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Interest and Science Process Skills in Science Education Based on Gender

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Abstrak

Pentingnya minat belajar siswa adalah keterampilan belajar, maka dilakukan penelitian untuk menilai minat dan keterampilan siswa secara mendalam berdasarkan tingkat kelas dan jenis kelamin di suatu sekolah agar minat dan keterampilan dapat diketahui secara mendalam berdasarkan indikator yang diujikan. . Belum ada penelitian yang mengkaji minat siswa dan keterampilan proses sains secara rinci berdasarkan tingkat kelas dan generasi di suatu sekolah. Maka penulis membuat penelitian ini dengan tujuan untuk menganalisis bagaimana perbandingan minat dan keterampilan proses sains antara perempuan dan laki-laki pada mata pelajaran IPA dan untuk menganalisis bagaimana hubungan antara minat dan keterampilan proses sains siswa dengan mata pelajaran IPA. Penelitian ini menggunakan metode kuantitatif dengan tipe komparatif. Penelitian kuantitatif adalah bidang penyelidikan yang berdiri sendiri, bersifat ilmiah dan bertujuan untuk memahami realitas sosial. Instrumen dalam penelitian ini menggunakan angket dan lembar observasi yaitu angket minat siswa dan lembar observasi keterampilan proses sains. Berdasarkan hasil pengujian hipotesis, pengujian penelitian dan analisis data, maka kesimpulan penelitian ini adalah dari uji-t terdapat perbedaan minat siswa perempuan dan siswa laki-laki di kelas VII A dan VII B. Uji t keterampilan proses sains siswa terdapat perbedaan minat siswa putri dan siswa putra kelas VII A dan VII B. Berdasarkan hasil uji korelasi antara minat dan keterampilan proses sains siswa kelas VII A terdapat hubungan minat dan keterampilan proses sains antara siswa perempuan dan laki-laki serta di kelas VII B. Minat siswa dan keterampilan proses sains berpengaruh signifikan terhadap rasa ingin tahu, materi pembelajaran dan sikap guru, observasi dan komunikasi siswa.

Kata kunci: *Pendidikan, Minat, Keterampilan Proses Sains, Sains, Gender*

Abstract

The importance of students' interest in learning is learning skills, so research is carried out to assess students' interests and skills in depth based on grade level and gender in a school so that interests and skills can be known in depth based on the indicators tested. There has been no research that examines student interest and science process skills in detail based on grade level and generation in a school. So the author makes this study with the purpose to analyze how the interest and science process skills between women and men compare in science subjects and analyze how the relationship between students' interests and science process skills in science subjects. This study uses a quantitative method with a comparative type. Quantitative research is a field of inquiry that stands alone, is scientific in nature, and aims to understand social reality. The instrument in this study used a questionnaire and an observation sheet, namely a student interest questionnaire and an observation sheet for science process skills. Based on the results of hypothesis testing, research testing, and data analysis, the conclusion of this study is from the T-test there are differences in the interests of female students and male students in classes VII A and VII B. From the results of the T-test for students' science process skills, there are differences in the interests of female students and male students in grades VII A and VII B. Based on the results of the correlation test between interests and science process skills of grade VII A students there is a relationship between interests and science process skills between female and male students as well as in classes VII B. Students' interest and science process skills have a significant influence on curiosity, learning materials and teacher attitudes, student observation and communication.

Keywords: Education, Interests, Science Process Skills, Science, Gender

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1. INTRODUCTION

21st century learning are an effort to meet the needs of life in various knowledge-based contexts and 21st century learning is known as the learning period (Mutakinati et al.,

2018). 21st Century Learning is learning that integrates literacy skills, knowledge, skills, and attitudes, as well as mastery of technology (Anggraeni et al., 2019; Ramdani et al., 2019; Marshel & Ratnawulan, 2020). In the 21st century, education is becoming increasingly important to ensure students have learning skills. These 21 skills are relevant to the four pillars of education which include learning to know, learning to do, learning to be and learning to live together (Wegawati et al., 2016; Gelen Assoc, 2018; Gürsoy, 2021). Therefore, participants must have great motivation to learn to deepen their knowledge which is always evolving from time to time.

Education is the learning of knowledge, skills, and habits of a group of people that are passed down from one generation to the next through teaching, or research (Ferreira et al., 2018; Marniati, Sanova et al., 2019; Mason, 2020). The purpose of national education is to develop the potential of students to become human beings who believe and fear God Almighty, have a noble character, are healthy, knowledgeable, capable, creative, independent, and become democratic and responsible citizens (Ahmad et al., 2017; Kamza et al., 2020; Lestari et al., 2021). One of the sciences that enhances human understanding of various realities in the human realm is science. Science in education is scientific knowledge and serves as a very important discipline of knowledge in the field of education. Science learning aims to help students develop critical and creative thinking skills (Wahyudi et al., 2017; Hong & Talib, 2018; Crawley et al., 2019).

Physics is a science that studies something that is real and proven mathematically that can interact with human life and with various exercises because of the application of physics that is applied in sophisticated technology (Harefa, 2019; Nurmayani et al., 2018; Puspitasari et al., 2019). Physics learning is mostly natural phenomena to understand knowledge contextually. Physics is in fact one of the subjects that are considered heavy and are avoided by some students because it requires perseverance, seriousness, and a lot of practice (Sultan & Bancong, 2017; Astalini et al., 2018; Rosdianto, 2018). Starting from the wrong concept, of course, it will be different from the scientific understanding possessed by experts or scientists in the field of physics (Warfa et al., 2018; Maison et al., 2019; Madu, 2020). This requires a scientific approach to science to improve and develop the knowledge experienced by students. The increase in students' conceptual knowledge can be seen through students' science process skills and student interests.

Interest can be interpreted as a condition that occurs when a person sees the characteristics or temporary meaning of a situation with his own desires or needs. The greater the student's interest in learning, the easier it will be to carry out the learning process. interest in learning is a form of student interest in the lesson to be studied by having 2 cognitive and affective aspects in a growing interest in learning (Archu, 2019; Saputro & Amir, 2018). Some topics can be measured by a number of validated methods to assess student interest (Jack & Lin, 2017; Swirski et al., 2018; Kwarikunda et al., 2020). Students who have an interest in studying physics will try to concentrate on learning. Then the student will continue to learn to be able to understand the material (Dou et al., 2018; Giglio et al., 2020; Luo et al., 2020).

The scientific method is a very important part for students to improve students' process skills. Skills are very important for generating new knowledge through learning refers to behaviors that reveal their understanding of the world dunia (Vansteensel et al., 2017; Stender et al., 2018; Vartiainen & Kumpulainen, 2020). Students are able to build science concepts with a mixture of theory and observations (Labouta et al., 2018; Solé-Llussà et al., 2020; Stylinski et al., 2020). This learning allows students to experience for themselves, seek, try and draw conclusions from the process of known skills (Kruit et al., 2018; Llussà et al., 2019; Mutlu, 2020). So the process of science is very important for students to be realized in everyday life.

Gender differences are one of the topics that attract a lot of attention today. A gender is a group of cultural attributes and behaviors that exist in men and women (Kartika & Rabial Kanada, 2017; Yunarti, 2018; Wahyuningsih, 2020). A school is a place where teachers as facilitators consciously or unconsciously provide different treatment between male students and female students. To meet gender needs and justice, education needs to fulfill the basics of education, which is to help every individual or people get an education, so that people can get an education (Fadilah, 2017; Shchurko, 2018; Wahyuningsih, 2020). Gender equality in education has a positive impact on children's well-being and development and contributes to women's work and empowerment, as well as economic growth (Fuller, 2019; Dolch, 2020; Aslam, 2021).

Research conducted by researchers is similar to previous research, whose conclusion states that student interest affects students' science process skills (Archu, 2019; Saputro & Amir, 2018). If the students' interest is great, the students' science process skills will improve well. In addition, science process skills variables such as research by the previous researcher states that science process skills are important for the learning and learning process (Kruit et al., 2018; Llussà et al., 2019; Mutlu, 2020). Students' science process skills are needed because they will affect student learning outcomes. However, previous research did not link the differences and relationships between the two variables with other differentiating indicators and factors as in this study. The purpose of this study was to analyze whether there is a comparison of the relationship between attitudes and interests and science process skills of junior high school students in science subjects. The novelty of this research is that it uses students' interest and science process skills variables, with different indicators from previous research.

The urgency of this research based on the description above is very important because there has been no research that examines student interest and science process skills in detail based on grade level and generation in a school. In addition, this research needs to be done to analyze the interests and skills of the science process more deeply based on the indicators tested. By seeing how important the students' interest and science process skills are from the questionnaire and observation attachments, the researcher concludes the research objectives as follows: To analyze how the comparison of interest between women and men in science subjects. To analyze the comparison of science process skills in female and male students towards science subjects. To analyze how the relationship between interest and science process skills in students with science subjects.

2. METHODS

This study uses a quantitative method with a comparative type. Quantitative research is a field of inquiry that stands alone, is scientific in nature, and aims to understand social reality (Manzilati, 2017; Surwenda, 2018; Rukin, 2019). The data was obtained using numerical data with a Likers scale of 5 and 4. This study gains an understanding of a phenomenon from basic logic, usually including the perspective of the research population (Tolley, 2017; Anggito &Setiawan, 2018; Hennik et al, 2020). Quantitative research which is divided into comparative research uses survey procedures. Survey research design is a quantitative research procedure in which the researcher administers a survey on a sample or on an entire population of people to describe attitudes, opinions, behaviors, or specific characteristics of the population (Creswell, 2012). The instrument in this study used a questionnaire and an observation sheet, namely a student interest questionnaire and an observation sheet for science process skills. There are 11 statement items in the valid student interest questionnaire. This instrument uses a Likert scale. A scale consisting of 5 points with a very good score of 5, good that is 4, enough is 3, not good that is 2, and very not good is 1.

Each statement is representative of each indicator of interest. Furthermore, there are 7 statement items on the scientific process skills observation sheet that are valid. This instrument uses a Likert scale. A scale consisting of 4 points with a score of very good is 4, good is 3, not good is 2, and very not good is 1. Each statement is representative of each indicator of interest and science process skills. The grid of interest questionnaire instruments used in this study are shown in Table 1. The grid of the science process skills questionnaire instrument used in this study is shown in Table 2. The intervals and categories of student interest in science subjects is shown in Table 3. The intervals and categories of science process skills for science subjects are presented in Table 4.

Table 1. Grid of Student Interest Questionnaire Instruments in Science Subjects

Variabel	Indicator	No. Statement Items
Interest	Curiosity	15, 16, 17, 18, 19
	Learning materials and teacher attitudes	20, 21, 22, 23, 24, 25
Number of statements		**11 items**

(Dierks et al., 2016)

Table 2. Grid of Student Science Process Skills Questionnaire Instruments in Science Subjects

Variabel	Indicator	No. Statement Items
Science Process Skills	Observation	1,2,3
	Communication	4,5,6,7
Number of statements		**7 items**

(Darmaji et al., 2019)

Table 3. Categories of Student Interest

Category	Interval Indicator	
	Curiosity	Learning Materials and Teacher Attitudes
Not very good	5.0-9.0	6.0-10.8
Not good	10.0 -13.0	10.9-15.6
Enough	14.0 -17.0	15.7-20.4
Good	18.0 – 21.0	20.5-25.2
Very good	22.0-25.0	25.3-30.0

Table 4. Categories of Students' Science Process Skills

Category	Interval Indicator	
	Observation	Communication
Not very good	3.0-5.25	4.0-7.0
Not good	5.35-7.5	8.0 -10.0
Good	7.6-9.75	11.0 -13.0
Very good	9.85-12.1	14.0 – 16.0

The Likert scale used in this study are 1 (very not good), 2 (not good), 3 (enough), 4 (good), and 5 (very good). Regarding science process skills, this research was carried out by 2 samples, namely samples of class VII A and VII B with each class having 37 students. The sample consisted of two groups, namely the experimental group and the control group (Fromowitz, 2017).

The population of this study was 68 students from SMP 10 Mestong in Muaro Jambi Regency. The sampling technique is total sampling. The subjects taken were classes VII A and VII B consisting of 40 women and 28 men. The sample in this study uses the Probability Sampling sampling technique, which is a sampling technique that provides equal opportunities for each member (element) of the population to be selected as a sample member (Achdiyat & Utomo, 2018). The reason for using the purposive sampling technique is that not all samples have criteria that match the phenomenon under study. Therefore, the authors chose a purposive sampling technique that stipulates certain considerations or criteria that must be met by the samples used in this study. The total number of samples that will be used in this study are students of classes VII A and VII B of the State Junior High School 10 Mestong, Muaro Jambi Regency. In detail, the details of this research sample can be seen in Table 5.

Table 5. Research Sample

Junior High School 10 Mestong							
Interest				**Science Process Skills**			
VII A		**VII B**		**VII A**		**VII B**	
F	M	F	M	F	M	F	M
20	14	20	14	20	14	20	14

F: Female; M: Male

This research was conducted starting by distributing questionnaires and observation sheets. then quantitative data analysis is carried out, then identification of results for follow-up. At the data collection stage, questionnaires were given to 68 students at one SMP 10 Mestong school in Muaro Jambi Regency. From the data, data analysis is then carried out, namely data coding, filtering appropriate data,and analysis of the data.

The data analysis technique used is purposive sampling. The purposive sampling technique is used because it provides unbiased parameter estimates and is better if the population is homogeneous (Endayani et al., 2017; Tao & Ning, 2018; Bankole & Nasir, 2020). Also using purposive sampling can reduce the potential for bias in the selection of cases to be included in the sample. Due to the homogeneity of the population, the sampling frame is clear and general in nature. This research was carried out starting by distributing observation sheets, then analyzing quantitative data, then identifying the results for follow-up. At the data collection stage, questionnaires were given to 68 students at SMP Negeri 7 Mestong. From the data, data analysis was then carried out, namely data coding, data filtering, and data analysis. In describing the data in the form of students' attitudes and science process skills, the statistics used are descriptive and inferential statistics. Description or presentation of large amounts of data which includes mean, mode, median, maximum, minimum, and standard deviation are descriptive statistics. Inferential in the form of independent to t-test, and correlation. Then test for normality, homogeneity, and linearity. Then the data were analyzed using the SPSS 26 program to get the percentage, frequency, average, and standard deviation.

In collecting data, the first activity that must be done is to select students based on the categories given by the researcher, then provide a questionnaire on student attitudes toward science subjects. Then the questionnaire data were processed using the SPSS application. The use of the SPSS application functions to view descriptive statistics, in the form of mean, median, min, max, percentage, and category of students. The data needed in research can be collected or obtained from various data sources. The procedures for collecting data in this study are in accordance with Figure 1.

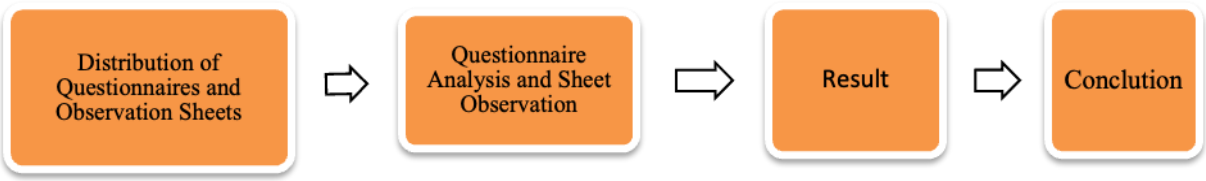

Figure 1. Research Procedure

3. RESULTS AND DISCUSSION

Result

The following describes the results of descriptive statistics on students' interest and science process skills in science subjects. With indicators of interest: curiosity and learning materials and teacher attitudes. Then indicators about science process skills: Observation and Communication. Where the results were obtained from the distribution of questionnaires to SMP N 10 Mestong to both classes, namely class VII A and VII B.

Descriptive Statistics Test

The description of students' interest in science in grades VII A & VII B with an indicator of curiosity is shown in Table 6.

Table 6. Description of Students' Interest in Physics on the Curiosity Indicator

	Category	Interval	Freq		%		Mean		Median		Min		Max	
			F	M	F	M	F	M	F	M	F	M	F	M
VII A	Very not good	5.0-9.0	0	0	0	0	3,5	2.9	3.0	3.0	2.0	2.0	5.0	5.0
	Not good	10.0 -13.0	1	1	5	7.5								
	Enough	14.0 -17.0	11	10	55	70								
	Good	18.0 – 21.0	5	2	25	14								
	Very good	22.0-25.0	3	1	15	7.5								
VII B	Very not good	5.0-9.0	0	0	0	0	2.9	3.0	3.0	3.0	2.0	2.0	5.0	4.0
	Not good	10.0 -13.0	6	4	30	28.5								
	Enough	14.0 -17.0	9	6	45	43								
	Good	18.0 – 21.0	4	4	20	28.5								
	Very good	22.0-25.0	1	0	5	0								

Based on the results from table 6, in this case, it can be said that the superior interest in classes VII A and VII B fell to female students on the curiosity indicator. The description of students' interest in science in classes VII A & B with indicators of learning materials and teacher attitudes is shown in Table 7.

Table 7. Description of Students' Interest in Science on Indicators of Learning Materials and Teacher Attitudes

	Category	Interval	Freq		%		Mean		Median		Min		Max	
			F	M	F	M	F	M	F	M	F	M	F	M
VII A	Very not good	6.0-10.8	0	0	0	0	3.5	3.8	4.0	4.0	2.0	3.0	5.0	5.0
	Not good	10.9-15.6	1	0	5	0								
	Enough	15.7-20.4	8	4	40	28.6								
	Good	20.5-25.2	10	8	50	57.1								
	Very good	25.3-30.0	1	2	5	14.3								
VII B	Very not good	6.0-10.8	0	0	0	0	3.5	3.5	3.0	4.0	2.0	3.0	5.0	4.0
	Not good	10.9-15.6	11	0	55	0								
	Enough	15.7-20.4	5	6	25	42.9								
	Good	20.5-25.2	3	8	15	57.1								
	Very good	25.3-30.0	1	0	5	0								

Based on Table 7, in this case, it can be said that male students have a higher interest in grades VII A & VII B. Description of students' science process skills in grade VII A&B science with observation indicators is shown in Table 8.

Table 8. Description of The Science Process Skills on Observation Indicators

	Category	Interval	Freq		%		Mean		Median		Min		Max	
			F	M	F	M	F	M	F	M	F	M	F	M
VII A	Very not good	3.0-5.25	3	1	15	7.1	3.9	2.7	3.0	3.0	1.0	1.0	4.0	4.0
	Not good	5.35-7.5	4	4	20	28.6								
	Good	7.6-9.75	5	7	25	50								
	Very good	9.85-12.1	8	2	40	14.3								
VII B	Very not good	3.0-5.25	4	0	20	0	2.3	2.8	2.0	3.0	1.0	2.0	4.0	4.0
	Not good	5.35-7.5	7	4	35	28.6								
	Good	7.6-9.75	7	8	35	57.1								
	Very good	9.85-12.1	2	2	10	14.2								

Based on the results from table 8, it can be seen that the category of science process skills for grades VII A and VII B which is superior to boys falls on the observation indicators. The description of students' science process skills in science in classes VII A & B with communication indicators is shown in Table 9.

Table 9. Description of Students' Science Process Skills on Communication Indicators

	Category	Interval	Freq		%		Mean		Median		Min		Max	
			F	M	F	M	F	M	F	M	F	M	F	M
VII A	Very not good	4.0-7.0	4	2	20	14.3	2.5	2.9	2.0	3.0	1.0	1.0	4.0	4.0

	Category	Interval	Freq		%		Mean		Median		Min		Max	
			F	M	F	M	F	M	F	M	F	M	F	M
VII B	Not good	8.0 -10.0	7	2	35	14.3								
	Good	11.0 -13.0	3	5	15	35.7								
	Very good	14.0 – 16.0	6	1	30	7.1								
	Very not good	4.0-7.0	0	0	0	0								
	Not good	8.0 -10.0	0	0	0	0	2.9	2.8	3.0	3.0	1.0	1.0	4.0	4.0
	Good	11.0 -13.0	10	12	50	70.6								
	Very good	14.0 – 16.0	1	0	5	0								

Based on the results from Table 9, it can be seen that the category of science process skills for grades VII A and B which is superior to boys falls on the communication indicator.

Normality test

The data is normally distributed as seen from the significance value, if the significance value is > 0.05. The normality test of students' interest and science process skills in grades VII A and VII B is described in Table 10.

Table 10. Normality Test of Interest and Science Process Skills

Variable	Class	Kolmogorov-Smirnov			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	Df	Sig.
Interest	VII_A	0.098	34	0.200	0.970	34	0.397
	VII_B	0.127	34	0.137	0.959	34	0.185
Science process skills	VII_A	0.099	34	0.200	0.978	34	0.720
	VII_B	0.090	34	0.200	0.966	34	0.363

Based on the results of table 10. It can be obtained that the data is normally distributed, the normality test is obtained with the Kolmogorov-Smoniv test, the significance value is > 0.05.

Homogeneity test

This test is carried out in order to find out whether the x and y data are homohen or not. The requirement in this test is that if the significance value is > 0.05, it can be said that the x and y data are homogeneous (same). If the significance value is < 0.05 then the data is not homogeneous (not the same). The results obtained are shown in the following table. The homogeneity test of student interest in grades VII A and VII B is described in table 11.

Table 11. Test of Homogeneity of Interest and Science Process Skills

Variable	Kelas	Sig.
Interest	VII A VII B	0.123
science process skills	VII A VII B	0.354

Based on Table 11. It can be concluded that the variance of the two variables is the same or homogeneous with the result that the significance value has met the requirements > 0.05.

Linearity Test

This test is carried out in order to see a linear relationship between two or more variables. The conditions in this test, if the significance value is < 0.05. The results obtained are shown in Table 12.

Table 12. Linearity Test of Interest and Science Process Skills

Variable	Class	Signifinance
interest * science process skills	VII A	0.046
	VII B	0.022

Based on Table 12, it can be said that there is a linear relationship between interest and science process skills in grades VII A and VII B, obtained, the results of the linearity test obtained are the significance value has met the requirements <0.05.

T-test

This test, it is carried out in order to analyze the difference between the variables in science subjects. The condition in this test is if the significance value is > 0.05, it can be said that the variable has no difference. If the significance value is <0.05, then the variable has a significant difference. The results obtained are shown in Table 13.

Table 13. T-Test of Student Interest and Science Process Skills

Class	Variable	Student	N	Sig. (2-tailed)
VII A	Interest	Female	20	0.047
		Male	14	
	Science process skills	Female	20	0.046
		Male	14	
VII B	Interest	Female	20	0.038
		Male	14	
	Science process skills	Female	20	0.036
		Male	14	

From Table 13, it is found that there are differences in the interests and science process skills of female students and male students in grades VIIA and VII B towards science subjects. This is evidenced by the value of sig (2-tailed) < 0.05.

Correlation Test

This test, it is carried out in order to determine the relationship of the variable to science subjects. The condition in this test is if the significance value is > 0.05, it can be said that the variable has no relationship. If the significance value is <0.05, then the variable has a significant relationship. The results obtained are shown in Table 14.

Table 14. Correlation Test of Interest and Science Process Skills

Class	Variable	N	Pearson Correlation	Sig. (2-tailed)
VII A	Interest	34	0,763	0,035
VII B	science process skills	34	0,756	0,038

From Table 14, it is found that there is a relationship between the interest and science process skills of female students and male students in grades VII A and VII B with science subjects. This is proven by the value of sig (2-tailed) < 0.05.

Discussion

In the descriptive statistical test results obtained in class A there are 34 students including 20 female students and 14 male students. In class B there are 34 students including 20 female students and 14 male students. With the tests that have been carried out on descriptive statistics, there are 4 indicators that need to be considered. There are 2 indicators used on interest, namely: curiosity and learning materials and teacher attitudes. There are 2 indicators of science process skills, namely: Observation, Communication. The results obtained from descriptive statistical tests for the attitudes and self-efficacy of students in grades VII A and VII B with the indicators mentioned above that the results of the tests that have been carried out seen from the average percentage of interest and science process skills of female students are higher than female students. boys in both grades VII A and VII B. This means that the interest and science process skills of students are better or superior to male students. The results of this descriptive statistical test are in line with previous research conducted by (Chivandikwa et al., 2019).

In the analysis prerequisite test or assumption test, 3 tests are carried out, namely normality, linearity, and homogeneous test. In the first test, the normality test aims to determine whether the average attitude of students comes from a distributed population (Sultan & Bancong, 2017). Results of the normality test based on the results of the table can be obtained that the data is normally distributed, the normality test is obtained with the Kolmogorov-Smoniv test, the significance value is > 0.05. criteria if the linearity sig < 0.05 then the data has a linear pattern (Astuti, 2017; Ernawati et al., 2021). The key word is a linear relationship between interest and science process skills in class VII A and class VII B. In the third test, namely the homogeneity test, based on the table it can be said that the second variance is the same or homogeneous with a significance value that has met the requirements > 0.05. The results of this assumption test are in line with previous research (Zurweni et al., 2018).

In the T-test, the results based on the table can be seen that there is a difference between the interests of female students and male students in grades VII A and VII B. This is evidenced by the value of sig (2-tailed) > 0.05. Based on the table, it can be seen that there are differences between the science skills of female students and male students in grades VII A and VII B. This is evidenced by the process of sig (2-tailed) > 0.05. The next test is about the correlation test, the results are based on the table, it can be seen that there is a relationship between the interests of male students and female students in classes VII A and VII B. This is evidenced by the value of sig (2-tailed) > 0.05. Based on the table, it can be seen that there is a relationship between the science process skills of male and female students in grades VII A and VII B. This is evidenced by the value of sig (2-tailed) > 0.05. The correlation test conducted in this study was to determine the ability to solve problems closely with students' beliefs in questions because students' beliefs in solving problems will affect student learning outcomes (Utami & Wutsqa, 2017).

Research conducted by researchers is similar to previous research, among others research which states that student interest is very important for science subjects at school (Karina et al., 2017). The better the interest, the better the student learning outcomes. In addition, research with students' science process skills variables such as previous research conducted by the previous researchers, which said that students' science process skills in elementary schools were very important for students' learning processes, if students' science processes were good then the learning outcomes obtained also well (Sudibyo et al., 2018). However, previous studies did not carry out several complete tests carried out by this study such as the t-test and correlation test where the t-test worked to compare students' interest and science process skills and the correlation test worked to determine the effect of students' interest and science process skills.

The generalization and novelty of this research are to analyze the comparison of students' interests with science process skills and to analyze the relationship between students' interests and students' science process skills. Where there is rarely research that examines the interests and skills of the science process of students in two junior high school classes at once. So that with this research, it can be known in more detail and accurately based on the tests that have been carried out by this research. Student interest is very important so that students have good learning outcomes and continue from high school to college (Giglio et al., 2020; Luo et al., 2020). The influence of interest on students' science process skills is also very important for students at the junior high school level to hone the skills and knowledge needed by students' interest and science process skills.

The implication of this research is that students' interests and skills are very influential in the learning process, especially in learning physics. In this study, it was found that students' interest and students' science process skills performed very well. This is very influential in learning physics in schools (Madu, 2020; Warfa et al., 2018). Thus, learning physics that is carried out with students' interests and science process skills is very effective for high school students. The limitation of this article is that it only measures students' interest and science process skills with four indicators. The indicators used in the interest variable are curiosity and learning materials and teacher attitudes. Then indicators in science process skills, namely: Observation, Communication. However, this research needs to be done to determine student responses after learning to analyze the process skills possessed by students, and also as a reference for educators to teach appropriately in learning activities. The researcher suggests to conduct further research to compare the interest variable or process skills with other variables such as motivation or learning model and the researcher suggests conducting research at the junior secondary or senior high school level.

4. CONCLUSION

The conclusion of this study is that there is a comparison of the interest and science process skills of female and male students in grades VII A and VII B in science subjects. There is a relationship between interest and science process skills in students with science subjects. From this research, it can be seen that students' interest and student's process skills are interconnected so it has an impact on students' interest in high science skills, so student skills are also high. The limitation of this article is that it only measures students' interest and science process skills with four indicators. The researcher suggests to conduct further research to compare the interest variable or process skills with other variables such as motivation or learning model and the researcher suggests.

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