



Analysis of Learning Styles of Academically Achieving Students

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Abstract

This study investigates the learning styles of academically high-achieving students at SD Negeri 138/II Daya Murni, aiming to understand how these preferences influence their academic success. Employing a qualitative descriptive approach, the research was conducted from June to August 2025. The study's subjects, selected through purposive sampling, included two high-achieving students and their Class V homeroom teacher. Data were collected using method triangulation, comprising participatory observations, structured interviews, and documentation. The data were then analyzed using a descriptive analysis technique involving data reduction, presentation, and verification. The key findings indicate that while students utilized a combination of visual, auditory, and kinesthetic styles, their academic achievement was predominantly driven by the effective application of visual and auditory learning. The study concludes that an understanding and accommodation of these dominant learning styles, alongside a supportive learning environment, are crucial for fostering and sustaining high academic performance.

Introduction

Education is a fundamental and deliberate endeavour aimed at developing an individual's potential throughout their life, both within and outside the formal school setting (Apdoludin et al., 2022; Tirtasari et al., 2024). The primary function of education is to cultivate character and a dignified national civilization, with the ultimate goal of maximizing a student's potential (Aldino et al., 2023; Nurhanita et al., 2022). A critical factor that significantly influences a student's learning outcomes and academic success is their learning style (Arumsari, 2023; Dewi & Prasetyo, 2022). Learning styles represent the unique ways individuals receive and process new information. Therefore, educators need to understand the dominant learning styles of their students to implement effective teaching methods that can accommodate this diversity and, in turn, enhance learning outcomes.

Learning style is defined as a consistent approach that describes how individuals focus their attention during the learning process and how they master new and complex information using unique perceptions (Budi Sentot Setia et al., 2021; Nisa et al., 2022). Every student has a preferred or comfortable method for receiving, absorbing, processing, and managing information. Using a suitable learning style has been shown to make it easier for students to retain information in their long-term memory (Rahmalika & Marsofiyati, 2024; Hanifah et al., 2021). Moreover, the right learning style is directly linked to a student's academic achievement, as it improves their comprehension of subject matter (Harahap, 2023; Susianti et al., 2022). Previous studies also demonstrate that improved learning outcomes can be achieved by applying teaching models that align with student preferences, such as the use of visual media and discussion-based methods (Apdoludin et al., 2022).

Based on preliminary observations conducted by the researchers at SD Negeri 138/II Daya Murni on June 10, 2025, two students were identified as academic high-achievers, having won first place at the sub-district level in Mathematics and Social Sciences. The observations revealed that despite both students being high-achievers, their behaviour and learning styles during classroom activities varied significantly. This phenomenon highlights that high academic achievement is not necessarily the result of a uniform learning style but rather stems from each individual optimizing the learning modality that best suits them (Ilham, 2023; Nugroho & Haslina, 2022). This was further supported by observations of one high-achieving student in Social Sciences, identified as "US," who showed a greater interest and understanding of the material through active engagement in discussions, question-and-answer sessions, and oral presentations, a different approach from the other high-achiever.

To gain a deeper understanding, interviews were conducted on June 11, 2025, with both the student US and the homeroom teacher for class V. The interview with student US revealed a preference for learning through discussion and creating concept maps, which indicates a combination of visual and auditory learning styles. This was corroborated by the teacher, Mrs. DM, who confirmed that US is consistently active in class discussions, frequently asks questions, and enjoys creating concept maps from the lessons. These findings underscore that significant variations in learning styles exist even among high-achieving students, necessitating specific attention from teachers. Research also indicates that the development of learning materials using concept maps (mind maps) can effectively enhance student learning outcomes, aligning with the preferences of students (Apduludin et al., 2022; Yuliani, 2021).

Based on the background and observed phenomena, the main objective of this study is to conduct a more in-depth investigation into the learning styles of academically high-achieving students at SD Negeri 138/II Daya Murni. The urgency of this research lies in the critical importance of understanding student learning styles as a key factor in designing effective teaching strategies and supporting optimal academic achievement, as highlighted in educational literature (Aini et al., 2022; Dewi & Prasetyo, 2022). The novelty of this study is its specific focus on analyzing the learning styles of high-achieving students within this particular school, a context that has not been previously examined. Consequently, this research is expected to make a tangible contribution by providing educators with the insights needed to develop more personalized and relevant teaching strategies for high-achieving students, thereby fostering their understanding and sustained academic success.

Methods

Research Methods

This research employs a qualitative approach with a descriptive research design. The qualitative approach was chosen to provide an in-depth and holistic understanding of the learning styles of high-achieving students within their natural context (Ahmad & Muslimah, 2021; Daruhadi & Sopiati, 2024). The descriptive method aims to describe, elaborate, and analyze phenomena as they occur in the field, allowing the meaning of the research topic to be constructed through words and language (Deswita Khovia Dwi, 2024; Emzir, 2022). This method enables the researcher to explore the behavior, perceptions, and actions of research subjects regarding their learning styles without relying on statistical data.

Population and Sample

The study was conducted at SD Negeri 138/II Daya Murni from June to August 2025. The research subjects were selected using purposive sampling, a technique where samples are chosen based on specific criteria or considerations relevant to the research focus (Sudaryono, 2021; Yanuarti & Rosida, 2023). In this case, the subjects were academically high-achieving

students who had won first place at the sub-district level in Mathematics and Social Sciences, along with their homeroom teacher, who was considered to have a deep understanding of the students' learning styles. The selected subjects consisted of two high-achieving students and one class V homeroom teacher, who were deemed capable of providing rich and relevant data to address the research questions.

Data Collection and Analysis Techniques

Data collection in this study was performed using method triangulation, a combination of observation, interviews, and documentation, to ensure comprehensive data acquisition (Habsy et al., 2024; Denzin, 2024). Participatory observation was carried out to directly and actively observe the behavior of the high-achieving students during classroom learning, including their interactions, expressions, and how they responded to the material (Daruhadi & Sopiati, 2024; Darmawati & Sudiro, 2022). Structured interviews were used to gather in-depth information through systematically designed questions (Romdona et al., 2025). The interview questions were posed to both the high-achieving students and their homeroom teacher to explore their learning preferences, habits, and influencing factors. Finally, documentation was employed to collect supporting data, such as written and recorded documents, including lesson plans, syllabi, photos of learning activities, and voice recordings, which substantiated the findings from the observations and interviews (Sugiyono, 2020; Hidayat & Irawan, 2023).

Data analysis was conducted using a descriptive analysis technique, which involved three interrelated stages: data reduction, data presentation, and conclusion drawing/verification (Ahmad & Muslimah, 2021; Sofwatillah et al., 2024). First, data reduction is the process of simplifying the raw data obtained from field notes by summarizing, coding, and identifying key themes. This stage helps the researchers focus on the most important information (Hasibuan & Nurhasanah, 2022). Second, data presentation involves organizing the reduced information into a systematic narrative text, which clearly illustrates the relationships between the data and the conditions in the field. Third, the process of drawing conclusions or verification is an ongoing activity where researchers seek to find meaning from the findings. Initial conclusions are continuously verified and strengthened with consistent evidence until a credible and accurate conclusion is reached (Deswita Khovia Dwi, 2024).

Results and Discussion

Learning style is a complex cognitive and affective mechanism that reflects an individual's distinct preferences for perceiving, interacting with, and responding to the learning environment and new information (Hamna & BK, 2021). The varying pace at which students acquire and comprehend material—ranging from rapid to slow—necessitates the adoption of adaptive pedagogical approaches. Consequently, a multifaceted instructional design that incorporates diverse strategies such as group discussions and question-and-answer sessions becomes crucial for catering to this learning diversity (Mustakim et al., 2020). By understanding and leveraging these consistent patterns of information processing, educators can help students more effectively store and retrieve knowledge in their long-term memory (Budi Sentot Setia et al., 2021). The primary goal of this research was to conduct an in-depth analysis of the dominant learning styles among academically high-achieving students at SD Negeri 138/II Daya Murni, building upon the established framework of three principal learning types: visual, auditory, and kinesthetic (Rudini & Agustina, 2021; Marzuki et al., 2021).

Visual Learning Style

The study's findings provide compelling evidence for the prevalence of a visual learning style among the high-achieving student cohort. The implementation of this learning modality was observed through teachers' pedagogical practices, which centred on the display and

explanation of material using visual aids such as pictures and diagrams. This approach, as documented in the teachers' lesson plans (RPP) and syllabi, was found to be highly effective in enhancing students' comprehension and memory retention. The use of visual media facilitates a more direct and intuitive understanding of complex concepts, as students are able to form a mental map of the information presented (Hamna & BK, 2022).

Student engagement and enthusiasm were significantly heightened during lessons that integrated visual content. This is consistent with existing literature that posits visual learners grasp information most optimally when it is presented in a visible format (Azimi et al., 2017). Furthermore, the research highlighted the crucial role of external support, particularly from parents, who provided supplementary visual tools at home. This collaborative effort between the school and the home environment was found to be a key factor in optimizing the students' learning process and academic outcomes (Setiawan et al., 2023). This collaboration helps to create a consistent learning ecosystem that reinforces classroom learning and encourages students to practice their preferred learning style in a relaxed setting.

A key characteristic of visual learners is their dependency on the sense of sight for information intake (Chen et al., 2014; Silitonga & Magdalena, 2020). They require concrete visual evidence, such as illustrations, diagrams, and video demonstrations, to fully internalize concepts. These students also typically exhibit a high degree of organization in their learning habits and are less susceptible to distractions from auditory stimuli. However, a notable challenge identified in this study, aligning with previous research, is their difficulty in processing instructions that are conveyed exclusively through verbal means (Chen et al., 2014). This underscores the necessity for teachers to provide both oral and visual instructions to ensure effective communication in a mixed-style classroom. This dual approach ensures that visual learners can process information effectively while also catering to other learning styles, thereby creating a more inclusive learning environment. The research by Parwati (2024) further reinforces the importance of using visual aids to enhance learning achievement, particularly for subjects that benefit from visual representation.

Auditory Learning Style

The research also identified a strong auditory learning style within the student group, which was effectively catered to by the teachers' direct verbal delivery of material. Students in this study demonstrated enhanced understanding and mastery of subjects when teachers explained content orally, as opposed to merely assigning tasks that involved copying notes. This finding highlights the effectiveness of a direct instructional approach for auditory learners, who process information best through sound and verbal interaction. In a classroom setting, these students thrive during lectures, group discussions, and verbal question-and-answer sessions. They often prefer to read out loud to themselves or engage in verbal recaps of the material to reinforce their learning. Parental support at home, which included discussions and verbal reinforcement of lessons, further augmented the students' comprehension, demonstrating the importance of a consistent auditory learning environment (Assidiqia & Sumarni, 2020).

Auditory learners, as described by De Porter and Hernacki (as cited in Hamna & BK, 2022), are identifiable by their preference for speaking over writing and their tendency to use auditory cues, such as "I hear what you're saying," in their communication. Their learning is heavily reliant on their powerful sense of hearing, which serves as the primary channel for absorbing new information. The study found that these students thrive in a classroom environment where lectures, discussions, and verbal Q&A sessions are central to the learning process. These findings corroborate the work of Nasution (2022), which also concluded that a strong auditory learning style significantly impacts a student's academic achievement. The research

emphasizes that auditory learners' ability to recall information is often superior when it has been processed through listening, making verbal instruction a critical component of their learning success.

Kinesthetic Learning Style and Contributing Factors

The kinesthetic learning style was also successfully integrated into the classroom pedagogy. The study revealed that teachers employed dynamic teaching methods, such as utilizing body movements, gestures, and active physical demonstrations, to present material. The high-achieving students showed a marked improvement in their understanding of concepts when the learning process involved active movement and tangible, hands-on examples. This dynamic approach not only prevented student boredom but also made the subject matter more accessible and memorable, as it directly engaged their physical senses. This finding aligns with the characteristics of kinesthetic learners, who, as Diana et al. (2021) note, think more effectively when they are in motion and often find it challenging to remain seated for prolonged periods.

The formation of a student's learning style is not static; it is a dynamic process shaped by a confluence of psychological and physical factors, as well as the interaction between the individual and their environment (Hamna & BK, 2022). This is further supported by Kolb's theory, which states that learning styles are influenced by personality, habits, and career choices (Shi et al., 2019). The study identified several supporting factors that contributed to the students' academic success, including the optimal utilization of motivating learning media by teachers and robust parental support at home. These elements collectively created a conducive learning environment that fostered focus and deep comprehension.

Conversely, the research also uncovered significant hindering factors, such as insufficient communication between teachers and students and a lack of adequate learning facilities in the home environment. These limitations can impede the learning process and highlight the need for systemic improvements. The analysis conclusively demonstrates that while high-achieving students at SD Negeri 138/II Daya Murni utilize a combination of all three learning styles, their academic success is predominantly driven by the effective application of their visual and auditory learning styles. This is due to a majority of students feeling most comfortable and effective when learning through sight and hearing, a finding supported by other studies on learning preferences in educational settings (Rosidah et al., 2022). The optimal application of these dominant styles, alongside a supportive learning ecosystem, is instrumental in achieving high academic performance. This highlights the importance of a personalized approach to education, where teachers and parents work together to identify and cultivate the most effective learning strategies for each student.

Conclusion

In conclusion, this research aimed to analyze the learning styles of academically high-achieving students at SD Negeri 138/II Daya Murni. The key findings indicate that while these students utilize a combination of visual, auditory, and kinesthetic learning styles, their academic success is predominantly driven by the effective application of their visual and auditory preferences. The study found that teaching methods incorporating visual aids and direct verbal explanations were highly effective in enhancing student comprehension and retention. Furthermore, a collaborative learning ecosystem, supported by optimal use of learning media and active parental involvement, was identified as a critical factor in fostering academic achievement.

Despite these findings, the study acknowledges several limitations. The research was conducted with a small, specific sample of high-achieving students at a single school, which may limit the generalizability of the findings to a broader student population. Additionally, while the study identified a correlation between dominant learning styles and academic success,

it did not establish a direct causal link. This leaves room for further exploration of other contributing factors to high academic performance.

For future research, it is recommended to conduct a quantitative study with a larger and more diverse sample to validate and expand upon these findings. Future studies could also investigate the long-term impact of personalized teaching strategies on student achievement. Furthermore, research could focus on developing and testing specific interventions aimed at improving communication between teachers and students and enhancing learning facilities in both school and home environments. This would provide more comprehensive insights into how educators and parents can best support students' academic journeys.

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