

## LEARNING STYLE OF FIRST-YEAR BIOLOGY COLLEGE STUDENTS IN STATE UNIVERSITY OF PADANG

*Relsas Yogica, Ristiono*

Jurusan Biologi, Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Negeri Padang, Indonesia  
relsasyogica.1103992@gmail.com

### ABSTRACT

At the beginning of the learning process in college, one of the things that must be understood by a lecturers is identifying student's learning styles. Basic knowledge is needed about condition of the student in order to achieve instructional goals. By knowing the learning styles of students, lecturers can design techniques and methods to make an effective lecture time, to open the opportunity to make learning productive more, as well as to design appropriate approach for each activity. For students, this research will be useful to know whether learning method that they use is accordance with their learning styles, also to open some opportunities to change their learning habits, it can also be a reference for what types of careers corresponding roughly to live. By understanding the importance of basic knowledge about the learning styles, researcher have described the learning styles of freshmen year in Department of Biology, Faculty of Mathematics and Natural Sciences, State University of Padang. Of the 177 students who became the object of research, note 96 (54.23%) of them are visual learners. 58 (32.76%) of them are students who have audio style. The rest numbering 23 people (12.99%) have a kinesthetic learning style. These results provide information to faculty and students to use variety methods and media during the lecture time.

*Index Terms*— Learning style, visual, auditory, kinesthetic

### 1. INTRODUCTION

Learn at the college level can not be separated from active participation of students and lecturers who foster related subjects. Both aspects are keys to create a quality atmosphere of courses. The expected outcome of this process is the graduate can make a positive contribution to the environment and their society, since the main objective in the learning processes are to grow student's dexterity, forming attitudes and their actions<sup>[1]</sup>.

The lofty hope very influential to the process that occurs before. For example, acourse in the classroom, students who comes and sits only in the class without attempt to participate in class activities, lecturers who use the monotonous technique, of course, this condition will hampering learning objectives to be achieved by students. The success of an educational process in every level of education depends on the process experienced by participants of the students<sup>[2]</sup>. That successful point can be measured by attitude and behavior of student's daily and also must be permanently.

Based on description in the previous explanation, lecturers have an important role to create graduates embodiment useful for society, therefore optimally teachers should strive with improve continuously quality of their self in order to remainable to innovate techniques or methods of learning. Based on the theory of mental discipline Plato-Aristoteles, in the implementation of teaching, lecturers must be an actor to train their students<sup>[3]</sup>. The ability of lecturer to

choose and use a variety of techniques or methods in learning are soft skills integrity within an educator<sup>[4]</sup>.

When lecturers makes an update and always change their style of teaching in the classroom will directly offset the learning style unit or group of students. By offsetting the learning style unit or a group of students, will facilitate that student to absorb the course materials provided by the lecturer. Because of when we understand one's learning style, learning will be easier and more enjoyable. Learning styles of the students do not relate with the attendance of lecturers in classroom<sup>[5]</sup>.

When learning in the classroom is started, one of the first steps that must be understood by lecturers is identify students' learning styles, as the modalities of visual, auditory, or kinesthetic (VAK)<sup>[6]</sup>. Despite the development of many studies that reveal a new type of learning modality and adapt to the needs, but still it is needed basic knowledge about the condition of students in order to achieve the purpose of the instructional learning process<sup>[7]</sup>. By knowing the learning styles of students, lecturers can design many effective techniques or methods course<sup>[8]</sup>. It also open the opportunity to make learning more productive<sup>[9]</sup>, and designing an appropriate approach for each activity in the classroom<sup>[10]</sup>. For students, this research will be useful to know whether learning method is used for this in accordance with its learning styles and opportunities to change the study habits<sup>[11]</sup>, it can also be a reference for what types of careers that roughly correspond to do<sup>[12]</sup>.

By understanding the importance of prior knowledge about type of student's learning styles, researchers have described the learning styles of freshmen year in 2015 Department of Biology, Faculty of Mathematics and Natural Sciences, State University of Padang.

**2. METHODOLOGY**

This research is a descriptive study that conducted in September 2015. The object of research is all new students of the Department Biology, Faculty of Mathematics and Natural Sciences, State University of Padang.

The study was conducted by questionnaire to the research's object, and object were asked to fill out the questionnaire. Data collection assisted by two second year students from the Department of Biology, Sarah and Enjelvi Permana. The questionnaire was adapted from the education planner, an online service provider to test the students' learning modalities. Once the data is collected, the study continued to analyze the result and make the tabulation of data. Data are grouped into three groups, namely the data of visual, audio and kinesthetic.

**3. RESULT**

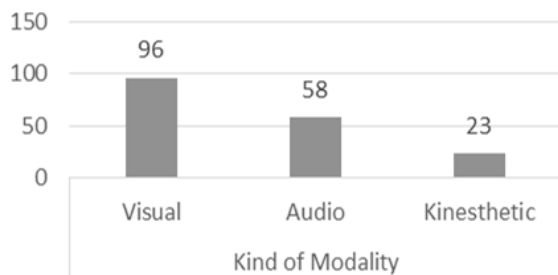


Figure 1. Distribution Data of Biology First Year Students

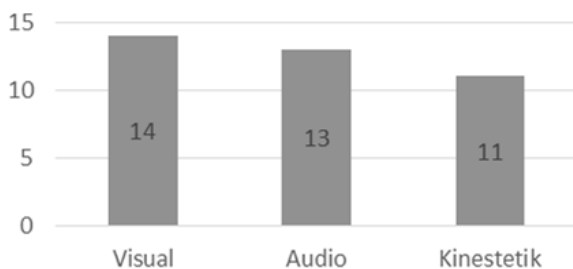


Figure 2. Distribution Dataof Biology EducationClass A

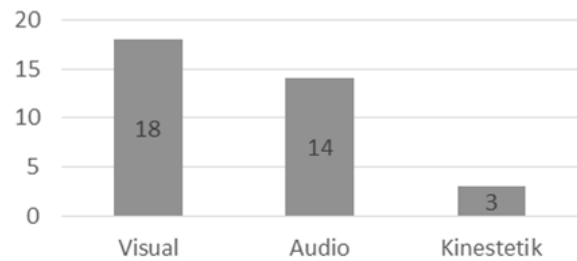


Figure 3. Distribution Dataof Biology EducationClass B

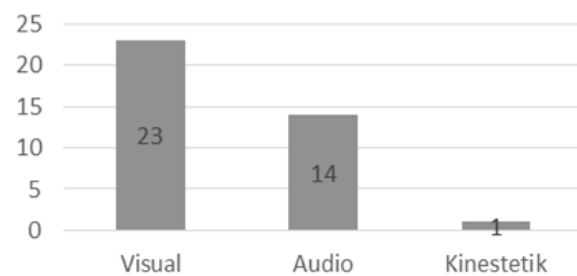


Figure 4. Distribution Dataof Biology Education Class C

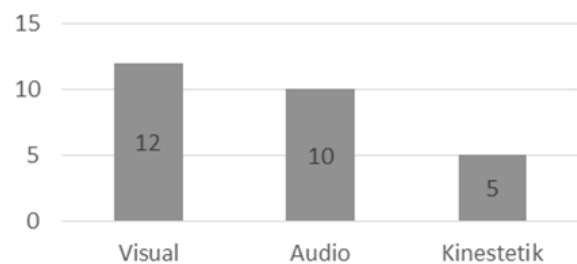


Figure 5. Distribution Data of BiologyClass A

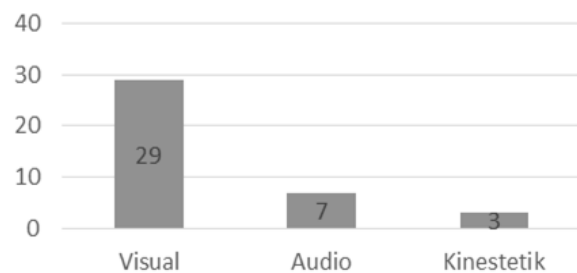


Figure 6. Distribution Dataof Biology Class B

Based on Figure 1. we can look that out of 177 students who became the object of research, note 96 (54.23%) of them are students who have a visual's learning style. 58 (32.76%) of them are students who have learning style type audio. The rest numbering 23 people (12.99%) have a kinesthetic's learning style.

Students who have a visual's learning style is 96 people total, or approximately 54.23% from all. That is consist of 14 people (14.58%) students from biology education class A (Figure 2), 18 (18.75%) students from biology education class B (Figure 3), 23 (23.95%) students from biology education class C (Figure 4), 12 (12.5%) class A biology student (Figure 5) and 29 (30.2%) students from biology

class B (Figure 6). The finding of this study provides information to the reader that the dominant learning styles in freshmen students from Biology Department is a visual learning style. The largest percentage of students with visual learning style is a student of biology class B about 30.2% and the lowest percentage is a student in biology class A, that is 12.5% about.

Students who have visual's learning style emphasize learning activities by using the senses of sight (eyes). The use of images and colors are helping students to understand the course materials. Students with this learning style are asked to sit on the front row seat, because lecturers can observe more closely, as well as image material that is being given.

Students who have a learning style type audio is totaled 58 people, consist of 13 people (22.41%) students of biology education class A (Figure 2), 14 (24.13%) students of biology education class B (Figure 3), 14 people (24.13%) students of biology education class C (Figure 4), 10 people (17.24%) class A from biology student (Figure 5) and the last one is 7 people (12.06%) students of biology class B (Figure 6).

In addition to visual's learning style, there are students who have a learning style audio also. Students who have this type of learning style will get their focus more on sound based learning activities. Activities that use auditory stimulus as a catcher. Intonation of the lecturer when explaining the material help them to improve their understanding. It is recommended that students record the lecturer's sound when they heard explanation from the lecture material, it is very useful because they can repeat again when they back home. The sitting position does not affect them, but students with the type of audio learning is strongly influenced by level of noise in the surrounding environment of study. The largest percentage of students with audio's learning style are students from biology education class B and class C, there is 24.13%. The lowest percentage is in students from biology class B, that is 12.06%.

The third learning style which is owned by the students according to the results of this research are kinesthetic's learning style. The number of students who have learning style kinesthetic types are 23 people, 11 (47.82%) from the biology education class A (Figure 2), 3 (13.04%) from biology education class B (Figure 3), 1 person (4.34%) from biology education class C (Figure 4), 5 (21.73%) from study program biology class A (Figure 5) and 3 (13.04%) of the study program biology class B (Figure 6).

This learning style is different from others type. Students who have this learning style will concentrate on learning if learning is designed for physical movement. Kinesthetic's learning style focused on the movement of limbs. They read and talk with the familiar moving the mouth or other body parts. Instructional design is fitting to the students of this type is the method the lab or demonstration. The

largest percentage of students with kinesthetic's learning style is students from biology education class A, that is 47.82% and the lowest percentage is in students from biology education class C, that is 4.34%.

#### 4. CONCLUSION

This study gives information to all students in first year and also to Biology Department staff that dominate learning styles in their students are visual's learning style. In addition, also found other learning styles namely audio and kinesthetic. These results also provide information to choose appropriate methods, medias and varied during the course. Acknowledgements researchers to all the parties involved in this study, especially Sarah and Enjelvi Permana.

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