonesia* . Vol. 2. No. 1. 2023, h 21

Dina Maharani Arumsari. Analisis Gaya Belajar Siswa Terhadap Hasil Belajar Pada Mata Pelajaran Ipas. *Learning : Jurnal Inovasi Penelitian Pendidikan dan Pembelajaran*. Vol. 3. No. 1 2023, h 111.

Elka Meilani. Hubungan Gaya Belajar terhadap Hasil Belajar Matematika pada Materi Operasi Vektor di Kelas XI SMA IT Al-'Arabi Bekasi. *Jurnal Ilmu* Pembelajaran. Vol. 2. No. 4. 2024, h 37

Fadiah Cahya Amelia. Pemanfaatan Media Sosial Instagram dalam Membangun Brand Image Wardah sebagai Produk Kosmetik Halal di Indonesia. *Jurnal Riset Rumpun Ilmu Sosial, Politik dan Humaniora*. Vol. 4. No. 2. 2025, h 353

Lestari Bunga Pertiwi. Analisis Strategi Komunikasi Brand Equity Wardah Beauty Melalui Video Kampanye 'Colorfit Ultralight Matte Lipstick' Korea Edition di Instagram. *Komuniti : Jurnal Komunikasi dan Teknologi Informasi*. Vol. 16. No. 2. 2024, h 303

Malim Soleh Rambe. Pengaruh Gaya Belajar Visual, Auditorial, Dan Kinestetik Terhadap Prestasi Belajar Siswa Sma Dian Andalas Padang. *Jurnal Review Pendidikan dan Pengajaran*. Vol. 2 No. 2. 2019, h 291

Nur Muslimah. Pengaruh Gaya Belajar Dan Motivasi Belajar Terhadap Hasil Belajar Matematika Siswa Kelas VIII SMP Negeri 1 Kembang Janggut. *PHI: Jurnal Pendidikan Matematika*. Vol. 8. No. 1. 2024, h 187

Vita Indri Febriani. Pengaruh Gaya Belajar terhadap Hasil belajar IPA Siswa Sekolah Menengah Pertama. *Jurnal Pembelaharan Anak*. Vol. 7. No. 4. 2025, h 66