



Analysis of Student Learning Styles in the Science Learning Process in Class IV MIN 2 Banda Aceh City

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ABSTRACT

This study examines the low learning achievement of students due to their inability to optimize learning styles that suit their individual characteristics. Many students tend to be passive, reluctant to ask questions, and hesitant to express opinions. The research aims to analyze the learning styles of grade IV students in Natural Sciences (IPA) at MIN 2 Banda Aceh City. Using a qualitative descriptive method, data were collected through questionnaires, observations, and interviews to identify students' dominant learning styles: visual, auditory, or kinesthetic. Results from 20 students showed 60% preferred visual, 25% kinesthetic, and 15% auditory styles. The findings highlight the importance of teachers recognizing students' learning styles and applying varied teaching strategies to improve engagement and achievement in science learning.

Keywords: Learning Style; Learning Strategy; MIN 2 Banda Aceh

INTRODUCTION

Learning is an effort to function or develop all skills, both physical and psychological.¹ Meanwhile, the learning method is a combination of how students receive, organize, and manage information. Not only that, the way of learning can be said to be an individual's way to start absorbing, concentrating, accommodating and processing difficult and up-to-date explanations. Eric Jensen defines learning as a preferred way to think, process, and understand information. In line with this, Cholifah said that the way of learning is formed naturally in harmony with the intelligence and potential that each individual has.²

All students have different ways of learning, so educators must teach in harmony with each student's learning style to help students understand and absorb lessons. Keep in mind that, even if students are in school or just sitting in the same class, students have different skills to understand and accept the subject matter. It is very important for educators to understand their students' learning styles. They will be able to organize each class according to the needs of their students, and at the very least, educators will strive to implement various learning approaches that suit their students' way of learning.³

Based on the results of observations in class IV-B MIN 02 Banda Aceh City, at the time of teaching, teachers were more dominant in using the lecture method during the learning process and at the time of learning, educators were less varied in the learning methods applied so that students could not optimize learning styles that were in harmony with their character. The variety of different learning methods of each student leads to the development of different learning achievements. During teaching and learning activities, most students are more passive, do not ask questions, play with classmates and are afraid or embarrassed to express their opinions. Because there are variations in learning methods, the researcher wants to dig deeper into the learning methods applied in classes IV-B to maximize student learning achievement.

The process of identifying children's learning styles needs to involve the help of adults such as teachers and parents. This can be done through learning planning with a variety of media, such as audio, video, and images. Next, observe the child's response when learning to find out their tendencies, whether they are more interested in visuals, audio, or have a need for

¹ Suyono dan Harianto. *Belajar & Pembelajaran* (Bandung: PT Remaja Rosdakarya. 2016). hal 163.

² Risa Zakiatul Hasanah (2021). *Gaya Belajar (Learning Style)*. Malang: Literasi Nusantara. hal 27.

³ 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.

movement while learning⁴. According to Mouly, learning is the process of changing one's behavior thanks to experience. *Garry and Kingsley* state that learning is a change in behavior that is through experience and practice⁵.

The visual learning style relies on the sense of sight, either through direct observation or imagination. According to Wahyuni, individuals with this learning style are sensitive to color and have a good artistic understanding. However, they tend to have difficulty in verbal communication because they are too sensitive to sounds and often misinterpret speech⁶. Indicators of visual learning styles based on Harianto and Suyono's theory:

1. Neat and Organized: Visual learners love neatness in appearance and environment, as well as having organized notes.
2. Difficulty Receiving Verbal Instructions: They tend to forget verbal information and better understand instructions in visual form such as writing or drawings.
3. Attention to Detail: Visual students are very careful in observing and paying attention to detail in the material being studied.
4. Remembering What You See: They have an easier time remembering what is seen than what is heard, such as through readings, images, or videos.
5. Undisturbed by Noise: Their concentration is maintained even in noisy environments, as their main focus is on what is seen⁷.

While the auditory learning type is a learning style that relies on the sense of hearing. Students with this type tend to learn and remember easily through listening, such as discussions, lectures, or audio. However, they often have difficulty remembering verbal instructions, forgetting tasks, misfollowing commands, and difficulty expressing thoughts verbally⁸. Auditory learning style is characterized by learning abilities that rely on hearing. Students with this style understand the material faster through verbal discussions and verbal explanations by the teacher. They tend to be fluent in speech, like to discuss, and explain things at length, although they often have difficulty writing down what they know. Auditory students

⁴ Risa Zakiatul Hasanah (2021). *Gaya Belajar (Learning Style)*. Malang: Literasi Nusantara.hal 29.

⁵ Nana Sudjana, *Cara Belajar Siswa Aktif*, (Bandung: Sinar Baru Algensindo, 2010), hal 5.

⁶ Risa Zakiatul Hasanah (2021). *Gaya Belajar (Learning Style)*. Malang: Literasi Nusantara.hal 29.

⁷ Harianto dan Suyono, *Belajar dan Pembelajaran*, (Bandung: Remaja Rosdakarya, 2012),

⁸ Pangesti Wiedarti, *Pentingnya Memahami Gaya Belajar*, (Jakarta: Direktorat jendral pendidikan dasar dan menengah kementerian pendidikan dan kebudayaan, 2018), hal 16.

are also able to remember the information heard, including tone, rhythm, and intonation of voices, so they can repeat it well again. However, they are very sensitive to ambient noise and are easily distracted by noise, which can interfere with study concentration. Additionally, they often read material aloud as a way to aid in understanding and remembering information.

METHODS

A. Types of Research

This research is directed at a qualitative descriptive approach, which means that the type of descriptive research is a research that only aims to explain an event or fact to the object being studied. Therefore, this study uses qualitative descriptive research because it aims to collect data or information to solve problems based on existing data, namely by presenting, analyzing, and interpreting data.

According to Nursapia, qualitative research is research that is used to investigate, discover, describe, and explain the qualities or privileges of social influences that cannot be explained, measured or described through a quantitative approach.⁹ Meanwhile, according to Abdussamad, qualitative research is research that is more focused on describing the state of the nature or essence of the value of a certain object or phenomenon.¹⁰

This qualitative research aims to understand a social phenomenon or phenomenon more fully about the phenomenon being studied. Qualitative research is not to look for relationships or influences between variables, but to gain a deep understanding of a phenomenon, so as to obtain a theory. The type of qualitative descriptive research used in the research is intended in the research to obtain information about the visual, auditory, and kinesthetic learning styles of students in Natural Sciences (IPA) learning in grade IV MIN 2 Banda Aceh City in depth and comprehensively. In addition, this qualitative research is expected to provide an overview for students to recognize their learning styles and for teachers to be able to adjust the teaching method to the learning style of the students.

B. Research Objects and Subjects

Based on the title "Analysis of Student Learning Styles in the Science Learning Process in Grade IV MIN 2 Banda Aceh City, the object of this study is grade IV students of MIN 2 Banda Aceh City in 2023/2024. The subject in this study is learning style (Visual, Auditorial,

⁹ Nursapia, H. *Penelitian Kualitatif*. Medan: Wal Ashri Publishing. (2020).

¹⁰ Abdussamad, Zuchri. *Metode Penelitian Kualitatif*. Makassar: CV. Syakir Media Press. (2021)

and Kinesthetic). The number of students used or sampled in this study was 20 people, consisting of 10 female students and 10 male students. The researcher conducted research in MIN 2 Banda Aceh City and chose class IV where class IV has 2 classrooms, namely class IV – A and class IV – B. The reason why the researcher chose class IV was because I was interested in the division of digital classes and traditional classes 32 applied in the school and I was more interested in choosing the traditional class namely classes IV – B to see how the learning style and teaching and learning process in the classroom IV – B MIN 2 Banda Aceh city.

C. Sumber Data

The data source is the subject from which the data is obtained. The data source in this study is action in science learning in MIN 2 Banda Aceh City. The data source is teaching and learning activities carried out by teachers and students of grade IV MIN 2 Banda Aceh City and the data source used in this study is science learning. According to Moloeng, the main source of data in qualitative research is words and actions, the rest is additional data such as documents and others. In this study, the research used primary data sources and qualitative secondary data sources¹¹.

1. Primary Data

According to Sugiyono, primary data is a data source that directly provides data to data collectors. Primary data is the main data obtained or obtained through observation, questionnaires and direct interviews at the research site and research location, namely in MIN 2 Banda Aceh City. Researchers can collect data directly from informants. Primary data can be in the form of individual opinions of subjects (people) or groups of observations. In this study, primary data was obtained by conducting direct observation and distributing questionnaires to students in accordance with the focus of the research and question-and-answer to grade IV teachers of MIN 2 Banda Aceh City guided by interview guidelines. Observations were carried out to observe and become preliminary data for this research to be carried out, questionnaires to answer how

¹¹ Dr. M.A. Lexy J. Moleong, "Metodologi Penelitian Kualitatif (Edisi Revisi)," *PT. Remaja Rosda Karya* (2019).

students' learning styles and interviews were conducted to answer how strategies teachers carried out in optimizing students' learning styles.¹²

2. Secondary Data

According to Sugiyono, secondary data sources are data sources that do not directly provide data to data collectors, for example through other people or through documents.

35 The data sources used in this study came from books that discussed learning styles.

D. Data Collection Techniques

Data collection techniques are the most important step in research, because the main purpose of research is to obtain data. Without knowing the data collection techniques, researchers will not get data that meets the set data standards. In order to collect data from the field, the data collection techniques carried out by the researcher are as follows¹³.

1. Questionnaire or Questionnaire

According to Rahmadi, explaining that a questionnaire is a data collection technique in the form of a list of questions that are systematically compiled to be filled in by respondents. Questionnaires are used when respondents have independence in doing or filling out questionnaires. The background of the respondents is certainly very important so that the questionnaire is considered to represent the presence of the researcher¹⁴. The learning style questionnaire used by the researcher to obtain the results of the learning style of grade IV students of MIN 2 Banda Aceh City used an open questionnaire. The purpose of using this questionnaire is to find out about the learning style of class IV MIN 2 Banda Aceh City. This questionnaire was distributed to several students who were research samples. The open questionnaire used in this study is a questionnaire of research results conducted by Mulyati, with the research title "Identification of Learning Styles of Class V Elementary School Students in Cluster 3, Pengasih District, Kulon Progo Regency

¹² Sugiyono, "EDUCATIONAL RESEARCH METHODS: QUANTITATIVE, QUALITATIVE, AND R&D APPROACHES," last modified 2012, accessed June 28, 2025, <https://perpustakaan.binadarma.ac.id/opac/detail-opac?id=8>.

¹³ Ibid.

¹⁴ Rahmadi, "Pengantar Metodologi Penelitian," last modified 2011, accessed June 28, 2025, https://books.google.co.id/books/about/Pengantar_Metodologi_Penelitian.html?id=linKEAAAQBAJ&redir_esc=y.

for the 2014/2015 Academic Year". This questionnaire has been validated or consulted with experts so that it is suitable for use for research.¹⁵

2. Interview

According to Sidiq & Choiri, an interview is a conversation with a specific purpose. The conversation is conducted by two parties, namely the interviewer who asks the question and the interviewee who provides the answer to the question. An interview is a process of communication interaction carried out by at least two people, on the basis of availability and in a natural setting, where the direction of the conversation refers to the goal that has been set by prioritizing the main foundation in the process of understanding.¹⁶ Here, the researcher will conduct an intensive question and answer session with grade IV teachers of MIN 2 Banda Aceh City as a data source to strengthen the data on student learning styles in grade IV MIN 2 Banda Aceh City. The questions asked were about the teacher's teaching style when science learning took place. The main question that will be asked to the teacher is the etode that is often used during the learning process while the main question that will be asked for grade IV students/students is what learning style they like and it is easier for them to understand during the science learning process.

E. Research Instruments

Research instruments are all tools used to collect, examine, investigate a problem. Research instruments can also be interpreted as tools to collect, process, analyze, and present data in a systematic and objective manner with the aim of solving a problem or testing a hypothesis. So, all tools that can support a research can be called research instruments. 40 Based on this concept, it can be said that this research is using the researcher himself. In addition, the assessment instruments used in this study are:

1. Observation Sheet

The observation research instrument uses observation sheets to find out and observe directly and carefully to find out the condition of the research subject used

¹⁵ Mulyati. (2015). Identifikasi Gaya Belajar Siswa Kleas V SD Se-Gugus 3 Kecamatan Pengasih Kabupaten Kulon Prago Tahun Ajaran 2014/2015. Skripsi Program Studi Pendidikan Guru Sekolah Dasar. Universitas Negeri Yogyakarta. hal 13.

¹⁶ Sidiq, Umar., Moh. Miftachul Choiri. (2019). Metode Penelitian Kualitatif di Bidang Pendidikan. Ponorogo: CV. Nata Karya. hal 61.

to see which student activities tend to which learning style is more prominent during class learning in science (Natural Sciences) subjects.

2. Interview Guidelines

The interview instrument was carried out by directly interviewing the research subjects using interview guidelines to obtain research information. Here, the researcher will conduct intensive questions and answers with classroom teachers about learning activities in science learning and also interview grade IV students of MIN 2 Banda Aceh City. The questions asked were about students' learning styles. The interview conducted in the study is an open interview, namely an interview whose direction of the question provides an opportunity for the informant to argue and is not limited to just answering yes or no.

3. Questionnaire or Questionnaire

According to Sugiyono, quizzes are a data collection method where respondents are given a list of written questions and asked to react. The types of questions in the questionnaire are divided into two, namely open questionnaires and closed questionnaires. An open-ended questionnaire question is a question that expects the respondent to write the answer in the form of a description of something. While a closed questionnaire is a question that expects an unclear answer or expects the respondent to choose one of the short answer alternatives or expects the respondent to choose one of the alternative answers from each question that has been available. The form of the questionnaire sheet used by the researcher is an open questionnaire because the respondents are asked to elaborate on their answers. The purpose of using this questionnaire is to find out the learning styles of students who discuss learning styles (Visual, Auditorial, and Kinesthetic). Here, the researcher will distribute questionnaires in odd semesters and give questionnaires to 20 students of grades IV – B MIN 2 Banda Aceh City consisting of 30 questions and distributed at the end of science learning. The questionnaire used by the researcher was to obtain the results of the learning style of students in grades IV - B MIN 2 Banda Aceh City in science ¹⁷.

¹⁷ Sugiyono, "METODE PENELITIAN PENDIDIKAN : PENDEKATAN KUANTITATIF, KUALITATIF, DAN R&D."

F. Data Analysis Techniques

Data analysis is the process of finding and systematically compiling data obtained from interviews, field notes and documentation, by organizing data into categories, describing it into units, arranging it into patterns, choosing which ones are important and what will be learned by oneself and others¹⁸.

According to Danuri & Maisarah, qualitative data analysis is the process of systematically searching and compiling data obtained from interviews, field notes and other materials so that it is easy to understand so that it can be informed to others. Data analysis in qualitative research is inductive and sustainable. The ultimate goal of qualitative data analysis is to gain meaning, produce understandings, concepts, and develop new hypotheses or theories.

In this study, the researcher used qualitative research data analysis of Miles and Huberman's theory. The steps taken in data analysis are:

1. Data Reduction

Reducing data means summarizing, choosing the main things, focusing on the things that are important, looking for themes and patterns. The data reduction in this study was carried out to assess the simplification of the data that had been obtained from the beginning of data collection to the preparation of research reports. Therefore, the data that has been reduced will provide a clear picture, and make it easier for researchers to collect further data¹⁹.

2. Data Presentation

After the data is reduced, the next step is to present the data. Through the presentation of this data, the data is organized, so that it will be easier to understand. The data from interviews, observations and documentation that has been organized in the process of reducing the data is then presented in a better and more orderly form, so that the structure can be understood. Furthermore, after an in-depth analysis, the researcher can see what happened and determine the next step.

¹⁸ Danuri and Siti Maisarah, "Metodologi Pendidikan," accessed June 28, 2025, <https://balaiyanpus.jogjaprov.go.id/opac/detail-opac?id=319982>.

¹⁹ Sugiyono, "METODE PENELITIAN PENDIDIKAN : PENDEKATAN KUANTITATIF, KUALITATIF, DAN R&D."

3. Conclusion

The next step is to draw conclusions. The initial conclusions that are still being put forward are still temporary, and will change if strong supporting evidence is found at the next stage of data collection. In this study, the withdrawal is adjusted to the problem being researched and in accordance with the existing reality, but all must pay attention to systematic and logical²⁰.

G. Data Validity Test Techniques

Qualitative research must reveal objective truths. Therefore, the validity of data in the form of qualitative research is very important. Through the validity of data, credibility (trust) of qualitative research can be achieved. In this study, to obtain the validity of the data, triangulation was carried out. Triangulation is a technique of checking the validity of data that utilizes something other than the data for the purpose of checking or as a comparison to the data. Triangulation is divided into 3 namely:

1. Triangulation Source

Testing data from several informant sources whose data will be obtained is known as source triangulation. If source triangulation is used to compare data collected by researchers from multiple sources or informants, it can increase data dependence.

2. Triangulation Technique

The reliability of a data is tested through technological triangulation, not source triangulation, by determining the correctness of data from the same source using several methodologies. This means that different data collection methods are used by researchers to obtain data from the same source. In this case, researchers can use observation, interview, and documentation strategies to achieve results.

3. Time Triangulation

Data acquisition in a certain time also has a great influence on the credibility of the data. Therefore, obtaining data in different times and situations needs to be done. Triangulation can be done at three times in the morning, noon, and night from the same source or from one day to another. From different weeks to weeks or even from different months to months. From time to time the data changes 51 or towards consistency. So data consistency is what is aimed at in this triangulation²¹.

²⁰ Ibid.

²¹ Anis Fuad and Kandung Sapto Nugroho, "Panduan Praktis Penelitian Kualitatif," last modified 2014, accessed June 28, 2025, <https://balaiyanpus.jogjaprov.go.id/opac/detail-opac?id=268344>.

In this study, the researcher used triangulation techniques because it can help researchers collect different data to get data from the same source. With triangulation techniques, testing the credibility of a data is done by checking data that has been obtained from the same source using different techniques. The data obtained from the observation results are then checked by interviews or with documentation.

RESULTS AND DISCUSSION

In this section, we will explain the presentation of research results from the formulation of problems obtained in the field and grouped according to their respective fields. The research data here discusses "Analysis of Student Learning Styles in Science Learning in Grade IV MIN 2 Banda Aceh City" the results of the research were obtained after carrying out research with a series of data collection methods with observation, questionnaires/questionnaires, and interviews.

1. Observation

Based on the field data obtained that in the visual learning style that children understand science learning more easily by looking at the pictures presented because it is easier to understand and the defense becomes more interesting, by reading alone without the help of others or friends can make children understand more about science learning, by writing or not mixing their notebooks with other subject books is also one of the ways that can make children easy understanding science learning and observing in detail can provide good results for children who have a visual learning style. Based on field data for auditory learning styles, it was found that by listening to direct explanations, whether teachers or friends, it can help children easily understand the subject matter well and can remember well if with the help of oral explanations instead of having to read on their own. Children with this auditory learning style are easily disturbed by commotion because it can interfere with children's concentration. For children who have an auditory learning style, they like to express their opinions because that way learning can be more fun when they are given the opportunity to express their opinions with this learning style.

Based on the field data obtained, children with kinesthetic learning styles like learning if they do practicum or do group tasks because that way children who have a

kinesthetic learning style feel more interested and they feel more enjoyable if the learning process involves them to continue to be active and move to carry out the directions carried out during the practicum.

2. Questionnaire or Questionnaire

Based on the results of student learning styles obtained through the questionnaire, the researcher obtained visual, auditory and kinesthetic learning style data where visual learning styles were 12 students, auditory learning styles were 3 students, and kinesthetic learning styles were 5 students. So if you look at the results obtained, the visual learning style is the most dominant learning style in class IV MIN 2 Banda Aceh City in science learning.

3. Interview

From the results of the interview above, it can be concluded that children may not have fully mastered speaking skills and may speak quietly because they are still trying to find the right words. A child who lacks confidence or anxiety may speak quietly. They may be worried about how their vote will be received by others. And some children tend to be more careful in their speech and may speak quietly to make sure that they choose words correctly.

Recap of Student Learning Style Questionnaire Data

Student Name	Learning Style Trends		
	Visual	Auditory	Kinesthetic
HA	√		
SA		√	
NH			√
ML	√		
MDR	√		
ZZ			√
AR			√
MTR	√		
RA	√		
YES			√
F	√		
AHS	√		
TA	√		
AOZ		√	
DS	√		
MZ		√	
AZN	√		

MBA	√		
KF	√		
AB			√
Total	12	3	5

CONCLUSION

Based on the results of the research titled "Analysis of Student Learning Styles in the Science Learning Process in Grade IV MIN 2 Banda Aceh City," it can be concluded that the learning style most dominant among fourth-grade students at MIN 2 Banda Aceh City is the visual learning style. This is evident from the analysis conducted during the research and data processing stages, which show that students tend to learn better through visual means such as images, videos, graphics, and other visual aids, where the eyes play a central role in the learning process.

Furthermore, this study also reveals that each student possesses a unique learning style. These individual styles often become apparent during classroom activities or through specific assessments. Therefore, it is important for teachers to understand the characteristics of their students to better grasp how they think and learn. Recognizing students' learning styles is essential in helping educators maximize each learner's potential and support a more effective and personalized learning process.

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