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Analysis of Student Learning Interest In Physics Subject In Force Material

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Abstract: This study entitled "Analysis of Student Learning Interest in Physics in Force Material" aims to measure and determine the level of student interest in physics at SMA Negeri 11 Muaro Jambi. The method used by the researcher is a method in the form of a quantitative descriptive method with an instrument in the form of a student interest questionnaire. The population of this study were students in class X with a total of 32 students, students in class XI with a total of 33 students, and students in class XII with a total of 23 students. The sample technique used in this study is the total sampling technique. Researchers used a total sampling technique because the total population did not reach 100 students, so researchers used all students of class X, XII, and XII IPA 1, totaling 88 students as samples in this study. After the questionnaire was given to students and then calculated using Microsoft Excel, the results were obtained, then they were made into 4 categories with the final results in percent form and a bar chart was made. Based on the results that have been calculated, it is obtained that the level of student interest in physics class X IPA is in the good category which can be seen from Table 1 that as many as 46,8% of students have a high interest in physics subjects. Furthermore, students' interest in learning physics in class XI and XII IPA is in the low category which can be seen from Table 2 and Table 3 that 48,4% and 47,8% of students have a low interest in physics. In addition, students also do not understand the concept of force, classification of force and examples of force.

INTRODUCTION

The world of education in 2020 will be a very moving education, where there is the Covid-19 case which is the impact of the declining quality of education (Chang et al., 2020; Meiliani et al., 2021; Satta et al., 2021). Starting from curriculum changes that make the learning system switch from online to offline. The transition to the learning system did not bring about a significant change in the quality of education at that time. Education is learning understanding, insight and skills carried out by individuals and groups of people through teaching, guidance, and training that has become a hereditary

habit from generation to generation. Education has an important position in improving the quality of creative, productive and innovative human resources in determining the progress of a nation and state (Bahrudin & Yogihati, 2022; Masalesi, 2022; Zakwandi et al., 2022). To become a human being with noble character and to become a human being who believes and fears God Almighty, it is necessary to have a good education. From education we can have knowledge and can learn many sciences, one of which is physics.

Physics is a science that studies natural phenomena and symptoms that are presented systematically and can be studied by conducting research (Misbah et al., 2022; Nehru et al., 2022; Rahim & Nadira, 2022), measurements and experiments in accordance with general regulations. Physics is one of the most basic sciences that understands how the universe works. Physics plays an important role in the development of technology in the world(Ramadhani & Nurita, 2022; Yusuf et al., 2022). By studying physics can help develop skills and support the improvement of logical and creative thinking, being able to analyze situations critically and being able to solve a problem. Physics basically studies the phenomena and properties related to the universe which can be studied in a unique way, namely by observing, experimenting and analyzing so that it can be said that physics is an interesting and fun lesson.

However, in reality it is different from the actual situation which views that physics is a subject that is difficult to understand so that many students are allergic to hearing the word physics and it becomes a subject that is considered scary by students(Malone, 2008; Scott & Schumayer, 2017). There are many factors and problems learning physics experienced by students in class, one of which is a lack of understanding of physics concepts which causes students to find it difficult to learn physics so that it is the impact of students' lack of interest in physics lessons.In addition, another factor is the lack of students' interest in physics lessons is that there are too many formulas that are difficult to understand and the teacher's strategies and methods in teaching are less efficient, so students have great difficulty understanding physics lessons and making students interested in physics lessons.

Interest is a feeling of like, pleasure and interest in something without the influence of other people. If something that can not give pleasure, then people will not have an interest in it. Therefore, students who are interested in physics lessons mean these students are interested and think physics lessons are fun(Shute & Rahimi, 2021; Smith et al., 2014; Wells et al., 2020). Meanwhile, students who are less interested in physics think that physics lessons are difficult and scary. In a lesson there are factors that support the success of learning. One of them is learning facilities and infrastructure which are supporting factors and greatly impact on learning outcomes and student learning interest. However, with the lack of learning facilities and infrastructure which is an obstacle to the success of learning, especially in physics subjects which should be presented in an interesting way, but due to the lack of facilities and infrastructure, physics lessons are considered less interesting and make it difficult for students to understand concepts in physics. one of the causes of the lack of student interest in physics lessons and results in low student learning outcomes at school(Leak et al., 2017; Mestre et al., 2011; Perkins et al., 2006).

In this study, there is a difference between the previous research and the current research. There are 4 things that distinguish between the current research and previous research. First, in terms of research locations where there are differences in characteristics from previous research locations. Second, in terms of the subject matter, the subjects of this study were all students of class X, XI, and XII IPA of SMAN 11 Muaro Jambi. Third, from the method used where this research uses quantitative methods and to collect data it is done by giving questionnaires to students. Fourth, in terms of research results where the results of the analysis received have differences with previous studies. This is the difference between the previous research and the current research. However, previous research with current research has the same goal, namely to analyze students' interest in learning physics.

Research with the title "Analysis of Student Interests in Physics Subjects on Style Material" is the title that researchers use in conducting research. Researchers are interested in doing this research because with this researcher can measure and know the level of student interest in physics subjects. From this research it is hoped that prospective teachers and other teachers can attract and increase students' interest in physics subjects, because basically physics is an important subject to improve students' logical and creative thinking. This research can also be a reference for further research for other researchers.

METHOD

This research was conducted at SMA Negeri 11 Muaro Jambi, Mendalo Darat Village, Muaro Jambi Regency in classes X, XI, XII IPA. At first the researcher first asked permission from the school. After being allowed by the school, the researcher immediately went down to the field to conduct research. This research was conducted on Monday, 17 October 2022. The purpose of this study was to determine the level of students' interest in physics subjects, especially the force material. The method in this study uses a method in the form of quantitative descriptive(Creswell, John W ; Poth, 2017; Creswell, 2003, 2012). The method is a technique used to obtain a truth by conducting a search that is being studied. While descriptive quantitative is a method for collecting data with the aim of making a view of a situation by using lots of numbers. The target of this study were students of SMA Negeri 11 Muaro Jambi. The population of this study were students in class X with a total of 32 students, students in class XI with a total of 33 students, and students in class XII with a total of 23 students. The sample technique used in this study is the total sampling technique. This technique is used when the population is relatively small and few. The researcher used a total sampling technique because the total population did not reach 100 students, so the researchers used students of class X, XII and XII IPA, totaling 88 students as samples in this study .

The instrument used in this study was a questionnaire sheet. The questionnaire sheet is a draft written statement that is used to obtain reports about students, This questionnaire sheet uses a Likert Scale The questionnaire used is a closed questionnaire with a total of 10 statements with indicators in the form of impressions of pleasure, interest, attention and student participation. Furthermore, the questionnaire was given to

students of class X, XI and XII IPA SMA Negeri 11 Muaro Jambi to obtain data about students' interest in learning physics in class X, XII and XII IPA based on predetermined indicators. Data is calculated using Microsoft Excel and each indicator is calculated and made in the form of a percentage with the equation below as a reinforcement and explanation of the level of student interest in learning as follows:

$$P = \frac{Many\ students\ answered}{Total\ students} \times 100\%$$

RESULT AND DISCUSSION

In accordance with the research that has been done, what is measured in this study is the level of student interest in physics based on predetermined indicators, namely the impression of pleasure, interest, attention and student participation. To measure student interest, researchers used an instrument in the form of an interest questionnaire which was distributed to students as respondents with the aim of obtaining and collecting data. After the data is collected and then analyzed with the aim of drawing conclusions. The data obtained is processed and calculated using Microsoft Excel to obtain scores, values, mean, max, min, standard deviation and variance. After calculating, it can be determined the level of student interest in physics subjects in style material with 4 categories, namely very high, high, low and very low which will be made in a table. Then, the results are made in the form of a bar chart which can be seen in the table below:

Table 1. Categories of Students Learning Interest in Class X IPA 1

Interval	category	*f*	(%)
77 < X	Very high	3	9,3 %
69 < X ≤ 77	High	15	46,8%
61 < X ≤ 69	Low	9	28,1%
X ≤ 61	Very low	5	15,6%

From the table 1 of categories of students' learning interest in Class X IPA above, it can be made into a diagram as shown below:

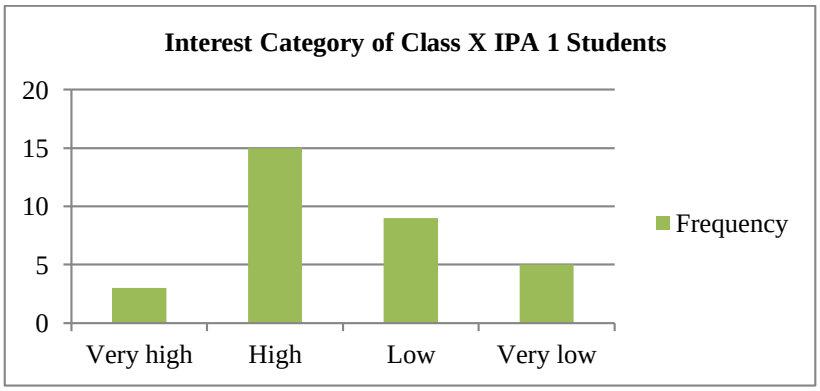

Diagram 1. Category of Students Learning Interest of Class X IPA 1

In table and diagram 1 above it is found that as many as 46.8% of students have a high level of interest in physics subjects. This is contrary to the data obtained in class XI IPA as shown in table and diagram 2.

Table 2. Categories of Students Learning Interest in Class XI IPA 1

Interval	Category	*f*	(%)
72 < X	Very high	6	18,1 %
65 < X ≤ 72	High	8	24,2%
58 < X ≤ 65	Low	16	48,4%
X ≤ 58	Very Low	3	9%

From the table of categories of students' learning interest in Class XI IPA above, it can be made into a diagram as shown below:

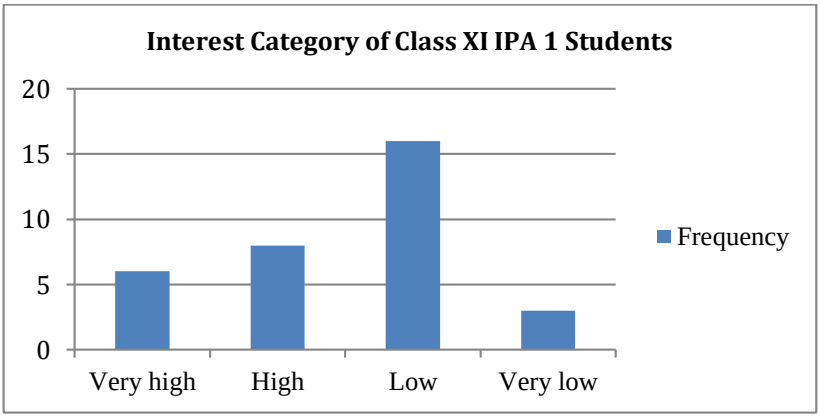

Diagram 2. Categories of Students Learning Interest of Class XI IPA 1

In table and diagram 2 above it is found that as many as 48.4% of students have a low level of interest in physics subjects. This is in accordance with the data obtained in class XII IPA as shown in table and diagram 3.

Table 3. Category of Students Learning Interest in Class XII IPA 1

Interval	Category	*f*	(%)
70 < X	Very high	2	8,6 %
65 < X ≤ 70	High	5	21,7%
60 < X ≤ 65	Low	11	47,8%
X ≤ 60	Very low	5	21,7%

From the table of categories of students' learning interest in Class XII IPA above, it can be made into a diagram as shown below:

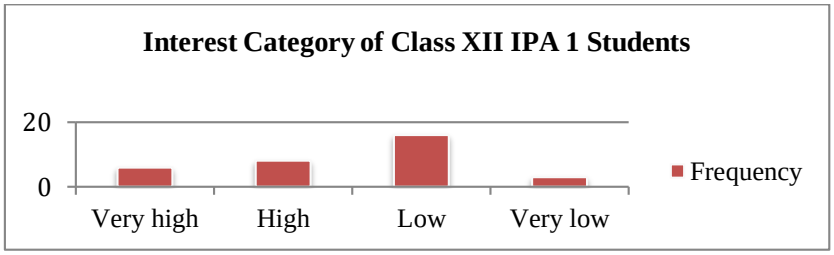

Diagram 3. Category of Students Learning Interest of Class XII IPA 1

After obtaining the category of students' interest level in physics subjects on style material. Then calculate the percentage of each indicator with several statements that have been given to respondents as reinforcement and explanation of the level of student interest in learning which can be seen in the tables below:

Table 4. Students enjoy learning physics in class X IPA 1

Alternative answers	Many students	Percent (%)
Agreed	29	90,6%
Against	3	9,4%
Total	32	100%

In table 4 above, the data shows that 90.6% of students enjoy learning physics and 9.4% of students do not like learning physics. However, this is contrary to the data obtained in class XI IPA 1 as shown in table 5.

Table 5. Students enjoy learning physics in class XI IPA 1

Alternative answers	Many students	Percent (%)
Agreed	16	48,5%
Against	17	51,5%
Total	33	100%

In table 5 above, it is found that 48.5% of students enjoy learning physics and 51.5% of students do not like learning physics. This is in accordance with the data obtained in class XII IPA 1 as shown in table 6.

Table 6. Students enjoy learning physics in class XII IPA 1

Alternative answers	Many students	Percent (%)
Agreed	11	47,8%
Against	12	52,2%
Total	23	100%

In table 4-6 above is a table of pleasure in learning physics, while the table of interest in learning physics can be seen in the table below.

Table 7. Students are interested in learning physics in class X IPA 1

Alternative answers	Many students	Percent (%)
Agreed	24	75%
Against	8	25%
Total	32	100%

In table 7 above, it is found that 75% of students are interested in learning physics and 25% of students are not interested in learning physics. However, this is contrary to the data obtained in class XI IPA 1 as shown in table 8.

Table 8. Students are interested in learning physics in class XI IPA 1

Alternative answers	Many students	Percent (%)
Agreed	16	48,5%
Against	17	51,5%
Total	33	100%

Table 8 above shows that 48.5% of students are interested in learning physics and 51.5% of students are not interested in learning physics. This is in accordance with the data obtained in class XII IPA 1 as shown in table 9.

Table 9. Students are interested in learning physics in class XII IPA 1

Alternative answers	Many students	Percent (%)
Agreed	8	34,8%
Against	15	65,2%
Total	23	100%

In table 7-9 above is a table of interest in learning physics, while the table of enthusiasm for learning physics can be seen in the table below.

Table 10. Students are enthusiastic about learning physics in class X IPA 1

Alternative answers	Many students	Percent (%)
Agreed	18	56,2%
Against	14	43,8%
Total	32	100%

In table 10 above, the data shows that 56.2% of students are enthusiastic about learning physics and 43.8% of students are not enthusiastic about learning physics. However, this is contrary to the data obtained in class XI IPA 1 as shown in table 11.

Table 11. Students are enthusiastic about learning physics in class XI IPA 1

Alternative answers	Many students	Percent (%)
Agreed	16	48,5%
Against	17	51,5%
Total	33	100%

In table 11 above, the data shows that 48.5% of students are enthusiastic about learning physics and 51.5% of students are not enthusiastic about learning physics. However, this contradicts the data obtained in class XII IPA 1 as shown in table 12.

Table 12. Students are enthusiastic about learning physics in class XII IPA 1

Alternative answers	Many students	Percent (%)
Agreed	15	65,2%
Against	8	34,8%
Total	23	100%

Pada taIn table 10-12 above is a table of enthusiasm for learning physics, while the table pays attention to the teacher when explaining can be seen in the table below.

Table 13. Students pay attention to the teacher in class X IPA 1

Alternative answers	Many students	Percent (%)
Agreed	27	84,4%
Against	5	15,6%
Total	32	100%

In table 13 above, it was found that 84.4% of students paid attention to the teacher and 15.6% of students did not pay attention to the teacher. This is in accordance with the data obtained in class XI IPA 1 as in table 14.

Table 14. Students pay attention to the teacher in class XI IPA 1

Alternative answers	Many students	Percent (%)
Agreed	29	87,9%
Against	4	12,1%
Total	33	100%

In table 14 above, it was found that 87.9% of students paid attention to the teacher and 12.1% of students did not pay attention to the teacher. This is in accordance with the data obtained in class XII IPA 1 as in table 15.

Table 15. Students pay attention to the teacher in class XII IPA 1

Alternative answers	Many students	Percent (%)
Agreed	22	95,7%
Against	1	4,3%
Total	23	100%

In table 13-15 above is a table paying attention to the teacher when explaining, while the concentration table when studying can be seen in the table below.

Table 16. Students concentrate on class X IPA 1

Alternative answers	Many students	Percent (%)
Agreed	22	68,8%
Against	10	31,2%
Total	32	100%

In table 16 above, the data shows that 68.8% of students concentrate and 31.2% of students do not concentrate. This is in accordance with the data obtained in class XI IPA 1 as in table 17.

Table 17. Students concentrate on class XI IPA 1

Alternative answers	Many students	Percent (%)
Agreed	23	69,7%
Against	10	30,3%
Total	33	100%

In table 17 above, the data shows that 69.7% of students concentrate and 30.3% of students do not concentrate. This is in accordance with the data obtained in class XII IPA 1 as in table 18.

Table 18. Students concentrate on class XII IPA 1

Alternative answers	Many students	Percent (%)
Agreed	14	60,9%
Against	9	39,1%
Total	23	100%

In table 16-18 above is a table of concentration while studying, while the chat table when the teacher explains can be seen in the table below.

Table 19. Students often chat in class X IPA 1

Alternative answers	Many students	Percent (%)
Agreed	10	31,3%
Against	22	68,7%
Total	32	100%

In table 19 above, the data shows that as many as 31.3% of students often chat and 68.7% of students don't talk often. This is in accordance with the data obtained in class XI IPA 1 as in table 20.

Table 20. Students often chat in class XI IPA 1

Alternative answers	Many students	Percent (%)
Agreed	11	33,3%
Against	22	66,7%
Total	33	100%

In table 20 above, the data shows that as many as 33.3% of students often chat and 66.7% of students don't talk often. This is in accordance with the data obtained in class XII IPA 1 as in table 21.

Table 21. Students often chat in class XII IPA 1

Alternative answers	Many students	Percent (%)
Agreed	10	43,5%
Against	13	56,5%
Total	23	100%

In table 19-21 above is a chat table when the teacher explains, while the active discussion and asking table can be seen in the table below.

Table 22. Active student discussions in class X IPA 1

Alternative answers	Many students	Percent (%)
Agreed	19	59,4%
Against	13	40,6%
Total	32	100%

In table 22 above, it was found that 59.4% of students were active in discussions and 40.6% of students were not active in discussions. This is in accordance with the data obtained in class XI IPA 1 as in table 23.

Table 23. Active students discussions in class XI IPA 1

Alternative answers	Many students	Percent (%)
Agreed	19	57,6%
Against	14	42,4%
Total	33	100%

In table 23 above, it was found that 57.6% of students were active in discussions and 42.4% of students were not active in discussions. This is in accordance with the data obtained in class XII IPA 1 as shown in table 24.

Table 24. Active student discussions in class XII IPA 1

Alternative answers	Many students	Percent (%)
Agreed	20	87%
Against	3	13%
Total	23	100%

In table 22-24 above is an active discussion and asking table, as for the table answers to questions by the teacher can be seen in the table below.

Table 25. Students answer questions in class X IPA 1

Alternative answers	Many students	Percent (%)
Agreed	14	43,8%
Against	18	56,2%
Total	32	100%

In table 25 above, it was found that 43.8% of students answered questions and 56.2% of students did not answer questions. This is in accordance with the data obtained in class XI IPA 1 as shown in table 26.

Table 26. Students answer questions in class XI IPA 1

Alternative answers	Many students	Percent (%)
Agreed	15	45,5%
Against	18	54,5%
Total	33	100%

In table 26 above, it was found that 45.5% of students answered questions and 54.4% of students did not answer questions. This is in accordance with the data obtained in class XII IPA 1 as shown in table 27.

Table 27. Students answer questions in class XII IPA 1

Alternative answers	Many students	Percent (%)
Agreed	8	34,8%
Against	15	65,2%
Total	23	100%

Tables 25-27 above are tables for answering questions by the teacher, while tables for recording material by the teacher can be seen in the table 28 below.

Table 28. Students record material in class X IPA 1

Alternative answers	Many students	Percent (%)
Agreed	30	93,8%
Against	2	6,2%
Total	32	100%

In table 28 above, it was found that 93.8% of students recorded material and 6.2% of students did not record material. This is in accordance with the data obtained in class XI IPA 1 as shown in table 29.

Table 29. Students record material in class XI IPA 1

Alternative answers	Many students	Percent (%)
Agreed	26	78,8%
Against	7	21,2%
Total	33	100%

In table 29 above, it was found that 78.8% of students recorded material and 21.2% of students did not record material. This is in accordance with the data obtained in class XII IPA 1 as in table 30.

Table 30. Students record material in class XII IPA 1

Alternative answers	Many students	Percent (%)
Agreed	17	73,9%
Against	6	26,1%
Total	23	100%

After the above data is calculated, the results obtained regarding students' interest in learning physics in class X, XI and XII SMA Negeri 11 Muaro Jambi. Data obtained from a questionnaire given by researchers to students as respondents. The data is calculated using Microsoft Excel and the percentage of each respondent is calculated based on predetermined indicators. These indicators are in the form of impressions of pleasure, interest, attention and student participation. For students' interest in class X physics is in the high category, it can be seen from table 1 that as many as 46,8% of students have a high level of interest in physics subjects. It is this high student learning interest in physics that makes them happy and interested in learning physics, which can be seen from Table 4 on the happy impression indicator, and Table 7 and Table 10 on the interest indicator that as many as 90,6% of students enjoy learning physics and as many as 9,4% of students do not enjoy learning physics. As many as 75% of students are interested in learning physics and as much as 25% of students are not interested in learning physics. As many as 56,2% of students are enthusiastic about learning physics and as many as 43,8% of students are not enthusiastic about learning physics. In addition, it turns out that the concentration factor can affect student learning interest(Aksit, 2012; Wang et al., 2017), if students concentrate fully, students will understand the lesson.

It can be seen from Table 17 that as many as 68,8% of students concentrate fully when studying physics and as many as 31,2% of students cannot concentrate fully in study physics. Friends and self can also be a factor of student interest in learning where students when studying chat more often with friends will make students lag behind a lot of material but if students don't chat with friends students will understand the material better. It can be seen from Table 16 on the attention indicator that there are 31,3% of students chat with friends while studying and as many as 68,7% of students do not chat with friends while studying. Active discussion and asking questions is also a factor in how interested students are in learning, if students often discuss and ask questions it means students are interested in learning. However, there were also several factors or problems that occurred, where students answered questions given by the teacher. It can be seen from Table 25 in the participation indicator that 43,8% of students answered questions from the teacher and 56,2% of students did not answer questions from the teacher. can be interpreted that students rarely answer questions given by the teacher. Furthermore, in answering questions given to students regarding physics lessons on force material where many students already understand the concept of force, it's just that students are still hesitant to describe it, students are also hesitant to give examples of force in everyday life, but students can provide some kinds of force, this can be seen from the questions given by researchers to respondents.

Meanwhile, students' interest in physics for class XI is in the low category. It can be seen from table 2 that 48,4% of students have a low level of interest in physics. It is

this low level of student interest that makes students unhappy, disinterested, unenthusiastic and rarely answer questions posed by the teacher which can be seen in Table 5 on the happy impression indicator, Table 8 and Table 11 on the interest indicator, and Table 26 on the indicator student participation that as much as 48,5% of students enjoy learning physics and as much as 51,5% of students do not like learning physics. As many as 48,5% of students are interested in learning physics and as much as 51, Students 5% of students are not interested in learning physics. As many as 48,5% of students are enthusiastic about learning physics and as much as 51,5% of students are not enthusiastic about learning physics. As many as 45,5% of students answered questions from the teacher and as many as 54,5% of students did not answer questions from the teacher. The above factors could have been caused by a lack of students' understanding of the material. The lack of students' understanding of the material can be caused by the teacher's method being too boring. It can be seen in Table 32 that 51,5% of students answered that the teacher's method of teaching was very boring and 48,5% of students answered that the teacher's method of teaching was not boring. Another factor that makes students not interested in physics is that it can be influenced by internal factors and external factors at school. Internal factors can come from teachers, yourself and friends at school. While external factors can come from parents and family. That's what makes students' interest in learning physics becomes low.

Furthermore, for students' learning interest in class XII physics subjects are in the low category can be seen in table 3 that as many as 47,8% of students have a low interest in physics subjects. This also makes students unhappy, uninterested, unenthusiastic and rarely answer questions posed by the teacher which can be seen from Table 6 on the happy impression indicator, Table 9 on the interest indicator, Table 27 on the participation indicator and Table 33 that there are 47,8% of students enjoy learning physics and as much as 52,2% of students do not like learning physics. As many as 34,8% of students are interested in learning physics and as much as 65,2% of students are not interested in learning physics. As many as 34,8% of students answered questions from the teacher and as many as 65,2% of students did not answer questions from the teacher. Finally, 52,2% of students considered the teacher's method of teaching very boring and 47,8% of students considered the teacher's method of teaching not boring. This is still the same as previously described, where the low interest of students in physics subjects can be influenced by internal and external factors. In addition, it turns out that the teacher's method of teaching also affects students' learning interest, teachers too often use methods that are too conservative so that students get bored easily in learning, teachers should be able to use methods that are more fun and not boring by utilizing other facilities and infrastructure, the environment and society in schools to assist in the learning process so that students are more interested in learning and don't get bored quickly.

From the explanation above, there are differences in students' interest in physics as evidenced by the fact that students' interest in physics is in the high category as evidenced in class X IPA. However, it turns out that more people are less interested in physics, as evidenced in class XI and XII IPA, where students' interest in physics is in the

low category. This can also be seen from some of the difficulties experienced by students in learning physics, especially in the material of force, where students do not know what the concept of force is, classify various force and give examples of force in everyday life.

There are reasons why students do not know the concept of force, various force and examples of force in everyday life. That is caused by the teacher's boring method which makes students less willing to understand the material. Students are also lazy to repeat lessons that have been studied at home. Students play Smartphone more than reading books. There are several ways to increase students' interest in learning. First, using interesting learning media with the aim of increasing students' understanding of physics learning itself, students sometimes cannot directly understand the material conveyed by the teacher in class, therefore other learning media and facilities are needed so that students can repeat material that is not understood, such as visual media, audio media, social media and so on. Second, a learning system that is not monotonous and conservative can increase student learning interest, students often complain that the method used by the teacher is too boring because the teacher explains the material using the same method, therefore innovation is needed by using the system. challenging and fun learning such as physics experiments and practicums. Apart from that, there are many things that can be used so that students are interested in learning physics, such as comfortable classroom conditions, competent teachers, and so on.

CONCLUSION

The research entitled students' interest in learning physics in the subject matter of style at SMA Negeri 11 Muaro Jambi aims to measure and find out the level of students' interest in physics at SMA Negeri 11 Muaro Jambi. So it can be concluded that students' interest in class X physics is in the high category. It can be seen from table 1 that as many as 46,8% of students have a high level of interest in physics. Students' interest in learning physics in class XI and XII is in the low category. It can be seen from Tables 2 and 3 that 48,4% of students have a low level of interest in physics subjects and as many as 47,8% of students have low interest too. towards physics subjects. Students also do not understand the concepts, classifications and examples of force material so that it can be said that students' interest in physics is low. Lack of student interest in learning can be influenced by several factors such as boring teaching methods and inadequate facilities and infrastructure. There are several ways to increase student interest in learning, namely teachers can use interesting and not boring learning methods and media such as visual media, audio media, social media and so on. Therefore, with the conclusions above, the authors suggest that teachers provide motivation and innovation to students that physics is not difficult and that in the learning process teachers must innovate such as learning media and new learning methods and it is hoped that this research can be further developed by means of conducting research in schools aims to be able to carry out various methods so that students can have an even higher interest in learning physics.

REFERENCES

Aksit, F. (2012). Clarification of Selected Misconceptions in Climate Topic. *Procedia* -

Social and Behavioral Sciences, *46*, 4363–4368. https://doi.org/10.1016/j.sbspro.2012.06.255

Bahrudin, A. D., & Yogihati, C. I. (2022). Development of Interactive Learning Media as an Alternative to Improve Students ' Conceptual Understanding and Motivation on the Temperature and Heat Topics. *International Journal of Education and Teaching Zone*, *1*(2), 8–10. https://doi.org/https://doi.org/10.57092/ijetz.v1i2.37

Chang, T. Y., Hong, G., Paganelli, C., Phantumvanit, P., Chang, W. J., Shieh, Y. S., & Hsu, M. L. (2020). Innovation of dental education during COVID-19 pandemic. *Journal of Dental Sciences*, *155*. https://doi.org/10.1016/j.jds.2020.07.011

Creswell, John W ; Poth, C. N. (2017). A Book Review: Qualitative Inquiry & Research Design: Choosing Among Five Approaches. In *Russian Journal of Sociology* (Vol. 3, Issue 1). https://doi.org/10.13187/rjs.2017.1.30

Creswell, J. W. (2003). Research Desgn Quantitative, Qualitative, and Mixed Method, Appraoches Seccond Edition. (p. 246).

Creswell, J. W. (2012). *Planning, Conducting, and Evaluating Quantitative and Qualitative Research*.

Leak, A. E., Rothwell, S. L., Olivera, J., Zwickl, B., Vosburg, J., & Martin, K. N. (2017). Examining problem solving in physics-intensive Ph.D. research. *Physical Review Physics Education Research*, *13*(2), 1–13. https://doi.org/10.1103/PhysRevPhysEducRes.13.020101

Malone, K. L. (2008). Correlations among knowledge structures, force concept inventory, and problem-solving behaviors. *Physical Review Special Topics - Physics Education Research*, *4*(2), 1–15. https://doi.org/10.1103/PhysRevSTPER.4.020107

Masalesi, A. K. (2022). Resource Identification and Level of Understanding of Particle Dynamics Concepts. *International Journal of Education and Teaching Zone*, *1*(2), 8–10. https://doi.org/https://doi.org/10.57092/ijetz.v1i2.48

Meiliani, M., Tanti, T., & Sulman, F. (2021). Student Resources On Newton's Lawa Concepts Reviewing From Gender: Identification Using Open-Ended Question. *Indonesia Journal of Science and Mathematics Education*, *04*(November), 324–332. https://doi.org/10.24042/ijsme.v4i3.10177

Mestre, J. P., Docktor, J. L., Strand, N. E., & Ross, B. H. (2011). Conceptual Problem Solving in Physics. In *Psychology of Learning and Motivation - Advances in Research and Theory* (Vol. 55). Elsevier Inc. https://doi.org/10.1016/B978-0-12-387691-1.00009-0

Misbah, M., Trisnowati, E., Rahim, A., & Zb, A. (2022). Investigating Problem Solving and Mathematical Connections in Solving the Fermi-Dirac Equation. *International Journal of Education and Teaching Zone*, *1*(2), 8–10. https://doi.org/https://doi.org/10.57092/ijetz.v1i2.36

Nehru, N., Ananda, R., Zb, A., & Novaliyyan, D. (2022). The Analysis of Mathematical Critical Thinking Ability and Mathematical Creativity : Judging from the Process of Deriving the Fermi-Dirac Formula. *International Journal of Education and Teaching Zone*, *1*(2), 8–10. https://doi.org/https://doi.org/10.57092/ijetz.v1i2.33

Perkins, K., Adams, W., Dubson, M., Finkelstein, N., Reid, S., Wieman, C., & LeMaster, R. (2006). PhET: Interactive Simulations for Teaching and Learning Physics. *The Physics Teacher*, *44*(1), 18–23. https://doi.org/10.1119/1.2150754

Rahim, A., & Nadira, N. (2022). Application of Model Group Investigation based on Experiments Against Student Academic Skills. *International Journal of Education and Teaching Zone*, *1*(2), 8–10.

https://doi.org/https://doi.org/10.57092/ijetz.v1i2.35

Ramadhani, F. A., & Nurita, T. (2022). The Critical Thinking Skills of Junior High School Student On Simple Machines. *International Journal of Education and Teaching Zone*, *1*(2), 8–10. https://doi.org/DOI: https://doi.org/10.57092/ijetz.v1i2.29 The

Satta, K., Ahmad, T., Siddiqui, D., Hasan, Z., Akram, A., & Yusoff, M. S. B. (2021). Exploring Awareness About COVID-19 Using YouTube Videos: based on the user engagement. *Indian Journal of Science and Technology*, *14*(20), 1615–1621. https://doi.org/10.17485/ijst/v14i20.384

Scott, T. F., & Schumayer, D. (2017). Conceptual coherence of non-Newtonian worldviews in Force Concept Inventory data. *Physical Review Physics Education Research*, *13*(1), 1–12. https://doi.org/10.1103/PhysRevPhysEducRes.13.010126

Shute, V. J., & Rahimi, S. (2021). Stealth assessment of creativity in a physics video game. *Computers in Human Behavior*, *116*, 106647. https://doi.org/10.1016/j.chb.2020.106647

Smith, T. I., Wittmann, M. C., & Carter, T. (2014). Applying model analysis to a resource-based analysis of the Force and Motion Conceptual Evaluation. *Physical Review Special Topics - Physics Education Research*, *10*(2), 1–17. https://doi.org/10.1103/PhysRevSTPER.10.020102

Wang, J. Y., Wu, H. K., & Hsu, Y. S. (2017). Using mobile applications for learning: Effects of simulation design, visual-motor integration, and spatial ability on high school students' conceptual understanding. *Computers in Human Behavior*, *66*, 103–113. https://doi.org/10.1016/j.chb.2016.09.032

Wells, J., Henderson, R., Traxler, A., Miller, P., & Stewart, J. (2020). Exploring the structure of misconceptions in the force and motion conceptual evaluation with modified module analysis. *Physical Review Physics Education Research*, *16*(1). https://doi.org/10.1103/PHYSREVPHYSEDUCRES.16.010121

Yusuf, I., Zb, A., & Rozal, E. (2022). The Understanding Mathematical Communication Concepts and Skills : Analysis of the Ability of Prospective Physics Teachers ? *International Journal of Education and Teaching Zone*, *1*(2), 8–10. https://doi.org/https://doi.org/10.57092/ijetz.v1i2.34

Zakwandi, R., Wulansari, P., Maula, A. R., & Hasan, S. (2022). Learning Reflection During Covid-19 Pandemic : Teacher Perception Toward Google Form Based Test. *International Journal of Education and Teaching Zone*, *1*(2), 8–10. https://doi.org/https://doi.org/10.57092/ijetz.v1i2.42