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1. Originality: 79%
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3. Results: Satisfactory
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----- **REVIEW 2** -----

Review Decision 2: Accepted

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4. References are Cited Properly

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Utilization of Interactive Module to Improve Student Learning Interests in Materials Hydrocarbons And Earth Oil in XI IPA

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Keywords: Improvement, interest in learning, interactive modules, feeling of pleasure, interest

Abstract: The research was conducted to find out whether there was an increase in student learning interest by using an interactive module and how much the increase was. The research subjects were students of class XI IPA Santo Kristoforus High School Jakarta with two treatments namely class XI IPA 1 as a control class using a student handbook totaling 33 students and class XI IPA 2 as an experimental class using interactive modules totaling 33 students. The total number of 66 students. Students and sampling techniques are done by purposive sampling (directly). Data collection techniques in this study used a Likert scale questionnaire with two group research design: pre nontest and postnontes. Data obtained from the results of the pre-test was processed in excel which then tested for normality and homogeneity using SPSS 22 for Windows. From the test results obtained the results for the normality test sig value = 0.200 sig 0.05, meaning that it can be normally distributed. Whereas for homogeneity test obtained sig 0,420 sig 0,05 which means the data is homogeneous. To find out how to improve student learning outcomes, calculate the score through the gain test. In the control class there was an increase in student learning interest of 6.5%, with the highest indicator of pleasure of 46.51% while in the experimental class there was an increase in student interest in learning by 12.92%, with the highest indicator of interest of 72.41%.

1 INTRODUCTION

Changes and developments in human life, one of which is determined by the quality of the education process. Quality education is very supportive of the creation of intelligent human resources and able to compete in the era of globalization. If in an environment the community takes education, then that environment will be superior to other environments (Buerck et al., 2003). Therefore the success of a country can be seen from the success of education in that country. In this case, the government plays an important role in improving the quality of education. This can be strengthened based on the research which says that the government must have a commitment to be serious in improving the quality of education for the prosperity and progress of the nation in order to become a nation that can follow the progress of the times (Muhardi, 2004; Rosyid, 2016).

For this reason, professional teachers are needed, meaning that the work of teachers can only be carried out by people who have academic qualifications, competencies and educator

certificates for each type and level of education (Laelasari, 2013; Muhlison, 2014). To make teachers professional, educational institutions must hold activities that can develop the potential within the teacher through the provision of workshops, seminars, training and others (Berliani, 2017; Riyadi, 2016). In line with that, the teacher must also be able to involve students in the learning process so that it can foster and increase students' interest in learning the lessons learned. Students are interested in learning the lesson well based on their interests and abilities. Interest in learning is created and must be fostered so that it grows and feels so it becomes a habit. The indicators of interest in learning are having curiosity about what is learned, liking what is learned, high enthusiasm to get the desired results and always paying attention in order to know or master the lesson (Ahmadi, 2010; Aritonang, 2008).

In fact, student interest in learning is still relatively low. Specifically the interest in learning towards chemistry subjects. This is evidenced from the Ministry of Education and Culture circular based on the favorite voting for the SMA IPA UN 2017, that the number of students interested in taking the

UN Chemistry specialization is only 20% (detiknews.com, June 23, 2017). In addition, based on a survey conducted by researchers at the beginning of April 2018 to SMA Santo Kristoforus 2 Jakarta using a questionnaire to all students of class XI IPA as well as interviews about students' interest in chemistry. From the survey results it is obtained that 85% of students have no interest in learning chemistry because the lessons are not interesting, teaching materials used in schools are also long-winded and boring to read. But that does not mean the value of learning outcomes in this school is low. 50% of students are able to achieve the KKM value because there are indeed many students at the school who are smart, only their interest in learning chemistry is lacking. This is evidenced by the lack of students who take specialization in chemistry when the UN is only 2 people out of 30 students. Furthermore, the researchers asked about teaching materials such as what they wanted to attract their learning interest, obtained 85% of students wanted a picture book, a brief and clear explanation so that it was easy to understand.

Based on the above problems and information obtained from previous research references, the researcher wants to see if there is an increase in students' learning interest when learning by using interactive learning modules. Given the large role of learning devices on students' interest or interest in learning and understanding lessons including chemistry lessons, the researcher took the title: "Utilization of Interactive Modules to Increase Student Learning Interest in Hydrocarbon and Petroleum Materials in Class XI IPA SMA

2 LITERATURE REVIEW

2.1. Interactive Module

Media is anything that can be used to convey messages from the sender to the recipient of the message (Adi Widodo et al., 2018; Widodo, 2018; Widodo et al., 2019, 2018). But what is discussed here is about learning media that can be understood as anything that can convey and channel messages from a planned source so as to create a conducive learning environment where the recipient can carry out the learning process efficiently and effectively. Learning media that are often used in schools include books and modules. Judging from the nature of the presentation of the message, the book tends to be informative and emphasizes more on the presentation of teaching material with a broad and

general scope. Because of its nature, the communication process that takes place into one direction and the reader tends to be passive. While the module is a learning material that can be used by students to learn independently with as little help as possible from others. It was said so, because the module was made based on a comprehensive and systematic learning program and was designed for an independent learning system (Ena, 2011; Jonassen et al., 1994; Saputro, 2016) 2008).

The module is defined as one of the smallest teaching and learning program units outlined in detail; Instructional objectives to be achieved, Topics to be used as the basis of the teaching-learning process, Principal materials learned, Module positions and functions in a broader program unit, The role of the teacher in the teaching-learning process, Tools and resources to be used, Learning activities that must be carried out and lived by students sequentially, Work sheets that must be filled out by students, and evaluation programs to be carried out (Asih Mardati, 2016; Budimah et al., 2014; Hutabri, 2017; Syahrir and Susilawati, 2015).

The module is a printed teaching material designed to be studied independently by learning participants (Berliani, 2017; Riyadi, 2016). Modules are also called media for independent learning because they are equipped with instructions for self-study. This means that the reader can carry out learning activities without the presence of a teacher directly. The module is one of the learning media in the form of a script or print media that is often used by teachers and students in learning activities. In addition, the module is also said to be interactive because the user will experience interaction and be active, for example the process of question and answer, the existence of images without explanation, but students already understand, pay attention to changes in writing colour and others.

An interactive module is the utilization of advances in computer technology (Putra et al., 2017). Making teaching materials can be made interactive because of the images and messages that are displayed so as to cause interaction between teacher and students as well as students and students in learning. The module is formulated as one complete unit that stands alone, consisting of a series of learning activities arranged to assist students in achieving learning goals that have been specifically and operationally formulated. Modules are used as organizing learning materials that demonstrate an interactive educational function. The strategy of organizing learning material refers to efforts to show students the interest between facts, concepts,

procedures and principles contained in the learning material. Its usefulness can make students more interested and interested in learning that can automatically improve learning outcomes.

The purpose of compiling the module is so that students can master the competencies taught in learning activities as well as possible (BSNP, 2006; Dewanti, 2009). For teachers, the module is also a reference in presenting and delivering material during the learning activities. That way students are more interested in reading it. The function of the module is as a learning material used in student learning activities. With modules, students can study more directed and systematically. Students are expected to master the competencies demanded by the learning activities that they participate in. Modules are also expected to provide learning instructions for students while participating in learning.

2.2. Student Learning Interest

Interest can be interpreted as a joy, passion or pleasure in something (Aritonang, 2008; Krapp, 1999; Schiefele, 1991). According to Sudirman (2007), interest is a condition that occurs when someone sees the characteristics or meanings of a situation that is associated with their own desires or needs (Sudarmin et al., 2017; Sudirman et al., 2018). Therefore, whatever a person sees might be able to arouse his interest to the extent that what is seen has a relationship with his own interests. This shows that interest is the tendency of one's soul towards an object, usually accompanied by feelings of pleasure, because they feel there is an interest in something.

According to Bernard states that interest arises not suddenly or spontaneously but rather arises as a result of participation, experience, habits during study or work (Susanto, 2013). So it is clear that interest will always be related to problems of needs and desires. In relation to learning, students' interest in learning is closely related to personality, motivation, expression and self-concept or identification. In practice, interest or encouragement in students is related to how students can actualize themselves through learning. Where self-identification has to do with opportunities or obstacles students in expressing their potential or creativity as an expression of the specific interests that he has. The hereditary factors and external or environmental influences are more related to changes that occur in students' interests due to the influence of class situations, systems and family encouragement.

From some of the definitions above, it can be concluded that interest is an impulse in a person or factors that generate interest or attention effectively which causes the selection of an object or activity that is beneficial, pleasant and over time will bring satisfaction in him. Someone tends to like an activity that he believes has been done or can be done successfully. This perception of success is determined by the background of the results obtained through the tasks and from people who are related to these tasks or similar ones such as teachers and parents. If a student believes that he has carried out a number of related tasks successfully, he is more likely to face further study assignments with positive effects, and vice versa. Also shows that achievement and subject-related affect are interrelated and influence each other (Susanto, 2013). High achievement increases positive effects, where positive effects make achievement higher, and vice versa.

The emergence of interest in a person can in principle be divided into two types, namely interests originating from innate traits and interests arising from external influences (Indaryati and Jailani, 2015; Suswina, 2011). First, the interest that comes from nature, arises by itself from each individual, this is usually influenced by heredity or natural talent. Second, interests arising from outside influences of individuals arise along with the development process of the individual concerned. This interest is greatly influenced by the environment, parents' encouragement and habits or customs.

According to William James that student interest is a major factor in determining the degree of student learning activities (Darmadi, 2017). So, interest is a factor that determines active student involvement in learning. Furthermore, Kurt singer (1987) suggests several factors that can lead to interest in learning (Dunlosky et al., 2013; McGlannan and Eysenck, 1977; Schiefele, 1991; Silvia, 2008). Lessons will attract students if there is a relationship between learning and real life. Assistance provided by teachers to students in achieving certain goals. The opportunity given by the teacher for students to play an active role in the learning process. The attitude shown by the teacher in an effort to show student interest, the attitude of a teacher who is disliked by students will certainly reduce the interest and attention of students towards the subjects taught by the teacher concerned. According to Sukartini based on the understanding of interest in learning, the indicators of interest can be identified by analysing the activities carried out or objects that are used as pleasure. The analysis can be done on four things,

namely: the desire to have something, (1) the object or activity that is preferred; (2) Types of activities carried out to obtain something that is liked; (3) Efforts made to realize the desire or taste for certain objects or activities (Susanto, 2013).

3 METHOD

3.1 Research Location and Time

This research will be conducted in SMA Santo Kristoforus 2 Jakarta class XI IPA 1 and 2 even semester, July 2017/2018 school year

3.2 Sampling Technique

The sampling technique was done by purposive sampling (directly), namely class XI IPA 1 as a control class totalling 33 students and the class XI IPA 2 as an experimental class totalling 33 students. In total there are 66 students

3.3 Indicator of Interest

Validation is done through construct validation to expert validators. After the points of the statement are prepared, then consult the validation construct or Expert Validator namely Mr. Nelius Harefa, S.Sc., M.Pd. The expert is a lecturer outside the supervisor in accordance with the field concerned. Scoring is used using a Likert scale. The Likert scale is a scale that contains five levels of answers regarding the respondent's agreement to the statement or statement put forward the answer options provided (Boone and Boone, 2012; Clason and Dormody, 1994; Sullivan and Artino, 2013). However, the Likert scale has been modified to eliminate weaknesses contained in the five-level scale. So in this study have used four alternative answers, namely: strongly agree (SS), agree (S), disagree (TS), and strongly disagree (STS). Likert scale is used to measure the attitudes, opinions, and perceptions of a person or group of people about social phenomena (Sugiyono, 2010).

Table 1. Indicator of Interest

Indicator	Number of Item Statement
Feelings of pleasure (Types of activities carried out to get the ikes)	1,2,3,4
Involvement (student activity in the learning process)	5,6,7,8

Indicator	Number of Item Statement
Interest of Learning	9,10,11, 12
Attention	13,14,15,16

4 RESULT

Table 2. Data Description

Class	Paired differences			t	df	sig
	Mean	Std. deviation	Std. error mean			
Cont.	3.503	7.911	1.377	2.544	32	0.016
Exp.	11.08	9.393	1.635	6.776	32	0.000

In the control class it is known that prior to the treatment of students, pre-test there were 270 students who agreed, while after treatment using the handbook and giving a post-test there was a decrease in the answers of students who agreed to 213. Whereas in the experimental class it was known that prior to treatment , pre nontest there were 48 students who agreed very much, after treatment using the interactive module and post nontest there was an increase in the answers of students who strongly agreed to 208.

4.1.1 Indicator of Involvement

In the control class it is known that prior to the treatment of students, pre-test there were 228 students agreeing to answers, while after treatment using a handbook and giving a post-test there was a decrease in the answers of students who agreed to 192. Whereas in the experimental class it was known that prior to treatment, there were 88 pre-test answers of students who strongly agreed, after treatment using the interactive module and giving post-test there was an increase in the answers of students who strongly agreed to 148.

4.1.2 Interest Indicator

In the control class it is known that prior to the treatment of students, pre-test there were 180 students who agreed, while after treatment using the handbook and giving a post-test there was a decrease in the answers of students who agreed to be 162. While in the experimental class it was known that prior to treatment, pre nontest there were 104 students who agreed very much, after treatment using the interactive module and post nontest there

was an increase in the answers of students who strongly agreed to 220.

4.1.3 Indicator of Attention

In the control class it is known that prior to the treatment of students, pre-test there were 204 students agreeing answers, whereas after treatment using the handbook and giving a post-test there was an increase in the answers of students who agreed to be 219. While in the experimental class it was known that prior to treatment, pre nontest there were 104 students who agreed very much, after treatment using the interactive module and post nontest there was an increase in the answers of students who strongly agreed to 236.

4.2 Normality Test

Normality Test is conducted to determine whether the research data has a normal distribution or not. If the data is normally distributed or the distribution of research data is normal then the data can be tested with parametric statistics. The normality test is carried out with two approaches namely the Kolmogorov-Smirnov approach and as a comparison, the Shapiro-Wilk approach is used. The normality test results can be seen in table 3.

Table 3. Result of the Normality Test

Score	Kolmogorov-Smirnov		
	Statistic	df	Statistic
Pre-Nontest	0.083	66	0.200

Based on the results described above, it can be stated that the research data is normally distributed, with sig $0.200 > 0.05$

4.3 Homogeneity Test

Homogeneity test in this study was also conducted to see whether the data is homogeneous or not. Homogeneity is also one of the requirements in conducting data analysis based on parametric statistics. In this study, homogeneity testing was carried out using the Levene approach. The homogeneity test results can be seen in table 4.

Table 3. Result of the Normality Test

Lavene's taticistic	df1	df2	Sig.
1.080	7	16	0.420

Homogeneity test results in table 4.3.1 above indicate that the significance value (Sig.) In the

Levene approach is 0.420. The significance value is greater than 0.05 ($0.420 > 0.05$) so it can be stated that the research data are homogeneous

4.4 Hypothesis Test

Based on the paired t test results in table 5 above, it is known that the significance value (Sig.) For the control class is 0.016 less than 0.05. This means that the media used in the control class significantly influence student interest in learning. Furthermore, it is also known that the significance value (Sig.) For the experimental class is 0,000 less than 0.05. This means that the interactive modules used in the experimental class are significantly beneficial to students' learning interests. The significance value in the experimental class is better than the significance value in the control class. So it can be stated that the interactive module used has better benefits in increasing student interest in learning.

Table 5. Result of the Hypothesis Test

Class	Paired differences			t	df	sig
	Mean	Std. deviation	Std. error mean			
Cont.	3.503	7.911	1.377	2.544	32	0.016
Exp.	11.08	9.393	1.635	6.776	32	0.000

Research activities continued with learning activities using an interactive module, after teaching using the interactive module, the researcher gave a post-test with the same questionnaire statement. The questionnaire was processed using SPSS 22 for windows and Likert scale calculations. Using the T-Test. From the results of data processing, the results show that the t-test for the pre-test control class is 1489 total score ≤ 1584 and the post-test control class is 1563 total score ≤ 1584 or sig (2-tailed) score of $0.016 < 0.05$, it means the learning media with textbooks used in the control class have a significant effect on student interest in learning. T-count for the pre-test experimental class was 1492 total error ≤ 1584 ; post-test amounted to 1726 total score ≤ 2112 or sig (2-tailed) score; the significance value (Sig.) is $0,000 < 0.05$. This means that the interactive modules used in the experimental class have a significant increase in student interest in learning. The significance value in the experimental class is better than the significance value in the control class. So it can be stated that the interactive module used has better benefits in increasing student interest in learning.

4.5 Gain Test

The gain test results in this study were divided into two parts. The first part is the overall gain test and the second part is the gain test for each indicator in a questionnaire consisting of four indicators. The overall gain test results can be seen in the table 6.

Table 6. Gain Test Result for Control Class

Indicator	Average pre-nontest	Average post-nontest	Gain	Percentage
Feeling happy	92.5	91.75	0.1	10%
Involvement	96	97.75	0.4375	43.75%
Attraction	89.25	94.75	0.4651	46.51%
Attention	94.75	106.5	0.238	23.80%
Whole	372.5	390.25	0.00651	6.52%

Based on table 6 it is known that the value of the gain for the indicator of feeling happy is 0.1, if it is presented it can be stated that the textbook can increase student interest in learning by 10%. In relation to the gain index, the gain value for the feeling of pleasure indicator is included in the normal category. The gain value for the engagement indicator is 0.4375. If it is presented, it can be stated that the textbook can increase student learning interest by 43.75%, in relation to the gain index, the gain value for the engagement indicator is included in the medium category. The gain value for the interest indicator is 0.4651. If it is presented, it can be stated that the textbook can increase student learning interest by 46.51%, in relation to the gain index, the gain value for the engagement indicator is included in the medium category. The gain value for the attention indicator is 0.2380. If presented, it can be stated that textbooks can increase student learning interest by 23.80%. In relation to the gain index, the gain values for indicators of interest, pleasure and student involvement are included in the normal category

For the experimental class, the gain test provides data that the gain value for the indicator of feeling happy is 0.1953. If it is presented, it can be stated that the interactive module can increase student learning interest by 19.53%. In relation to the gain index, the gain value for the feeling of pleasure indicator is included in the normal category. The gain value for the engagement indicator is 0.205. If it is presented, it can be stated that the interactive module can increase student learning interest by 20.50%, in relation to the gain index, the gain value for the engagement indicator is included in the

normal category. The gain value for the interest indicator is 0.7241. If it is presented, it can be stated that the interactive module can increase student learning interest by 72.41%, in relation to the gain index, the gain value for the engagement indicator is included in the high category. The gain value for the happiness indicator is 0.398. If presented, it can be stated that interactive modules can increase student learning interest by 39.8%. The gain value for the attention indicator is 0.5. If presented, it can be stated that the interaction module can increase student interest in learning by 50%. In relation to the gain index, the gain values for indicators of interest, pleasure and student involvement are included in the moderate category. For more details can be seen in the table 7.

Table 7. Gain Test Result for the Eksperimen Class

Indicator	Average pre-nontest	Average post-nontest	Gain	Percentage
Feeling happy	89.25	110.25	0.1953	19.53%
Involvement	95	1005.25	0.205	20.50%
Attraction	85.5	75	0.7241	72.41%
Attention	97.25	111	0.5	50%
Whole	367	401.5	0.1292	12.92%

5 DISCUSSION

The study was conducted at sma santo kristoforus 2 cengkareng, west jakarta on july 30 and august 3, 2018, before conducting the research, the researchers first conducted a school observation of students in class xi science. Researchers observe student interest in teaching and learning activities, observation of student interest in learning to find out what problems occur in the teaching and learning process, especially in chemistry lessons. Researchers spread the questionnaire of interest to students of class xi science, from the observations it was concluded that students' interest in learning chemistry was indeed low. Based on these results the researchers tried to provide one solution in order to increase student interest, namely learning by using interactive module learning media. This research was conducted by taking the population of the entire class xi ipa of sma santo kristoforus 2. From the population, samples were taken with a purposive sampling class xi ipa 2 as an experimental class totaling 33 students and class xi ipa 1 as a control class totaling 33 students. The total number of students is 66 students. The research began with the

giving of pre-test in the form of a questionnaire of learning interest, amounting to 16 statements. Data obtained from the pre-test results are processed in the form of excel which is then tested for normality and homogeneity using spss 22 for windows. From the test results obtained for the normality test the value of sig = 0,200 sig 0.05, meaning it can be normally distributed. Whereas for homogeneity test, sig 0,420 sig 0,05, which means the data is homogeneous.

Research activities continued with learning activities using an interactive module, after teaching using the interactive module, the researcher gave a post-test with the same questionnaire statement. The questionnaire was processed using spss 22 for windows and likert scale calculations. Using the t-test. From the results of data processing, the results show that the t-test for the pre-test control class is 1489 total score skor 1584 and the post-test control class is 1563 total score \leq 1584 or sig (2-tailed) score of $0.016 < 0.05$, it means the learning media with textbooks used in the control class have a significant effect on student interest in learning. T-count for the pre-test experimental class was 1492 total error \leq 1584; post test amounted to 1726 total score \leq 2112 or sig (2-tailed) score; the significance value (sig.) Is $0,000 < 0.05$. This means that the interactive modules used in the experimental class have a significant increase in student interest in learning. The significance value in the experimental class is better than the significance value in the control class. So it can be stated that the interactive module used has better benefits in increasing student interest in learning.

Increased interest in learning can be seen from the data in table 6 for the control class and table 7 for the experimental class. Increased student interest in learning occurs from pleasure to be happier, from those involved to becoming more involved in the learning process, from those who are interested in becoming more interested in using interactive modules. Where the interactive module is a teaching material that invites readers to experience interaction and be active and make it easier for students to understand what is conveyed by the book.

The definition of interest according to sudirman (2007) is a condition that occurs when a person sees the characteristics or meanings of a situation that is associated with his own desires or needs. So that the interactive module is designed in such a way as to be able to arouse students' interest in learning in that module there are pictures and messages that are displayed so as to cause interaction between the teacher and students as well as students and students

in learning. According to william james in darmadi h (2017) see that student interest is a major factor in determining the degree of student learning activities. So, interest is a factor that determines active student involvement in learning.

In the learning process that takes place with hadrocarbon material, there is an increase in student interest in using interactive modules.

5.1 Indicator of feeling happy

In the control class it is known that prior to the treatment of students, pre-test there are 270 students who agree with answers, while after treatment using a handbook and giving a post-test there is a decrease in the answers of students who agree to 213 with the highest statement item at no. 1 i.e. Happy after learning hydrocarbon and petroleum chemical materials taught by the teacher using the student's handbook "with an indicator of feeling happy. While in the experimental class it is known that before conducting treatment, pre-test there were 48 students who agreed very much as agreed, after doing treatment using an interactive module and giving post-test there was an increase in answers of students who strongly agreed to be 208 with no. Item 1 statement "happy after learning hydrocarbon and petroleum chemical materials taught by the teacher using an interactive module"

Indicator of engagement

In the control class it is known that prior to the treatment of students, pre-test there are 228 students who agree with answers, while after treatment using a handbook and giving a post-test there is a decrease in the answers of students who agree to 192 with the highest statement item in no. 5 namely "smoothly working on the questions given by the teacher using the student handbook" with indicators of involvement. While in the experimental class it is known that before conducting treatment, pre-test there were 88 students who agreed very much, after doing treatment using an interactive module and giving post-test there was an increase in the answers of students who strongly agreed to 148 with no. Item 7: "work well in groups with guidance from the interactive module"

5.2 Interest indicator

In the control class, it is known that prior to the treatment of students, there were 180 pre-test answers of students who agreed, while after treatment using the handbook and giving a post-test there was a decrease in the answers of students who

agreed to be 162 with the highest statement item at no. 12 ie "always pay attention to the teacher's explanation." with indicators of interest. While in the experimental class it is known that before conducting the treatment, pre-test there were 104 students who agreed very much, after doing the treatment using an interactive module and giving a post-test there was an increase in the answers of students who strongly agreed to be 220 with no. Item 12 statement "always pay attention to the teacher's explanation."

5.3 Indicator of attention

In the control class it is known that prior to the treatment of students, pre-test there are 204 students who agree with answers, while after treatment using a handbook and giving a post-test there is an increase in the answers of students who agree to be 219 with the highest statement item in no. 13 namely "listen well when the teacher is explaining the chemistry taught by the teacher using the student handbook" with indicators of attention. While in the experimental class it is known that before conducting treatment, pre-test there are 104 students who agree strongly agree, after conducting treatment using an interactive module and giving post-test there is an increase in answers of students who strongly agree to 236 with no. Item 13: "listen well when the teacher is explaining the chemistry taught by the teacher from the interactive module."

5 CONCLUSIONS

Based on the results of the analysis and discussion explained in the previous chapter, it can be concluded that (1) There is a significant student interest in learning in class XI IPA of SMA Santo Kristoforus 2 Jakarta through the use of interactive modules on Hydrocarbons and Petroleum materials. This is evidenced through the paired t test results that show that the significance value of the class using the interactive module is 0,000 less than 0.05. There is also a significant interest in learning in students in the class who do not use interactive modules, but nevertheless students in class who use interactive modules better. (2) The magnitude of the increase in student learning interest that uses interactive modules is 16%. While the increase in interest of students who do not use interactive modules is 5%. This means that the magnitude of increased interest in learning students who use

interactive modules is better than students who do not use interactive modules.

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