

Comparative analysis and student response relationships regarding the inquiry learning model on students' attitudes and character

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ABSTRACT

This research was conducted with the aim of knowing the differences and the relationship between student responses to the inquiry learning model, student attitudes towards physics lessons and student character towards physics lessons in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City. This research uses quantitative research with associative and comparative research types, by filling out a questionnaire. The sampling technique used in this research is purposive sampling. Based on the results of the hypothesis testing carried out, it can be concluded that there are differences and relationships between students' responses to the inquiry learning model on students' attitudes and character in physics subjects.

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1. INTRODUCTION

Education is a place to improve and develop self-ability. Education has a very important role, because education can improve the quality of human resources (Johnes et al., 2017; Syahrial et al., 2019; Putri et al., 2020). Quality education is a reflection of the success of a nation (Mahartika & Dewantoro, 2017; Toraja et al., 2021; Joarder et al., 2020). The 2013 curriculum is the government's implementation to realize the goal of national education, namely to produce a generation that excels in knowledge and skills (Susilowati, 2017; Nenotaek et al., 2019; Novalinda et al., 2020). One of the subjects taught in education is Natural Science.

Natural Sciences is a science whose focus of study is nature and the processes that exist in it. Natural Sciences are subjects that cover nature, technology and scientific investigations carried out with the skills of experimenting using the scientific method (Hisbullah, 2018; harefa, 2020; Lagun Siang et al., 2020). The essence of Natural Science (IPA) is to understand and study the natural surroundings (Wibawa & Sri Asri, 2020; (Nurmayani, Doyan, & Sedijani, 2018); (Dan et al., 2020). One part of the field of Natural Sciences is physics (Utama et al., 2019; Sufahmi & Safitri, 2018; Dahliana et al., 2018). In everyday life will not be separated from physics.

Physics is the study of matter and energy and all interactions between them through a series of processes known as the scientific method. Physics is a material that is closely related in everyday life and is related to various scientific concepts (Astuti et al., 2017; Maison et al., 2018; (Darmaji et al., 2019). Physics is one of the important subjects to learn, but most students think that physics is difficult (salamah, 2017; Zuhra, 2017; Darmaji et al., 2019). In the learning process, especially in physics lessons, the attitude of students is very important (Darmaji et al., 2019; Putra et al., 2019; Kurniawan et al., 2018). The attitude of students in the learning process is one factor in the success or failure of a learning.

One of the factors that influence the learning process that comes from within students is student attitudes (Dewi et al., 2017; Maison et al., 2018; Rahayu & Romadona, 2020). Attitude is a form of a person's perception of an object that is described by the expression of likes or dislikes (Kurniawan et al., 2018; Nugroho & Surjono, 2019; Mariskhana, 2019). Attitudes towards science are very important for students, this shows how students think and express expressions about science (Syahril et al., 2019; Sole & Anggraeni, 2017; Smith et al., 2020). In addition, the character of students also needs to be known in the learning process.

With character education, it has an impact on existing social changes and brings changes in human character (Hidayati et al., 2020; Watson, 2019; Birhan et al., 2021). Prioritizing character as a center of education and meaningful schools is important to give to today's young generation because character education is needed to provide provisions so that they can compete in the global market while upholding morals and being able to control themselves from the bad effects of current technological developments (Izzati et al., 2019; Peterson, 2020). Currently the learning process is required not only to prioritize intellectual intelligence, but also to build character values, so that the learning process needs to be improved and innovative in order to become a personality foundation that will lead a person to have a strong character.(E. R. Dewi & Alam, 2020; Kadek Suartama et al., 2020). Students' attitudes and character can be developed with the learning model applied by the teacher, one of which is the inquiry learning model.

The inquiry learning model is a learning model that encourages students to be actively involved in learning activities, besides that it also makes a significant contribution to students' skills in thinking, working, and communicating as well as improving scientific attitudes. (Amijaya et al., 2018; Jundu et al., 2020). Active student involvement both physically and mentally in learning activities will have an influence on student action patterns which are always based on scientific matters that are able to encourage students to think actively and work on their own initiative in formulating hypotheses and solving problems face it (Suryantari et al., 2019; Widani et al., 2019). Inquiry is a process that encourages students to play an active role in obtaining and obtaining information by looking for answers or solving problems to a question or problem by using critical and logical thinking skills (Nafisa & Iskandar, 2022; P. Putra, 2017).

This research is in line with research that has been done by (Murningsih et al., 2016), where the research discusses the inquiry learning model and attitudes. What distinguishes this research is the variables used and the subjects targeted. Research conducted by (Murningsih et al., 2016) using the inquiry model variables, attitudes, and student achievement in physics subjects while in this study using student responses to the inquiry learning model, students' attitudes and character in physics subjects.

The novelty of this research is that the variables used in this research are three variables with different indicators, besides that, the tests carried out in this study have various kinds of tests including descriptive statistical tests, assumption tests consisting of normality tests, linearity tests and After the homogeneity test, a hypothesis test was conducted in the form of a comparison test and a relationship test. This research was conducted with the aim of knowing the differences and the relationship between student responses to the inquiry learning model, student attitudes towards physics lessons and student character towards physics lessons in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City. Based on the description above, the researcher formulates the problem as follows:

1. How is the comparison of student responses to the inquiry learning model for class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City?
2. How is the comparison of students' attitudes towards physics in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City?
3. How do the students' characters compare to physics in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City?
4. How is the relationship between student responses to the inquiry learning model, student attitudes towards physics lessons and student character towards physics lessons in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City?

2. METHODS

A. Type of Research

This research uses quantitative research with associative and comparative research types, by filling out a questionnaire. According to (Sugiyono, 2018) called quantitative method because the research data in the form of numbers and analysis using statistics. While the type of associative research is research that aims to determine the relationship between two or more variables (Arifin & Mashudi, 2020) and the type of comparative research is a type of research that functions to compare two treatments or more than one variable, or several variables at once (Ramdhan, 2021).

B. Population and Sample

Populations and samples are units or groups that have certain shapes or characters that are deliberately chosen, so that data can be taken that can be used in research that has been designed (Nurrahmah et al., 2021). The samples used in this study were 35 students of class XI IPA 1 and 35 students of class XI IPA 4 at SMAN 11 Jambi City. The sampling technique used in this research is purposive sampling. Purposive sampling is a data collection technique with certain considerations (Sugiyono, 2012). The criteria used in this study are high school students who study physics subjects.

C. Research Instruments

The research instrument used in this study was a questionnaire prepared by the researcher himself. Where the questionnaire consists of a student response questionnaire to the inquiry learning model, a student attitude questionnaire towards physics subjects and a student character questionnaire to physics subjects. There are 17 statement items about students' responses to the inquiry learning model, 19 question items about students' attitudes towards physics subjects and 7 statement items about students' character towards physics subjects. The statement is valid using the Likert scale. For the attitude variable, the scale consists of 5 points with a value of strongly agreeing is 5, agreeing is 4, neutral is 3, disagreeing is 2, and strongly disagreeing is 1 while for the response variable and character the scale consists of 4 points with a value of very agree is 4, agree is 3, disagree is 2, and strongly disagree is 1. The focus of this research is on 3 dimensions of attitude, namely understanding and believing in the importance of learning the objectives and content of physics lessons, pleasure in solving physics problems and teacher interaction with students. While the indicators used to measure student character are hard work and cooperation. For the questionnaire grid for this research, it can be seen in table 1, table 2 and table 3.

The description of the questionnaire instrument questionnaire for student responses to the inquiry learning model is as follows:

Table 1. Grid of the questionnaire instrument for student responses to the inquiry learning model

Variable	Indicator	statement item number
Student responses to the inquiry learning model	Passion for learning	1,2,3,4
	Media use	5,6,7,8
	Interest in studying physics	9,10,11,12
	Easy to understand the concept and importance of physics in life	13,14,15,16,17
Number of Statements		17

The description of the instrument grid of students' attitudes towards physics subjects is as follows:

Table 2. Grid of students' attitude questionnaires towards physics subjects

Variable	Indicator	statement item number
student attitudes towards physics subjects	Fun to solve physics problems	18,19,20,21,22
	Teacher interaction with students	23,24,25
	19	

The description of the student character instrument grid for physics subjects is as follows:

Table 3. Grid of student character questionnaires for physics subjects

Variable	Indicator	statement item number
student character towards physics subject	Hard work	37,38,39
	Cooperation	40,41,42,43
Number of Statements		7

Due to the student response questionnaire, student attitudes and character in physics subjects using a Likert scale consisting of 4 and 5 categories, there are intervals in each category, and the intervals in each category can be seen in tables 4.5 and 6.

The description of the category of student responses to the inquiry learning model is as follows:

Table 4. Categories of student responses to the inquiry learning model

Category	Variable Interval
	Student responses to the inquiry learning model
Very not good	17.0 – 29.75
Not good	29.76 – 42.5
Good	42.6 – 55.25
Very good	55.26- 68.0

The description of the category of student attitudes towards physics subjects is as follows:

Table 5. Categories of student attitudes towards physics subjects

Category	Indicator Interval	
	Fun to solve physics problems	Teacher interaction with students
Very not good	5.0 – 9.0	3.0 – 5.4
Not good	10.0 – 13.0	5.5 – 7.8
Enough	14.0 – 17.0	7.9 – 10.2
Good	18.0 – 21.0	10.3 – 12.6
Very good	22.0 – 25.0	12.7 – 15.0

The descriptions of the student character categories for physics subjects are as follows:

Table 6. Character categories of students towards physics subjects

Category	Indicator Interval	
	Hard work	Cooperation
Very not good	3.0 – 5.25	4.0 -7.0
Not good	5.26 – 7.50	8.0 – 10.0
Good	7.51 – 9.75	11.0 – 13.0
Very good	9.76 – 12.0	14.0– 16.0

D. Data Analysis Techniques

In this study using quantitative data analysis techniques with the help of SPSS 26, to find descriptive statistics and inferential statistics. Descriptive statistics are descriptive statistics are a set of mathematics used to summarize data, descriptive statistics can be in the form of distribution, central tendency, and data dispersion (Hui, 2019). While inferential statistics are statistics that involve the use of descriptive statistics for samples to make conclusions or estimates about the appropriate population parameter values (Gibbs et al., 2015). In this study, before testing the hypothesis, a prerequisite test was conducted. The prerequisite tests carried out in this study were the normality test, linearity test and homogeneity test. Furthermore, after the prerequisite test is carried out, the T test and correlation test can be carried out.

E. Research Procedure

In collecting data, the first activity that must be done is to ask permission to observe the intended school, then select students based on the categories given by the researcher, then provide a student response questionnaire to the inquiry learning model, students' attitudes towards physics subjects and students' character towards the subject. physics. Then the questionnaire data was processed using the SPSS application. The use of the SPSS application functions to view descriptive statistics, in the form of mean, min, max, percentage, and category of students (Pramesti.2018; Santoso. 2019; Wahyuni. 2020) . 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 the following diagram:

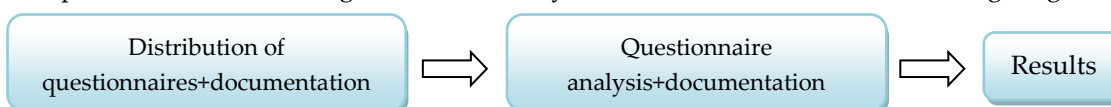


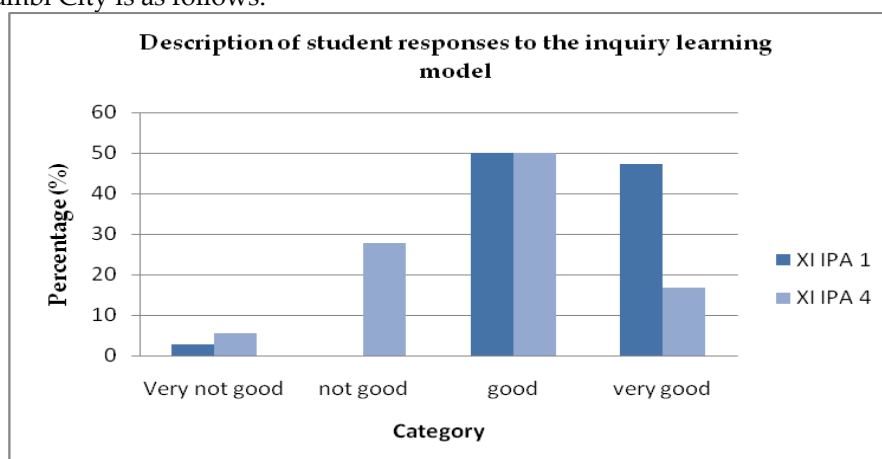
Figure 1. Research Procedure

3. RESULT AND DISCUSSION

The following describes the results of descriptive statistics on student response variables to the inquiry learning model, student attitudes towards physics subjects and student character towards physics subjects, which results will be obtained from distributing questionnaires in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City.

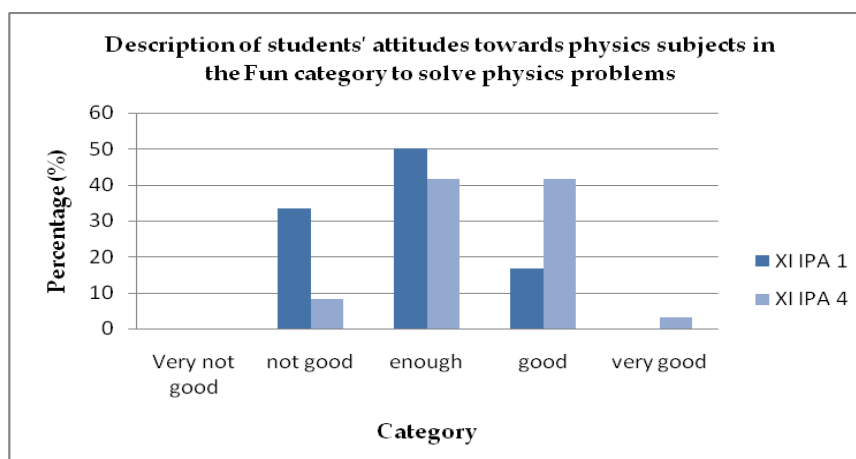
a. Descriptive Statistics Test

The description of student responses to the inquiry learning model in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City is as follows:



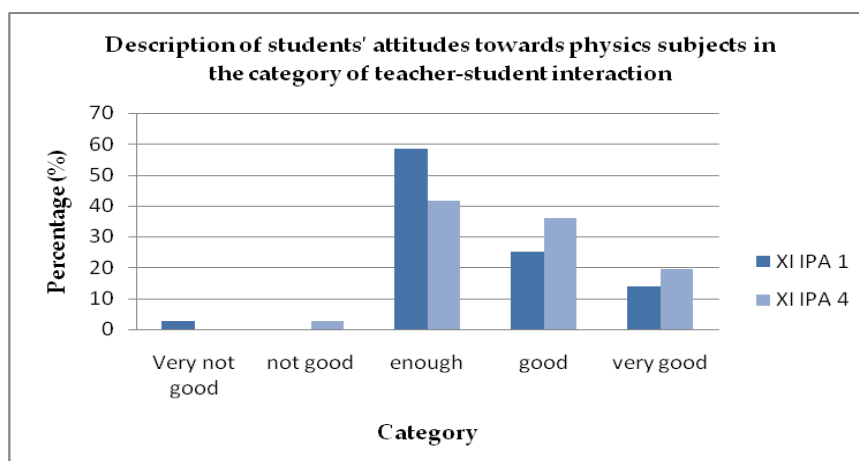
Based on table 7, a description of student responses to the inquiry learning model in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City, it was found that the average number of students chose the good category with a percentage of 50.0% in class XI IPA 1 and for class XI IPA. 4 on average students choose a lot in the good category with a percentage of 50.0%.

The description of students' attitudes towards physics subjects in the Fun category to solve physics problems in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City is as follows:



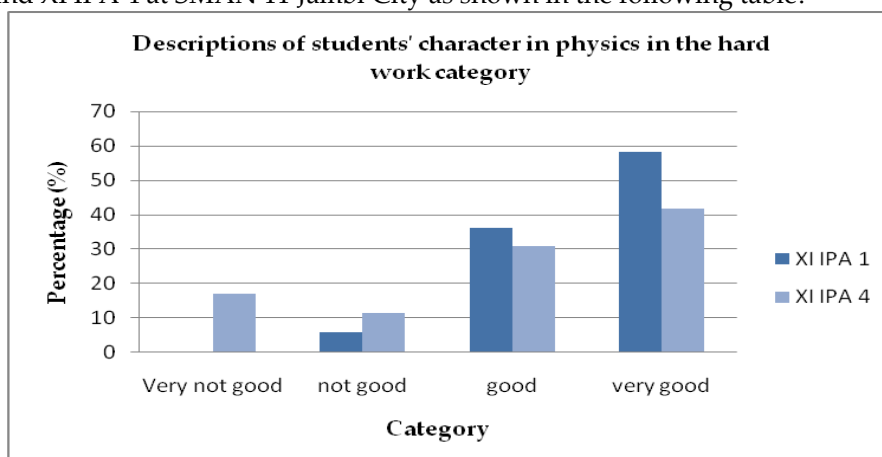
Based on table 8, a description of students' attitudes towards physics subjects in the fun category for solving physics problems in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City, it was found that the average number of students chose the sufficient category with a percentage of 50.0% in for class XI IPA 1 and for class XI IPA 4 the average number of students chooses in the sufficient and good category with a percentage of 41.7%

The description of students' attitudes towards physics subjects in the category of teacher-student interaction in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City is as follows:



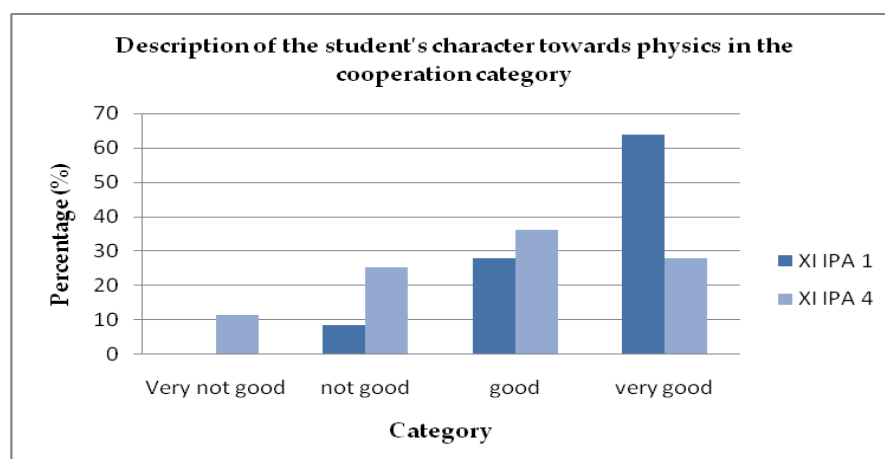
Based on table 9, the description of students' attitudes towards physics subjects in the category of teacher-student interaction in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City, it was found that the average number of students chose the sufficient category with a percentage of 58.3% in class XI IPA. 1 and for class XI IPA 4, the average number of students chose the moderate category with a percentage of 41.7%

The description of the student's character towards physics subjects in the hard work category in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City as shown in the following table:



Based on table 10, the description of the student's character towards physics subjects in the hard work category in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City, it was found that the average number of students chose the very good category with a percentage of 58.3% in class XI IPA 1 and for class XI IPA 4 the average number of students chose the very good category with a percentage of 41.7%

The description of the student's character towards physics subjects in the cooperation category in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City is as follows:



Based on table 11, the description of the student's character on physics subjects in the cooperation category in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City, it was found that the average number of students chose the very good category with a percentage of 63.9% in class XI IPA 1 and for class XI IPA 4 the average number of students chose the good category with a percentage of 36.1%

2. Assumptions Test

In this assumption test, there are three tests that will be carried out, namely the normality test which serves to see whether the data is normally distributed or not (Wijoyo, 2020), linearity test which serves to see the linear relationship between the two variables to be tested and homogeneity test which functions to see whether the data is homogeneous or not.

a. Normality Test

Normality test is a test that is useful for determining the data that has been collected is normally distributed or not. The data requirements are said to be normally distributed if the value of sig. > 0.05

The description of the results for testing student responses to the inquiry learning model, students' attitudes towards physics subjects and students' character towards physics subjects in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City are shown in the table below:

Table 12. Description of the normality test of student responses to the inquiry learning model, student attitudes towards physics subjects and student character to physics subjects

Variable	Class	Sig.	Distribute
Student	XI IPA 1	.200	Normal
Response	XI IPA 4	.200	Normal
Student	XI IPA 1	.200	Normal
Attitude	XI IPA 4	.200	Normal
Student	XI IPA 1	.200	Normal
Character	XI IPA 4	.200	Normal

Based on table 12. Description of the normality test of student responses to the inquiry learning model, student attitudes towards physics subjects and student character towards physics subjects in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City obtained the results of the normality test, namely the significance value > 0.05, it can be concluded that the data is normally distributed.

b. Linearity Test

Linearity test is a test used to determine the form of the relationship between the independent variable or the dependent variable. The data conditions are said to be related if the value of sig. < 0.05.

The description of the results for the linearity test of student responses to the inquiry learning model, student attitudes towards physics subjects and student character towards physics subjects in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City are shown in the table below:

Table 13. Description of the linearity test of student responses to the inquiry learning model, student attitudes towards physics subjects and student character towards physics subjects

Variable	Class	Sig.	Distribute
Student Response*Student Attitude*Student Character	XI IPA 1	0,046	linear
	XI IPA 4	0,041	linear

Based on table 13. The description of the linearity test of student responses to the inquiry learning model, student attitudes towards physics subjects and student character towards physics subjects obtained from the linearity test, namely the significance value < 0.05 , it can be concluded that there is a linear relationship between the linearity of student responses on the inquiry learning model, students' attitudes towards physics subjects and students' character towards physics subjects in class XI IPA 1 and class XI IPA 4 at SMAN 11 Jambi City.

c. Homogeneity Test

Homogeneity test is a test used to determine whether the data used is homogeneous or not. The data requirements are said to be homogeneous if the value of sig. > 0.05 .

The description of the results for the homogeneity test of student responses to the inquiry learning model, student attitudes towards physics subjects and student character towards physics subjects in class XI IPA 1 and class XI IPA 4 at SMAN 11 Jambi City is shown in the table below:

Table 14. Description of the homogeneity test of student responses to the inquiry learning model, student attitudes towards physics subjects and student character to physics subjects

Variable	School	class	Sig.	Distribute
Student Response	SMAN 11 Kota Jambi	XI IPA 1	0.473	Homogen
		XI IPA 4		
Student Attitude	SMAN 11 Kota Jambi	XI IPA 1	0.325	Homogen
		XI IPA 4		
Student Character	SMAN 11 Kota Jambi	XI IPA 1	0.341	Homogen
		XI IPA 4		

Based on table 14. Description of the homogeneity test of student responses to the inquiry learning model, student attitudes towards physics subjects and student character towards physics subjects in class XI IPA 1 and class XI IPA 4 at SMAN 11 Jambi City obtained the results of the homogeneity test, namely the significance value > 0.05 , it can be concluded that the data used in this study is homogeneous.

3. Hypothesis Test

In this hypothesis test, the tests carried out are T test and correlation test. The t test aims to determine whether the independent variable has an effect on the dependent variable while the correlation test aims to determine the relationship between student responses to student attitudes and character in physics subjects.

a. T-test

The description of the results for the test of student responses to the inquiry learning model, student attitudes towards physics subjects and student character towards physics subjects in class XI IPA 1 and XI IPA 4 at SMAN11 Jambi City are shown in the table below:

Table 15. T-test description of student responses to the inquiry learning model, student attitudes towards physics subjects and student character to physics subjects

<i>Variable</i>	<i>School</i>	<i>Class</i>	<i>Sig.(2-tailed)</i>
Student Response		XI IPA 1	0.047
		XI IPA 4	
Student Attitude	SMAN 11 Kota Jambi	XI IPA 1	0.020
		XI IPA 4	
Student Character		XI IPA 1	0.034
		XI IPA 4	

Based on table 15. Description of the T test of students' responses to the inquiry learning model, students' attitudes towards physics subjects and students' character towards physics subjects obtained from the results of the T test, namely the value of sig. (2-tailed < 0.05 , it can be concluded that there are differences in responses students towards inquiry learning models, students' attitudes towards physics subjects and students' character towards physics subjects in class XI IPA 1 and class XI IPA 4 at SMAN 11 Kota Jambi.

b. Correlation Test

The description of the results for the correlation test between student responses to the inquiry learning model, student attitudes towards physics subjects and student character towards physics subjects in class XI IPA 1 and class XI IPA 4 at SMAN 11 Jambi City is shown in the table below:

Table 16. Description of the correlation test of students' responses to the inquiry learning model, students' attitudes towards physics subjects and students' character towards physics subjects

Class	Variable	Pearson Correlation	Sig.(2-tailed)	N
XI IPA 1	Student Response	0.641	0.043	36
	Student Attitude			
	Student Character			
XI IPA 4	Student Response	0.684	0.039	36
	Student Attitude			
	Student Character			

Based on the table. 16 descriptions of the correlation test student responses to the inquiry learning model, student attitudes towards physics subjects and student character towards physics subjects were obtained, the results of the correlation test were sig. (2-tailed) < 0.05 then, it can be concluded that there is a relationship between student responses to the inquiry learning model, student attitudes towards physics subjects and student character towards physics subjects in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City.

Discussion

The results of descriptive statistics on student response variables to the inquiry learning model, student attitudes towards physics subjects and student character towards physics subjects, which results will be obtained from distributing questionnaires in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City. Based on table 7, a description of student responses to the inquiry learning model in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City, it was found that the average number of students chose the good category with a percentage of 50.0% in class XI IPA 1 and for class XI IPA. 4 the average number of students chose the good category with a percentage of 50.0%, so it can be concluded that the two classes are the same. Based on table 8, a description of students' attitudes towards physics subjects in the fun category for solving physics problems in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City, it was found that the average number of students chose the sufficient category with a percentage of 50.0% in class XI IPA 1 and for class XI IPA 4 the average number of

students chose the sufficient and good category with a percentage of 41.7%, it can be concluded that class XI IPA 4 is superior to class XI IPA 1. Based on table 9, a description of students' attitudes towards the eyes physics lessons in the category of teacher interaction with students in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City, it was found that the average number of students chose the moderate category with a percentage of 58.3% in class XI IPA 1 and for class XI IPA 4 the average the average number of students chose the sufficient category with a percentage of 41.7%, it can be concluded that class XI IPA 1 is superior to class XI IPA 4. Based on table 10, the description of the character of the self-reliance on physics subjects in the hard work category in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City, it was found that the average student chose the very good category with a percentage of 58.3% in class XI IPA 1 and for class XI IPA 4 the average number of students chose the very good category with a percentage of 41.7%, it can be concluded that class XI IPA 1 is superior to class XI IPA 4. Based on table 11, the description of the character of students towards physics subjects in the category of cooperation in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City, it was found that the average number of students chose the very good category with a percentage of 63.9% in class XI IPA 1 and for class XI IPA 4 the average number of students chose the good category with a percentage of 36.1% so it can be concluded that concluded that class XI IPA 1 is superior to class XI IPA 4.

After performing descriptive statistical tests, the assumptions were tested in the form of normality tests, linearity tests and homogeneity tests. Based on table 12. Description of the normality test of student responses to the inquiry learning model, student attitudes towards physics subjects and student character towards physics subjects in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi City obtained the results of the normality test, namely the significance value > 0.05 , it can be concluded that the data is normally distributed. Based on table 13. The description of the linearity test of student responses to the inquiry learning model, student attitudes towards physics subjects and student character towards physics subjects obtained from the linearity test, namely the significance value < 0.05 , it can be concluded that there is a linear relationship between the linearity of student responses on the inquiry learning model, students' attitudes towards physics subjects and students' character towards physics subjects in class XI IPA 1 and class XI IPA 4 at SMAN 11 Jambi City. Based on table 14. Description of the homogeneity test of student responses to the inquiry learning model, student attitudes towards physics subjects and student character towards physics subjects in class XI IPA 1 and class XI IPA 4 at SMAN 11 Jambi City obtained the results of the homogeneity test, namely the significance value > 0.05 , it can be concluded that the data used in this study is homogeneous.

After testing the assumptions, the hypothesis is tested in the form of T test and correlation test. Based on table 15. Description of the T test of student responses to the inquiry learning model, student attitudes towards physics subjects and student character towards physics subjects obtained from the T test, namely the value of sig. (2-tailed) < 0.05 , it can be concluded that there are differences in responses students towards the inquiry learning model, students' attitudes towards physics subjects and students' character towards physics subjects in class XI IPA 1 and class XI IPA 4 at SMAN 11 Jambi City Based on the table 16 descriptions of the correlation test students' responses to the inquiry learning model, attitudes students towards physics subjects and students' character towards physics subjects were obtained, the results of the correlation test were sig. (2-tailed) < 0.05 then, it could be concluded that there was a relationship between student responses to the inquiry learning model, student attitudes towards subjects physics lessons and student character towards physics subjects in class XI IPA 1 and XI IPA 4 at SMAN 11 Kota Jamb i.

This research is in line with research conducted by (Nurmayani, Doyan, & Verawati, 2018) which states that the use of the inquiry learning model requires accuracy in the learning process because a lack of accuracy can give results that are less than optimal and require a longer time because students must experiment carefully and not in a hurry to get really maximum results. For this reason, so that learning objectives can be achieved optimally, teachers need to pay more attention so that during learning activities, especially when conducting experiments, students do not play around with tools

and practicum materials, so that students really focus on learning activities. that day in conducting experiments.

Research on attitude has also been carried out by (Astalini et al., 2018) which states that physics which is abstract and uses a lot of formulas makes students' interest in learning low so that students have a negative attitude. As a result, students' physics learning outcomes decreased. More creative learning methods are needed to attract students' attention, such as using media in the learning process and increasing experimental activities. This makes students have a good attitude towards physics.

In addition, research conducted by (S & Firman, 2019) suggested that the science learning model that is predicted to contribute significantly to the development of students' character is the Cooperative Learning model, Contextual Learning model, Problem Based Learning model, Problem Solving Learning model, Inquiry Learning model, community-based learning model, portfolio-based learning model, model-based learning projects, and Learning Cycle models.

This research is important so that teachers can find out the comparison and relationship between student responses to the inquiry learning model, student attitudes towards physics lessons and student character towards physics subjects, so that teachers can estimate the attitudes and characters of their students and can maximize the learning model that will be used. to improve students' attitudes and character towards physics subjects.

This study also has shortcomings, including the number of samples which only amounted to 72 students and the school studied was only 1 school, namely SMAN 11 Jambi City. Besides that, the variables used were only student responses, student attitudes and student character. With this research, the researcher recommends that in the future there will be research that is relevant to this research but uses different variables or a different number of samples.

4. CONCLUSION

Based on the comparative test, it is known that there are differences in student responses to the inquiry learning model, student attitudes towards physics subjects and student character towards physics subjects in class XI IPA 1 and class XI IPA 4 at SMAN 11 Jambi City. These differences can be caused by various factors, such as family environmental factors, schools, both friends and teachers, so student responses to the inquiry learning model, student attitudes towards physics subjects and students' character to physics subjects will be different. In addition, based on the correlation test, it was found that there was a relationship between student responses to the inquiry learning model, student attitudes towards physics subjects and student character towards physics subjects in class XI IPA 1 and XI IPA 4 at SMAN 11 Jambi Kota. The inquiry model is a learning model that facilitates students to ask questions, conduct investigations or searches, experiment or research independently to get the knowledge they need so that they can develop the attitudes and character of students during the learning process.

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