

## Profiling Student's Learning Styles on Song-Assisted Science Lesson Content to Support Merdeka Belajar

Ichsan Fahrozi<sup>1\*</sup>, Putri Yanuarita Sutikno<sup>2</sup>

Elementary School Teacher Education, Faculty of Educational Sciences and Psychology, Semarang State University,  
Semarang, Indonesia

\*E-mail: [padangrangkas27@students.unnes.ac.id](mailto:padangrangkas27@students.unnes.ac.id)

Received: July 14, 2024. Accepted: August 28, 2024. Published: September 26, 2024

**Abstract:** Each student has its own characteristics, especially in terms of learning styles. In that case, teachers as educators must create a learning atmosphere and appropriate media and meet each student's learning needs, according to Merdeka Belajar's goal, which provides flexibility to educators in designing learning. Based on this, this research aims to produce significant data or information about the implementation of song media in science lesson content to fulfill students' learning styles. This type of research is qualitative research. This study uses a case study method to explore reality, applying different learning methods by profiling students' learning styles. The research subjects were teachers and students of grade V. The techniques used to collect data are interviews, observations, and student questionnaires. The data analysis technique used in this study is qualitative descriptive with Miles and Huberman's version of data analysis techniques. The study results show that using song media in science subjects can meet the needs of students' learning styles. The learning style of grade V students includes 21% visual, 48% auditory, and 31% kinesthetic, which can be fulfilled using song media in science subjects.

**Keywords:** Learning Styles; Merdeka Belajar; Natural Science; Song Medi.

### Introduction

The basis of education is the interaction between educators and students to achieve learning goals. Education and learning are related to educational values. Educational value refers to giving, growing, and instilling positive values in students [1,2]. Giving students grades can help develop their potential, abilities, and characteristics more positively [3,4]. In the new paradigm, teaching is considered a process of managing the environment in the hope that students learn. Independent The needs of the educational system during the Industrial Revolution 4.0 is being met by learning education. The new "Merdeka Belajar" paradigm facilitates students' learning according to their learning needs and contextual development stages, and it is called differentiated learning principles. The "Merdeka Belajar" program aims to liberate teachers and students. This is in line with the spirit of Ki Hajar Dewantara, which is to liberate humans, especially in terms of education [5-7]. An innovative educational project in Indonesia called the Merdeka Curriculum seeks to give teachers flexibility in designing lessons based on the needs and characteristics of their students [8-9].

With the introduction of the autonomous curriculum, educators are expected to prioritize academic instruction while still giving enough attention to students' social and emotional development. The Merdeka Curriculum allows teachers to apply different teaching methods [9-10]. Individual differences in the classroom, such as learning styles, abilities, interests, and pace, are accommodated by this strategy. In the Independent curriculum, the content of science lessons is integrated into a science subject, which is

also indispensable for teachers to pay more attention to the student learning process. The goal of learning science in elementary school has not been fully achieved. There are still many elementary school students who still have difficulties in understanding science subjects [11].

Another fact was that many teachers still need help understanding the meaning of the independent curriculum. Previous research findings also found that many teachers still need to apply varied learning methods so that students feel bored with learning activities [12-14]. This indicates that teachers must be more creative and innovative in learning activities, contrary to the independent curriculum. Other research also states that many teachers still need help implementing the independent curriculum [15-16]. The obstacles faced by teachers certainly have an impact on learning activities that need to run optimally. Teachers need a good understanding of the Independent Curriculum, including concepts, learning strategies, and assessment of learning outcomes [9-10]. A lack of teacher understanding and preparation can hinder the effectiveness of implementing the Merdeka Curriculum. Previous research findings also reveal that teachers need more resources, such as textbooks, learning tools, and training, which can hinder learning activities [17-18] [13].

Observations at SDN Sadeng 02, especially in grade V, will analyze several research problems raised in the learning of science lesson in the material "Respiratory System in Humans" with the help of song media. The research problem will discuss 1) the learning style students use, 2) The motivation that increases learning, and 3) The learning outcomes that increase. In line with that, the purpose of this study is: 1) to know the learning style

### How to Cite:

Fahrozi, I., & Sutikno, P. Y. (2024). Profiling Students Learning Styles on Song-Assisted Science Lesson Content to Support Merdeka Belajar. *Jurnal Pijar Mipa*, 19(5), 771-779. <https://doi.org/10.29303/jpm.v19i5.7336>

used by students in learning science lesson material "Respiratory System in Humans" with the help of songs in class V of SDN Sadeng 02 2) to understand the increase in students' learning motivation in learning science lesson material "Respiratory System in Humans" with the help of songs in Class V SDN Sadeng 02 3) To find out the improvement of students' learning outcomes in learning science lesson material "Respiratory System in Humans" with the help of songs in class V of SDN Sadeng 02.

Based on these problems, solutions can be offered by profiling the needs of students' learning styles and then designing appropriate methods and media; in this case, song media can meet the needs of students' learning styles in the context of science lessons on the human respiratory system. Teachers can improve Indonesian education by learning new paradigms applied to the independent curriculum [19-20]. The role of learning media is vital in efforts to enhance students' ability to understand material [21]. Today's learning media that can help optimize learning outcomes is digital media [22]. Media can also help with abstract thinking and develop psychomotor learning skills. The learning media that teachers can use is song media. Songs are one of the media that teachers can use in learning. In elementary school, the learning process is inseparable from singing activities. In preparing creative, innovative students who have a high understanding of the material, triggering teachers' creativity, such as selecting learning methods through musical activities in learning, is very necessary [23].

Songs are a medium to increase motivation and attract students' interest in learning. Media use is one of the options for teachers to improve the quality of fun learning [24-25]. Song media plays a role in helping the process of students' understanding of the material being taught [26]. This is obtained through different learning processes by applying song-assisted learning media [27-29]. Differentiated learning is essential to maximize students' potential and provide an inclusive learning environment. By concentrating on each student's interests, preferences, and learning, teachers can provide content for different learning [29-30].

Song media is an audio media that utilizes sound elements to convey messages of information and knowledge to listeners. According to [31], using songs as a learning medium integrates song elements with learning materials to increase learning effectiveness. Thus, teachers can use these songs as teaching aids to help students understand the learning material more efficiently and effectively, creating an exciting and memorable learning atmosphere [25,32]. Digital media was chosen to provide a modern and interactive dimension to learning, allow the use of various multimedia elements, and create an exciting learning experience [22]. It is hoped that combining songs in the content of Class V Science Lessons packaged in digital format can provide an exciting learning experience and follow the times.

Using song-assisted learning media with lyrics can help students understand and positively impact learning [33]. This study analyzes the learning of science pupils, which is carried out using song-assisted media and the composition of song lyrics that contain science learning materials to create fun science pupil learning. The song

lyrics were adapted to the class V science learning material about the "Respiratory System in Humans," using musical instruments from the song "Anak Kambing Saya." The use of musical instruments from the song "Anak Kambing Saya" is because the song has a joyful tone, so it will motivate students and make them enthusiastic about participating in science learning activities with respiratory system material in humans. In addition, the song also has a tone that is easy for children to remember, making it easier for students to recognize and memorize the lyrics. The use of song-assisted learning media is proven to meet all the dominant learning styles of each student because they display song lyrics, listen to the sound and rhythm, and practice singing the song. This study aims to find out the profile of students' learning styles in science lesson respiratory system material in humans using song-assisted media to support independent learning.

The research I conducted on profiling student learning styles in science lesson material on the respiratory system in humans, assisted by songs, will contain a discussion of student learning styles. Learning styles are an essential and inseparable part of science learning. Experts agree that students' learning styles are divided into three types, namely auditory, visual, and kinesthetic learning styles [34]. The first learning style, namely the visual learning style, focuses on visual acuity. This means that concrete evidence must be shown first so that they understand. This learning style relies on seeing or seeing the evidence first to believe it. The characteristics of students with visual learning styles are remembering that what they see is not what they hear, preferring to read rather than be read, and being diligent and fast readers. The second learning style, the auditory learning style, relies on hearing to understand and remember it. Characteristics of students with auditory learning styles: love to talk to themselves while working, learn to listen and remember what is discussed rather than what is seen, enjoy reading aloud, move lips and speak while reading, and spelling aloud better than writing. The third learning style, namely the kinesthetic learning style, requires the individual concerned to touch something that provides specific information and must move the limbs so that he can remember it. Characteristics of students with kinesthetic learning styles: not easily distracted by chaotic circumstances, remembering through body movements, learning through practice, liking games that keep them busy, and using fingers as clues when reading [35-36].

Learning tailored to each student's needs is closely linked to differentiated teaching topics. Different learning demands arise from the nature and profile of students from various backgrounds [37][38]. Additionally, differences in students' IQs require different teaching approaches from other teachers. In all their diversity, children need individualized classroom teaching [39-40]. Differentiated learning allows students to learn in a way that best suits their abilities, circumstances, and individuality, fostering a sense of ease and comfort in the classroom environment created by the teacher. If applied in the classroom, the differentiation approach affects students' abilities. The differentiation approach positively impacts students' ability to maximize capacity in learning activities based on student learning needs [41-42].

Songs are a medium to increase motivation and attract students' interest in learning. Media use is one of the options for teachers to improve the quality of fun learning; this can improve student learning outcomes. According to Uno and Sudirman [43], there are indicators of learning motivation, namely: (1) students participate in carrying out their learning tasks diligently, (2) students are willing to ask questions to friends or teachers if they do not understand the material or encounter difficulties, (3) students conduct group discussions according to the teacher's instructions, (4) there are exciting activities in learning, (5) conducive learning situations, so that students can learn well, (6) students like to find and solve problems.

Research by [23] shows that the media of video clips of songs of human respiratory system material for elementary school students is suitable to support science learning in elementary schools. Another study by [44] found that the Talking Stick learning model assisted by Traditional Songs affects the science knowledge competence of grade V students. This research is vital because there has been no research on profiling student learning styles in song-assisted science lesson content as an effort to support Freedom of Learning. This study is intended to produce data related to profiling student characteristics, especially learning style profiles, as necessary information that will be used to determine the reference for learning planning that is differentiated from various optimal methods in designing learning to achieve learning success. This research will also explain the implementation of song media in the content of Science Lessons to fulfill each student's learning style. Based on this, this study aims to analyze the media of songs in the Science subject of Respiratory System in Humans in

meeting the needs of students' learning styles as an effort to support independent learning.

### Research Methods

This type of research is descriptive qualitative. Qualitative research produces descriptive data from the speech, behavior, and writing of the persons being watched. Qualitative research aims to understand an event or reality from the perpetrator's perspective [45]. This research uses a post-positivism paradigm. This paradigm ontology views that reality is what it is, but the truth cannot be seen if humans distance themselves from the object of their study. This paradigm has an approach that utilizes various methods, data sources, researchers, and theories [46]. So, in implementing different learning or the curriculum, this paradigm will help this research see the reality in schools.

This research uses the case study method to explore reality and the use of song media to meet the needs of students' learning styles. This research was carried out at SDN Sadeng 02, with research subjects, namely teachers and class V students. The methods used to collect data were interviews, observation, and student questionnaires. Interviews were conducted with informants who met the criteria, namely teachers and homeroom teachers who taught in class V because, at the time of this research, the Independent Curriculum had been implemented in class V. The instrument used to collect data was a questionnaire sheet. The media used in integrating the song as a medium is Canva; the lyrics of the song contained in it are the scope of the content of the science lesson "Respiratory System in Humans" with the tune of the song "Anak Kambing Saya." The questionnaire grid is presented in Table 1.

**Table 1.** Students learning style questionnaire grid instrument

Learning Style Aspects	Indicators
Visual (See the Lyrics of the Song "Respiratory System in Human")	Enjoy learning by reading the lyrics of the song "Respiratory System in Humans."
	Not easily disturbed by noise
	It's easier to remember what you see with the song's lyrics than hear it.
Auditory (Listen to the Song "Respiratory System in Humans")	How it works following the image and song lyrics instructions
	Jabber and answer yes/no only
	Often, you can fill your free time by watching or reading song lyrics.
Kinesthetics (Practice to sing the Song "Respiratory System in Humans")	Enjoy learning by listening to the science material song "Respiratory System in Humans."
	It is easy to remember what he hears, namely the song's sound, rather than what he sees.
	They are easily distracted by noise.
	Works while talking and can mimic changes in the sound of a song
	Rhythmic speech and intonation
	Often, you can fill your free time by listening to science material songs.
	Happy to learn the model of practicing singing/with movement science material "Respiratory System in Humans."
	Easy to remember with body movements and live singing practice
	They can't sit for too long and like to move.
	Enjoys communicating by moving their limbs
	Likes to practice when singing
	Often, they fill their free time with games/games/singing practice.

Source [47]

The data validity technique in this research will use data triangulation. Triangulation is a credibility test that examines data from various sources, methods, and times.

The source of this research is the teacher of class V and the students of class V. The implementation of song-assisted learning can meet various learning styles of students;

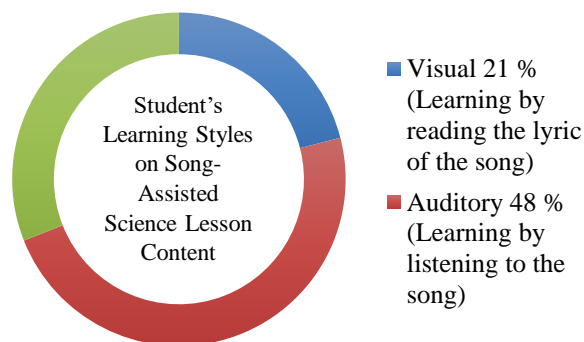
namely, the teacher presents song-assisted media that is visually charged, such as song lyrics, so that students with a visual learning style can understand the material by looking at the lyrics of the song, in the media, the audio of the song is also set to be heard first so that students with auditory learning styles can be helped and understand the material, then after that, the teacher tells students to memorize and practice to sing the song in front of the class so that students with kinesthetic learning styles can be helped by directly practicing it. The methods used include questionnaires in the form of questions aimed at students to find out the dominant learning style in the material "Respiratory System in Humans" science lesson with the help of song media so that the learning style of students who are more dominant among visual, auditory, and kinesthetic learning styles will be known. Then, the interview method is aimed at the homeroom teacher of class V and the students of Class V, interviews about how to implement science lesson learning with the help of song media and the results of profiling student learning styles. Another method that is carried out is by observing the learning process, starting from the learning atmosphere, the media used, the way the teacher delivers the learning material, and the student's response during the learning process. Data based on time is carried out to ensure the validity of the data obtained; the research process is carried out in several meetings so that consistent results are obtained regarding the process and results of this research.

Data was collected using a Guttman scale questionnaire to determine the dominant learning style of each student in the science and science subject assisted by class V songs. This scale is firm and consistent, giving firm answers to questions such as yes and no, positive and negative, agree and disagree, and right and wrong. The data analysis technique used in this study is the Miles and Huberman version of the data analysis technique [48]. Miles and Huberman applied three stages in analyzing data: data reduction, data presentation, and conclusion [49]. The three steps of this research are as follows. The data reduction stage aims to identify relevant, significant, and valuable data based on the research conducted and obtain the data researchers need. The information collected for this research is presented as data (data display) in a concise narrative description (with text). Verification of conclusions (verification). Researchers will conclude by explaining the methods used to collect data through interviews, observations, and questionnaires.

**Results and Discussion**

One aspect implemented in the independent curriculum is differentiated learning. Although differentiated learning is nothing new, teaching and learning activities are rarely carried out. One way to design and implement a learning process based on student characteristics is with a differentiation learning strategy. One of the essential characteristics for teachers to know is the characteristics of students' learning styles. Students also have their style of learning. This learning style embodies individual differences that teachers must pay attention to. Learning styles include visual, audio, and kinesthetic learning styles. The teacher's understanding of students' learning styles will motivate students to participate in

learning. Teachers realize that knowing students' various learning styles is essential to see what students' character is like during the learning process, so teachers are expected to be able to present lesson material according to the material and media that will be taught. The results of mapping the dominance of learning styles from 29 class V students at SDN Sadeng 02 on social studies of the Respiratory System in Humans are presented in Figure 1.



**Figure 1.** Chart of Student's Learning Styles

The results of data analysis show that 6 (21%) students predominantly use visual learning styles, namely learning by reading the material about the respiratory system in humans and the lyrics of the song about the respiratory system in humans that are presented. They mentioned that they prefer to learn by reading the material and lyrics of the song about the respiratory system in humans that are displayed; they can understand the material conveyed by the teacher through the lyrics of the song material of the respiratory system in humans. In this case, the teacher presents a visual display in the form of materials, pictures, and lyrics of the respiratory system song in humans. While listening to the song's audio, students with a visual learning style will focus more on the lyrics about the human respiratory system, also displayed at that time.

A total of 14 (48%) students dominated the auditory learning style, namely by listening to songs of respiratory system material in humans; in this case, the teacher presented the audio of the song of respiratory system material in humans, which was played several times so that students with this learning style could better remember the material taught. Students with an auditory learning style prefer to learn by listening to songs and quickly recognize and understand a learning material by listening to audio, namely songs. They mentioned that they often fill their free time by listening to songs of material on the respiratory system in humans until they understand the flow and memorize the material by listening to the song many times.

A total of 9 (31%) students predominantly use a kinesthetic learning style, which is learning by practicing singing after being presented with song media. In addition to being set to audio and song lyrics, teachers also ask students to practice singing songs of respiratory system material in humans. According to information from the teacher, this method is considered effective in maximizing the process of students understanding the material. This is the dominant learning style in kinesthetics, where students with this learning style prefer to learn by practicing the material directly, namely by practicing singing. This is

done by singing and moving the body to increase students' memory and understanding of the respiratory system material in humans with a kinesthetic learning style.

The analysis showed that, on average, students preferred to learn the material by listening to songs about the material of the respiratory system in humans. However, some students like to know the material independently by reading and discussing with other colleagues, namely by reading and understanding the material and lyrics of the song. During the implementation of the process, the average student focused more on listening to the material delivered by the teacher and the video of the respiratory system song on humans sung together. When differentiating products, focus on students with a dominant kinesthetic learning style, namely, students enthusiastic about presenting it in front of the class with singing practice. In the implementation of learning the content of science lessons on the respiratory system in humans, teachers use alternative song media assistance about the respiratory system in humans, which is packaged in one Canva application. This is shown to meet the learning style needs of all class V students. The existence of song media packaged in one Canva application, of course, will display a visual image of the breathing system and the song lyrics. Students will also listen and sing the song together, then practice it by singing songs of respiratory system material in humans in groups.

Based on the interview results, the teacher explains learning styles, namely how students learn to understand and accept the material. Every child or student has different characteristics, attitudes, and characteristics, so a teacher needs to understand and know each student's learning style. These various learning styles provide a fast and good way for everyone to understand information from outside themselves. Therefore, educators can find out how students' learning styles differ. Therefore, educators can find differences in students' learning styles to present the proper methods and media to meet every learning style needed in learning the science of respiratory system material in humans, namely with the help of songs.

Using the media of songs, the content of science lessons, and the material of the respiratory system, humans can meet three learning styles of students; this is included in the differentiated learning process. Differentiated learning uses three strategies: content Content, where there is content in the Canva application in which material and songs about the respiratory system in humans are listed; then differentiation of the process by listening to songs; and product differentiation, namely by the practice of singing. Content differentiation is taught to students, namely science material on the respiratory system in humans. Teachers prepare various learning tools for their students through content differentiation, such as reading books, Listening to the material in PowerPoint, and listening to the teacher's explanation first. The term "process differentiation" describes how students understand or apply what they have learned, namely by singing, teaching, and practicing singing songs. This activity can be carried out in stages by giving assignments to students or directing questions to be completed according to areas of interest, making individual agendas in the form of to-do lists, adjusting the amount of time given for assignments, and creating various kinds of assignments, by providing Student Worksheets (LKPD),

which contain challenging activities for each group that differ. Product differentiation focuses on students who have a dominant kinesthetic learning style. These namely students are enthusiastic about being able to sing the songs they learn in front of the class.

Learning methods and learning media adapted based on these needs can meet the unique demands of each student. Students' diverse learning styles, interests, and levels of learning readiness must be accommodated through differentiated teaching, assessment, and learning activities. Applying differentiated learning to education is very beneficial. These needs include pre-existing knowledge, preferred learning methods, hobbies, and subject understanding. This method allows students with learning abilities to demonstrate what they have learned at school. Differentiated learning is more successful in increasing knowledge of each indication tested. The learning media in the differentiated learning process is adjusted to meet student's individual needs, so differentiated learning is seen as more attractive than other forms of teaching, enabling students to follow the learning process quickly and flexibly.

Songs are one of the media that teachers can use in learning. In elementary school, the learning process is inseparable from singing activities. In preparing students who are creative, innovative, and have a high understanding of the material, triggering teachers' creativity, such as selecting learning methods through musical activities in learning, is very necessary [23]. During learning, teachers use learning media in the form of song media [50]. Brewster et al. (2002) state numerous benefits to employing music as a teaching tool. First of all, music is a language resource. In this instance, songs serve as a teaching tool for new languages and a way to reinforce vocabulary and grammar.

Additionally, songs give pupils a fresh and enjoyable way to learn the language they already know. On the other hand, songs allow for natural and fun repetition of language. All language abilities can be developed holistically through songs, including pupils' pronunciation. Second, music is a psychological and expressive tool. The song is entertaining and can inspire kids to create a good outlook on English. For students, songs don't pose a threat or fright. Students proficient in English can confidently perform English songs for their parents to prove their proficiency. Thirdly, music serves as a cognitive tool. Songs facilitate better coordination, memory, and focus. As a tool for deciphering meaning, rhymes become more meaningful to students. Both social and cultural resources can be found in the four songs. Brewster et al. (2002) also found that songs are beneficial for teaching pronunciation. Some essential pronunciation characteristics, such as stress, rhythm, and intonation, can be spontaneously trained through songs [51].

Using song media in the learning process is an effective and engaging teaching method. According to [52], the song motivates students to listen continuously and imitate the pronunciation sung by their favorite singer. According to [33], with the learning process using song media, students change attitudes after carrying out the learning process. Students master the material delivered with the help of media so that learning outcomes increase from the previous one without using any media assistance.

Learning to use song media can make students interested so that they will pay attention to the delivery of the material.

The song lyrics used in the learning process are as follows:

**Respiratory System in Humans**  
(Song Tone: Anak Kambing Saya)

Ayo belajar sistem pernapasan  
Oksigen ke hidung, faring, laring, trachea  
Lewati bronkus, juga bronkeolus  
Sampai alveolus, ditukas CO2  
Hirup oksigen hei hei  
Hirup oksigen hei hei  
Hirup oksigen, hembuskan CO2  
Hirup oksigen hei hei  
Hirup oksigen hei hei  
Hirup oksigen, hembuskan CO2

The research results show that students have various learning styles. This is used as the basis by teachers to use song media tailored to the characteristics of students' learning styles. By meeting all the learning needs of students, teachers have also implemented differentiated learning that can be applied in learning activities because it facilitates a variety of learning styles in children [53-54]. Differentiated learning requires teachers to continuously understand their students' strengths and weaknesses and observe and evaluate their readiness, interests, and learning preferences [28,55]. Teachers' and students' learning styles are closely related, supporting each other and determining the success of teaching and learning [56]. The fifth-grade teacher at SD Negeri Sadeng 02 also realized that the learning process was no longer centered on educators alone but focused more on students. Teachers must also apply the right learning strategies and methods. This aligns with research that states that educators must be competent in preparing learning through various media according to the results of mapping students' learning style needs to achieve learning objectives [40][57].

The results of the analysis of the implementation of learning styles in class V science pupil science material "Respiratory system in humans" which dominates the most is the auditory learning style, which occupies almost half of the number of students, namely as much as 48%, then kinesthetic learning style, and the most miniature visual learning style. This shows that song-assisted science learning is suitable for use as a medium to meet the learning needs of students. Auditory learning styles and visual and kinesthetic learning styles are also fulfilled through the help of media and appropriate learning methods. The fulfillment of each student's learning style is directly proportional to the motivation and learning outcomes; this is strengthened by research [34], following the results of research that has been carried out that the fulfillment of learning styles can improve student learning outcomes. In the study, the results were obtained that in learning social studies in the classroom, there were 89.29% of students had an auditory learning style, followed by 7.14% of students had a visual learning style, and the remaining 3.57% of students had a kinesthetic learning style. In contrast to the results of the research that we have conducted on learning social science in the classroom, there are 48% of students have an auditory learning style, followed by 21% of students have a

visual learning style, and the remaining 31% of students have a kinesthetic learning style.

In this case, the implementation of learning the content of science lessons on the human respiratory system material with the help of songs contained in one Canva application has been proven to meet all kinds of dominant learning style needs of class V students. Teachers have also implemented a differentiated learning process that meets all the needs of students' learning styles. To meet the requirements of the Independent Curriculum, differentiated learning can be applied not only based on learning styles but also on learning readiness, interests, and student profiles [58]. This is also reinforced by findings stating that students can learn using their learning style, making it easier to understand learning material [59-60]. Student learning styles play an essential role in the learning outcomes that will be obtained. This is reinforced by research that the more dominant a student's learning style, the better the learning outcomes obtained [61-62]. By using the media of songs, the content of science lessons, and the respiratory system material, humans can meet three learning styles of students; this is included in the differentiated learning process. Differentiated learning uses three strategies: content where there is content in the Canva application in which songs are included in the human respiratory system, then differentiation of the process by listening to songs, and product differentiation, namely by singing practice. Content differentiation is taught to students, namely science material on the respiratory system in humans. Students who know their learning style will find it easier to learn, so it impacts student learning outcomes. Previous findings stated that differentiation strategies can improve student learning outcomes [63][64].

Other findings also state that the independent curriculum gives teachers the freedom to create exciting and highly relevant learning experiences that are tailored to the specific needs of each student and the learning environment [65-67]. In implementing differentiated learning, several challenges are found because each student has their dominant learning style and characteristics in one class. Differences in learning styles challenge teachers to apply different learning strategies. However, with these challenges, teachers are increasingly motivated to maximize the learning process while still paying attention to the needs of each student. This is, of course, realized by implementing differentiated learning.

Apart from these challenges and obstacles, teachers certainly have strategies and efforts to overcome them; teachers try to present learning media that is more helpful in learning the science of respiratory system material in humans, where the media can help meet the dominant needs of each student's learning style. This research implies that the results contribute to teachers so that teachers must know each student's learning style so that learning activities can run optimally. Differentiated learning ideas have significant relevance to the principles of the new paradigm in education. In the new paradigm, the learning perspective is different because each learner is different but has the same learning goals. Facilitating learning tailored to each student's needs allows teachers to provide unique input to each student. Based on student growth and development in many environments and cultures, this interpretation explains how learning is implemented using various

techniques to help students understand their interests and abilities. A new paradigm in the curriculum triggers Merdeka Belajar to optimize the learning process, focusing on students and giving teachers the freedom to organize their classes. Hopefully, this research can serve as an illustration for further study and for teachers to implement differentiated learning by profiling each student's learning style.

## Conclusion

Based on the research in implementing the learning science lesson of respiratory system material in humans, grade V students have various learning styles, including visual, auditory, and kinesthetic. It turns out that the most dominant learning style is the auditory learning style, followed by the kinesthetic learning style and the miniature visual learning style. Grade V teachers of SD Negeri Sadeng 2 understand the characteristics of students' learning styles exceptionally well. This can be seen in the results of the interviews that were conducted. Teachers have implemented appropriate methods and media to meet the learning needs of each student. In this case, teachers use song-assisted media, which can increase students' motivation to learn. In its implementation, song-assisted media content science lesson material on the respiratory system in humans is packaged in one Canva application. From the findings, it turns out that the media, with the help of songs, can meet the needs of each student's learning style, which also improves student learning outcomes. In its implementation, teachers still need help carrying out different learning styles based on students' learning styles. Nevertheless, teachers still optimize their ability to teach well.

## References

- [1] Kidd, W., & Murray, J. (2020). The Covid-19 Pandemic And Its Effects On Teacher Education In England: How Teacher Educators Moved Practicum Learning Online. *European Journal Of Teacher Education*, 43(4), 542–558.
- [2] Saputro, F. E. (2020). The Role Of Islamic Religious Education Teachers In Actualizing Tolerance Attitudes To Students. *AL-ISHLAH: Jurnal Pendidikan*, 12(2), 336–347.
- [3] Intania, E. V., & Utama, S. (2020). The role of character education in learning during the COVID-19 pandemic Peran pendidikan karakter dalam pembelajaran selama pandemi. *Jurnal Penelitian Ilmu Pendidikan*, 13(2), 129–136.
- [4] Prayitno, H. J., Markhamah, Nasucha, Y., Huda, M., Ratih, K., Ubaidullah, Rohmadi, M., Boeriswati, E., & Thambu, N. (2022). Prophetic educational values in the Indonesian language textbook: pillars of positive politeness and character education. *Heliyon*, 8(8), e10016.
- [5] Indarta, Y., Jalinus, N., Waskito, W., Samala, A. D., Riyanda, A. R., & Adi, N. H. (2022). Relevansi Kurikulum Merdeka Belajar dengan Model Pembelajaran Abad 21 dalam Perkembangan Era Society 5.0. *Edukatif: Jurnal Ilmu Pendidikan*, 4(2).
- [6] Malikah, S., Winarti, W., Ayuningsih, F., Nugroho, M. R., Sumardi, S., & Murtiyasa, B. (2022). Manajemen Pembelajaran Matematika pada Kurikulum Merdeka. *Edukatif: Jurnal Ilmu Pendidikan*, 4(4), 5912–5918.
- [7] Yunaini, N., Rukiyati, R., Prabowo, M., Hassan, N. M., & Hermansyah, A. K. (2022). The Concept of the Independent Learning Curriculum (Merdeka Belajar) in Elementary Schools in View Progressivism Educational Philosophy. *JIP Jurnal Ilmiah PGMI*, 8(2), 95–105.
- [8] Abidah, A., Hidaayatullaah, H. N., Simamora, R. M., Fehabutar, D., & Mutakinati, L. (2020). The Impact of COVID-19 to Indonesian Education and Its Relation to the Philosophy of "Merdeka Belajar." *Studies in Philosophy of Science and Education*, 1(1), 38–49.
- [9] Chaniago, S., Yeni, D. F., & Setiawati, M. (2022). Analisis Penerapan Kurikulum Merdeka Belajar terhadap Hasil Belajar Siswa Kelas X pada Mata Pelajaran Geografi di MAN I Koto Baru. *Sultra Educational Journal*, 2(3).
- [10] Sopiandah, D., Masruroh, S., Zaqiah, Q. Y., & Erihadiana, M. (2022). Konsep dan Implementasi Kurikulum MBKM (Merdeka Belajar Kampus Merdeka). *Reslaj: Religion Education Social Laa Roiba Journal*, 4(1).
- [11] Mubarak, I. (2022). Media Audiovisual Pada Pembelajaran IPA Tema Peduli Terhadap MakhluK Hidup Siswa Kelas IV Sekolah Dasar. *Edukasiana: Jurnal Inovasi Pendidikan*, 1(4), 208–218.
- [12] Amalia, N., Ermawati, D., & Kuryanto, M. S. (2022). Pengaruh Penggunaan Metode Hypnoteaching terhadap Motivasi Belajar Matematika Siswa Sekolah Dasar. *JIP - Jurnal Ilmiah Ilmu Pendidikan*, 5(7), 2148–2155.
- [13] Putri, C. K., & Koeswanti, H. D. (2022). Karuta Ceria: Media Pembelajaran Berbasis Model Pembelajaran APACIN Untuk Meningkatkan Kemampuan Calistung Siswa. *Jurnal Imiah Pendidikan Dan Pembelajaran*, 6(2), 236–248.
- [14] Qodriani, R. N. L., Asrori, & Rusman. (2022). Implementasi Metode Pembelajaran Kuis Interaktif Berbasis Mentimeter pada Mata Pelajaran Pendidikan Agama Islam. *Jurnal Pendidikan Agama Islam Al-Thariqah*, 7(2), 326–339.
- [15] Firdaus, H., Laensadi, A. M., Matvayodha, G., Siagian, F. N., & Hasanah, I. A. (2022). Analisis Evaluasi Program Kurikulum 2013 Dan Kurikulum Merdeka. *Jurnal Pendidikan Dan Konseling*, 4(4).
- [16] Sasmita, E., & Darmansya, D. (2020). Analisis Faktor-Faktor Penyebab Kendala Guru Dalam Menerapkan Kurikulum Merdeka (Studi Kasus: Sdn 21 Koto Tuo, Kec. Baso). *Jurnal Pendidikan Dan Konseling (JPDK)*, 6(4).
- [17] Lestari, N., Anjarini, T., & Ngazizah, N. (2022). Pengembangan Media Scapbook Berbasis Pemecahan Masalah pada Materi Struktur tumbuhan. *Jurnal Educatio FKIP UNMA*, 8(2), 491–497.
- [18] Mustadi, A., Sayekti, O. M., Rochmah, E. N., Zubaidah, E., Sugiarsih, S., & Schulze, K. M. (2022). Pancalis: Android-based learning media for early-reading in new normal. *Jurnal Cakrawala Pendidikan*, 41(1), 71–82.
- [19] Fauzia, R., & Ramadan, Z. H. (2023). Implementasi

- Pembelajaran Berdiferensiasi Dalam Kurikulum Merdeka. *Jurnal Educatio FKIP UNMA*, 9(3), 1608–1617.
- [20] Rahayu, R., Rosita, R., Rahayuningsih, Y. S., Hernawan, A. H., & Prihantini, P. (2022). Implementasi Kurikulum Merdeka Belajar di Sekolah Penggerak. *Jurnal Basicedu*. <https://doi.org/10.31004/basicedu.v6i4.3237>
- [21] Qulub, M. C., Almadani, C. M., Laila, S. N., Sadih, T. A., & Siswoyo, A. A. (2022). Penggunaan Media Lagu Sebagai Upaya Meningkatkan Pemahaman Siswa Terhadap Satuan Panjang. *ELEMENTARY: Jurnal Inovasi Pendidikan Dasar*, 2(3), 135–143.
- [22] Desyandri, Yeni, I., Mansurdin, & Dilfa, A. H. (2021). Digital Student Songbook as Supporting Thematic Teaching Material in Elementary School. *Jurnal Ilmiah Sekolah Dasar*, 5(2), 342.
- [23] Kusuma, P. A., & Airlanda, G. S. (2022). Pengembangan Video Klip Lagu Materi Sistem Pernapasan Manusia untuk Siswa Sekolah Dasar. *Jurnal Basicedu*, 6(5), 8675–8685.
- [24] Anggraini, N. A., Ningsih, E. F., Choirudin, Darmayanti, R., & Triyanto, D. (2022). Application of the AIR learning model using song media to improve students' mathematical representational ability. *AMCA Journal of Science and Technology*, 2(1), 28–33.
- [25] Ratnawati, & Angraeni, L. (2021). Pembelajaran Bahasa Inggris Berbasis Lagu dan Media Audio Visual. *Madaniya*, 2(1), 79–86.
- [26] Latifah, N., & Nasution, N. B. (2024). Pengaruh Model Pembelajaran Air Berbantu Media Lagu Materi Aljabar Terhadap Kemampuan Pemahaman Konsep. *Jurnal Lebesgue: Jurnal Ilmiah Pendidikan Matematika, Matematika Dan Statistika*, 5(1), 553–560.
- [27] Hafizha, D., Ananda, R., & Aprinawati, I. (2022). Analisis Pemahaman Guru Terhadap Gaya Belajar Siswa Di Sdn 020 Ridan Permai. *Jurnal Review Pendidikan Dasar: Jurnal Kajian Pendidikan Dan Hasil Penelitian*, 8(1), 25–33.
- [28] Nahdhiah, U., & Suciptaningsih, O. A. (2024). Optimization of Kurikulum Merdeka through differentiated learning: Effectiveness and implementation strategy. *Inovasi Kurikulum*, 21(1), 349–360.
- [29] Bendriyanti, R. P., Dewi, C., & Nurhasanah, I. (2022). Manajemen Pembelajaran Berdiferensiasi Dalam Meningkatkan Kualitas Belajar Siswa Kelas Ix Smpit Khairunnas. *Jurnal Pendidikan (Teori Dan Praktik)*, 6(2), 70–74.
- [30] Faiz, A., Pratama, A., & Kurniawaty, I. (2022). Pembelajaran Berdiferensiasi dalam Program Guru Penggerak pada Modul 2.1. *Jurnal Basicedu*, 6(2), 2846–2853.
- [31] Lubis, K., Safina, N., & Soraya, R. (2021). Pengaruh Model Think Pair Share dengan Media Lagu Sahabat Sejati terhadap Kemampuan Menulis Cerpen Siswa Kelas XI MAS Proyek UNIVA Medan. *Sintaks: Jurnal Bahasa & Sastra Indonesia*, 1(1), 9–12.
- [32] Desyandri, & Maulani, P. (2020). Penerapan Model Project Based Learning untuk Meningkatkan Hasil Belajar Seni Musik Pada Pembelajaran Tematik Terpadu di Sekolah Dasar. *JURNAL INOVASI PENDIDIKAN DAN PEMBELAJARAN SEKOLAH DASAR*, 3(2), 58.
- [33] Juhaeriah, J., & Cunandar, D. (2022). Pengaruh Penerapan Model Moody Terhadap Hasil Belajar Memahami Makna Lirik Lagu Wajib Nasional Pada Siswa Kelas V SD Negeri 1 Sindangbarang Kecamatan Jalaksana Kabupaten Kuningan. *Jurnal Lensa Pendas*, 5(1), 7–18.
- [34] Arumsari, D. M. (2023). Analisis Gaya Belajar Siswa Terhadap Hasil Belajar Pada Mata Pelajaran IPAS. *LEARNING: Jurnal Inovasi Penelitian Pendidikan Dan Pembelajaran*, 3(1), 111–119
- [35] Kurniati, A., Fransiska, F., & Sari, A. W. (2019). Analisis Gaya Belajar Siswa Pada Mata Pelajaran Bahasa Indonesia Kelas V Sekolah Dasar Negeri 14 Manis Rayakecamatan Sepauk Tahun Pelajaran 2018/2019. *JURNAL PENDIDIKAN DASAR PERKHASA: Jurnal Penelitian Pendidikan Dasar*, 5(1), 87–103
- [36] Putri, R. A., Magdalena, I., Fauziah, A., & Azizah, F. N. (2021). Pengaruh Gaya Belajar terhadap Pembelajaran Siswa Sekolah Dasar. *Cerdika: Jurnal Ilmiah Indonesia*, 1(2), 157–163
- [37] Hidayati, N., Hidayati, D., Hani Saputro, Z., & Lestari, T. (2022). Implementasi Pembelajaran Projek pada Sekolah Penggerak di Era Digital. *Journal of Education and Teaching (JET)*, 4(1), 68–82.
- [38] Lubaba, M. N., & Alfiansyah, I. (2022). Analisis Penerapan Profil Pelajar Pancasila Dalam Pembentukan Karakter Peserta Didik di Sekolah Dasar. *EDUSAINTEK: Jurnal Pendidikan, Sains Dan Teknologi*, 9(3), 687–706.
- [39] Aminuriyah, S., Markhamah, & Utama. (2022). Pembelajaran Berdiferensiasi: Meningkatkan Kreativitas Peserta Didik. *Jurnal Mitra Swara Ganesha*, 9(2), 89–100.
- [40] Herwina, W. (2021). Optimalisasi Kebutuhan Murid Dan Hasil Belajar Dengan Pembelajaran Berdiferensiasi. *Perspektif Ilmu Pendidikan*, 35(2), 175–182.
- [41] Hadi, W., Prihasti, E., Yuhdi, A., & Agustina, R. (2022). Desain Pembelajaran Diferensiasi Bermuatan Problem Based Learning (Pbl) Mendukung Critical Thinking Skill Siswa Pada Era Kenormalan Baru Pascapandemi Covid-19. *Basastra*, 11(1), 56.
- [42] Rahmah, S., Dalila, A. A., Liliawati, W., & Setiawan, A. (2022). Pendekatan Pembelajaran Diferensiasi dalam Model Inkuiri terhadap Kemampuan Numerasi Siswa. *Jurnal Imiah Pendidikan Dan Pembelajaran*, 6(2), 393–401.
- [43] Rani, N. M. A. M., Ardana, I. K., & Negara, I. G. A. O. (2019). Pengaruh Model Pembelajaran Talking Stick Berbantuan Lagu Tradisional Terhadap Kompetensi Pengetahuan IPA. *Mimbar Ilmu*, 24(3), 345.
- [44] Sugiyono. (2013). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta.
- [45] Irawati, D., Natsir, N. F., & Haryanti, E. (2021). Positivisme, Pospositivisme, Teori Kritis, dan Konstruktivisme dalam Perspektif “Epistemologi Islam.” *JIIP - Jurnal Ilmiah Ilmu Pendidikan*, 4(8), 870–880.
- [46] Porter, B. De, & Hernacki, M. (2007). *Quantum*



- Learning: Membiasakan Belajar Nyaman dan Menyenangkan* (1st ed.). Kaifa.
- [47] Jayanti, S. D., Suprijono, A., & Jacky, M. (2023). Implementasi Pembelajaran Berdiferensiasi Dalam Kurikulum Merdeka Pada Mata Pelajaran Sejarah Di SMA Negeri 22 Surabaya. *EDUKASIA: Jurnal Pendidikan Dan Pembelajaran*, 4(1), 561–566.
- [48] Miles, M. B., & Huberman, A. M. (2014). *Qualitative Data Analysis-Third Edition*. London: Sage Publication Ltd.
- [49] Janah, R., Widyaningrum, A., & Purnamasari, V. (2023). Penggunaan Media Lagu Pada Mata Pelajaran Bahasa Indonesia Untuk Meningkatkan Literasi Siswa Kelas III SDN 02 Krompeng. *Didaktik : Jurnal Ilmiah PGSD STKIP Subang*, 9(04), 779–791.
- [50] Melalolin, L. M., Hartini, N. M. S. A., & Mahayanti, N. W. S. (2020). Pemanfaatan Lagu Sebagai Media Pembelajaran Untuk Meningkatkan Pemahaman Tentang Simple Past Tense. *Journal for Lesson and Learning Studies*, 3(1), 108–119.
- [51] Faiza, D., Mayekti, M. H., & Bestari, A. C. Y. (2021). Pelatihan Kemampuan Listening melalui Media Lagu Bahasa Inggris kepada Siswa Kelas X MA Al Ikhsan Beji, Kedungbanteng. *Jurnal Abdidas*, 2(2), 253–262.
- [52] Asume, S., Isa, R., Panigoro, M., Asi, L. L., & Mahmud, M. (2023). Pengaruh Gaya Mengajar Guru Terhadap Aktivitas Belajar Siswa. *Journal of Economic and Business Education*, 1(1), 134–139.
- [53] Hilman, I., Akmal, R., & Nugraha, F. (2023). Analisis Gaya Belajar Peserta Didik Melalui Assessment Diagnostik Non Kognitif Pada Pembelajaran Diferensiasi di Sekolah Dasar. *Naturalistic: Jurnal Kajian Dan Penelitian Pendidikan Dan Pembelajaran*, 8(1), 161–167.
- [54] Marlina. (2019). *Panduan Pelaksanaan Model Pembelajaran Berdiferensiasi di Sekolah Inklusif*. PLB FIP UNP.
- [55] Jatmiko, H. T. P., & Putra, R. S. (2022). Refleksi Diri Guru Bahasa Indonesia Dalam Pembelajaran Berdiferensiasi Di Sekolah Penggerak. *Lingua Franca: Jurnal Bahasa, Sastra, Dan Pengajarannya*, 6(2), 224.
- [56] Mastuti, A. G., Abdillah, & Rumodar, M. (2022). Peningkatan Kualitas Pembelajaran Guru Melalui Workshop Dan Pendampingan Pembelajaran Berdiferensiasi. *JMM (Jurnal Masyarakat Mandiri)*, 6(5).
- [57] Marlina, I., & Aini, F. Q. (2023). Perbedaan Pembelajaran Berdiferensiasi Berdasarkan Kesiapan Dengan Gaya Belajar Terhadap Hasil Belajar Siswa. *EDUSAINTEK: Jurnal Pendidikan, Sains Dan Teknologi*, 11(1), 392–404.
- [58] Irma, N., & Misriyati. (2020). Pengaruh Gaya Belajar Dan Motivasi Belajar Terhadap Hasil Belajar Siswa Pada Mata Pelajaran Matematika Kelas X Ips Semester Genap Di Ma Fathus Salafi Tahun Pelajaran 2019/2020. *Jurnal IKA: Ikatan Alumni PGSD UNARS*, 8(1), 48–56.
- [59] Isnanto, & Hamu, M. A. (2022). Hasil Belajar Siswa Ditinjau Dari Gaya Belajar. *Aksara: Jurnal Ilmu Pendidikan Nonformal*, 8(1), 547.
- [60] Prabanitha, M. I., Sudarma, I. K., & Dibia, I. K. (2020). Korelasi Antara Gaya Belajar dengan Hasil Belajar IPA. *Mimbar Ilmu*, 25(2), 51.
- [61] Yuliastini, L. G. I., Wiyasa, I. K. N., & Manuaba, I. B. S. (2020). Kontribusi Gaya Belajar dan Motivasi Berprestasi Terhadap Kompetensi Pengetahuan IPA. *Mimbar Ilmu*, 25(1), 11.
- [62] Latifah, D. N. (2023). Analisis Gaya Belajar Siswa Untuk Pembelajaran Berdiferensiasi Di Sekolah Dasar. *LEARNING : Jurnal Inovasi Penelitian Pendidikan Dan Pembelajaran*, 3(1), 68–75.
- [63] Wahyuni, A. S. (2022). Literature Review: Pendekatan Berdiferensiasi Dalam Pembelajaran IPA. *JURNAL PENDIDIKAN MIPA*, 12(2), 118–126.
- [64] Basra, H. (2023). Pembelajaran Berdiferensiasi dengan Quizizz. *JURNAL SIPATOKKONG BPSDM SULSEL*, 3(4), 193–208
- [65] Dafitri, R. S., Hasrul, H., Rafni, A., & Bakhtiar, Y. (2022). Implementasi Program Merdeka Belajar melalui Profil Pelajar Pancasila di SMKN 1 Sijunjung. *Journal of Education, Cultural and Politics*, 2(2), 175–184
- [66] Nugraha, T. S. (2022). Kurikulum Merdeka untuk Pemulihan Krisis Pembelajaran. *Inovasi Kurikulum*, 19(2).