Analysis of Student Learning Styles as an Implementation of Differentiated Learning Strategies in the Indonesian Education Merdeka Curriculum

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ABSTRACT

The aim of this research is to analyze student learning styles in implementing differentiated learning for elementary school students. To analyze the research objectives, the researcher used qualitative research methods to collect data from class IV students at SDN 1 Waleddesa. Data was collected through observation and interviews. The research results revealed that students' learning style patterns resulted in visual (4 people), auditory (4 people) and kinesthetic (2 people) learning styles. Observations show that with the strategic abilities of teachers who are skilled in designing responsive learning, they are able to provide implications for students' diverse learning experiences according to their needs and are able to increase student achievement under the Independent Curriculum Framework in Elementary Schools. With differentiated learning strategies, students will be able to achieve their optimal learning potential, according to the characteristics and tendencies of each individual student as implemented by teachers at SDN 1 Waleddesa. The implications of this research emphasize that to meet students' learning styles, teachers need to learn models, approaches, strategies and methods that lead to differentiated learning as in the Merdeka curriculum.

Keywords: Learning style analysis; Independent Curriculum; Differentiated learning

ABSTRAK

Tujuan penelitian ini untuk menganalisis gaya belajar siswa dalam implementasi pembelajaran berdiferensiasi pada siswa Sekolah Dasar. Untuk menganalisis tujuan penelitian tersebut, maka peneliti menggunakan metode penelitian kualitatif untuk mengumpulkan data dari siswa kelas IV di SDN 1 Waleddesa. Data dikumpulkan melalui observasi dan wawancara. Hasil penelitian mengungkapkan pola gaya belajar siswa menghasilkan gaya belajar visual (4 orang), auditori (4 orang) dan kinestetik (2 orang). Pengamatan menunjukkan dengan kemampuan strategi guru yang terampil dalam mendesain pembelajaran yang responsive mampu memberikan implikasi bagi pengalaman belajar siswa yang beragam sesuai dengan kebutuhan mampu meningkatkan pencapaian siswa di bawah Kerangka Kurikulum Merdeka di Sekolah Dasar. Dengan strategi pembelajaran berdiferensiasi siswa akan dapat mencapai potensi pembelajaran mereka yang optimal, sesuai dengan karakteristik dan kecenderungan pada setiap individu siswa sebagaimana yang diterapkan oleh guru di SDN 1 Waleddesa. Implikasi penelitian ini menegaskan bahwa untuk memenuhi gaya belajar siswa, guru perlu belajar model, pendekatan, strategi dan metode yang mengarah pada pembelajaran berdiferensiasi sebagaimana pada kurikulum Merdeka.

Kata Kunci: Analisis gaya belajar; Kurikulum Merdeka; Pembelajaran berdiferensiasi

INTRODUCTION

Education is a change in helping humans to develop themselves and increase human dignity, so that humans are able to face every change towards a better direction. The educational process must lead to the ability to master knowledge, abilities, skills, develop attitudes and values that are used for self-formation and self-development of students (Sukmadinata, 2008; Wahyu, 2016).

In an era of rapid change and increasingly complex educational dynamics, the challenge of providing effective and relevant learning for every student is becoming increasingly important. In the midst of these changes, the Merdeka Curriculum has been presented as an innovative step in developing an adaptive and inclusive education system. With a competency-based approach and flexibility in learning design, the Merdeka Curriculum aims to create a learning environment that allows every student to reach their maximum potential (Faiz & Kurniawaty, 2020).

One of the key strategies used in implementing the Independent Curriculum is differentiated learning (Joseph, et.al, 2013; Marlina, 2020). This approach recognizes diversity in students' learning styles and seeks to design learning experiences that suit their individual needs. By paying attention to student learning styles, teachers can adapt teaching methods, materials, and assessments to ensure that each student gets the support they need to succeed (Faiz, et. al., 2022).

In this context, analysis of student learning styles becomes very important. By understanding each student's learning tendencies, teachers can identify the most effective and relevant learning strategies. However, implementing differentiated learning is not without challenges. Teachers often face obstacles in adapting learning experiences for each student, especially when they have classes that are heterogeneous in terms of learning styles (Ghufron & Risnawita, 2012).

This article aims to analyze student learning styles in the implementation of differentiated learning for elementary school students in the Independent Curriculum. By combining theories about student learning styles and differentiated learning practices (Faiz et al., 2022). Through careful research and in-depth analysis, it is hoped that this article can provide valuable insight for educators and educational practitioners about the importance of understanding student learning styles in the context of implementing the Independent Curriculum. Thus, it is hoped that this article can make a significant contribution to efforts to improve the quality of education and ensure that every student has an equal opportunity to succeed in learning.

Research with similar variables was conducted by Latifah (2023) who revealed research results that the application of differentiated learning can facilitate students in their learning process through varied learning activities that suit their learning styles. In addition, research by Umayrah, A., & Wahyudin (2024) explains that students' learning styles are challenges that teachers face, and solutions to these problems enable teachers to design and implement effective different learning experiences that support the diversity of students in their classes. The novelty in this research seeks to fill the gap in educational literature by examining the implementation of differentiated learning based on student learning styles in elementary schools in the context of the Independent Curriculum. By identifying, implementing and evaluating these strategies, it is hoped that this research can improve the quality of education

and student learning outcomes in Indonesia. The novelty of this research compared to previous research is that this research specifically links the analysis of student learning styles with the implementation of the Merdeka Curriculum, which is the newest educational framework in Indonesia. Focusing on grade 4 elementary school, previous research focused more on secondary or higher education. This research pays special attention to elementary school students, which is a critical stage in a child's educational development.

The urgency of research is important to carry out, research on analyzing student learning styles in the implementation of differentiated learning in elementary schools is very urgent and important. This not only supports improving the quality of education but also ensures that every student has the opportunity to learn and develop according to their potential, in line with the principles of the Independent Curriculum. Thus, the urgency of this research lies in analyzing efforts to create more personalized, inclusive and effective learning in preparing students to face future challenges.

METHODS

Type and Design

This research uses a qualitative approach, where in qualitative methods the researcher functions as a human instrument, or what is often referred to as the first instrument. The method used is descriptive narrative because it describes data through descriptions (Faiz & Purwati, 2021; Sugiyono, 2018). This research was carried out at SDN 1 Waleddesa, Waled District, Cirebon Regency. The object of this research is students with different learning styles, so teachers must apply appropriate differentiated learning methods.

Data and Data Sources

The primary data in this research are students as research objects, 10 respondents/informants and 1 teacher. The focus of the research object is to pay attention to the learning styles and needs of students, teachers can create an inclusive learning environment and support the development of each individual (Sugiyono, 2015). Furthermore, secondary data in this research was obtained from information from pre-existing sources, such as previous research archives from SINTA journals and international journals, documents from libraries, both digital and regular libraries, or notes related to the research being conducted. document data. Document data is used to collect this secondary data, which can be in the form of facts, tables, graphs, or other information relevant to the research topic. This secondary data provides additional context and information that can support better analysis and understanding of the phenomenon under study. By using secondary data, researchers can complement primary data and strengthen research findings and interpretations.

Data collection technique

Data collection techniques use instruments used to collect data (Arikunto, Suharsimi, dkk, 2006; Sugiyono, 2007). The data collection is based on the problem formulation and research objectives. The formulation of the problem in this research is how the learning style patterns are used to implement a differentiated learning process in the implementation of the Merdeka Curriculum.

The instruments in this research are observation, interviews and documentation, as follows:

1) Observation:

Observation is a data collection technique that has special characteristics compared to other techniques. The purpose of observation is so that researchers can better understand the context of the data as a whole and discover things that may not have been detected by respondents, thereby providing a more comprehensive picture. The instrument used is an observation guide to learning styles that influence student learning outcomes in class IV of SD Negeri 1 Waleddesa, Waled District, Cirebon Regency. This observation sheet is used to observe students' learning styles during the learning process to determine each student's learning style.

2) Interview:

Interviews are a data collection technique that is often used in qualitative descriptive research. Interviews involve meetings between two individuals to exchange information and ideas through dialogue, so that meaning can be constructed on a particular topic. The purpose of the interview is to obtain information and data about the topic discussed. The focus of the interview was in accordance with the research objective, namely to determine students' learning styles to see the differentiated learning process in the Implementation of the Independent Curriculum. Interviews were conducted with 10 students as research samples, consisting of 5 women and 5 men, as well as a fourth year teacher. The instrument used was an interview guide for teachers and students of class IV SD Negeri 1 Waleddesa, Waled Regency, Cirebon Regency.

3) Documentation:

Documentation is a record of events that have occurred, and can take the form of writing, drawings, or monumental works by individuals. In this research, documentation data is used to search for written data about the thing being researched, which can be used to test, interpret and make conclusions in solving problems. Researchers use photos, audio interviews and videos as tools in documentation (Sukmadinata, 2009).

Data analysis

Data analysis used refers to Faiz (2023; Miles & Hubberman, 1992) quoted by Sugiyono (2013), data analysis in qualitative research is carried out while the data collection process is in progress, and also after data collection is complete within a certain period. The data analysis process in qualitative research takes place interactively and continuously until it reaches the data saturation point, according to Miles and Huberman. Activities in data analysis include; 1) data reduction, the meaning of which is that the function of data reduction in qualitative analysis is to simplify and organize the data that has been collected so that it can be processed and understood better. Data reduction helps researchers to focus on the most relevant and significant information in each data set, thereby facilitating the process of further analysis; 2) data presentation serves to communicate research findings clearly, systematically and persuasively to readers or audiences and for withdrawal; 3) conclusion or verification. The function of conclusion or verification in qualitative analysis is to combine research findings

into a comprehensive summary and summarize the conclusions or interpretations that have been obtained from the analysis process.
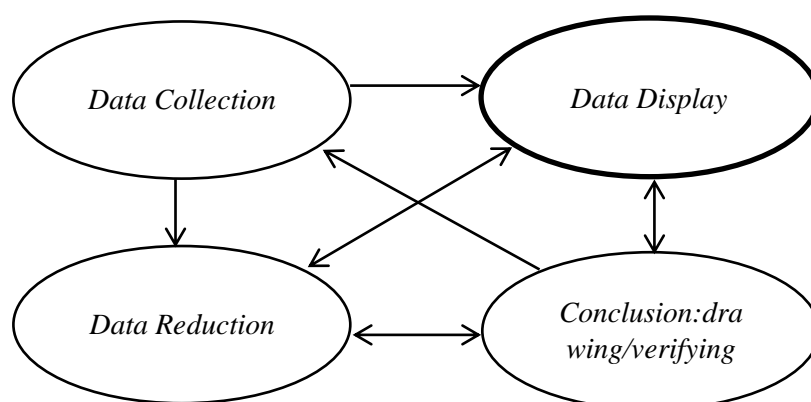
Figure 1. Data Analysis Techniques (Sugiyono, 2013).

RESULTS AND DISCUSSION

Each individual has a different way of learning, including interaction, understanding, remembering, capturing information, thinking, processing and maintaining information. Based on the results of observations and interviews from 10 students who were informants, researchers found that there were 4 students with the auditory learning type with the names Aliyah, Ayu, Bilqis, Imro. Then 4 students with the visual learning type were named Alya, Dika, Eza and Ezi. Then 2 students with a kinesthetic learning style tendency named Dul and Badru.

Based on the results of observations carried out for two weeks. The main focus is on students' behavior when receiving verbal information, participation in class discussions, and responses to verbal instructions to determine auditory learning style. Strengthened by the results of semi-structured interviews conducted with 4 students who were identified as having an auditory learning style based on the results of initial observations with interview questions focusing on learning experiences, preferences in receiving information, and learning strategies used.

Based on the results of observations of students with an auditory learning style, namely Aliyah, Ayu, Bilqis, Imro, they have a tendency to pay full attention when the teacher gives verbal instructions. They more often ask questions for clarification and demonstrate understanding by repeating instructions given. Then when it came to participating in class discussions, Aliyah, Ayu, Bilqis, Imro participated more actively in class discussions and were more comfortable expressing opinions orally than writing. The results of interviews with Aliyah, Ayu, Bilqis, Imro indicated that they often remembered the information presented in discussions and were able to connect it with previously studied material. In literacy they also often use methods such as reading aloud, listening to recorded lesson material, or discussing with friends as a way to learn and remember information. The majority of students find it

easier to understand and remember information when listening to the teacher's explanation compared to reading a textbook.

However, the interview results showed that there were difficulties in understanding material which was only presented in written form without verbal explanation. Students with an auditory learning style express a strong preference for teaching methods that involve lectures, discussions, and verbal explanations. When learning is presented using learning media such as audio recordings, podcasts and videos that have clear verbal explanations, students such as Aliyah, Ayu, Bilqis, Imro prefer learning conditions like that.

Thus, it can be concluded that the four students (Aliyah, Ayu, Bilqis, Imro) with an auditory learning style show a strong tendency to learn in ways that involve hearing. They are more responsive to verbal instructions, active in class discussions, and use strategies that involve listening to understand and remember information. Therefore, in fulfilling differentiated learning, teachers and educators are advised to integrate more auditory elements in their teaching methods, such as oral explanations, group discussions, and the use of audio media, to support the learning needs of students with an auditory learning style.

The research was conducted through classroom observations and in-depth interviews with several students who were identified as having a visual learning style and found 4 students with a tendency towards a visual learning style including Alya, Dika, Eza and Ezi. The main focus is on students' behavior when receiving visual information, participation in activities involving visualization, and use of visual aids. Interview questions focused on learning experiences, preferences in receiving information, and learning strategies used.

Based on Alya's observations, Dika, Eza and Ezi with a visual learning style tend to be more focused when teachers practice visual aids such as diagrams, concept maps and slide presentations. The observation results show that Alya, Dika, Eza and Ezi are detailed in the pictures and graphs presented and show a high interest in visual material.

In discussion activities that involve visualization, such as making mind maps, drawing diagrams, or analyzing graphs, Alya, Dika, Eza and Ezi show good abilities in understanding and interpreting information presented in visual form. Based on interviews with Alya, Dika, Eza and Ezi, they often use picture books, notes with colors and illustrations, as well as applications or software that allow visualization of lesson material. When remembering lesson material, Alya, Dika, Eza and Ezi found it easier to understand and remember information when they saw pictures, diagrams or videos related to the lesson material. They have difficulty following long verbal explanations without visual support.

These results indicate that Alya, Dika, Eza and Ezi have a visual learning style, showing a strong tendency to learn through methods that involve visualization. They are more responsive to information presented in visual form, active in activities involving pictures and graphs, and use visual strategies to understand and remember information. Therefore, in fulfilling differentiated learning, teachers are advised to integrate more visual elements in their

teaching methods, such as the use of diagrams, concept maps, and multimedia presentations, to support the learning needs of students with a visual learning style.

The next observation the researcher made was to see how the kinesthetic learning style was. The results of the researcher's observations found 2 students named Dul and Badru who tended to have a kinesthetic learning style. The main focus in this observation is student behavior when receiving information through physical activity, participation in practical activities, and responses to tasks that involve movement. The results of interviews with Dul and Badru liked activities that involved movement, such as experiments or learning based on educational games. They tend to be more active and appear more focused when doing physical activity compared to sitting quietly listening to lectures.

Badru and Dul during the learning process cannot sit still, they prefer outside activities rather than sitting listening to lectures. One of them is during outdoor classroom learning, they show better understanding when directly involved in learning experiences that require manipulation of objects or physical actions. Especially when the learning process uses methods such as simulations and role playing which prioritize body movements to help the thinking process and understand the material. With this tendency, Dul and Badru find it easier to understand and remember information when they are directly involved in physical activity or practice.

The results of observations and interviews with Dul and Badru show a strong tendency to learn through physical activity and direct experience. They are more responsive to information presented through movement and practice, active in activities that involve the use of hands and body, and use kinesthetic strategies to understand and remember information. Therefore, in fulfilling differentiated learning, teachers and educators are advised to integrate more kinesthetic elements in their teaching methods, such as experiments and role playing. Teachers can provide more activities involving experiments, practical projects, and simulations to facilitate student understanding. By implementing these strategies, it is hoped that students with a kinesthetic learning style can be more optimal in the learning process and achieve better academic results as well as fulfilling differentiated learning in the independent curriculum.

Based on the results of the interviews and observations above, the researcher summarized 4 learning styles which are the core of the learning focus, including; First, the visual learning style has tendencies including:

1) Students pay attention to the teacher when explaining the material.

2) Students tidy up their study tables regularly.

3) Students are easily distracted by noise

4) Students prefer to read alone rather than listen.

5) Students tend to note important things that the teacher conveys

6) Students have difficulty remembering verbal instructions, but it is easier to remember with the help of picture media, teacher expressions, diagrams, videos.

Students who have a tendency towards a visual learning style are more effective in processing information conveyed visually rather than verbal instructions. Based on the findings, researchers summarize several advantages and disadvantages of this visual learning style;

1) Strengths:

    a) Facilitates Understanding: Visual information can help students understand complex concepts better than information conveyed verbally alone. Pictures and diagrams can provide clear, easy-to-understand visual representations.

    b) Improves Retention: The use of pictures and graphs can help students retain information better in their memory. Visual information tends to be easier to remember and retrieve than verbal information.

    c) Reaching Different Types of Learners: Although some students may prefer auditory or kinesthetic learning styles, the use of visuals can provide additional stimulus that helps students of various learning types understand the material better.

    d) Encouraging Creativity: Using pictures and diagrams often encourages students to think creatively and find connections between different concepts.

2) Weaknesses

    a) Limitations in the Representation of Abstract Concepts: Some concepts that are very abstract or difficult to illustrate in the form of pictures or diagrams may be difficult for students with a visual learning style to understand.

    b) Depends on Artistic Ability: Some students may not have enough artistic ability to create effective drawings or diagrams, which may reduce the benefits of a visual approach to learning.

    c) Media Limitations: The use of visual media in learning may require access to certain devices or technology, which may not always be available in every learning environment.

However, it is important to remember that visual learning styles are only one of various learning methods that can be used in education, and combinations with other approaches such as auditory and kinesthetic learning styles can help meet the diverse learning needs of students.

The visual learning style is very relevant in the context of differentiated learning, which aims to meet the diverse learning needs of each student in the class. The following are several analyzes of visual learning styles that are related to differentiated learning: 1) Presenting Material with Various Media: In differentiated learning, teachers can present material with various media, including pictures, diagrams, graphs and visual presentations. This allows students with a visual learning style to acquire information effectively through clear and easy-to-understand visual representations; 2) Different Activity Options: Teachers can provide different activity options for students, including assignments that utilize visual learning styles. For example, students may choose to create posters, diagrams, or visual presentations to demonstrate their understanding of the material; 3) Diverse Assessment: In differentiated learning, teachers can use a variety of assessments to measure student understanding. This may include assignments that utilize a visual learning style, such as a visual project or image portfolio; 4) Additional Support and Help: For students who need additional support in a visual learning style, teachers can provide additional help such as video tutorials, customized visual resources, or step-by-step guides with pictures; 5) Collaboration between Students: Differentiated learning also encourages collaboration between students. Students with a visual learning style can collaborate with other students to create visual materials together, expanding their understanding through discussion and exchange of ideas. By paying attention

to visual learning styles in differentiated learning, teachers can create an inclusive and supportive learning environment, which allows each student to reach their learning potential in a way that suits their individual tendencies and needs (Budiyanto, 2013; Madang, et.al., 2017; Rahmatullah, et.al., 2020).

The results of the next analysis, researchers found a type of auditory learning style. The findings based on observations and interviews showed that there were 4 fourth grade students at SD Negeri 1 Waleddesa, Waled District, Cirebon Regency with an auditory learning type. Researchers gathered from the findings that auditory learning style is an individual's tendency to process information by listening which involves using hearing as the main focus for understanding and remembering information (Rasul, 2022). Researchers gathered from auditory students the results of observations and interviews containing the following things;

1) Class IV students at SD Negeri 1 Waleddesa have a learning style of paying attention to the explanations given by the teacher verbally. They prefer to listen to spoken information rather than read or view visual presentations.

2) Fourth grade students at SD Negeri 1 Waleddesa with an auditory learning style have a tendency to more easily remember information they hear than information they see. They can quickly recall information taught through verbal instructions or class discussions.

3) Grade IV students at SD Negeri 1 Waleddesa auditory tend to be active in class discussions and debates. They gain better understanding through verbal exchange of ideas and opinions with teachers and classmates.

4) Grade IV students at SD Negeri 1 Waleddesa like to use audio recordings, such as podcasts or learning through audio books, which can be effective for students with an auditory learning style. They can listen to course material while doing other activities or in situations where there is no access to written material.

5) Class IV students at SD Negeri 1 Waleddesa with an auditory learning style may find it easier to understand abstract concepts through in-depth verbal explanations and listening to verbal illustrations given by the teacher.

6) Fourth grade students at SD Negeri 1 Waleddesa found benefits in recording lessons or class discussions to listen to the material again and again as a way to strengthen their understanding.

Thus, understanding how the auditory learning style works in fourth grade students at SD Negeri 1 Waleddesa allows teachers to develop appropriate learning strategies, such as the use of clear verbal instructions, group discussions, and the use of audio resources, to support the successful learning of students with this tendency.

These findings assume the theory that specifically relates to auditory learning style is the "Auditory-Verbal Learning Style" theory (Shahar, 2012). This theory emphasizes the individual's tendency towards the use of hearing and words in the learning process. By understanding and applying the principles of Auditory-Verbal Learning Style theory, teachers can create a supportive and effective learning environment for students with an auditory learning style. This enables them to acquire and understand information in a way that suits their individual learning preferences and needs.

As explained above, researchers must balance the advantages of the auditory learning type with its disadvantages (Talib, et.al, 2019). The researchers' summary results explain that the strengths and weaknesses of the auditory learning style include:

1) weaknesses:

a. Not effective for all material: Auditory learning methods may be less effective for more complex or abstract material that is difficult to understand just by listening. Some students may need more visualization or hands-on experience to understand the concept.

b. Limitations in noisy environments: Loud or noisy environments can interfere with a student's ability to listen and process information effectively. This can reduce the effectiveness of auditory learning.

c. Limitations in information retention: Some students may have difficulty retaining information just by listening. They may need to engage more senses or physical actions to help strengthen their memory.

d. Reliance on hearing: Auditory learning methods rely on hearing as the main tool for understanding information. This can be a challenge for students with hearing problems or who prefer ways of learning that engage other senses.

2) Strengths:

a. Easy to access: Material presented verbally is easy to access and can be enjoyed in various situations, such as in class, when listening to recordings, or via podcasts. This makes the auditory learning method flexible and easily accessible.

b. Developing auditory skills: Auditory learning methods can help develop students' auditory skills, including the ability to listen carefully, differentiate sounds, and interpret verbal messages appropriately.

c. Encourages concentration: Focusing on verbal information can help improve students' concentration, especially if they are taught effective listening techniques, such as noting important points or asking questions during the listening process.

d. Efficient for language learning: Auditory learning is very effective in language learning, because it helps students listen and understand correct pronunciation, intonation and sentence structure.

With these strengths and weaknesses, teachers must minimize how to fulfill students' needs in differentiated learning so that students' opportunities to find the right learning style can be found from the results of the teacher's analysis in differentiated learning. By integrating auditory learning theory into a differentiated learning approach, teachers can create learning environments that are inclusive and responsive to the learning needs of diverse students. This can help increase student motivation, engagement and overall achievement.

The last learning style is the kinesthetic learning style. The results of observations from 2 students who have a kinesthetic learning style, the researcher summarizes from the results of observations and interviews that this learning style is a learning style that involves learning choices through direct experience and physical activity. Students with this learning style tend to be more effective at understanding and remembering information when they are involved in activities that involve body movement, such as walking around while reading, writing, or speaking. Class IV students at SDN 1 Waleddesa with the kinesthetic learning type prefer learning through experiments, simulations or direct practice rather than just listening or

reading information. This is often associated with the need to move and perform physical actions in order to process information better.

The results of interviews and observations of students at SDN 1 Waleddesa who tend to have a kinesthetic learning style include:

1) Students like learning while moving or doing physical activities, such as walking around while reading or practicing material by doing body movements.
2) Students like learning through direct experience, such as conducting experiments or direct practice, rather than just listening or reading information.
3) Students enjoy the use of simulations or models that allow them to "feel" or "experience" the concept or material being studied.
4) Students like physical movement and changes in the surrounding environment while studying. This may mean paying attention to their own hand or body movements when processing information, or needing a learning environment that allows movement.
5) Students like physical interaction with subject matter, for example manipulating objects or carrying out physical actions related to the concepts being studied.

As previously explained, Cahyani (2016) each learning style has strengths and weaknesses that need to be considered , including:

1) strengths:
   a) Increase engagement: Physical activity and hands-on experiences can increase student engagement in the learning process. They are more likely to be actively engaged rather than just listening or reading.
   b) Strengthen understanding: By doing physical activities related to the lesson material, students can strengthen their understanding. Body movements can help link concepts to real experiences, making them easier to understand and remember.
   c) Improve information retention: Through hands-on experience and physical activity, students can better remember information. Physical movement can strengthen neuron connections in the brain, which can improve retention abilities.
   d) Encourages creativity: Kinesthetic learning can encourage creativity and problem solving. Physical activity often requires creative thinking and innovative solutions, which can help students develop these critical skills.

2) Weaknesses
   a) Not always practical: Kinesthetic learning may not always be practical in all learning contexts. Some concepts or subject matter may be difficult to realize in the form of physical activity, especially in a limited classroom environment.
   b) Requires more time: Preparation and implementation of kinesthetic activities often require more time than other learning methods. This can be a challenge especially if there are strict time constraints in the curriculum.
   c) Not all students are suitable: Not all students may respond well to kinesthetic learning style. Some students may be more comfortable learning with other methods, such as visual or auditory, and feel less engaged in physical activity.
   d) Space and resource limitations: Carrying out kinesthetic activities can require additional space and resources that may not always be available in every learning environment. This can be an obstacle to the effective implementation of this learning style.

Analysis based on strengths and weaknesses makes it easier for teachers to meet students' needs in differentiated learning so that students' opportunities to find the right learning style can be found from the results of teacher analysis in differentiated learning, especially in kinesthetic learning styles. Differentiated learning opportunities in kinesthetic learning theory can be through game or role-playing strategies to help students visualize concepts, test theories in real contexts, and strengthen their understanding through direct experience (Herwina, 2021; Joseph, et.al., 2013; Suwartiningsih, 2021). It perfectly suits the needs of kinesthetic students who need physical activity to process information. In addition, learning strategies can be implemented on a project basis which allows students to apply their knowledge in real contexts and create something concrete. Kinesthetic students may be more engaged and inspired by projects that allow them to move and create things with their own hands. By integrating kinesthetic learning principles into a differentiated learning approach, teachers can create a learning environment that is responsive to the needs of kinesthetic students, increasing their engagement, understanding and achievement in learning (Faiz & Faridah, 2022; Modul Guru Penggerak, 2022).

Thus, it can be emphasized that it is important to remember that a person's learning style tendencies may not be completely exclusive and may vary depending on the context and specific subject matter. The results of this research provide reinforcement to the results of previous research conducted by (Margianti, 2017), that learning styles have an influence on student learning outcomes. The teacher's role has a positive effect in implementing appropriate strategies. Another research from (Wahyuni, 2020), which shows that the varied learning styles of students in class IV lead students to their own learning styles. Khoiriyah, et.al (2022) also emphasized that according to the right learning style a student can excel. The role of teachers in supporting the learning process cannot be ignored.

The results and discussion above emphasize the importance of understanding student learning styles as an implementation of differentiated learning in elementary schools, which is certainly very relevant and important in the context of an independent curriculum. This not only supports improving the quality of education but also ensures that every student can develop their potential optimally in an inclusive and responsive learning environment.

CONCLUSION

The implementation of differentiated learning in the Merdeka Curriculum allows teachers to accommodate the diversity of student learning styles by providing tailored learning experiences. Students with kinesthetic, auditory, or visual learning styles can be reached through a variety of learning approaches to suit their preferences and needs. The use of diverse learning strategies, including the use of manipulatives, physical activities, project-based projects, and the use of audio-visual media, becomes an integral part of differentiated learning. This enables students to learn in the most effective way for them, increasing their engagement, understanding and achievement in learning. However, the implementation of differentiated learning in the Independent Curriculum also raises challenges, including the need to develop teacher skills in designing and delivering diverse learning experiences and effective classroom management. Thus, this research highlights the importance of considering student learning styles in designing differentiated learning in the context of the Merdeka Curriculum. Through

this approach, it is hoped that students will be able to achieve their optimal learning potential, according to the characteristics and tendencies of each individual student.

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