



## Analyzing student learning style profiles for differentiated learning in merdeka curriculum in elementary schools

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### ABSTRACT

Students have unique learning styles. Understanding students' learning style profiles enables teachers to design differentiated learning with more effective teaching strategies that cater to individual needs, enhancing comprehension and retention of material. The aim of this research is to determine the Student Learning Style Profiles for Differentiated Learning in the Merdeka Curriculum in Elementary Schools. This is motivated by the distinct differences among students influenced by environmental factors and brain dominance, shaping learning styles towards visual, auditory, or kinesthetic preferences. This qualitative descriptive research employed a case study approach, involving all second-grade students (Class IIB) of elementary school 44 Bengkulu city in the academic year 2023/2024, totaling 24 students. Data collection methods included observation, interviews, and questionnaires. The research findings reveal diverse learning styles among second-grade students, with 31% being visual learners, 32% auditory, and 37% kinesthetic. These differences pose a challenge for teachers to implement differentiated teaching strategies. The goal of differentiated learning is to facilitate meeting the diverse learning needs of students. This study anticipates that students' learning styles in elementary school 44 Bengkulu city may differ in auditory and kinesthetic aspects, and understanding these learning styles can assist teachers in adapting their teaching approaches to meet students' needs and potentials.

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## INTRODUCTION

The improvement of education in Indonesia continues to progress, one aspect being the change in curriculum aimed at continually evolving the education system to remain relevant. The curriculum functions as the structure that organizes and guides the educational system of an institution

toward shared goals. The implementation of the curriculum in Indonesia has undergone various changes and adaptations. These curriculum adjustments stem from the continuously changing conditions and external expectations demanding competitive outcomes in both domestic and global societal aspects. According to Fahlevi (2022), the Minister of Education in Indonesia introduced the "Merdeka Curriculum" policy as an alternative to address the country's educational conditions. The introduction of this Merdeka curriculum into the Indonesian education system has become the focal point of study, especially in educational institutions (Setiawati, 2022). This is because it directly influences the learning processes in schools. The government's efforts to socialize this curriculum aim to accelerate the implementation of the Merdeka Curriculum as part of its initiative to enhance the learning environment in Indonesia (Mulyasa, 2022). In implementing the curriculum, the Indonesian government provides freedom to all educational institutions in the country to choose and apply a concept of flexible learning according to the capabilities and conditions of each school. Damayanti et al (2023) explains that the improvement of Indonesian education must align with the demands and needs of the government's and schools' curricula. This curriculum plays a crucial role within the educational framework.

Changes in the curriculum can have both positive and negative impacts on the quality of education. The positive impact lies in students being able to learn in line with the evolving times. However, the negative consequence arises if the changes in the curriculum occur too rapidly, potentially leading to new issues such as a decline in student achievement (Setiawati, 2022 ; Siregar et al., 2022). From this discussion, it can be concluded that changes in the curriculum should be viewed as a catalyst for achieving better results and competing effectively in the national and international educational sphere. The Merdeka Curriculum is an approach that emphasizes learning variations. According to Oktavia & Qudsiyah (2023), the focus of the Merdeka curriculum is on core subjects, allowing students adequate opportunities to grasp concepts and develop their skills. Angga et al (2022) state that the implementation of this curriculum in educational institutions is expected to pay attention to students' competency achievement in emergency situations, particularly in foundational learning. Hanafiah et al (2022) explain that circumstances such as the COVID-19 pandemic since 2020 have caused setbacks in learning and impacted students' competency achievements. Efforts to address this setback require steps to improve learning adapted to specific periods through the application of the curriculum at the learning level by educational institutions (Novandi et al., 2023).

Implementing diverse teaching strategies can assist teachers in conducting the learning process by encouraging student participation and meeting diverse needs, ultimately resulting in more effective learning and achieving learning objectives. Susilo & Sarkowi (2019) depict the 21st century as an era of knowledge serving various needs. In this 21st century, globalization affects nearly all aspects of life, including the educational realm, where teachers should remain committed to educating students and instilling national values (Surya, 2017). To develop 21st-century learning, teachers should start by changing the traditional teacher-centered learning to student-centered learning, considering their learning styles. Hence, innovation in education becomes crucial in the current educational context Sugiastuti & Indrajit (2022). Therefore, the influence of globalization should be harnessed to obtain its positive benefits in education while mitigating the negative impacts it might bring about.

According to research by Rahayu et al (2022), the Merdeka Curriculum grants freedom to students to explore their abilities and interests. By using the Merdeka Curriculum, significant changes occur in schools, with teachers becoming more flexible in creating optimal teaching methods and understanding the interests, talents, needs, and capabilities of students better. The Independent Learning Program is aimed at uncovering the potential, innovation, and creativity of both students and teachers to enhance the quality of learning (Saleh, 2020). The Merdeka Curriculum, based on the principle of independent learning at the basic level, provides "freedom" to educators, especially teachers and school principals, in designing, developing, and

implementing curricula that adapt to the potentials and needs of students and schools. Independent learning gives teachers the freedom to plan lessons emphasizing essential aspects while considering the unique characteristics of students, thereby achieving more meaningful, engaging, and profound learning outcomes (Rahmadayanti & Hartoyo, 2022).

Students in a classroom have differences stemming from diverse backgrounds, learning preferences, interests, and varying learning speeds, resulting in diverse readiness for learning. Halimah et al (2023) explain that differentiated learning is an approach used by teachers to accommodate students' learning needs in the classroom, encompassing readiness, interests, and learning profiles. Parnawi (2021) states that in implementing differentiated learning, teachers need to consider logical actions to take, as this doesn't necessarily mean providing entirely different treatment for each student or sharply distinguishing between more capable students and those who may be less proficient.

According to Himmah & Nugraheni (2023), Differentiated Learning is an instructional approach that provides support to students so that their learning needs can be met. Differentiated learning is an effort to tailor the learning process in the classroom to meet the individual learning needs of each student (Herwina, 2021). This approach applies student-focused learning strategies known as the student-centered approach, enabling students to become more active participants in the learning process. Suwartiningsih (2021) suggests that implementing differentiated learning can enhance students' engagement and learning outcomes while providing opportunities for them to learn naturally and efficiently. Student engagement during the learning process serves as an indicator of their willingness to inquire, express opinions, complete tasks, and respond to teacher questions. Through student engagement, there arises a better learning motivation, ultimately leading to improved learning outcomes (Surat, 2019).

Based on initial observations and interviews with teachers at elementary school 44 Bengkulu city in class IIB, some students exhibited a lack of attention towards the teacher while explaining the learning material. Some passive students require more concentration during the learning process, prefer solitary play, and find themselves disengaged during lessons. Group formation wasn't aligned with mapping students' learning styles. During learning activities, certain students require knowledge about easily comprehensible and enjoyable learning styles. The issue at hand involves the necessity to optimize learning success, prompting teachers to conduct group mapping based on potential, interest, and learning readiness that can coalesce into a unified entity a learning profile. By addressing students' needs through this mapping, the aim is to foster an environment conducive to optimal learning outcomes.

Learning styles represent personalized individual methods of understanding, absorbing, and acquiring information based on a student's disposition during the learning process. There are three types of learning styles: visual, auditory, and kinesthetic. By aligning teaching methods with individual students' learning styles, teachers can help achieve optimal learning outcomes (Zulfiani et al., 2021). According to Falah & Fatima (2019), each student possesses a unique learning style depending on how they comprehend and absorb the material taught by the teacher. Salam et al (2020) view learning styles as an approach or strategy that involves a series of processes, behaviors, and personal tendencies in uniquely understanding knowledge. Alhafiz (2022) states that learning styles function as a framework explaining how students construct knowledge, grasp complex information, and develop diverse perspectives. These learning styles empower teachers to assess the potential of each student, enabling a more targeted approach in using learning strategies aligned with students' interests (Kusumawati & Maruti, 2019). Every student possesses different qualities, readiness, and diverse methods in absorbing information while learning. By understanding learning styles, educators can identify issues and understand students' readiness in comprehending material based on their interests and abilities (Sari et al., 2023). In the Merdeka Curriculum, the differentiation approach becomes highly relevant (Wahyudi et al., 2023). With a

strong understanding of students' learning style profiles, educators can design diverse learning strategies to reach and cater to each student's specific learning needs.

Research by Herdianto et al (2023) indicates that learning style profiles in differentiated learning provide unique readiness, interest, and preferences for each student. In this differentiated learning approach, all students' needs can be met according to their interests and learning profiles. The implementation of differentiated learning is expected to accommodate various student needs. Differentiated learning refers to adapting learning to students' interests, desired learning methods, and readiness levels so that they can achieve learning objectives. Sarie (2022) states that in implementing differentiated learning, three aspects are differentiated: content differentiation, process differentiation, and product differentiation. Yani et al (2023) explain that differentiation is one of the tactics that can build the learning process. Utilizing differentiation in the classroom offers three alternative methodologies for differentiated learning: differentiated content, differentiated process, and differentiated product.

The research findings by Digna et al (2023) indicate a high level of enthusiasm among teachers for learning about the Merdeka Curriculum, with significant participation in related training. However, this enthusiasm doesn't align with teachers' understanding of differentiated learning. Only a few teachers comprehend differentiated learning, and most have not yet implemented it in their classrooms. While the implementation of the Merdeka Curriculum in schools has been maximal, there are still numerous constraints and challenges in its execution. The current implementation of the Merdeka Curriculum in learning still faces shortcomings and obstacles. The research results by Mawati et al (2023) & Maskur (2023) suggest that post-analysis, the implementation of the Merdeka Curriculum aligns better with the educational culture. However, policymakers and education practitioners need to consider various factors to ensure the proper implementation and improvement of the 2013 Curriculum.

The urgency of the research on analyzing student learning style profiles for differentiated learning in the Merdeka curriculum in elementary schools lies in the essential need to enhance the effectiveness of education tailored to individual students. With the implementation of the Merdeka curriculum, understanding and addressing diverse learning styles become imperative for successful and inclusive educational practices. This research is necessary to fill the gap in knowledge regarding how students with varying learning preferences engage with the Merdeka curriculum. By unraveling the intricacies of learning styles, the study aims to contribute insights that can inform educators, curriculum developers, and policymakers, ensuring that educational approaches are adaptable, inclusive, and optimized for the diverse needs of students in elementary schools. The urgency stems from the aspiration to create a more tailored and effective learning environment that aligns with the principles of the Merdeka curriculum.

Understanding students' learning style profiles is crucial because each student has a different way of comprehending, absorbing, and processing information. In the Merdeka Curriculum, every student is allowed to develop according to their potential and uniqueness. A deep understanding of individual learning styles enables teachers to create various learning approaches tailored to each student's needs and preferences. Analyzing students' learning style profiles for differentiated learning within the context of the Merdeka Curriculum can provide a deeper insight into students' learning preferences. It allows the development of more targeted and suitable learning strategies, maximizing each student's potential in an educational environment that values learning freedom. Based on the aforementioned problem background, it's important to understand students' learning styles for differentiated learning that can influence and enhance students' knowledge in the learning process. The researcher is interested in conducting a study titled "Analyzing Student Learning Style Profiles for Differentiated Learning in the Merdeka Curriculum in Elementary Schools".

## RESEARCH METHODOLOGY

This study employs a qualitative descriptive research approach conducted at Elementary School 44 in Bengkulu City. Qualitative research aims to gather information that reflects actual occurrences without fabrication. Descriptive research involves classifying and substantiating a topic based on the events observed during the research process. The use of qualitative research focuses on acquiring information that genuinely reflects factual occurrences and is not contrived. According to Sugiyono (2019), descriptive assessment is a form of clarifying and proving a topic according to the events observed during the research. Winarni (2018) asserts that qualitative research centers on natural object conditions, gathers data through triangulation, and places greater emphasis on significant findings rather than generalization. Based on these perspectives, the researcher concludes that descriptive assessment involves systematically and accurately gathering information about the ongoing state of affairs.

This research commenced from September 4, 2023, to November 30, 2023. The research subjects were all 24 students in class IIB at Elementary School 44 in Bengkulu City. Data collection techniques involved observation, interviews, and a learning style questionnaire conducted in the IIB class. During observation, the researcher directly engaged in the observed activities. Interview techniques were employed with pre-selected informants, namely, the teachers of class IIB at Elementary School 44 in Bengkulu City. For this study, the researcher used the Miles and Huberman data analysis model. This model, often referred to as the interpretive analysis model, aims to comprehend the meaning within the collected data. It involves utilizing relevant theories and concepts in data collection, data reduction, data presentation, and drawing conclusions from the analysis. Data reduction occurred after collecting all data, sorting it according to research needs. Data presentation was conducted by analyzing the sorted data and presenting it in the research results and discussion section. The researcher also grouped the obtained data into specific learning style categories, preparing the data for verification and drawing conclusions. The final step involved drawing conclusions derived from the analysis and establishing appropriate conclusions based on the data presentation.

This research focuses on three types of learning styles: visual, auditory, and kinesthetic. Using a learning style test, students in class IIB have been grouped based on their learning style profiles for differentiated learning in the independent curriculum. The learning style indicators were developed based on the characteristics of student learning styles (Mursari, 2020), which include:

**Table 1.** Learning style indicators

Aspect of Learning Style	Learning Style Indicators	Number of Statement Items
Visual	1. Doesn't want to be disturbed by noise.	7
	2. Easier to remember by looking at objects/information.	7
	3. Enjoys reading independently.	7
	4. Capable of reading quickly and with focus.	5
	5. Recalls information through visual connections.	4
Auditory	1. Often self-motivates while working.	7
	2. Capable of reading aloud and has good listening skills.	5
	3. Learns well through auditory means, remembering information from discussions.	7
	4. Highly skilled in speaking, discussions, and explaining important matters.	5
	5. Proficiency lies in speaking skills but struggles with writing.	6
Kinesthetic	1. Speaks at a slow pace.	5
	2. Remembers through visual and experiential processes.	6
	3. Actively moves and finds it difficult to stay seated.	6
	4. More interested in physical activities and enjoys movement.	6
	5. Has a desire to engage in numerous activities or tasks.	7
	Total	90

Using the cues from these indicators, a questionnaire encompassing various aspects of learning styles was structured. Based on the observations, interviews, and completion of the questionnaire regarding students' learning styles, the researcher attempted to request respondents, specifically the students in class IIB, to fill out the prepared questionnaire. The percentage formula used to determine the dominant learning style in each class is as follows:

$$P = \frac{F}{N} \times 100\%$$

P = Percentage to be calculated

F = Number of students in each learning style aspect

N = Total number of students

## RESULTS AND DISCUSSIONS

This research was conducted in class IIB of Elementary School 44 in Bengkulu City, involving 24 students, comprising 11 females and 13 males. The research focused on three learning styles: visual, auditory, and kinesthetic. The research instrument was a student learning style questionnaire consisting of 90 items, divided into 30 statements for visual style, 30 statements for auditory style, and 30 statements for kinesthetic style. This instrument was developed based on the characteristics of elementary school students' learning styles. In addition to observation and interviews, completing the questionnaire was expected to provide an accurate overview of the learning styles of class IIB students. Based on observation results, it was evident that the teacher prepared students for learning with focus and conducted an initial diagnosis to understand students' learning needs. This allowed the teacher to recognize differences among the students. Interviews with the class IIB teacher indicated that each student possessed unique and varied traits. The learning approach at State Elementary School 44 in Bengkulu City aimed to explore the potential of each student. Teachers provided opportunities for students to actively participate in the learning process, answer questions, and express their opinions. Teachers also interacted with students regarding the learning and assessment processes. Therefore, the approach at State Elementary School 44 in Bengkulu City not only centered on students' knowledge but also aimed to develop skills such as dance, singing, and martial arts.

Learning style is a complex method wherein students engage in learning based on their preferences and comfort while receiving or processing information. Students' levels of comprehension vary, with different speeds of understanding, such as fast, moderate, and slow. This affects the effectiveness of the learning methods used, subsequently resulting in various engaging learning approaches, such as the question-and-answer method. Wassahua (2016) states that learning style is the consistent way a student captures stimuli or information, their way of developing, thinking, and solving problems. Learning style is the preferred and comfortable learning preference and habit for students when receiving, absorbing, processing, and managing learning information, making it easier for them to remember in their brain's memory. Dewi & Yusri (2023) define learning style as a complex way of learning in which students perceive it as the most effective and efficient in processing, storing, and recalling what they have learned. Wahyuni (2017) states three modalities or types in learning styles: visual, auditory, and kinesthetic. Visual learners learn through sight, auditory learners through hearing, and kinesthetic learners through movement and touch. According to Nuralan et al (2022), although some students use all three modalities at certain stages, most tend to favor one of the three. Here is the profile explanation of the learning styles of class IIB students at Elementary School 44 in Bengkulu City.

### Visual Learning Style

Observations regarding the visual learning style of class IIB students depict several prominent tendencies. These students tend to create notes rich in images, diagrams, and

highlighted key points with vivid colors, often using color codes to differentiate vital information. They also exhibit a leaning towards using illustrations, graphs, or mind maps as aids for understanding concepts. A positive response from students towards visual presentations, such as slideshows, interactive whiteboards, or instructional videos, was also observed, indicating high interest and engagement when material is presented visually. However, it's apparent that these students face challenges in comprehending information delivered verbally, despite their good listening skills. Their understanding improves significantly when information is presented visually, leading to their reduced responsiveness to teachings heavily reliant on auditory methods alone. It seems these students also tend to create mental images or retain information with the assistance of images, diagrams, or other visual elements as part of their learning comprehension strategy. Therefore, these observational findings serve as a crucial foundation for teachers to devise more effective teaching strategies by incorporating more visual elements in the learning process to support students who have a preference for visual learning.

Based on interviews with the class IIB teacher at Elementary School 44 in Bengkulu City, the teacher expressed that students in the class show a clear preference for visual learning. Students mentioned that they tend to be more engaged and responsive when material is presented visually, such as through presentations using images, diagrams, or instructional videos. The teacher highlighted that when given the opportunity to take notes, these students often use images or color codes to highlight key points. The teacher noted that these students seem more enthusiastic and interested when visual elements support the lesson content. Additionally, the teacher mentioned challenges in facilitating better understanding through purely auditory-based approaches. Students highlighted that when information is delivered orally, those with a preference for visual learning tend to show slightly lower levels of engagement. However, the teacher emphasized that by integrating more visual elements into the teaching, such as using images, visual presentations, and other visual aids, they can more effectively facilitate deep understanding for these students. According to the teacher, a diverse approach, including the use of visual aids, opens opportunities for these students to access and comprehend the lesson material more effectively.

The visual learning style depicts students who tend to use their sense of sight as the primary strength in learning (Fendrik et al., 2022). Cheng et al (2019) explain that students with a visual learning style tend to utilize their visual abilities in the learning process. This indicates that these students tend to comprehend concepts better through the use of their sense of sight. Hence, providing concrete evidence is crucial for students to better understand the material. According to Hanim (2021), a characteristic of students with a visual learning style is their high desire to understand information visually before fully comprehending it. Students can easily remember information through visualization, such as the teacher's body language or facial expressions, diagrams, illustrated books, and videos. This enables students to understand aspects related to positions or locations, shapes, numbers, and colors. Students with a preference for visual learning tend to be orderly and unaffected by noise but struggle with verbal instructions (Chen et al., 2014). The visual learning style is a characteristic profile of individuals who prefer learning by seeing, observing, and paying attention (Rambe & Yarni, 2019). Students are more responsive to pictures, diagrams, or photographs in the learning process. The eyes become the most frequently used sense organ by individuals with a visual learning style due to its role in vision.

### **Auditory Learning Style**

Observations of the auditory learning style among class IIB students at State Elementary School 44 in Bengkulu City reveal several behavioral patterns indicating a preference for auditory-based learning. These observations include the students' preference for orally delivered instructions, as they seem more attentive and capable of retaining information effectively when listening to instructions from the teacher. Additionally, these students appear more actively engaged in verbal discussions, feeling comfortable speaking up to express thoughts or ask

questions about the learning topics. They also tend to rely on their sense of hearing as the primary means to comprehend concepts, preferring to listen to recordings, lectures, or verbal explanations to absorb the material.

Students with an auditory learning style face difficulties in comprehending visually presented material, even though they can obtain information from image or diagram presentations. Additionally, these students have a strong ability to remember information heard attentively, making in-depth oral explanations highly beneficial for them. Observations like these can serve as a foundation for teachers to design more effective teaching strategies by integrating more auditory learning elements, such as group discussions, verbal presentations, or utilizing audio recordings to support the understanding of students who are more responsive to auditory learning.

From interviews with the class IIB teacher, it was revealed that some students in the class tend to prefer learning through auditory means. The teacher highlighted that these students appear more focused and responsive to oral instructions, actively engaging in speaking and participating in class discussions by expressing their thoughts verbally. During the interview, the teacher explained that students who prefer auditory learning tend to grasp lesson concepts better when the material is presented orally or through verbal means. One of the main challenges identified by the teacher is effectively delivering learning material to students who prefer auditory learning, especially when the material is presented visually, such as through images or diagrams. Students explained that when using visual aids, those with an auditory learning preference struggle to understand concepts presented exclusively through visual means. The teacher explained that in such situations, students try to find more creative ways to present information that aligns with their learning preferences. One approach is integrating deeper verbal explanations, communicating the meaning and context of displayed images or diagrams to make them more easily understood by students with an auditory learning preference. This allows the teacher to provide broader and more comprehensive information accessibility to all students, regardless of their chosen learning styles.

The class IIB teacher described strategies employed to meet the characteristic profile of auditory learning styles, such as utilizing a more active oral delivery approach, facilitating group discussions, or utilizing audio recordings as additional aids to support the understanding of students who prefer auditory learning. According to Kurniawan (2017), auditory learning style involves a strong preference for using the sense of hearing. Supit et al (2023) state that individuals with an auditory learning style tend to prefer acquiring knowledge through teacher lectures, discussions, and debates. Students have a better understanding through listening to explanations from teachers, and their primary strength in the learning process lies in their ability to hear.

### **Kinesthetic Learning Style**

Observations regarding the kinesthetic learning style among students in the class depict behavioral patterns indicating a preference for learning involving movement and physical experiences. Students with this learning style often demonstrate high involvement in physical activities in class, showing a tendency to move their hands or feet and find it challenging to sit still for extended periods. They are also more responsive to practical demonstrations, exhibiting a better understanding of lesson concepts when given the opportunity for direct involvement in experiments or demonstrations. Additionally, students with a kinesthetic learning style tend to enjoy learning involving physical interaction, such as games or group activities that require direct interaction.

Observations also reveal a strong response to sports or movement-based activities, indicating a high interest or skill level in those areas. However, students with a preference for kinesthetic learning might face difficulties in deeply understanding concepts if the material is presented solely through visual or auditory approaches. This highlights the importance of using diverse learning approaches, including incorporating physical movement, practical

demonstrations, and direct interaction, to support the understanding of students who prefer kinesthetic learning.

In a conversation with the class IIB teacher, it was revealed that students demonstrate remarkable engagement in physical activities during the learning process. The students are visibly active and often find it challenging to sit still for extended periods, which is a characteristic of the kinesthetic learning style. The teacher also noted the positive response of students to learning involving practical demonstrations or direct experiences. The teacher acknowledged that students with this learning preference find it easier to grasp lesson concepts when given the opportunity for direct involvement in experiments or simulations. However, the teacher also expressed challenges in effectively delivering lesson material to students with a kinesthetic learning style, especially when the material is presented solely through visual or auditory means. Despite this, in the interview, the teacher shared various strategies employed to accommodate these students' learning preferences. They emphasized the use of physical activities in teaching, such as hands-on experiences or practical demonstrations, as well as teaching methods that prioritize direct interaction. This was done to ensure better understanding for students with a kinesthetic learning style, enriching their learning experiences through more meaningful physical engagements.

The kinesthetic learning style involves individuals who feel more comfortable and think more effectively while moving or walking. Students tend to use body movements while speaking and find it challenging to stay still. Each individual's learning style is influenced by their personality type, habits, and evolves over time through experiences. These learning patterns or styles are also influenced by the field of study undertaken, which, in turn, can impact academic achievements in the learning process. According to Susanti et al (2023), the connection with the kinesthetic learning style can be found in learning approaches involving physically active games using movements or physical activities that support the kinesthetic learning style. Based on the questionnaire completed by students from class IIB at State Elementary School 44 in Bengkulu City, the percentage distribution of learning styles is as follows:

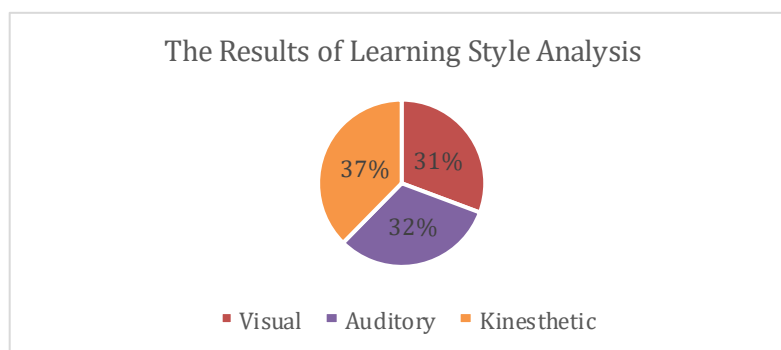


Figure 1. Diagram of learning styles of grade IIB students

Based on the learning style diagram of the students in class IIB at State Elementary School 44 in Bengkulu City, with a sample of 24 students, it's evident that the learning tendencies of the students are as follows: 31% prefer visual learning, 32% prefer auditory learning, and the largest preference is for kinesthetic learning, constituting 37%. From these results, it's apparent that students don't heavily rely on auditory learning to acquire information; instead, they predominantly favor kinesthetic and visual learning styles. For detailed results of the learning style questionnaire, some excerpts are outlined in Table 2.

**Table 2.** Results of identifying learning styles of grade IIB students

Number	Name	Gender	Aspect of Learning Style		
			Visual	Auditory	Kinesthetic
1	ASS	Female	45%	33%	22%
2	AA	Female	30%	45%	25%
3	ARP	Female	28%	17%	55%
4	AM	Female	25%	33%	42%
5	AF	Male	22%	33%	45%
6	AAC	Male	18%	22%	60%
7	AB	Male	15%	40%	45%
8	BR	Female	33%	20%	47%
9	DPN	Female	45%	28%	27%
10	DH	Male	35%	27%	38%
11	PF	Male	22%	23%	55%
12	HDA	Male	25%	15%	60%
13	IK	Male	33%	47%	20%
14	LNR	Male	20%	55%	25%
15	MAJ	Female	40%	23%	37%
16	MA	Male	60%	20%	20%
17	MIG	Male	22%	55%	23%
18	MQA	Male	45%	20%	35%
19	MDA	Male	33%	43%	24%
20	QDS	Female	27%	33%	40%
21	RA	Male	28%	27%	45%
22	SHA	Female	45%	23%	32%
23	VNF	Female	25%	20%	55%
24	ZBP	Female	25%	55%	20%

Based on Table 2, it illustrates a diverse profile of learning styles among the students of class IIB at State Elementary School 44 in Bengkulu City. This diversity is depicted in Figure 1 and Table 2 above. When arranged based on dominance from the highest to the lowest, the sequence of learning styles is kinesthetic, auditory, and visual. This variety in learning styles indicates the diverse learning needs of students in the learning process, which schools and teachers should accommodate. The concept of differentiated learning becomes crucial in meeting these varied needs.

Though learning style is just one aspect of the learning profile, this simple study focuses solely on learning styles. In reality, a student's learning profile is related to many factors such as language, culture, health, family conditions, and other unique aspects. According to Rosyida et al (2023), a student's learning profile is the preferred approach to learning, influenced by their thinking process, intelligence, culture, background, gender, and other factors. This profile varies from one context to another. It's important not to label students solely based on their learning profiles or set them in chronological order. When students are continually given the opportunity to contemplate and express their best ways of learning, they become more aware of their learning strengths and needs. Teachers also become more sensitive to individual student differences. This perspective aligns with the views of Nafisah et al (2023), who differentiate between traditional classrooms and differentiated classrooms. In differentiated classrooms, teachers acknowledge multiple intelligences because learning is based on readiness, interest, and a student's learning profile.

In a classroom environment that implements differentiated learning, observations in class IIB reveal an intriguing variation in how students interact with the learning material based on their learning styles. Students with a kinesthetic learning profile appear highly active in group activities, preferring direct physical engagement with the material through demonstrations or direct practice. Additionally, students inclined towards an auditory learning style engage in voice-oriented discussions that foster understanding through listening. The teacher provides oral instructions that encourage active participation, using auditory methods as the primary means to comprehend

concepts. Observations also indicate a strong response from students with a visual learning style towards visually presented material. Students seem more focused on graphics, diagrams, or videos used in presentations.

Teachers are seen adapting their teaching approaches, employing different strategies to illustrate concepts visually, providing concrete examples for auditory understanding, and encouraging hands-on practice for kinesthetic learners. In line with this, the learning environment is tailored to accommodate different learning styles, adjusting the classroom space to support movement and practice for kinesthetic students, and utilizing engaging visual materials for visual learners. All these efforts aim to create a more effective and enjoyable learning experience for students with diverse learning styles. Based on interviews with the class IIB teacher regarding differentiated learning implementation, it's crucial for teachers to ensure that different activities for each learning style remain focused and well-managed without compromising the engagement or progress of each student. This may require meticulous planning and effective management strategies to ensure all students remain engaged and supported in their learning, without causing imbalances between the various learning styles.

According to Wahyuningsari et al (2022), implementing differentiated learning demands teachers to introduce variations in teaching and understand various aspects of differentiation, such as content, process, product, and the learning environment. The goal is to optimize each student's needs and potential, ensuring effective learning and making students feel satisfied because their needs are well met (Hasnawati & Netti, 2022). Differences in learning styles indicate the most effective way an individual processes received information (Angyanur et al., 2022). The methods used by teachers to apply different learning strategies must be accurately tailored. According to Dewi & Budiana (2018), there are concrete steps to facilitate various student learning styles. For students with a visual learning style, their needs can be met through the use of videos, increased use of images, and writing material on the board. Azizah et al (2023) state that for students with an auditory learning style, teachers need to actively encourage group discussions and encourage students to read aloud. Meanwhile, for students with a kinesthetic learning style, the best approach is through demonstrations and enhancing hands-on practice in learning.

Hardiansyah et al (2023) recommends the utilization of interactive learning media in differentiated learning at the elementary school level with the aim of enhancing the learning outcomes of students with diverse learning styles. Based on the findings of the research conducted by Darmansyah et al (2022), it was revealed that the implementation of instructional media enhances students' enthusiasm in participating in learning activities, resulting in more meaningful learning. This is attributed to a balanced development in the three aspects of learning, namely cognitive, affective, and psychomotor. With the presence of supportive instructional media, students' learning styles can also achieve balance.

## CONCLUSION

Based on the research conducted at elementary school 44 Bengkulu city regarding students' learning styles, it appears that students have diverse learning style tendencies. The dominant learning styles among students in class IIB at elementary school 44 Bengkulu city are kinesthetic at 37%, auditory at 32%, and visual at 31%. The identification of these learning styles serves as a guide for teachers as an initial assessment in planning lessons that match the needs and capabilities of students. Differentiated learning, which adapts to students' learning needs based on their readiness levels, is a step to prevent boredom or excessive burden in the learning process. This individualized learning model is one method to implement a new approach in line with a flexible curriculum. Therefore, the primary goal in adapting learning styles is to apply teaching strategies that suit each student's needs, especially in the context of personalized learning.

This research reveals the essential importance of understanding that each student possesses unique characteristic profiles and learning style tendencies, highlighting the necessity of

adopting diverse teaching strategies. The key to success lies in a learning focus tailored to students' readiness levels, fostering better comprehension and absorption of materials. As a recommendation derived from this study, teachers are encouraged to integrate various teaching methods, such as group discussions, visual presentations, and the use of diverse learning materials like texts, images, audio, and video. This approach aims to meet the diverse preferences of students' learning styles and considers practical activities that support various learning methods. By analyzing student learning style profiles within the context of the Merdeka Curriculum in elementary schools, this research not only provides valuable scientific contributions but also opens up new insights into differentiated learning approaches. Nevertheless, limitations such as a restricted sample size and time constraints need to be addressed to ensure that future research can offer a more in-depth and relevant understanding of students' learning styles in the implementation of the Merdeka Curriculum.

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