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The junior high school students' attitudes and self-efficacy towards science subjects

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Abstract: This study was conducted with the aim of 1) knowing the attitudes and self-efficacy of students towards science subjects, 2) knowing the differences in attitudes that students have towards science subjects, 3) knowing the differences between students' self-efficacy towards science subjects, 4) knowing the differences in attitudes and self-efficacy of students, 5) knowing the relationship between students' attitudes and self-efficacy towards class science subjects. The type of research used in this research is a quantitative research type with the samples used are 74 students in 8th grade in Jambi. Through the results of data analysis, the results obtained are that 1) students' attitudes and self-efficacy towards science subjects are in the good to the excellent category, 2) there are differences in attitudes towards science subjects which is indicated by a significance value < 0.05, 3) there are differences in students' self-efficacy towards science subjects which is indicated by a significance value < 0.05, 4) there is a difference between attitudes and self-efficacy of students, 5) through correlation test it is known that there is a significant relationship between students' attitudes and self-efficacy towards science subjects.

Keywords: Attitude, Self-Efficacy, Science Subjects

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INTRODUCTION

We have now entered an era that almost entirely utilizes a technology known as the 21st century. The 21st century is a digital era that requires critical thinking skills (Dewi, 2017; Suryandari, 2018; Pahrudin, 2019). In the 21st century, information and technology have developed, and science has become the education focus, but scientific experiments are not enough to improve student's skills (Setiawan, 2017; Wardani, 2017; Mutakinati, 2018). The development of today's technology has a significant influence on education which encourages the creation of innovations in the world of education (Astuti, 2017; Simanjuntak, 2018; Bakri, 2019). Innovations in the education world also affect education development in Indonesia.

Education is an essential thing for every human being. Education is a systematic process that occurs over time to improve students' abilities and character, with the teacher as an essential actor (Andriana, 2017; Hartini, 2018; Afandi, 2019). The quality and orientation of education demand the Indonesian people's orientation of education in Indonesia, namely, attitudes, intelligence, and competitive achievements (Rahmawati, 2018; Syam, 2019; Kosim, 2020). Education has a fundamental goal, namely character building (Suastra, 2017; Buldur, 2018; Darmaji, 2019). Through this education, there is a process of character building in every human being, one of which is through science subjects in junior high school.

Science is one of the subjects taught in junior high school. Science learning is a basic set of research results of knowledge. This learning depends on the quality of teachers and students (Parmin, 2017; Haviz, 2018; Dewi, 2019). Science is one of the subjects in junior high school, including physics, chemistry, and biology, which not only transfers knowledge and processes that shape students' character (Nurita, 2017; Sutarto, 2018; Anita, 2020). Science learning is not only about knowledge but also leads to character development, which requires skills in finding information (Saefullah, 2017; Suratmi, 2018;

Parmin, 2019). Science becomes a crucial lesson so that in the next stage, science is taught in-depth by separating it into more complex parts such as physics.

Physics is part of science subjects but separated so that learning becomes more focused. Physics is a complex science and is considered essential to learn, which aims to facilitate students to understand physics concepts and apply them (Saifullah, 2017; Ridho, 2018; Tumanggor, 2019). Physics is a lesson related to scientific concepts and processes, but it is not attractive to students because it is difficult (Muskania, 2017; Abdurrahman, 2018; Jufrida, 2019). The concept of physics is relevant to everyday life, where the learning process can be assessed through results and books as learning media (Siswoyo, 2017; Maulana, 2018; Maskur, 2019). So, physics should be a favorite subject for every student.

In learning, the attitude of each student also needs to be considered. Students' attitudes towards learning are a reaction to a situation in learning that can be positive or negative, which is influenced by learning styles and students' learning motivation (Oyedeji, 2017; Chetty, 2019; Kurniawan, 2019). Motivation is a driving force that can direct one's behavior in achieving learning goals. Besides that, teachers who play an essential role in education can use technology to motivate students (Setiawan, 2017; Prasetyono, 2018; Denny, 2020). Teachers have a huge role and influence in education. Through teachers, students can be motivated (Fakhriyah, 2017; Sholihat, 2017; Lubis, 2018). Teachers and many things can play an essential role in motivating students so that they can have a positive attitude when learning physics.

Many students are not aware of their abilities. Therefore it is essential to understand self-efficacy in students. Self-efficacy is a belief in one's ability to succeed in a particular field (Panadero, 2017; Marshman, 2018; Marsh, 2019). Self-efficacy is a form of self-confidence that affects students' abilities (Tanaguchi, 2018; Lindfors, 2021; Panungcat, 2021). Teachers also influence self-efficacy (Adu, 2020; Gilkes, 2020; Duraku, 2021). Based on many explanations regarding self-efficacy, it can be seen that self-efficacy is very important and affects students' abilities and grades.

Based on the explanation above, researchers are interested in researching the description of students' attitudes toward science subjects at State Junior High Schools. In addition, this research is also intended to discover the description of students' self-efficacy in science subjects at State Junior High Schools. The questions in this research are as follows:

1. How to describe students' attitudes using indicators in science learning?
2. How to describe students' self-efficacy using science learning indicators?

Through the findings or results of this study, it is hoped that it can help contribute to/assist physics teachers in designing learning so that they can effectively improve students' attitudes and self-efficacy towards science lessons.

METHOD

Types Of Research

This research uses quantitative research with a descriptive statistical research type. According to Huwaida (2019), this type of descriptive statistical research aims to describe the research findings. Researchers use this type of descriptive statistical research to make it easier to achieve research objectives. This is because quantitative research will produce objective data so that the results that researchers display are actual and factual. In addition, researchers also use this type of descriptive statistical research in order to describe the attitudes and self-efficacy of students. Therefore, the researcher decided to use the type of descriptive statistical research considered the most appropriate for this study.

Research subject

The subjects in this study amounted to 74 students divided into class A and class B, with 37 students for each class. The sampling technique or subject used in this research is purposive sampling. Therefore, the researcher also uses a purposive sampling technique which, according to Seran (2020), aims to represent the existing population. The sample used is divided into an attitude sample and a self-efficacy sample.

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Research Instruments

In this study, the research instrument consisted of 56 statement items that the researchers adopted from Astalini and Kurniawan's research in 2019. Researchers adapted a questionnaire from Astalini and Kurniawan's research because the validity and reliability values of the questionnaire were 0.831 and 0.827. The Likert scale used in this study is five, so there are 5 points with a statement strongly agree that is 5, agree is 4, enough is 3, disagree is 2, and strongly disagree is 1. According to Rukajat (2018), the Likert scale measures attitudes, opinions, and perceptions of a person or group of people about events or social phenomena. Seven indicators are the focus of this research, consisting of 4 indicators for the attitude variable and 3 for the self-efficacy variable. The indicators used for the attitude variable are the social implications of science, normality of scientists, attitudes towards science investigations, and interest in a career in science. While on the self-efficacy variable, the indicators used are the level of task difficulty, behavior or attitude shown in facing the task, and the strength and weakness of the belief. The guidance of the questionnaire instrument on students' attitudes towards science subjects can be seen in Table 1.

Table 1. The Guideline of Attitude Questionnaire Instruments

Variable	Indicator	Statement Item Number
Students' attitudes towards science subjects	Social implications of science	1, 2, 3, 4, 5, 6, 7
	Scientific normality	8, 9, 10, 11, 12, 13, 14, 15
	Attitude on scientific inquiry	16, 17, 18, 19, 20, 21, 22
	Interest in a career in science	50, 51, 52, 53, 54, 55, 56

The guidance of the student self-efficacy questionnaire for science subjects can be seen in Table 2.

Table 2. The Guideline of Self-Efficacy Questionnaire Instruments

Variable	Indicator	Statement Item Number
Student self-efficacy in science subjects	Task difficulty level	1, 2, 3
	Behavior or attitude is shown in dealing with tasks	4, 5, 6, 7
	Strong or weak belief	8, 9, 10, 11, 12

Research Procedure

Research begins by following the research procedure in stages. At the preparatory stage, a proposal is made, formulating the problem and its variables. Furthermore, a literature review is carried out, looking for supporting theories and deepening the discussion of the problems studied in order to obtain an overview of the research to be carried out and the required instruments. At the data collection stage, 146 students at Muaro Jambi were given questionnaires. Data analysis is carried out from this data, namely data coding, filtering appropriate data, and analyzing the data. The research procedure can be seen in Figure 1.

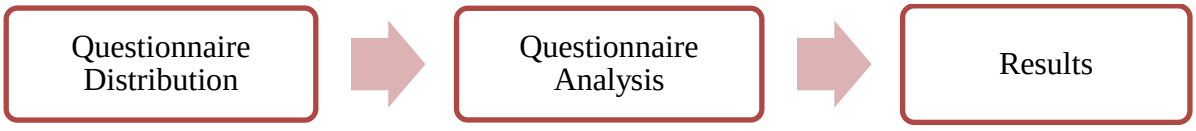

Figure 1. Research Procedure

Data Analysis Technique

After the data was ready to be analyzed, the researchers used descriptive statistical analysis tests and inferential statistical analysis. This descriptive statistical analysis test the researchers used according to the needs of the research objectives. According to Naledra (2021), this descriptive statistical analysis test is used to obtain concise and straightforward information in the form of a table containing numbers. The description of the presentation of the data obtained from this descriptive statistical analysis test includes the mean, median, mode, maximum value, and minimum value.

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RESULT AND DISCUSSION

Results

The data were classified into two classes, namely class A and class B. This data was then analyzed using descriptive statistics based on gender. The results of the descriptive statistical analysis of the category of social implications of science class A can be seen in Table 3.

Table 3. Descriptive Statistics of Social Implication for class A

Interval	Category	F	Mean	Median	Min	Max	%
7,0 – 12,6	Very Not Good	0					0
12,7 – 18,2	Not Good	2					5.4
18,3 – 23,8	Enough	10	24.59	26.00	17.00	35.00	27
23,9 – 29,4	Good	26					64,8
29,5 – 35	Very good	1					2.7
Total		37					100

The results of descriptive statistical analysis showed that the students of class A had social implications of science in the good category. The results of the descriptive statistical analysis of the category of social implications of science class B can be seen in Table 4.

Table 4. Descriptive Statistics of Social Implication Category for Class B

Interval	Category	F	Mean	Median	Min	Max	%
7,0 – 12,6	Very Not Good	0					0
12,7 – 18,2	Not Good	0					0
18,3 – 23,8	Enough	12	24.72	24.00	19.00	3100	32.4
23,9 – 29,4	Good	22					59.4
29,5 – 35	Very good	3					8.1
Total		37					100

The results of descriptive statistical analysis showed that the students of class B had social implications of science in the good category. The results of the descriptive statistical analysis of the normality category of class A can be seen in Table 5.

Table 5. Descriptive Statistics of the Normality Scientists Category of Class A

Interval	Category	F	Mean	Median	Min	Max	%
8.0 – 14.4	Very Not Good	0					0
14.5 – 20.8	Not Good	0					0
20.9 – 27.2	Enough	16	29.16	29.00	23.00	36.00	43.2
27.3 – 33.6	Good	17					40.5
33.7 – 40	Very good	4					16.2
Total		37					100

The results of descriptive statistical analysis show that the students of class A have normality scientists in the good category. The results of the descriptive statistical analysis of the normality category of class B scientists can be seen in Table 6.

Table 6. Descriptive Statistics of Normality Scientists Category for Class B

Interval	Category	F	Mean	Median	Min	Max	%
8.0 – 14.4	Very Not Good	0					0
14.5 – 20.8	Not Good	0					0
20.9 – 27.2	Enough	17	28.18	28.00	23.00	35.00	45.9
27.3 – 33.6	Good	17					45.9
33.7 – 40	Very good	3					8.1
Total		37					100

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The results of descriptive statistical analysis show that the students of class B have normality scientists in the good category. The results of the descriptive statistical analysis of the attitude category towards science investigations for class A can be seen in Table 7.

Table 7. Descriptive Statistics of Attitudes towards Science Investigation Class A

Interval	Category	F	Mean	Median	Min	Max	%
8.0 – 14.4	Very Not Good	0					0
14.5 – 20.8	Not Good	4					2.7
20.9 – 27.2	Enough	25	24.86	25.00	17.00	34.00	35.1
27.3 – 33.6	Good	6					56.7
33.7 – 40	Very good	2					5.4
Total							100

The results of descriptive statistical analysis showed that the students of class A had an attitude towards science investigations in the good category. The results of the descriptive statistical analysis of the attitude category towards science investigations for class B are provided in Table 8.

Table 8. Descriptive Statistics of Attitudes towards Science Investigation Class B

Interval	Category	F	Mean	Median	Min	Max	%
8.0 – 14.4	Very Not Good	0					0
14.5 – 20.8	Not Good	1					2.7
20.9 – 27.2	Enough	31	25.37	25.00	19.00	34.00	83.7
27.3 – 33.6	Good	4					10.8
33.7 – 40	Very good	1					2.7
Total		37					100

The descriptive statistical analysis results showed that the students of class B had an attitude towards science investigations in enough categories. The results of the descriptive statistical analysis of the attitude category towards career interests in science class A provided in Table 9.

Table 9. Descriptive Statistics of Career Interests in Science Class A

Interval	Category	F	Mean	Median	Min	Max	%
7.0 – 12.6	Very Not Good	0					0
12.7 – 18.2	Not Good	1					2.7
18.3 – 23.8	Enough	20	23.62	23.00	16.00	30.00	54
23.9 – 29.4	Good	14					37.8
29.5 – 35	Very good	2					5.4
Total		37					100

The results of descriptive statistical analysis show that the students of class A have an interest in a career in science in the good category. The descriptive statistical analysis results of the attitude category towards career interests in science class B, as seen in Table 10.

Table 10. Descriptive Statistics of Career Interests in Science Class B

Interval	Category	F	Mean	Median	Min	Max	%
7.0 – 12.6	Very Not Good	0					0
12.7 – 18.2	Not Good	8					21.6
18.3 – 23.8	Enough	17	21.37	22.00	13.00	28.00	45.9
23.9 – 29.4	Good	12					32.4
29.5 – 35	Very good	0					0
Total		37					100

The descriptive statistical analysis results show that the students of class B are interested in a career in the science enough category. The results of the descriptive statistical analysis of the self-efficacy category at the difficulty level for class A can be seen in Table 11.

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Table 11. Descriptive Statistics of Self-Efficacy Category on Difficulty Level of Tasks for Class A

Interval	Category	F	Mean	Median	Min	Max	%
3.0 – 5.4	Very Not Good	1					2.8
5.5 – 7.8	Not Good	2					5.6
7.9 – 10.2	Enough	26	9.27	9.00	5.00	12.00	69.4
10.3 – 12.6	Good	8					22.3
12.7 – 15	Very good	0					0
Total		37					100

Based on the results of descriptive statistical analysis, it shows that the students of class A have self-efficacy on the indicator of the level of task difficulty with enough categories. The results of the descriptive statistical analysis of the self-efficacy category at the difficulty level for class B assignments can be seen in Table 12.

Table 12. Descriptive Statistics of Self-Efficacy Category on Difficulty Level of Tasks for Class B

Interval	Category	F	Mean	Median	Min	Max	%
3.0 – 5.4	Very Not Good	1					2.8
5.5 – 7.8	Not Good	1					2.8
7.9 – 10.2	Enough	20	10.11	10.00	5.00	13.00	52.8
10.3 – 12.6	Good	13					36.1
12.7 – 15	Very good	2					5.6
Total		37					100

Based on the results of descriptive statistical analysis, it shows that the students of class B have self-efficacy on the indicator of the level of task difficulty with enough categories. The results of the descriptive statistical analysis of the self-efficacy category on attitudes in dealing with class A assignments can be seen in Table 13.

Table 13. Descriptive Statistics of Self-Efficacy Category on Attitudes in Facing Tasks Class A

Interval	Category	F	Mean	Median	Min	Max	%
4.0 – 7.2	Very Not Good	0					0
7.3 – 10.4	Not Good	1					5.6
10.5 – 13.6	Enough	22	13.22	13.00	9.00	16.00	55.6
13.7 – 16.8	Good	14					38.8
16.9 – 20	Very good	0					0
Total							100

The results of descriptive statistical analysis showed that the students of class A had self-efficacy on attitude indicators in dealing with tasks with enough categories. The results of the descriptive statistical analysis of the self-efficacy category on attitudes in dealing with class B assignments can be seen in Table 14.

Table 14. Descriptive Statistics of Self-Efficacy Category on Attitude in Facing Tasks Class B

Interval	Category	F	Mean	Median	Min	Max	%
4.0 – 7.2	Very Not Good	0					0
7.3 – 10.4	Not Good	1					2.8
10.5 – 13.6	Enough	19	13.58	13.00	10.00	17.00	50
13.7 – 16.8	Good	15					41.7
16.9 – 20	Very good	2					5.6
Total		37					100

The descriptive statistical analysis results showed that the students of class B had self-efficacy on attitude indicators in dealing with tasks with enough categories. The results of the descriptive statistical analysis of the self-efficacy category on the strength and weakness of class A beliefs can be seen in Table 15.

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Table 15. Descriptive Statistics of Self-Efficacy Category on Strong Weak Belief Class A

Interval	Category	F	Mean	Median	Min	Max	%
5.0 – 9.0	Very Not Good	0					0
10.0 – 13.0	Not Good	3					8.4
14.0 – 17.0	Enough	22	16.38	16.00	12.00	19.00	58.4
18.0 – 21.0	Good	12					33.3
22.0 – 25.0	Very good	0					0
Total		37					100

The results of descriptive statistical analysis show that students of class A have self-efficacy on indicators of strong and weak trust with enough category. The results of the descriptive statistical analysis of the self-efficacy category on the strength and weaknesses of class B beliefs can be seen in Table 16.

Table 16. Descriptive Statistics of Self-Efficacy Category on Strong Weak Belief Class B

Interval	Category	F	Mean	Median	Min	Max	%
5.0 – 9.0	Very Not Good	0					0
10.0 – 13.0	Not Good	3					8.3
14.0 – 17.0	Enough	25	15.91	16.00	13.00	19.00	69.4
18.0 – 21.0	Good	9					22.2
22.0 – 25.0	Very good	0					0
Total		37					100

The results of descriptive statistical analysis show that students of class B have self-efficacy on indicators of strong and weak trust with enough category. The results of the analysis of the attitude normality test for class A and class B can be seen in Table 17.

Table 17. Normality Test for Students' Attitude

Gender	Class	N	Statistics	Sig.
F	A	20	0.965	0.639
	B	20	0.955	0.644
M	A	17	0.956	0.656
	B	17	0.953	0.611

Based on the table above, it can be seen that the significant value > 0.05 means that the attitude data for class A and class B are normally distributed. The results of the normality test for self-efficacy tests for class A and class B can be seen in Table 18.

Table 18. Normality Test for Students' Self-Efficacy

Gender	Class	N	Statistics	Sig.
F	A	20	0,954	0,637
	B	20	0,970	0,759
M	A	16	0,866	0,614
	B	16	0,961	0,672

Based on the table above, it can be seen that the significant value > 0.05 means that the self-efficacy data for class A and class B were normally distributed. The results of the analysis of the homogeneity test of attitudes for class A and class B can be seen in Table 19.

Table 19. Homogeneity Test for Attitude

Gender	Class	N	F	Sig.
F	A	20	0,005	0,942
	B	20		
M	A	17	0,239	0,628
	B	17		

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Based on the table above, it can be seen that the significant value> 0.05 means that the attitude data for class A and class B are homogeneous. The results of the analysis of the homogeneity of self-efficacy tests for class A and class B can be seen in Table19.

Table 20. Homogeneity Tes for Students' Self-Efficacy

Gender	Class	N	F	Sig.
F	A	20	1,444	0,637
	B	20		
M	A	16	1,642	0,610
	B	16		

Based on the table above, it can be seen that the significant value > 0.05 means that the self-efficacy data for class A and class B are homogeneous. The results of the analysis of the linearity test of attitudes and self-efficacy can be seen in Table 21.

Table 21. Linearity Test of Attitudes and Self-Efficacy in Class A

Gender	Class	N	F	Sig.
F	VIII A	20	1,312	0,633
M		17	1,192	0,646
F	VIII B	20	3,085	0,643
M		17	8,280	0,654

Based on the table above, it can be seen that the significant value> 0.05 means that the data has been tested for linearity. The results of the attitude t-test analysis for class A and class B can be seen in Table 22.

Table 22. Attitude T-test

Gender	Class	N	Mean	Sig.	Sig. (2-tailed)
F	A	20	163,35	0,256	0,031
	B		163,60		
M	A	17	164,70	0,109	0,011
	B		163,35		

Based on the table above, it can be seen that there are significant differences between the attitudes of class A and class B seen from the significance value, namely the value of sig. (2-tailed) < 0.05. The results of the self-efficacy T-test analysis for class A and class B can be seen in Table 23.

Table 23. Self-Efficacy T Test

Gender	Class	N	Mean	Sig.	Sig. (2-tailed)
F	A	20	91,40	0,203	0,023
	B		93,10		
M	A	16	95,00	0,207	0,021
	B		90,12		

Based on the table above, it can be seen that there is a significant difference between the self-efficacy of class A and class B seen from the significance value, namely the value of sig. (2-tailed) < 0.05. The results of the analysis of the attitude correlation test and self-efficacy of class A and class B can be seen in Table 24.

Table 26. Attitude and Self-Efficacy Correlation Test

Gender	Class	N	Pearson Correlation	Sig. (2-tailed)
F	A	20	0,156	0,041
M		17	0,111	0,048
F	B	20	0,279	0,023
M		17	0,047	0,038

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Based on the table above, it can be seen that there is a relationship between attitude and self-efficacy in class A which is seen from the significance value (2-tailed), namely the sig value. (2-tailed) < 0.05. In addition, based on the table above, it can also be seen that there is a relationship between attitude and self-efficacy in class B, which is seen from the significance value (2-tailed), namely the sig value. (2-tailed) < 0.05.

DISCUSSION

Based on data analysis that has been carried out using four indicators, it is found that students have a positive attitude towards science subjects. This can be seen from the table of data analysis results which show that students, on average, get analysis results with good categories on four existing indicators, namely indicators of social implications of science, indicators of scientist normality, indicators of attitudes towards science investigations, and an indicator of interest in a career in science (Lestari & Projosantoso, 2016). Through his research, it is known that students have a scientific attitude in the good category.

In addition to analyzing students' attitudes towards science subjects, the researchers also analyzed students' self-efficacy towards science subjects using three indicators. Based on the analysis results that can be seen in the results table, it can be seen that the self-efficacy of students on average gets satisfactory results in each of the indicators tested. The results of the first indicator analysis are self-efficacy on the level of task difficulty in class A as many as 69.4% of students in the good category and 22.3% of students in the good category. While in class B, as many as 52.8% of students are in the moderate category, 36.1% are in a good category, and 5.6% are in the very good category. The results of the analysis of the second indicator, namely self-efficacy in dealing with assignments in class A as many as 55.6% of students are in a good category and 38.8% in a good category. While in class B, as many as 50% of students were in the moderate category, 41.7% in the good category, and 5.6% in the very good category. The results of the analysis of the third indicator, namely self-efficacy on the strength and weakness of belief in class A as many as 58.4% of students are in a good category, and 33.3% of students are in a good category. While in class B, as many as 69.4% of students were in a good category, and 22.2% were in a good category.

In addition to descriptive statistical tests to see the description of students' attitudes and self-efficacy, the researchers also tested assumptions to find out what hypothesis tests were suitable for use. In this assumption test, the researcher uses three tests: normality, homogeneity, and linearity. Based on the tests, it can be seen that all data for class A and class B have a significance value > 0.05, which means that both data are normally distributed. In addition to a normal distribution, all the data are homogeneous, which can be seen from the significance value > 0.05. Class A and B data are normally distributed and homogeneous. Then the researcher continued to test the assumptions by testing the linearity. Based on the linearity test, it can be seen that there is a linear relationship between attitude and self-efficacy.

After testing the assumptions, it can be decided that the hypothesis test used is a parametric test. The parametric tests used are a t-test on attitudes of class A with class B, a t-test on class A with B, a test of correlation between attitudes and self-efficacy of class A and a test of correlation between attitudes and self-efficacy. Class B. Based on the t-test on the attitudes of class A and class B, it can be seen that there is no significant difference between the attitudes of class A and the attitudes of class B. The t-test conducted on the self-efficacy of class A and class B also got the same results; namely, there was no significant difference between the self-efficacy of class A and class B. The last test was the correlation test between attitudes and self-efficacy of class A and the correlation test between attitudes and self-efficacy of class B. Based on the correlation test, it was found that there was no relationship between attitudes and self-efficacy for class A and class B.

Research on this attitude has been conducted previously by a researcher named Dwianto in 2017. In this study, the Likert scale used was 4: very good, good, sufficient, and not good. Dwianto (2017) focuses on students' scientific attitudes. Unfortunately, this study did not explain scientific attitudes, and the students' scientific attitudes were not described in detail. Researchers only conduct research and discuss scientific attitudes in general. Widowati also conducted another research in 2017. This research conducted by Widowati (2017) also focuses on scientific attitudes but, unfortunately, only in general. The indicators used are scientific attitudes in general and not in detail. Because of this, research is needed that explains students' attitudes towards science learning in detail using many indicators.

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Research on self-efficacy is quite rare. Not much has been discussed about students' self-efficacy toward science subjects. One of the researchers who researched self-efficacy was La Moma in 2017. This research conducted by La Moma (2017) focused on increasing the mathematical self-efficacy of junior high school students through generative learning. So far, it is complicated to find research on self-efficacy that focuses on science subjects. Because of this, research is needed that discusses students' self-efficacy toward science subjects. This infrequent research will certainly make other people interested in reading and even researching students' self-efficacy in science subjects. Breakthroughs certainly need to be made to move other researchers.

Attitudes and self-efficacy are two topics that researchers choose to discuss in-depth further. On the topic of student attitudes towards science subjects, researchers use four indicators, namely 1) social implications of science, 2) normality of scientists, 3) attitudes towards science investigations, and 4) interest in a career in science. Through these four indicators, students' attitudes towards science subjects are discussed in detail, and through these indicators, it can be seen how students respond to each indicator. In addition, researchers also conducted research on self-efficacy with three indicators, namely 1) the level of difficulty of the task, 2) the behavior or attitude shown in dealing with the task, and 3) the strength and weakness of the belief. Three indicators can represent students' self-efficacy toward science subjects. Because research on self-efficacy is rarely carried out, this research can be used for further research or as reference material for educators to determine students' attitudes and self-efficacy towards science subjects.

Although this study has shortcomings in using four different indicators for the attitude variable and three for the self-efficacy variable, this study only provides information with a data sample of 146. Of course, the data contained in this study is only a tiny part of all students who exist in Indonesia. However, in this case, this research is still a study that can provide accurate information even though it is on a small regional scale.

CONCLUSION

Based on the results of data analysis, several conclusions can be drawn based on the purpose of this study, namely students' attitudes towards science subjects in both categories on indicators of social implications, scientific normality, and attitudes towards scientific investigations. Meanwhile, the indicator of interest in a career in science is in a good category. In addition, students' self-efficacy is in the good category on the three indicators used. Based on the research, it can also be concluded that there is a significant difference between students' attitudes towards science subjects in class A and students' attitudes towards science subjects in class B. This also occurs in students' self-efficacy toward science subjects. Namely, there is a significant difference between the self-efficacy of class A students and the self-efficacy of class B students. Furthermore, it is concluded that there is a relationship between students' attitudes and self-efficacy towards science subjects in classes A and B.

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