

Analysis of Learning Styles of Students in Class XI Science 1 and Science 2 at SMAN 3 North Luwu

Jesi Jecsen Pongkendek^{a*}, Dewi Satria Ahmar^b

^aFaculty Teacher Training and Education, Universitas Musamu, Jalan Kamizaun Mopah Lama, Merauke 99611, Indonesia, pongkendek@unmus.ac.id

^bUniversitas Tadulako, Jalan Soekarno Hatta, Tondo, Kota Palu 94148, Indonesia, dewisatriaahmar@gmail.com

Abstract

The study was a descriptive study with the aim of knowing the description of the learning styles of students of Class XI Science 1 and Science 2 of SMAN 3 North Luwu. Description of learning styles that will be obtained in the form of visual style, auditory, and kinesthetic. The subjects of this study were students of class XI Science 1 totaling 29 people and XI Science 2 totaling 30 people. Retrieval of research data is done by using a student learning style questionnaire. Through descriptive data analysis process results obtained show that (a) the tendency of learning styles of class XI Science 1 students: visual amounted to 18 people (62.1%), auditory numbered (13.8%), and kinesthetic amounted to 7 people (24.1 %); (b) the tendency of students' learning styles in class XI Science 2: visuals are 15 people (50%), auditory is 9 people (30%), and kinesthetic is 6 people (20%). Through this research, it can be seen that the learning styles of students are different, some tend to be visual, auditory, or kinesthetic. Although it appears that the tendency of learning styles of students in Class XI Science 1 and Science 2 is a visual style. Thus, the teacher can determine the right learning design to be implemented in the classroom.

© 2020 Author(s). All rights reserved.

Keywords: Analysis; Learning Style

1. Introduction

Education is a system that includes input, process, and output. Inputs are students who will be involved in the learning process, processes are learning and teaching activities, and outputs are the results obtained after participating in the education process [1], [2]. In the process of education, students will learn about new knowledge that will be processed into social skills and self-development [3]. Through education that is pursued, students can maximize every potential possessed by harmonizing communication between teachers and students [4]. The learning process that goes well can realize the achievement of learning goals to the maximum [5]. Schools as educational institutions must be able to design and implement good learning strategies to be able to create quality Human Resources [6].

* Corresponding author.

E-mail address: pongkendek@unmus.ac.id (Jesi Jecsen Pongkendek)

The teacher has the task of planning and implementing learning activities that can make students able to learn well and full of enthusiasm. Student learning success is strongly influenced by the creativity of teachers in teaching [7]. The selection of appropriate learning strategies by the teacher, so that students can fully engage in learning and explore and explore their abilities [8]. Involvement of students in learning is very important to be able to motivate them in learning [9]. With the active involvement of students in learning will make students' learning behaviors productive, effective and efficient. In addition, in improving the quality of learning implementation, teachers must be able to apply effective learning models so that they help students in learning and improve their abilities [10].

Every human being is born with a variety of abilities and brain characteristics that differ in both the ability to absorb, process and convey information. One of the characteristics possessed by students in absorbing, processing and conveying learning information is learning style. Learning style is a very important modality that students have in learning. Learning style is one of the factors that has a great influence in the achievement of students' learning outcomes [11]. The key to the success of students in learning is by determining the right learning style [12]

Learning style is a tendency that is preferred by students in learning so that it can help in understanding learning material [13]. Learning styles of students come from personality, psychology, cognitive structure, social background, educational experience and culture. Learning styles of students need to be analyzed first before starting the learning process in an educational institution that is pursued [14]. Student learning styles consist of visual, auditory, and kinesthetic [14]. Visual learning style is a learning style that prioritizes vision by looking at the hills in a concrete way, auditory learning style is a learning style that prioritizes hearing in order to understand and remember, while the kinesthetic learning style is a learning style that prioritizes touch or action so as to understand learning [15]. These three learning styles can be owned by students, but there are those that will tend to be liked by students, so that they become learning styles of the students.

Observations that have been made by researchers in schools show that there are some students who are slow in understanding learning, they are difficult to understand and remember the material that has been taught. Some students are not active in learning, even the tasks that are done are not good. Some students do not focus on learning just playing when learning. Teachers in teaching tend to only use the lecture method, so that it will only be conveyed well to students with auditory learning styles, while students with other learning styles will find it difficult to understand learning.

The teacher must be able to know the student's learning style in advance, through an initial analysis of the students before the learning is done. By knowing students' learning styles, teachers can design learning that can represent each student's learning style. If the learning that is carried out can represent each learning style, of course, it can maximize the learning outcomes of students.

Based on the description above, the writer in this study analyzed the learning styles of students in class XI Science 1 and Science 2 of SMAN 3 North Luwu

2. Methods

The research conducted is descriptive research that can get a picture of the learning styles possessed by students. Students of class XI Science 1 totaling 29 people and class XI Science 2 of 30 people in SMAN 3 North Luwu are the subjects of this study. The research data obtained in this study in the form of student learning style data through the provision of learning style questionnaires. Student learning style questionnaire is divided into 3 categories of questions as in table 1 as follows:

Table 1. Learning style questionnaire

Number	Category	Number of question
1	Visual	12
2	Auditory	12
3	Kinesthetic	12

The research data obtained were analyzed descriptively by displaying the tendency of each student's learning style in the form of a percentage.

3. Results and Discussion

Learning style is a tendency favored by students to learn so as to maximize understanding of learning material. In designing learning, teachers must look at the learning styles of students, so that the learning process can run well, even student learning outcomes can be maximized.

This research was conducted to look at the learning styles of students of SMAN 3 North Luwu Class XI Science 1, amounting to 29 people and Science 2 which amounted to 30 people. The research data was obtained through a student learning style questionnaire consisting of 3 aspects namely visual, auditory and kinesthetic. Descriptive data analysis results obtained by students learning style data as follows :

Table 2. Analysis of the determination of learning styles of students in class XI Science 1

Number	Learning Style	Frekuensi	Percentage
1	Visual	18	62,1%
2	Auditory	4	13,8%
3	Kinesthetic	7	24,1%
Total		29	100%

Based on table 2 it appears that students have different learning styles. The learning styles of the students of class XI Science 1 are visual learning styles totaling 18 people with a percentage of 62,1%, auditory learning styles totaling 4 people with a percentage of 13,8%, and kinesthetic learning styles of 7 people with a percentage of 24,1%. Through these data it appears that the dominant students of class XI IPA 1 have a visual learning style with a percentage of 62,1 %

Table 3. Analysis of the determination of learning styles of students in class XI Science 2

Number	Learning Style	Frekuensi	Percentage
1	Visual	15	50%
2	Auditory	9	30%
3	Kinesthetic	6	20%
Total		30	100%

Based on table 3, the learning styles of students in class XI Science 2 are visual learning styles totaling 15 people with a percentage of 50%, auditory learning styles totaling 9 people with a percentage of 30%, and kinesthetic learning styles 6 people with a percentage of 20%. Through these data it appears that the dominant class XI Science 2 students have a visual learning style with a percentage of 50%

Table 4. Recapitulation of the learning styles of students in class XI Science 1 and Science 2

Number	Learning Style	Frekuensi	Percentage
1	Visual	33	56%
2	Auditory	13	22%
3	Kinesthetic	13	22%
Total		59	100%

Based on table 4, students who have visual learning styles are 33 people with a percentage of 56%, auditory learning styles are 13 people with a percentage of 22%, and kinesthetic learning styles are 13 people with a percentage of 22%. Through these data it appears that dominant students have a visual learning style with a percentage of 56%.

The description of students' learning styles obtained from this study, can be a reference for teachers in designing learning to be carried out so that learning outcomes obtained by students can be maximized. Students in a classroom have different learning styles so the teacher's learning design must represent the learning styles of students. Although, teachers must prioritize visual learning styles which are the most dominant learning styles possessed by students.

4. Conclusion

Through a descriptive data analysis process, the results show that (a) the tendency of learning styles of class XI students of Natural Sciences 1: visuals are 18 people (62.1%), auditory numbers (13.8%), and kinesthetic are 7 people

(24.1 %); (b) the tendency of students' learning styles in class XI IPA 2: visuals are 15 people (50%), auditory is 9 people (30%), and kinesthetic is 6 people (20%)

Acknowledgements

Thank you, the writer say to SMAN 3 North Luwu for giving the opportunity for the writer to carry out this research.

References

- [1] F. Ahmad and N. I. Sari, "Improvement of Biology Learning Results Through the Application of Problem-Based Instruction Approach Oriented Think Pair Share Learning Model," *J. Appl. Sci. Eng. Technol. Educ.*, vol. 1, no. 1, Jun. 2019.
- [2] A. A. Win, "The Effectiveness of Using Multiple Intelligences Learning Models on Biology Learning Outcomes of Class VII Students in Madani Junior High School of Makassar," *J. Appl. Sci. Eng. Technol. Educ.*, vol. 1, no. 2, Oct. 2019.
- [3] A. A. Rahma and H. Arista, "Pengaruh Model Pembelajaran Resicrocal Teaching Berbantuan LKS terhadap Prestasi Belajar Siswa," *Musamus J. Sci. Educ.*, vol. 1, no. 2, pp. 53–59, 2019.
- [4] Patimah and F. Abdullah, "Pengaruh Penerapan Gaya Belajar Terhadap Kemampuan Membaca Intensif pada Pelajaran Bahasa Indonesia Siswa SD Negeri Sunyaragi 1 Kota Cirebon," *Al Ibtida J. Pendidik. Guru MI*, vol. 5, no. 1, p. 133, 2018.
- [5] A. Ghofur, D. Nafisah, and N. Eryadini, "Gaya Belajar dan Implikasinya Terhadap Kemampuan Berfikir Kritis Mahasiswa," *J. An-Nafs Kaji. Penelit. Psikol.*, vol. 1, no. 2, pp. 166–184, 2016.
- [6] F. Anisa and E. Yuliyanto, "Analisis Faktor yang Mempengaruhi Pembelajaran Kimia di SMA Teuku Umar Semarang," in *Jurnal prosiding seminar nasional pendidikan, sains, dan teknologi*, 2017, pp. 476–482.
- [7] E. Ristiyani and E. S. Bahriah, "Analisis Kesulitan Belajar Kimia Siswa di SMAN X Kota Tangerang Selatan," vol. 2, no. 1, pp. 18–29, 2016.
- [8] J. J. Pongkendek, J. Parlindungan, and N. Sumanik, "The Development of Direct Learning Strategies in Topic Solubility and Solubility Product," in *ICSS*, 2019, vol. 383, pp. 129–133.
- [9] J. J. Pongkendek, D. N. Marpaung, and L. F. Siregar, "Analisis Motivasi Belajar Siswa Dengan Penerapan Model Pembelajaran Kooperatif Tipe Team Games Tournament," *Musamus J. Sci. Educ.*, vol. 2, no. 1, pp. 31–38, 2019.
- [10] I. Inayanti, T. Subroto, and K. I. Supardi, "Pembelajaran Visualisasi, Auditori, Kinestetik Menggunakan Media Swishmax Materi Larutan Elektrolit Dan Non-Elektrolit," *Chem. Educ.*, vol. 1, no. 2, pp. 35–41, 2012.
- [11] N. W. Juliani, I. N. Murda, and I. W. Widiyana, "Analisis Gaya Belajar Siswa dalam Pembelajaran Bahasa Indonesia Pada Siswa Kelas V SD Gugus VI Kecamatan Abang Kabupaten Karangasem Tahun Pelajaran 2015/2016," *e-Journal PGSD Univ. Pendidikan Ganesha*, vol. 4, no. 1, pp. 1–12, 2016.
- [12] D. Sulistiana, "Analisis Gaya Belajar Mahasiswa dan Hubungannya dengan Hasil Belajar Kimia Dasar Mahasiswa Program Studi Ilmu Ternak Fakultas Peternakan Universitas Islam Balitar Semester Ganjil Tahun Akademik 2016 - 2017," *Konstruktivisme*, vol. 10, no. 1, pp. 84–97, 2018.
- [13] G. A. Jatikusumo, T. Mayangsari, and E. Kurniadi, "Analisis Gaya Belajar Siswa Sekolah Menengah Pertama Negeri 5 Kota Madiun," in *Seminar Nasional Pendidikan Fisika III 2017*, 2017, no. 2008, pp. 213–217.
- [14] S. Wassahua, "Analisis Gaya Belajar Siswa Terhadap Hasil Belajar Matematika Pada Materi Himpunan Siswa Kelas VII SMP Negeri Karang Jaya Kecamatan Namlea Kabupaten Buru," *J. Mat. dan Pembelajarannya*, vol. 2, no. 1, pp. 84–104, 2016.
- [15] A. Kurniati and A. W. Sari, "Analisis Gaya Belajar Siswa Pada Mata Pelajaran Bahasa Indonesia Kelas V," *J. Pendidik. Dasar Perkhasa*, vol. 5, no. April, pp. 1–19, 2019.