

## AN OVERVIEW OF STUDENT LEARNING STYLES IN DIFFERENTIATED LEARNING

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### Abstract

This research is motivated by differences in student learning styles at school. This research aims to determine the mapping of learning styles in differentiated learning at Stage D of SMP Negeri 16 Padang. This research was conducted at SMP Negeri 16 Padang with a qualitative research type. The research instrument used in this research was a questionnaire. The sampling technique used was a total sampling technique so that the population became the research sample. The method used in this research is descriptive. The descriptive method is a research method that attempts to describe a symptom, event, or incident that is occurring at present. In other words, the descriptive method is used to describe an event according to what it was when the research activity took place. The researcher chose the descriptive research method because this research only focused on learning styles so the technique was descriptive analysis, not content analysis. Based on the research results, three learning styles were found in SMP Negeri 16 Padang students. These learning styles are visual, auditory, and kinesthetic learning styles. The dominant visual learning style is found in class VII.2 with a percentage of 43%. The dominant auditory learning style is in class VII.6 with a percentage of 46%. The dominant kinesthetic learning style is in class VII.1 with a percentage of 59%. From these results, it is known that there are three learning styles in each class, but there is one learning style that dominates in each class. Based on the results of the learning style mapping above, it can be seen that the learning styles of students in each class are different so differentiated learning can be realized by paying attention to the learning needs of students in each class.

Keywords: mapping, learning styles, differentiated learning

### Abstrak

*Penelitian ini dilatarbelakangi oleh perbedaan gaya belajar siswa di sekolah. Tujuan penelitian ini adalah untuk mengetahui pemetaan gaya belajar pada pembelajaran berdiferensiasi Tahap D SMP Negeri 16 Padang. Penelitian ini dilakukan di SMP Negeri 16 Padang dengan jenis penelitian kualitatif. Instrumen penelitian yang digunakan dalam penelitian ini adalah kuesioner. Teknik pengambilan sampel yang digunakan adalah teknik total sampling sehingga populasinya menjadi sampel penelitian. Metode yang digunakan dalam penelitian ini adalah metode deskriptif. Menurut (Sudjana, 2010) metode deskriptif adalah metode penelitian yang berusaha mendeskripsikan suatu gejala, peristiwa, kejadian yang terjadi pada saat sekarang. Dengan kata lain, metode deskriptif digunakan untuk menggambarkan suatu kejadian sesuai dengan apa adanya ketika kegiatan penelitian berlangsung. Peneliti memilih metode penelitian deskriptif karena penelitian ini hanya difokuskan pada gaya belajar saja sehingga metodenya adalah analisis deskripsi bukan analisis isi. Berdasarkan hasil penelitian ditemukan tiga gaya belajar pada siswa SMP Negeri 16 Padang. Gaya belajar tersebut adalah gaya belajar visual, auditori, dan kinestetik. Gaya belajar visual yang dominan terdapat pada kelas VII.2 dengan persentase sebesar*

43%. Gaya belajar auditorial yang dominan terdapat pada kelas VII.6 dengan persentase sebesar 46%. Gaya belajar kinestetik yang dominan terdapat pada kelas VII.1 dengan persentase sebesar 59%. Dari hasil tersebut diketahui bahwa terdapat tiga gaya belajar pada setiap kelas, namun terdapat satu gaya belajar yang mendominasi pada setiap kelas. Berdasarkan hasil pemetaan gaya belajar di atas terlihat bahwa gaya belajar siswa pada setiap kelas berbeda-beda sehingga pembelajaran yang berdiferensiasi dapat diwujudkan dengan memperhatikan kebutuhan belajar siswa pada setiap kelas.

**Kata Kunci :** pemetaan, gaya belajar, pembelajaran berdiferensiasi

## INTRODUCTION

The Merdeka Curriculum emphasizes the application of differentiated learning that is more in favor of student learning interests. According to Andriani & Nugraheni (2024), differentiated learning has benefits for both teachers and students. Teachers can process and evaluate learning appropriately without being engineered because students receive treatment according to their learning needs. Correspondingly (Purnawanto, 2023) believes that differentiated learning is a learning concept that accommodates the diversity of students' conditions. This concept states that every student is unique because no one is the same in all conditions.

"Teachers who carry out the teaching process in the classroom by implementing differentiated learning prioritize the students' own interests, readiness, profiles and conditions of the learning environment" (Symbolon, 2022). Mapping learning styles is one of the important activities in learning. This planning is what is meant by differentiated learning, namely creating learning in the classroom that is adapted to the diversity of learning needs of each student.

According to (Zuana et al., 2023) Visual, auditory, and kinesthetic learning styles can be seen throughout the learning process. Some students understand better if the teacher explains verbally, through pictures and movements. According to (Fitria Anisa et al., 2023) Learning style reflects the way a person processes and understands information. Students with a visual learning style prefer to sit at the front so they can see clearly, and can learn more effectively by using visual displays such as diagrams,

illustrated textbooks, and videos. Students with an auditory learning style prefer to learn through talking, listening to explanations, and participating in discussions. Students with a kinesthetic learning style prefer direct learning and demonstrations with movement, such as making observations, operating tools, practicing with concrete objects, predicting physical phenomena, applying concepts, planning research, communicating scientifically, and asking questions.

Based on visits and interviews conducted with Indonesian language teachers, it is known that at SMP Negeri 16 Padang, the learning process fully implements ideal differentiated learning based on the demands of an independent curriculum. For example, schools have not mapped student learning profiles according to student learning styles. This mapping has not been carried out because the school itself does not yet have a learning style instrument that will be used to map student learning styles. Therefore, the mapping of student learning styles in general and mapping of student learning styles in Indonesian Language Subjects was carried out in the form of a learning style instrument.

Through several literature reviews, three styles were found, namely visual learning style, auditory learning style and kinesthetic learning style. According to (Ediyanto, 2022) There are three types of learning styles, namely: (1) visual learning style, namely a learning style that emphasizes visual acuity. This means that concrete evidence must be shown first so they can understand it. This learning style relies on sight or seeing evidence first before being able to believe it, (2) auditory

learning style, namely a learning style that relies on hearing to understand and remember. The characteristics of this learning style place hearing as the main tool in absorbing information or knowledge. This means we have to hear, then we can remember and understand the information, and (3) kinesthetic learning style, namely a learning style that requires the individual concerned to touch something that provides certain information so that he can remember it.

Every student definitely has one of these learning styles and it is possible for a student to have two learning styles at once. Teachers cannot impose the will that students must learn according to the teacher's wishes without paying attention to the student's learning styles (Ningrat et al., 2018). A learning process that refers to the

results of mapping student learning styles will help educators in the learning process according to student needs. However, this research is only limited to aspects of learning styles. For this reason, it is hoped that in further research all aspects of students' learning needs, especially aspects of learning profiles such as environment, culture, learning styles and multiple intelligences, can be researched thoroughly.

## RESEARCH METHODS

This type of research is qualitative research. According to (Moleong, 2009) Qualitative methodology is a research procedure that produces descriptive data in the form of written or spoken words from people and observable behavior. The research instrument is a closed questionnaire.

**Table 1.** Grid of differentiated learning instruments

Learning Style Type	number of questions	Statement Point Number
Visual Learning Style	22	1,4,7,10,13,16,19,22,25,28,31,34,37,40,43,46,49,52,55,58,61,64
Auditory Learning Style	22	2,5,8,11,14,17,20,23,26,50,29,32,35,38,41,44,47,50,53,56,59,62,65
Kinesthetic Learning Style	22	3,6,9,12,15,18,21,24,27,30,33,36,39,42,45,48,51,54,57,60,63,66

The subjects in this research were all class VII students who were accepted in 2022/2023. The samples used in the

research were all students spread across 8 classes, namely VII-1, VII-2, VII-3, VII-4, VII-5, VII-6, VII-7, and VII-8.

**Table 2.** Research population and sample

NO	Class	Total population
1	VII-1	31
2	VII-2	30
3	VII-3	26
4	VII-4	31
5	VII-5	28
6	VII-6	28

7	VII-7	29
8	VII-8	30
Total		233

Based on student data, a sample of 100% can be drawn from the total population of Stage D class VII students at SMP Negeri 16 Padang, totaling 233 people

## DISCUSSION

The research was carried out at SMP Negeri 16 Padang, during June-July 2023. Mapping learning styles in differentiated learning stage D SMP Negeri 16 Padang is qualitative research to obtain data on the results of the mapping carried out. The learning style mapping process begins with giving a questionnaire to the validator for evaluation as a basis for carrying out initial stage revisions to the product (questionnaire). In the process of filling out the questionnaire, two validations were carried out by expert validators. In the first validation, there were several questionnaire items that were invalid so they were said to be unfit for use for collecting research data and had to go through a minor revision stage. The next process after making revisions, the questionnaire is given back to the validator for the validation stage so that in the end the validator declares the questionnaire valid and can be continued with notes without revision.

Valid questionnaires are given to students. Questionnaires were distributed to 233 students in a total of eight classes. The questionnaire distributed to students contained 66 statement items consisting of three learning style indicators, namely visual learning style, auditory learning style and kinesthetic learning style. The visual learning style questionnaire consists of 22 statement items, the auditory learning style consists of 22 statement items and the kinesthetic learning style consists of 22 statement items.

Based on the distribution of questionnaires, data was obtained in class VII.1, there were 10 students with a visual

because the data was taken using a total sampling technique, which means the entire population was sampled.

learning style, 4 students with an auditory learning style, and 17 students with a kinesthetic learning style. From these results it is known that in class VII.1 the dominant learning style is kinesthetic learning style with a percentage of 55%.

In class VII.2 there are 13 students with a visual learning style, 5 students with an auditory learning style, and 12 students with a kinesthetic learning style. From these results it is known that in class VII.2 the dominant learning style is the visual learning style with a percentage of 43%.

In class VII.3 there are 6 students with a visual learning style, 10 students with an auditory learning style, and 10 students with a kinesthetic learning style. From these results it is known that in class VII.3 the dominant learning styles are auditory and kinesthetic learning styles with a percentage of 38%.

In class VII.4 there are 9 students with a visual learning style where these students prefer learning by listening, 8 students with an auditory learning style where they learn by paying attention to movement and sounding, and 14 students with a reading and kinesthetic learning style. From these results it is known that in class VII.4 the dominant learning style is kinesthetic learning style with a percentage of 45%.

In class VII.5 there are 11 students with a visual learning style, 8 students with an auditory learning style, and 9 students with a kinesthetic learning style. From these results it is known that in class VII.5 the dominant learning style is the visual learning style with a percentage of 39%.

In class VII.6 there are 7 students with a visual learning style, 13 students

with an auditory learning style, and 8 students with a kinesthetic learning style. From these results it is known that in class VII.6 the dominant learning style is the auditory learning style with a percentage of 46%.

In class VII.7 there are 7 students with a visual learning style, 9 students with an auditory learning style, and 13 students with a kinesthetic learning style. From these results it is known that in class VII.7 the dominant learning style is kinesthetic learning style with a percentage of 45%.

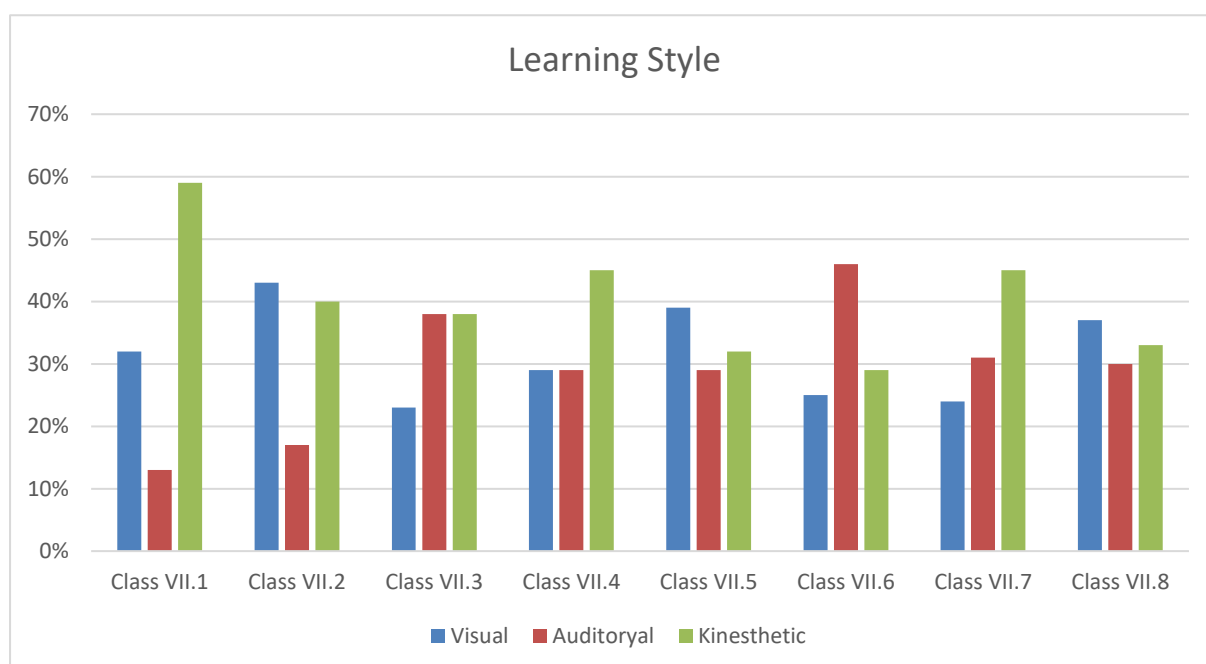
In class 8 there are 11 students with a visual learning style, 9 students with an

auditory learning style, and 10 students with a kinesthetic learning style. From these results, it is known that in class VII.8 the dominant learning style is the visual learning style with a percentage of 37%.

The results of mapping the number of students with each learning style were obtained from comparing scores between visual learning styles, auditory learning styles, and kinesthetic learning styles. A student's highest score on a learning style determines the student's learning style. More details can be seen in Table 3 and Figure 1 below.

**Table 3.** Results of mapping learning styles in differentiated learning stage D at SMP Negeri 16 Padang

NO	Learning Style Mapping	Percentage of Students							
		VII.1	VII.2	VII.3	VII.4	VII.5	VII.6	VII.7	VII.8
1.	Visual	32%	43%	23%	29%	39%	25%	24%	37%
2.	hearing	13%	17%	38%	29%	29%	46%	31%	30%
3.	Kinesthetic	59%	40%	38%	45%	32%	29%	45%	33%



**Figure 1.** Student Learning Style Mapping Diagram

Based on the information in Table 3 and Figure 1 above, it can be stated that the mapping of student learning styles in each class is different. The class with the highest visual learning style is class VII.2 with a percentage of 43%, class VII.5 with a percentage of 39%, and class VII.8 with a percentage of 37%. This percentage shows that students in classes VII.2, VII.5, and VII.8 have students who tend to learn with the help of pictures, graphs, plans, and videos. Visual learning style is a learning style that tends to use sight more so that when talking about something they tend to imagine it (Rafiska & Susanti, 2023). This is in line with the opinion (Uno, 2023) that someone with a visual learning style also has a sensitivity to color and has a sufficient understanding of art.

Furthermore, the class with the highest auditory learning style is only in one class, namely class VII.6 with a percentage of 46%. The percentage of auditory learning styles from all classes is VII.1 as much as 13%, VII.2 as much as 17%, VII.3 as much as 38%, VII.4 as much as 29%, VII.5 as much as 29%, VII.6 as much as 46%, VII.7 as much as 31% and, VII.8 as much as 30%. Auditory learning tendencies generally have characteristics such as learning by listening to other people, or learning while speaking, carrying out internal and external dialogue, a way of speaking that has a pattern or rhythm, and lastly, the focus is easily divided (Rafiska & Susanti, 2023). In line with this opinion (Andriani & Nugraheni, 2024) states that the characteristics of auditory style students often work in mumbling, do not like crowds, catch sounds and become readers aloud, can tell stories but have difficulty in writing sentences, are good at remembering what they hear from other people's opinions, describe a problem by conveying completely. This results in students having an auditory learning style that involves the ear senses in the learning process.

The highest kinesthetic learning style is found in class VII.1 with a percentage of 59%, class VII.4 with a

percentage of 45%, and class VII.7 with a percentage of 45%. The percentage of kinesthetic learning styles from all classes is VII.1 as much as 59%, VII.2 as much as 40%, VII.3 as much as 38%, VII.4 as much as 45%, VII.5 as much as 32%, VII.6 as much as 29%, VII.7 as much as 45% and, VII.8 as much as 33%. Students with a kinesthetic learning style usually like to move, touch the people they talk to, and do outdoor activities (Supit et al., 2023). This learning style is a learning style applied to students who utilize their physical bodies as learning tools optimally. Following this statement (Supit et al., 2023) explains that individuals who have a kinesthetic learning style easily grasp lessons when moving, touching, or taking action so that they gain direct practice or learning experience.

After knowing students' learning styles, it will be easier for educators to carry out the learning process so that the learning needs of students with each learning style can be met. Apart from that, cooperation between students and educators is needed to achieve ideal learning according to the demands of an independent curriculum with differentiated learning.

Differentiated learning according to (Marlina, 2020) is an adjustment to students' interests, learning preferences, and readiness in order to achieve increased learning outcomes. Differentiated learning is not individual learning but rather learning that accommodates students' learning strengths and needs with independent learning strategies. When teachers respond to students' learning needs, this means that teachers differentiate learning by adding, expanding, and adjusting time to obtain maximum learning results.

Differentiation in the learning process is a teacher's perspective in seeing students with different approaches and readiness to learn. Even though they are in the same level or class, students have different thought processes and perceptions of the content delivered, the type of content delivered, emotional stability, and even learning steps that may be different (Purba

et al., 2021).

Learning style mapping helps teachers adjust learning styles, models, strategies, and even media in the differentiated learning process so that it can be implemented optimally. However, to implement differentiated learning perfectly, teachers must pay attention to four (4) components of differentiated learning, namely: content, process, product, and learning environment (Bayumi et al., 2021). In addition, teachers are also required to be able to teach by paying attention to aspects needed by students, such as student learning profiles. The term learning profile refers to a student's preferred way of learning which can be influenced by a number of factors, including learning style, intelligence preferences, gender, and culture.

## CONCLUSION

Based on the results and discussion that have been presented, it can be concluded that to realize differentiated learning, educators need to know the learning style of each student so that student learning needs can be met. From the discussion of mapping the three learning styles above, it can be seen that after mapping learning styles in differentiated learning stage D at SMP Negeri 16 Padang, the kinesthetic learning style of students is more dominant with the highest percentage scores in four classes, namely classes VII.1, VII.4, VII.7, and VII.2. Meanwhile, the highest percentage score with a visual learning style is class VII.2, and the highest percentage score with an auditory learning style is class VII.6. Differentiated learning is learning that is expected to be able to see and meet students' learning needs. Therefore, research on differentiated learning can be continued by looking at other aspects besides learning styles but including students' learning needs in terms of learning readiness, learning interests, and learning profiles.

## REFERENCE

- Andriani, F., & Nugraheni, N. (2024). Analysis of Characteristics of Student Learning Styles in Differentiated Learning. *Journal of Basic Education Research (JRPD)*, 5(1), 33. <https://doi.org/10.30595/jrpd.v5i1.16067>
- Bayumi, Efriyeni, Fauzie, Elias, G., Hapizoh, & Ahmad, Z. (2021). *Application of the Differentiated Learning Model*. Deepublish.
- Ediyanto. (2022). Mapping learning needs based on students' learning styles. 2(1).
- Fitria Anisa, Ilham Falani, Riska Fitriani, & Viola Amelia Syafitri. (2023). Analysis of Visual, Auditory, and Kinesthetic-Based Student Learning Styles in Science Subjects at SMPN 7 Muaro Jambi. *Journal of Digital Learning and Distance Education*, 2(6). <https://doi.org/10.56778/jdlde.v2i6.167>
- Marlina. (2020). *Differentiated Learning Strategies in Inclusive Schools*. Main Afifa.
- Moleong, L. J. (2009). *qualitative research methodology*. PT Teen Rosdakarya.
- Ningrat, SP, Tegeh, IM, & Sumantri, M. (2018). Contribution of Learning Style and Learning Motivation to Indonesian Language Learning Outcomes. *Primary School Scientific Journal*, 2(3), 257. <https://doi.org/10.23887/jisd.v2i3.16140>
- Purba, M., Purnamasari, N., Soetantyo, S., Suwarma, IR, & Susanti, EI (2021). *Principles of Differentiated Learning Development (Differentiated Instruction)*. In the Center for Curriculum and Learning, Educational Standards, Curriculum and Assessment Agency, Ministry of Education, Culture, Research and Technology.
- Purnawanto, AT (2023). Differentiated Learning. *Scientific Journal of*

- Pedagogy, 2(1), 34–54.
- Rafiska, R., & Susanti, R. (2023). Analysis of Student Learning Style Profiles as Differentiated Learning Data in Class XIISMA Negeri 1 Palembang. *Research and Development Journal of Education*, 9(1), 474. <https://doi.org/10.30998/rdje.v9i1.17043>
- Simbolon, Z. (2022). Implementation of the Differentiation Method in Reflection on Islamic Religious Education Learning at SMPN 1 Tantom Angkola. *Journal of Islamic Religious Teacher Professional Education*, 2(3), 161–168.
- Sudjana, N. and I. (2010). *Educational Research and Assessment*. Sinar Baru Algensindo.
- Supit, D., Melianti, M., Lasut, EMM, & Tumbel, NJ (2023). Visual, Auditory, Kinesthetic Learning Styles on Student Learning Outcomes. *Journal on Education*, 5(3), 6994–7003. <https://doi.org/10.31004/joe.v5i3.1487>
- Uno, HB (2023). *New Orientations in the Psychology of Learning*. PT Bumi Aksara.
- Zuana, MMM, Rumfot, S., Aziz, F., Handayani, ES, & Lestari, C. (2023). The Influence of Learning Styles (Visual, Kinesthetic and Auditory) on the Independence of Elementary Students' Learning. *Journal on Education*, 5(3), 7952–7957. <https://doi.org/10.31004/joe.v5i3.1585>