

Analysis of Learning Styles Based on Indonesian Language Learning Outcomes in Elementary School Students

Rini Purbayani^{1✉}, Anggi Purwa Nugraha², Nabila Nurhaliza Ali³

¹ STAI Putra Galuh Ciamis, West Java, Indonesia

² STAI Putra Galuh Ciamis, West Java, Indonesia

³ STAI Putra Galuh Ciamis, West Java, Indonesia

✉ email: rinipurbayani@gmail.com

Received:
October 14, 2024
Revised:
October 19, 2024
Accepted:
October 25, 2024
Published:
November 1,
2024

ABSTRACT

Understanding students' learning styles is a key factor in effective learning, as it helps teachers optimize the teaching and learning process and improve student success. This study aims to examine the relationship between students' learning styles and learning outcomes in the Indonesian language subject. The research uses a survey method with a sample of 46 fifth-grade elementary school students using saturated sampling techniques. The results indicate that the majority of students have a kinesthetic learning style (43.5%), followed by visual learning styles (30.4%) and auditory styles (26.1%). The learning outcomes of visual learners are higher compared to the others, with an average score of 84.3 in the good category, while auditory learners perform better than kinesthetic learners but lower than visual learners, with an average score of 81.4 in the fair category, whereas kinesthetic learners have lower results compared to the others, with an average score of 79.5 in the fair category. This suggests that a teaching process that does not consider the diversity of learning styles can negatively impact students' learning outcomes. Therefore, teachers need to pay attention to students' learning styles to enhance learning effectiveness so that students' learning outcomes can be optimal.

Keywords: *effective learning; elementary school students; Indonesian language; learning outcomes; learning styles.*

INTRODUCTION

The success of learning is influenced by external factors such as methods, models, approaches, and media, as well as internal factors such as interests, motivation, and student potential. One important internal factor that must be considered is students' learning styles. According to Kamboj & Singh (2015), understanding learning styles and their role in teaching and learning is crucial to effective learning. Successful learning cannot be achieved without understanding students' learning styles. Every student has different ways of absorbing and processing information, known as learning styles, which affect the effectiveness of the learning they receive. This aligns with the opinion of Pashler et al. (Tulbure, 2012), stating that everyone has different ways of obtaining and understanding information, so an effective teaching method for one person may not be the same for another. In line with this, May (2005) also argues that

students may use different approaches or learning methods when learning new concepts, from understanding to applying those concepts.

Referring to these two opinions, teachers who understand students' learning styles can be more precise in designing teaching strategies that meet students' needs, thereby enhancing motivation, engagement, and student learning outcomes. Therefore, effective learning is not just about the transfer of knowledge, but also about how that knowledge is conveyed according to students' learning characteristics. Without a deep understanding of learning styles, the teaching process tends to be less personal and less relevant to students, which can ultimately lower the quality of learning and its outcomes.

DePorter & Hernacki (2016) reveal that there are three learning styles: visual, auditory, and kinesthetic (V-A-K). By knowing students' learning styles, teachers can choose more appropriate approaches to convey material. For example, students with visual learning styles understand material more easily through graphs or images. This is consistent with research conducted by Menik & Yuhendri (2016), which shows that characteristics suitable for students who learn visually include motivating them to illustrate information by creating diagrams, symbols, and colorful images in their visual notes. Meanwhile, students with auditory learning styles learn optimally through verbal explanations or prioritize their hearing senses in capturing information. In contrast, kinesthetic students are more effective when engaged in activities that involve movement or physical interaction or involving their bodies in capturing information. Each student tends to exhibit all three learning styles, but one is typically more dominant than the others.

Research by Rosdiana et al (2022) shows that the implementation of VAK learning can enhance the learning process and science learning outcomes for students. This is evident from the increase in learning outcomes that moved from the adequate category in Cycle I to the good category in Cycle II. Another study by Khoeron et al (2016) indicates that learning styles have a relationship with academic achievement and significantly affect learning achievement. Furthermore, research by Irawati et al (2021) shows that learning styles significantly influence the learning outcomes of fourth-grade students at State Elementary School 9 Mataram, contributing 21.2%. Referring to several previous research findings, it is crucial for teachers to pay attention to students' learning styles. This can serve as a guide to ensure that the material delivered is easily understood by students, thus optimizing their learning outcomes.

Based on observations, some students perceive the material presented as less interesting and sometimes difficult to understand. Teachers have not considered the diversity of students' learning styles in designing lessons. This is evident in the learning processes that do not adequately facilitate the learning styles of each student. Additionally, some teachers are unaware of their students' learning styles. This can lead to a less meaningful learning experience for students, resulting in suboptimal learning processes and, consequently, learning outcomes.

Tohirin (Astuti et al., 2019) states that learning outcomes are the achievements a student attains after undergoing a learning process, referring to three domains:

cognitive, affective, and psychomotor. It can be said that learning outcomes encompass all the knowledge, attitudes, and skills a student acquires after participating in learning activities. Achieving good learning outcomes is certainly inseparable from the learning processes undertaken.

Despite numerous studies exploring the relationship between learning styles and academic achievement, there remains a gap in understanding how specific learning styles—visual, auditory, and kinesthetic—affect students' academic performance, particularly in primary school settings. While much of the existing literature highlights general tendencies in learning preferences, there is limited research focused on how well teaching methods are aligned with these learning styles, especially in Indonesian primary schools like State Elementary School 1 Sindangrasa. Moreover, the kinesthetic learning style, which is the most dominant according to this study, has not been thoroughly examined in relation to its impact on academic achievement, compared to the more commonly studied visual and auditory styles. This leaves room for further investigation into how teaching strategies could be adapted to support kinesthetic learners more effectively.

Based on the problems and various research findings that have been presented, this study aims to determine the learning styles possessed by students in relation to their learning outcomes in the Indonesian language subject.

METHOD

The method used in this research is a survey method. Creswell (2015) explains that the survey method is a procedure where the researcher administers a survey to a sample or the entire population to describe attitudes, opinions, behaviors, or specific characteristics of the population. This research was conducted at State Elementary School 1 Sindangrasa, Ciamis District, Ciamis Regency, West Java, with a sample of 46 fifth grade students. The sampling technique used is saturated sampling. Data collection in this study employed questionnaires and tests. The questionnaire is used to identify the learning styles of students, including visual, auditory, and kinesthetic learning styles. Meanwhile, the test is used to measure students' learning outcomes in the Indonesian language subject.

FINDINGS AND DISCUSSION

This study was conducted in Class V of State Elementary School 1 Sindangrasa, located in Ciamis District, Ciamis Regency, West Java. Over the course of a week, the researchers collected the necessary data related to the research. The obtained data was then analyzed and presented in the form of tables and diagrams. The following are the results of the study conducted on 46 fifth-grade elementary school students.

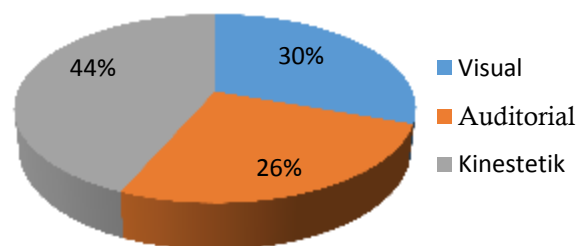
Student Learning Styles

Based on the research conducted, students' learning styles can be seen in the following table.

Table 1. Student Learning Styles

Learning Style	Number of Students	Percentage
Visual	14	30,4%
Auditorial	12	26,1%
Kinesthetic	20	43,5%
Total	46	100%

Referring to the table, it can be seen that out of 46 students, 14 students tend toward a visual learning style with a percentage of 30.4%. A total of 12 students tend toward an auditory learning style with a percentage of 26.1%. There are 20 students who tend toward a kinesthetic learning style with a percentage of 43.1%. For further clarity, see the following figure.

**Figure 1. Percentage of Students' Learning Styles**

Seiawan and Waspodo (Putri & Suryati, 2020) state that in reality, every student possesses all three learning styles, but usually, one style dominates over the others. DePorter & Hernacki (2016) reveal that there are three learning styles: Visual, Auditory, and Kinesthetic (V-A-K). Visual learners tend to absorb information more quickly when it is visualized, as they rely more on their sight to gain information. Auditory learners tend to receive information better when it is verbalized, as they rely more on their hearing. In contrast, kinesthetic learners understand what is conveyed better when they practice it, as this learning style requires activities that involve body movement.

The results of the research show that the majority of fifth-grade students at State Elementary School 1 Sindangrasa have a kinesthetic learning style. Deporter et al. (Putri & Suryati, 2020) state that several characteristics of individuals with a kinesthetic learning style include: a) frequently touching people, standing close together, and moving when interacting with others; b) learning by doing; c) writing down information while reading; d) remembering information while walking and looking. Therefore, the learning conducted should provide opportunities for students with kinesthetic learning styles to move so that they can absorb the material presented more easily.

Students' Learning Outcomes

Based on the research conducted, here are the students' learning outcomes in the Indonesian language subject.

Table 2. Students' Learning Outcomes

Interval Score	Frequency	Percentage	Criteria	Description
93-100	2	4%	A	Very good
84-92	9	20%	B	Good
75-83	30	65%	C	Fair
<75	5	11%	D	Poor
Total	46	100%		

Based on the table above, it can be seen that 2 students achieved very good learning outcomes, with a percentage of 4%. A total of 9 students achieved good learning outcomes, with a percentage of 20%. A total of 30 students achieved sufficient learning outcomes, with a percentage of 65%. Meanwhile, 5 students had poor learning outcomes, with a percentage of 11%.

The average learning outcome of the students based on the research in the Indonesian language subject is 81.4. The highest score achieved by the students was 93, while the lowest score was 70. The minimum passing grade (KKM) for the Indonesian language subject is 75. Thus, there are still students whose learning outcomes are below the KKM. Referring to Table 2, it is known that 5 students have learning outcomes below the KKM.

Learning Styles and Student Learning Outcomes

Based on the research conducted, here are the data on students' learning styles and learning outcomes:

Table 3. Learning Styles in terms of Student Learning Outcomes

Learning Style	Number of Students	Percentage	Average	Description
Visual	14	30,4%	84,3	Good
Auditorial	12	26,1%	81,4	Fair
Kinesthetic	20	43,5%	79,5	Fair
Total	46	100%		

Referring to the table above, it is known that students with a visual learning style have a higher average learning outcome compared to other styles, with a score of 84.3, which falls into the "good" category. Meanwhile, students with an auditory learning style have a higher average learning outcome than those with a kinesthetic learning style, but lower than those with a visual learning style, with a score of 81.4, which falls into the "fair" category. Additionally, students with a kinesthetic learning style have the lowest average learning outcome, with a score of 79.5, categorized as "fair".

From these findings, it can be concluded that there are differences in learning outcomes depending on the students' learning styles. The most dominant learning style is kinesthetic, but their learning outcomes are lower compared to students with other learning styles. This could be due to the way teachers deliver material, which might not align with the students' learning styles, leading to suboptimal information retention. This is supported by research by Supit et al (2023), which showed that teachers must consider students' learning styles when conducting lessons. Additionally, DePorter &

Hernacki (2016) stated that when someone understands their learning style, they can take important steps to learn faster and more easily, achieving better learning outcomes.

Learning Outcomes Based on Learning Style

Before delving deeper into the analysis of student learning outcomes based on each learning style, the following table presents the distribution of student learning outcomes categorized by visual, auditory, and kinesthetic learning styles. The table includes the number of students in each score range, along with the corresponding criteria and descriptions of their performance. This data provides a clearer picture of the differences in academic achievement across the three learning styles.

Table 4. Learning Outcomes Based on Learning Style

Score Interval	Visual		Auditorial		Kinesthetic		Criteria	Description
	F	%	F	%	F	%		
93-100	2	14%	0	0,0%	0	0%	A	Very good
84-92	3	21,4%	2	16,7%	4	20%	B	Good
75-83	9	64,3%	10	83,3%	11	55%	C	Fair
<75	0	0%	0	0%	5	25%	D	Poor
Total	14	100%	12	100%	20	100%		

Based on the table above, the learning outcomes of students with a visual learning style show that 2 students (14%) achieved excellent results, 3 students (21.4%) achieved good results, and 9 students (64.3%) achieved satisfactory results. Overall, students with a visual learning style have met the minimum passing criteria (KKM), indicating that the teaching process has been effective and aligned with their learning style.

For students with an auditory learning style, 2 students (16.7%) achieved good results and 10 students (83.3%) achieved satisfactory results. These results meet the KKM, suggesting that the teaching process has effectively accommodated auditory learners.

Meanwhile, for students with a kinesthetic learning style, 4 students (20%) achieved good results, 11 students (55%) achieved satisfactory results, and 5 students (25%) achieved below the standard. Since some kinesthetic learners have not met the KKM, the teaching process has not fully supported this learning style optimally.

Based on the research, the novelty of this research lies in the in-depth analysis of the impact of different learning styles—visual, auditory, and kinesthetic—on the academic performance of elementary school students. By comparing the learning outcomes of students based on these three learning styles, this study reveals a mismatch between the dominant learning style, which is kinesthetic, and the lower academic achievement associated with it. This finding is crucial for understanding how learning styles can influence students' academic success.

Additionally, this research specifically focuses on elementary school students in Indonesia, providing a relevant local context. Unlike many previous studies conducted in different educational settings, this research highlights the unique challenges and

needs faced by educators in adapting teaching methods to accommodate students' learning styles in Indonesia.

One significant finding of this study is the gap in teaching approaches used in the classroom, particularly in accommodating kinesthetic learning styles. This indicates that the existing teaching strategies are not fully effective in supporting the learning of students with this style. Such findings pave the way for the development of more innovative and responsive teaching methods that can enhance teaching effectiveness in the classroom.

This research also offers practical recommendations for educators and curriculum developers on how to better support students with diverse learning styles. Thus, this study contributes to the development of more inclusive and effective teaching practices in educational settings.

Finally, this research raises awareness of the importance of recognizing and accommodating kinesthetic learning styles in teaching. By demonstrating that kinesthetic learning styles dominate among students but are associated with lower academic outcomes, this study encourages further research and innovation in elementary education. With all these novelties, this research not only provides new insights for future studies in the field of learning styles and academic achievement but also contributes to the improvement of educational theory and practice.

CONCLUSION

Based on the research conducted, it can be concluded that 30.4% of students have a visual learning style, 26.1% have an auditory learning style, and 43.1% have a kinesthetic learning style. In terms of learning outcomes, students with a visual learning style have a higher average outcome than others, with a score of 84.3 in the "good" category. Students with an auditory learning style have higher outcomes than kinesthetic learners but lower than visual learners, with a score of 81.4 in the "fair" category. Students with a kinesthetic learning style have the lowest average outcome, with a score of 79.5 in the "fair" category.

ACKNOWLEDGMENTS

We would like to express our deepest gratitude to all those who have supported and contributed to the completion of this research. Special thanks go to the school principal and teachers at State Elementary School 1 Sindangrasa for their cooperation and assistance in data collection. We are also grateful to the students and their parents for their willingness to participate in the study. Without your contributions, this research would not have been possible.

REFERENCES

- Astuti, M., Sofyan, F. A., & Marisa, M. (2019). Hubungan antara learning style dengan hasil belajar siswa pada mata pelajaran matematika kelas V di MIN 2 Palembang. *JRPD (Jurnal Riset Pendidikan Dasar)*, 2(1), 54–65.

<https://doi.org/10.26618/jrpd.v2i1.2062>

- Creswell, J. W. (2015). *Educational research, planning, conducting and evaluating: qualitative and quantitative research*. Boston: Pearson.
- DePorter, B., & Hernacki, M. (2016). *Quantum learning membiasakan belajar nyaman dan menyenangkan*. Bandung: Kaifa.
- Irawati, I., Ilhamdi, M. L., & Nasruddin, N. (2021). Pengaruh gaya belajar terhadap hasil belajar IPA. *Jurnal Pijar Mipa*, 16(1), 44–48. <https://doi.org/10.29303/jpm.v16i1.2202>
- Kamboj, P., & Singh, S. K. (2015). Effectiveness of select teaching strategies in relation on the learning style of secondary school student in India. *Interchange*, 46(3), 289–312.
- Khoeron, I. R., Sumarna, N., & Permana, T. (2016). Pengaruh gaya belajar terhadap prestasi belajar peserta didik pada mata pelajaran produktif. *Journal of Mechanical Engineering Education*, 1(2), 291. <https://doi.org/10.17509/jmee.v1i2.3816>
- May, T. . (2005). *Teaching maths to pupils with different learning styles*. London: Paul Chapman Publishing.
- Menik, K., & Yuhendri, L. (2016). Analysis characteristics of learning styles VAK (Visual, Auditory, Kinesthetic) student of Banks and Financial Institutions course. *International Conference on Education for Economics, Business, and Finance*, 437–446.
- Putri, N. W. S., & Suryati, N. K. (2020). Analysis of the style of learning based on visual, auditorial, kinesthetic on students of computer system. *IJECA (International Journal of Education and Curriculum Application)*, 3(1), 43. <https://doi.org/10.31764/ijeca.v3i1.2056>
- Rosdiana, M. P. M., Muslimin, M., & Firmansyah, F. (2022). The use of visual, auditory, kinesthetic (VAK) learning to increase student learning outcomes. *Inornatus: Biology Education Journal*, 2(2), 85–93. <https://doi.org/10.30862/inornatus.v2i2.343>
- Supit, D., Melianti, M., Lasut, E. M. M., & Tumbel, N. J. (2023). Gaya belajar visual, auditori, kinestetik terhadap hasil belajar siswa. *Journal on Education*, 5(3), 6994–7003. <https://doi.org/10.31004/joe.v5i3.1487>
- Tulbure, C. (2012). Investigating the relationships between teaching strategies and learning styles in higher education. *Acta Didactica Napocensia*, 5(1), 65–74.