

Investigation of Learning Science: Fun in Learning, Interest in Learning Time, Social Implications, Scientific Normality for Science Learning

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Abstract Attitude is the tendency of one's behavior toward an object both positive and negative. Finding out about students in the world of education who can help in the learning process, this study aims to describe the attitudes of students in Muaro Jambi Junior High School 6 and Muaro Jambi Junior High School 5 in terms of 4 indicators, namely enjoyment in learning science, interest in increasing science learning time, social implications of science and scientific normality. The research design used is a mixed method with the type of explanatory research. The sampling technique in this study used is total sampling with the number of research subjects as many as 921 students from Muaro Jambi Junior High School 6 and Muaro Jambi Junior High School 5 and with 609 students in Junior High School 6 and 312 students in Junior High School 5. The instrument used is a closed questionnaire on the Linkert scale. Analysis of the data used is descriptive statistics with explanations and elaborations of quantitative data and qualitative data findings. Based on the results obtained from SPSS 22, there was obtained between Muaro Jambi 6th Middle School and 5 Muaro Jambi Secondary Schools, which had a dominant attitude toward students in the Natural Sciences subjects in the Good category.

Keywords Attitude Science, Education, Enjoyment Attraction Study

1. Introduction

In the revolutionary period, 4.0 quality human resources were needed to help the development of the Indonesian nation. Advances in technology have

influenced students in their learning process and [30]. The quality of human resources can be improved through education. Education is an ongoing process that aims to increase the quality of human resources and education is a conscious and planned effort to create an atmosphere of learning and learning process so that students actively develop their potential [1] [29]. Education is needed to be able to change behavior and add knowledge that can help educate the nation's life. According to Ref [2], who says that education is a very important activity for all humans, it can change behavior and knowledge for the better. In achieving good quality education, there is a need for a learning process. Education is a way to create an atmosphere of learning that is able to help students develop their potential. [13] [12] Learning is the main key to be able to open the horizons of the world. The success of the learning process is influenced by the quality and the way of teaching of a teacher [3]. Learning can be done either independently or guided by the teacher. The guided learning process by the teacher is obtained from an educational institution. One educational institution that can help achieve its potential is junior high school [4]. One of the subjects studied at the junior high school is natural science. Natural Science is the learning process which is highly related to the environment and the regularity of the universe created by God the Almighty [5].

Science is one of the compulsory subjects at every level of schooling and the material needs to be well understood, but in reality, there are still students who are not happy and not even interested in learning science because this subject is very boring to them[6]. One of the main keys in learning science is the attitude of students. Scientific attitude is one of the important aspects of science. Because scientific attitudes can shape students' minds

critically, the importance of the scientific attitude that a student must have is to acquire knowledge in various fields [7]. Attitude is the first thing that is seen from students whether they like the lesson or not [8]. Attitude is one's tendency toward an object both positive and negative. Scientific attitude is the desire to know and understand, questioning all statements, search for data and their meaning, search for verification and consideration of consequences [9]. In learning Natural Sciences, students are expected to have a positive attitude to support a good learning process [10] because students who have a positive attitude will tend to have more desire in learning science. The growth of a positive attitude toward science can increase interest, motivation in science and work related to science [11].

To measure students' attitudes in science lessons, an indicator is needed. Attitude scientific indicators adapted from Ref [10], namely:

- 1) Pleasure in Learning Science
- 2) Interest increases the amount of time studied in Natural Sciences.
- 3) Social Implications of Natural Sciences
- 4) Scientist normality

In the first indicator that is fun in learning, science is one indicator that can be used to determine whether students have positive or negative attitudes in science lessons. Fun in learning is the expression of students' emotions intrinsically related to students' motivation to learn, along with learning and school performance in school [12]. Student's happy attitude toward science can be shown how students are open and enthusiastic about learning inside or outside the classroom [13]. Students who feel happy in learning science will have a more positive attitude than students who do not like science lessons. Students who are not happy with science lessons will tend to be passive and feel lazy during the learning process. [14] More importantly, they suggested that conscious learning is associated with a favorable attitude toward the lesson. However, it turns out that other factors that cause students feel happy or unhappy in science studies depend on the teacher. According to Ref [15], the teacher also plays an important role in attitudes during the learning process. If students have the same view as the teacher of natural science, students will have an interest in following and trying to understand the science material delivered by the teacher and vice versa. So it is said that teachers are the main factors of students' success in the learning process. Students' attitude toward science varies among students, depending on factors. First, factors are associated with the teacher, such as teaching methods, classroom management, and teachers' content knowledge and personality [16].

In the second indicator, there is an interest in increasing the amount of time for studying science. In this indicator, it can be seen that students who have a positive attitude will have an interest in increasing the time of science

learning. One of the students' attitudes that will trigger students' understanding and insight related to science concepts is the duration of students' learning time in the science learning process. Learning time refers to the specific time students set for themselves to learn to gain knowledge [17]. Natural science subjects which are classified into one of the difficult subjects require more time duration in order to better understand a concept in natural science subjects compared to other subjects. Students' interest in extending this learning time is closely related to the joy that students have in natural science subjects. With the fun of students in taking science lessons in class, it will encourage students to add learning time related to science [18]. Students who have an interest in increasing the learning time have a high curiosity in natural science subjects, they will tend to try to learn materials related to science in order to better understand science. So when they find a problem related to science, students will feel challenged to find a solution. Students who are trained to work on problems will be more proficient and faster in deciding the formula or concept used in the problem [19]. So students who have an interest in increasing learning time will have more different levels of understanding than other students.

The third indicator is the social implications of science. In this indicator, it can be seen how students respond to social conditions related to science. Students who have a positive attitude in science will apply in social life. The social implications of science are the effects or impacts of learning science in social life [20]. Students who have good social implications of science will have independence and cooperation in solving a problem. Social implications in science are the most important part that students must have in learning science because they can form an attitude of independence and cooperation in the learning process [21]. Students will be able to work together in groups so that they will help students understand a science concept.

The fourth indicator is the scientist's normality. In this indicator, it can be seen how students' attitudes are in responding to matters related to scientists. In developing science, scientists always start from their curiosity, followed by the formulation of hypotheses and testing hypotheses after going through scientific investigation [22]. Scientists can classify things related to observations grouping objects in an experiment. Classifying is the ability to identify similarities and differences in various observed objects. Classification activities carried out by students included grouping the same or opposite quantities [34]. There are still many diverse assumptions from students regarding a scientist. Students need to have a good normality of scientists in order to help in the learning process of Natural Sciences. The normality of scientists is very influential on the concept of learning science in schools. So that it can improve attitude [23]. Students need to make a scientist a role model because a

scientist has a high curiosity and is always trying to solve the problems he has. So students need to have a normality attitude of scientists in learning science.

The purpose of this study is to describe the attitudes toward science subjects in Muaro Jambi 6th and Muaro Jambi 5th Junior High Schools through the 4 indicators outlined above so as to improve students' attitudes toward Natural Sciences subjects. In this study, the question addressed is how the students' attitudes are viewed from the indicators of pleasure in learning science, interest in increasing the learning time of science, the social implications of science and the normality of scientists at Muaro Jambi 6th Middle School and Muaro Jambi 5th Middle School ?

The existence of this research helps teachers improve students' positive attitudes to science subjects and add insight to teachers in preparing methods, strategies, models or certain ways of teaching science subjects.

2. Materials and Methods

Based on the problem in terms of research objectives, the research design used by researchers is a mix method with explanatory type. Mix method is a combination of quantitative methods and qualitative methods or what is often referred to as the Mixed-Method approach, precisely explanatory mixed-method design [24].

The sampling technique used in this study is total sampling. This is because the researcher wants to identify all the attitudes of students at Muaro Jambi Junior High School 5 And Muaro Jambi Junior High School 6. The subjects of this study were 921 students from Junior High School 5 Muaro Jambi And Junior High School 6 Muaro Jambi. With 609 students in junior high school 6 and 312 students in junior high school 5

This research instrument uses a science attitude questionnaire that was adapted from the research ref [10] with a Cronbach alpha value of 0.929 and there are 42 valid statements. The switch used is a five-point Likert scale consisting of STS = strongly disagree, TS = disagree, N = neutral, S = agree, SS = strongly agree. Namely with Pleasure in natural science subjects as many as 7 statements with a range that is used is 7.0-12.6 categories

strongly disagree, 12.7-18.20 categories disagree, 18.21-23.80 categories enough, 23.81 -29,40 the category agrees and 29,41-35,00 the category strongly agrees. The interest in increasing the amount of time for studying natural sciences is as much as 6 statements with the range used is 6.00-10.80 categories of strongly disagree, 10.81-15.60 categories of disagree, 15.61-20.40 enough categories, 20.41- 25.20 categories of agree and 25.21-30.00 categories strongly agree. Social implications of 7 statements with the range used are 7.0-12.6 categories strongly disagree, 12.7-18.20 categories disagree, 18,21-23,80 categories are sufficient, 23,81-29,40 categories agree and 29,41-35,00 categories strongly agree, Normality scientists as many as 5 statements with a range that is used is 5.00-9.00 very categories disagree, 9.01-13.00 category disagree, 13.01-17.00 category enough, 17.01-21.00 category agree and 21.01-25.00 category strongly agree.

For the research procedures carried out, first is the preparation stage, formulating the problem and its variables. Then a literature review is conducted, looking for theories supporting the discussion of the problem under study in order to obtain an overview of the research to be carried out as well as the instruments needed. During the data collection stage, questionnaires were given to 608 students at Muaro Jambi 6th Middle School and 313 students at Muaro Jambi 5th Middle School. From the data, data analysis is then carried out, namely filtering the proper data and encoding the data.

Analysis of the data used in this study is descriptive statistics. An overview or presentation of large amounts of data that include mean, mode, median, maximum, minimum, and standard deviation is descriptive statistics [27]. Data used in descriptive statistics are mean, median and mode. Then proceed with the explanation and elaboration on quantitative data and qualitative data findings. Then after that, to strengthen the quantitative findings data, the results of the interview are used. Interviews were conducted on students and teachers at Muaro Jambi 6 and Muaro Jambi 5, with the number of students interviewed, namely 3 students at each grade level and all natural science teachers in each school. All data analysis techniques used are assisted with the IBM SPSS Statistics program.

Table 1. Statements and Indicators of Attitudes toward Natural Sciences

Variable	Indicator	Statement		Number of items
		(+)	(-)	
Attitudes toward science subjects	Fun in science lessons	4,17,29	11,24,36,42	7
	Interest increases the amount of time studied in science	5, 18, 30,	12, 25, 37	6
	Social implications on natural science subjects	1,14,27,39	7,20,32	7
	Normality of Scientists	8, 21, 33,	15,40	5

3. Results and Discussion

3.1. Results

The renewal of this research is the indicator used, namely the pleasure in learning science. The interest is to increase the amount of time spent on studying Natural Sciences, the social implications of Natural Sciences and the Normality of Scientists with 42 items. With these indicators, the researcher wants to see the attitudes of students at Junior High School 6 Muaro Jambi And Junior High School 6 Muaro Jambi. For results and discussion of the four indicators are as follows:

3.1.1. Fun in Learning Science

Based on data obtained through descriptive statistics, indicators of pleasure in learning science are used to examine how students' interests are in science learning. The results of data processing on the indicator of pleasure in learning Science at Junior High School 6 Muaro Jambi can be seen below :

Table 2. Indicators of Pleasure in learning science at Junior High School 6 Muaro jambi

Range	Attitude	Amount	%	Min	Max
7.00 – 12.00	Very bad	1	0,2	1,00	5,00
12.61-18.20	Not good	20	3,3		
18.21-23.80	Pretty good	172	28,3		
23.81-29.40	Well	347	57,1		
29.41-35.00	Very good	68	11,0		
	amount	609	100	1,00	5,00

From Table 2 we can find out the level of students' enjoyment in learning science at Junior High School 6 Muaro Jambi, which can be seen from the responses of students categorized as Very Poor as much as 0.2% (1 of 609 students) then for the Not Good category as much as 3.3% (20 from 609 students) for the Fairly Good category as much as 28.3% (172 of 609 students) while for the Good category as much as 57.1% (347 of 609 students) and for the Very Good category as much as 11.0% (68 out of 609 students). With a minimum score on all statements of 1.00 and a maximum score of 5.00. Based on the results of the analysis of the data obtained, it shows that the attitude of students on the indicator of Pleasure in learning science in Junior High School 6 Muaro Jambi is dominant in the Good category.

The results of data processing on the indicator of pleasure in learning science at Junior High School 5 Muaro Jambi can be seen below:

Table 3. Indicators of Pleasure in learning science at Junior High School 5 Muaro jambi

Range	Attitude	Amount	%	Min	Max
7.00 – 12.00	Very bad	2	0.3	2,00	5,00
12.61-18.20	Not good	22	7,0		
18.21-23.80	Pretty good	93	29,7		
23.81-29.40	Well	167	53,7		
29.41-35.00	Very good	30	9,6		
	amount	312	100	1,00	5,00

From Table 3 we can find out the level of students' enjoyment in learning science at Junior High School 5 Muaro Jambi, which can be seen from the responses of students categorized as Very Poor as much as 0% (0 of 312 students) then for the category of Not Good as much as 7.0% (22 of 312 students) then for the Good Enough category as much as 29.7% (93 of 312 students) while for the Good category as much as 53.7% (167 of 312 students) and for the Very Good category as much as 9.6% (30 out of 312 students). With a minimum score on all statements of 2.00 and a maximum score of 5.00. Based on the results of the analysis of the data obtained, it shows that the attitude of students on the indicator of Pleasure in learning science in Junior High School 5 Muaro Jambi is dominant in the Good category.

3.1.2. Interest Increasing Science Learning Time

The indicator of interest in increasing science learning time is used to assess students' attitudes in increasing their science learning time beyond the time spent at school. The results of data processing on the indicator of Interest Increasing science learning time at 6 Muaro Jambi Junior High School can be seen below:

Table 4. Indicators of Interest in Increasing Natural Science Learning Time at Muaro Jambi Junior High School 6

Range	Attitude	Amount	%	Min	Max
6.00-10.80	Very bad	2	0.3	1,00	5,00
10.81-15.60	Not good	31	5.1		
15.61-20.40	Pretty good	203	33.3		
20.41-25.20	Well	282	46.3		
25.21-30.00	Very good	91	14.9		
	amount	609	100	1,00	5,00

From Table 4 we can find out the level of students' interest in increasing science at Junior High School 6 Muaro Jambi, which can be seen from the responses of students categorized as Very Poor by 0.3% (2 out of 609 students) then for the category of Not Good as much as 5.1% (31 from 609 students) for the Good Enough category as much as 33.3% (203 out of 609 students) while for the Good category as much as 46.3% (282 out of 609 students) and for the Very Good category as much as 14.9% (91 out of 609 students). With a minimum score on all statements of 1.00 and a maximum score of 5.00. Based on the results of the analysis of the data obtained, it shows that the attitude of students on the indicator of Interest increase the amount of science learning time at Junior High School 6 Muaro Jambi is dominant in the Good category.

The results of data processing on the indicator of interest in increasing the amount of time spent studying for Natural Sciences at Junior High School 5 Muaro Jambi can be seen below:

Table 5. Indicators of Interest Increasing Science Learning Time at Muaro Jambi 5 Public Middle School

Range	Attitude	Amount	%	Min	Max
6.00-10.80	Very bad	0	0	2,00	5,00
10.81-15.60	Not good	11	3.5		
15.61-20.40	Pretty good	111	35.6		
20.41-25.20	Well	148	47.4		
25.21-30.00	Very good	42	13.5		
	amount	312	100	2,00	5,00

From Table 5 we can find out the level of students' interest in increasing science learning at Junior High School 5 Muaro Jambi, which can be seen from the responses of students categorized as Very Poor at 0% (0 of 312 students) then for the category of Not Good at 3.5% (11 of 312 students) then in the Fairly Good category as much as 35.6% (111 of 312 students) while in the Good category as much as 47.4% (148 of 312 students) and for the Very Good category as much as 13.5% (42 out of 312 students) . With a minimum score on all statements of 2.00 and a maximum score of 5.00. Based on the results of the analysis of the data obtained, it shows that the attitude of students on the indicator of Interest to increase the time of learning science in Junior High School 5 Muaro Jambi is dominant in the Good category.

3.1.3. Social Implications of Natural Sciences

Indicators The social implications of science are used to examine how students' attitudes in science subjects are beneficial in the social environment. The results of data processing on the indicators of the social implications of Natural Sciences at Junior High School 6 Muaro Jambi can be seen below:

Table 6. Indicators of the Social Implications of Natural Sciences in Junior High School 6 Muaro Jambi

Range	Attitude	Amount	%	Min	Max
5.00 - 9.00	Very bad	0	0	2,00	5,00
9.01 – 13.00	Not good	34	5.6		
13.01 – 17.00	Pretty good	198	32.5		
17.01 – 21.00	Well	314	51.5		
21.01 – 25.00	Very good	63	10.3		
	amount	609	100	2,00	5,00

From Table 6 we can find out the level of social implications of students in Natural Sciences at Junior High School 6 Muaro Jambi, which can be seen from the responses of students categorized as Very Poor at 0.0% (0 out of 609 students) then for the Not Good category at 5.6% (34 from 609 students) for the Fair Good category as much as 32.5% (198 of 609 students) while for the Good category as much as 51.5% (314 of 609 students) and for the Very Good category as much as 10.33% (63 out of 609 students) . With a minimum score on all statements of 2.00 and a maximum score of 5.00. Based on the results of the analysis of the data obtained, it shows that the attitude of students on the indicators of the social implications of Natural Sciences in Junior High School 6 Muaro Jambi is dominant in the Good category.

The results of data processing on the indicators of the social implications of Natural Sciences at Junior High School 5 Muaro Jambi can be seen below:

Table 7. Indicators of the social implications of science at Junior High School 5 Muaro Jambi

Range	Attitude	Amount	%	Min	Max
7.00 – 12.00	Very bad	1	0.3	1,00	5,00
12.61-18.20	Not good	19	6.1		
18.21-23.80	Pretty good	103	33.0		
23.81-29.40	Well	179	57.4		
29.41-35.00	Very good	10	3.2		
	amount	312	100	2,00	5,00

From Table 7 we can find out the level of social implications of students in multiplying in Natural Sciences at Junior High School 5 Muaro Jambi, which can be seen from the responses of students categorized as Very Poor as much as 0.3% (1 of 312 students) then for the Not Good category of 6.1% (19 out of 312 students) then for the category of Good Enough 33.0% (103 out of 312 students) while for the Good category were 57.4% (179 of 312 students) and for the Very Good category were 3.2% (10 of 312 students). With a minimum score on all statements of 1.00 and a maximum score of 5.00. Based on the results of the analysis of the data obtained, it shows that the attitude of students on the indicators of the

Social Implication of Natural Sciences in Junior High School 5 Muaro Jambi is dominant in the Good category.

3.1.4. Normality of Scientists

Indicators The social implications of science are used to examine how students' attitudes in science subjects solve problems related to scientific progress. The results of data processing on the Scientific Normality indicator at Junior High School 6 Muaro Jambi can be seen below:

Table 8. Indicators of Scientist Normality at Junior High School6 Muaro Jambi

Range	Attitude	Amount	%	Min	Max
5.00 - 9.00	Very bad	2	0.3	1,00	5,00
9.01 – 13.00	Not good	64	10.5		
13.01 – 17.00	Pretty good	246	40.4		
17.01 – 21.00	Well	247	40.6		
21.01 – 25.00	Very good	50	8.2		
	amount	609	100	1,00	5,00

From Table 6 we can find out the level of student Scientist's officiality in Natural Sciences at Junior High School 6 Muaro Jambi, which can be seen from the responses of students categorized as Very Poor as much as 0.3% (2 out of 609 students) then for the Not Good category as much as 10.5% (64 from 609 students) for the Good Enough category as much as 40.4% (246 out of 609 students) while for the Good category as much as 40.6% (247 of 609 students) and for the Very Good category as much as 8.2% (50 out of 609 students). With a minimum score on all statements of 1.00 and a maximum score of 5.00. Based on the results of the analysis of the data obtained, it shows that the attitude of students on the indicator of Scientific Normality in Junior High School 6 Muaro Jambi is dominant in the Good category.

The results of data processing on the indicator Normality of scientists at Junior High School5 Muaro Jambi can be seen below:

Table 9. Indicators of Scientist Normality at Junior High School 5 Muaro Jambi

Range	Attitude	Amount	%	Min	Max
5.00 - 9.00	Very bad	3	1.0	1,00	5,00
9.01 – 13.00	Not good	23	7.4		
13.01 – 17.00	Pretty good	142	45.5		
17.01 – 21.00	Well	121	38.8		
21.01 – 25.00	Very good	23	7.4		
	amount	312	100	2,00	5,00

From Table 9 we can find out the level of social implications of students in multiplying in Natural Sciences At Junior High School5 Muaro Jambi which can

be seen from the responses of students categorized as Very Poor as much as 1.0% (3 of 312 students) then for the category of Not Good as much as 7.4% (23 out of 312 students) then for the Fair Good category 45.5% (142 out of 312 students) while for the Good category 38.8% (121 of 312 students) and for the Very Good category 7.4% (23 out of 312 students). With a minimum score on all statements of 1.00 and a maximum score of 5.00. Based on the results of the analysis of the data obtained, it shows that the attitude of students on the indicator of normality of scientists at Junior High School5 Muaro Jambi is dominant in the Good category.

3.2. Discussion

The purpose of this study is to find out the description of students' attitudes in natural science subjects at Junior High School6 Muaro Jambi and Junior High School5 Muaro Jambi using four indicators, namely enjoyment in learning science, interest in increasing science learning time, social implications of science and normality of scientists, after the results of data analysis then it can be seen a description of student attitudes.

From the results of the elaboration of Tables 2 and 3 on the indicator of pleasure in learning science, it shows that the attitude of students in science subjects in Junior High School 6 Muaro Jambi and Junior High School 5 Muaro Jambi both show a dominant attitude. This is supported by the results of the science and student teacher interviews conducted at Junior High School 6 Muaro Jambi and Junior High School 5 Muaro Jambi, which is when asked questions about whether science lessons are fun or not. Dominant students answered natural science subjects quite fun because science subjects are widely applied in daily life. According to [25], when children get attached to the activities of the lessons they are experiencing, he will feel happy. In addition, answers from the results of teacher interviews also dominantly answered that students at Junior High School6 Muaro Jambi And Junior High School5 Muaro Jambi liked the science subjects more than they disliked. Then when asked the question “do you like to visit the science laboratory?” Dominant students said that visiting the science laboratory was fun because in the laboratory they could directly do practical work related to science. Students are able to interact directly with practicum tools in the laboratory. With research-based practicum activities, students can learn more meaningfully, using science process skills by customizing themselves to building information independently that they get from science lessons [33], while the average science teacher also answered that visiting the laboratory can help students to better understand material related to science because students not only understand the theory but directly do the practicum so as to cause higher curiosity compared to normal learning. However, when viewed from the percentage of scores obtained from Muaro Jambi

6th Middle School and Muaro Jambi 5th Middle School, it appears that students at Muaro Jambi 6th Middle School tend to be more happy with natural science subjects.

From the results of the elaboration of Tables 4 and 5 on indicators of interest in increasing science learning time, it shows that the attitude of students in natural science subjects in Indicators of the Social Implications of Natural Sciences in Junior High School 6 Muaro Jambi and Indicators of the Social Implications of Natural Sciences in Junior High School 6 Muaro Jambi 5 Muaro Jambi both show a dominant attitude. This is supported by the results of student and teacher science interviews conducted at Junior High School 6 Muaro Jambi and Junior High School 5 Muaro Jambi, namely when asked questions about whether you often find out things related to science outside of assignments given at school or not. The dominant students who liked the science subjects said that they often find out things related to science for themselves, such as watching programs on television related to science experiments or reading books about life related to science, while the average teacher answered that there are some students who are interested in increasing the amount of time for natural science learning, such as frequently asking questions directly to the teacher related to science material taught outside of class meetings, showing that students have a desire to find out more related to science lessons even when not in class meetings. With the fun of students in taking science lessons in class, it will encourage students to add learning time related to science [4]. Then when asked the question about whether you often do your own experiments outside of science learning in the classroom or not, some students answered that they often did their own experiments at home related to the material being studied at school to prove whether the theory was right or wrong. As proof of the growing form of leaves that are placed right under the light with no light, some students conduct experiments independently at home. However, when viewed from the percent value obtained from Muaro Jambi Junior High School 6 and Muaro Jambi Junior High School 5, it appears that students at Muaro Jambi Junior High School 5 tend to be more interested in extending the science learning time.

From the results of the elaboration of Tables 6 and 7 on indicators of the social implications of Natural Sciences, it shows that the attitudes of students in natural science subjects in Junior High School 6 Muaro Jambi and Junior High School 5 Muaro Jambi both show a dominant attitude. This is supported by the results of the interviews of students and science teachers conducted at Junior High School 6 Muaro Jambi and Junior High School 5 Muaro Jambi, namely when asked the question about whether you agree if the government spends a lot of money for educational needs in the field of science, dominant students answered agree especially to meet the shortcomings of existing tools in the science laboratory. Because if the practicum tools in the laboratory are more

complete, it will increasingly help students to be able to experiment and understand the science material. Through science, what can be obtained is the ability of students to conduct experiments, observations, and theories that provide an explanation of the symptoms that exist in everyday life [26]. Then the answers given by teachers related to these questions on average answered strongly agree because there are still many science laboratories that lack practical tools so that not all students can experiment individually. Then when asked the question about whether science can make life better or not, dominant students answered that by studying science, students are able to know the natural sciences related to life so students are better able to understand the meaning of life and increase knowledge related to small things in life related to science. Then the average teacher also answers that learning science will greatly help students to live better because there are many things in science that is related to the body, nature, environment and even almost everything is closely related to science. However, when viewed from the percent value obtained from Muaro Jambi 6th Middle School and Muaro Jambi 5th Middle School, it appears that students at Muaro Jambi 5th Middle School tend to have higher social implications.

From the results of the elaboration of Tables 8 and 7 on indicators of scientist normality, it shows that students' attitudes in natural science subjects in Junior High School 6 Muaro Jambi and Junior High School 5 Muaro Jambi both show a dominant attitude. This is supported by the results of students and science teacher interviews conducted at SMP 6 Muaro Jambi and Junior High School 5 Muaro Jambi, which is when asked questions about how you think the life of a scientist is, some students answered that the scientist was identical to parents, had glasses and had gray hair, and a scientist was considered as a smart person who worked in a laboratory and had a strange appearance. This shows that students' assumptions about scientists are not good, It seems that the children in our study symbolized scientists with books, which would indicate that they thought scientists as knowledgeable people who read a lot, and thus wear eye-glasses [28], while the average teachers answered that the scientist is an expert in the field of science and conducts scientific research. Then when asked questions about how you think the lives of scientists are, dominant students said they thought that a scientist did not have a life like ordinary people. Some students say that a scientist usually does not care about family life because it is too cool in the laboratory, while the average teachers answered that a scientist has a high interest in science so that many scientists are not interested in other things even with the lifestyle of people in general. But even so students need to make scientists as role models who can motivate them so they can have an interest in science subjects. If the attitude of normality of scientists is applied to students, they will try as scientists. When confronted with a problem related

to the experiment, they can group these objects like scientists. Nebdefibisikan an object can help measure the results of experiments in a practicum [36] (Normayanti, Astalini & Darmaji, 2017) Therefore, the problem solving activities and experiments participated by student teachers during the experiential learning practice are seen as the reasons for their scientific process skills, which consist of identifying variables in the problem, establishing and defining hypotheses, making operational predictions, designing required analysis for the solution to the problem along with drawing and interpreting graphs [35]. However, when viewed from the percent value obtained from Junior High School 6 Muaro Jambi and Muaro Jambi Junior High School 5, it can be seen that students at Muaro Jambi 5 Junior High School tend to have a higher scientific normality attitude.

The teacher has an important role in developing the attitudes that exist in students so students have a positive attitude toward science subjects. In addition to understanding the material, what the prospective teacher does is to plan, implement and evaluate innovative learning through learning [32].

4. Conclusions

Based on the results obtained from the data analysis, there is a similarity in the description of students' attitudes in natural science subjects at Junior High School 6 Muaro Jambi and Junior High School 5 Muaro Jambi. On the indicator of pleasure in learning science, students at Junior High School 6 Muaro Jambi have a high description of the attitude of science compared to Junior High School 5 Muaro Jambi. On the indicator of interest in increasing science learning time, students at Junior High School 5 Muaro Jambi have a high description of the attitude of science compared to Junior High School 6 Muaro Jambi. In the indicators of the social implications of science, students at Junior High School 5 Muaro Jambi have a high description of the attitude of science compared to Junior High School 6 Muaro Jambi. On the Normality indicator, student scientists at Junior High School 5 Muaro Jambi have high Scientific attitude description compared to Junior High School 6 Muaro Jambi or certain methods that must be used in accordance with the state of attitude of students who will receive science learning. And add insight and experience of the teacher to know the description of students' attitudes in natural science subjects.

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