

Analysis of Students' Scientific Attitudes in Learning Science in The Campus Teaching Program at SMP Negeri 5 People's Village

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Abstract : The aim of this research is to determine the scientific attitude towards science learning in campus teaching programs for class VIII students at SMP Negeri 5 Kampung Rakyat. The research method used in this research is a descriptive method with a qualitative approach. The results of this research analysis show that four dominant scientific attitudes are seen in science learning in campus teaching programs, namely a curious attitude such as students having a high sense of curiosity about new things so that students are enthusiastic about asking questions. Indicators of respect for facts like students can appreciate and accept the opinions expressed by teachers and friends. Indicators of attitudes of willingness to change views such as students being able to realize changes to a more reasonable view of the facts. Students can convey the results of the discussion according to existing facts. The final indicator is a critical thinking attitude, such as students doubting the opinions or answers of other friends, students asking about learning they have just learned about, and students being able to express their opinions if there are differences in opinion between what the teacher conveys and the opinions of other discussion groups.

Keywords: Science, Teaching Campus, Scientific Attitude

In an effort to improve the quality of education in Indonesia, the Ministry of Education, Culture, Research and Technology is planning the "Freedom to Learn" program to meet educational needs. The Ministry of Education and Culture, Research and Technology created an innovative program called the Teaching Campus Program. According to (Makarim, 2021) the campus teaching program is one of the activities of the Independent Campus Program which involves students at every campus throughout Indonesia and from various educational backgrounds, to contribute to the education sector, especially in the teaching process at school, especially at the school level. Elementary (SD) and Junior High Schools (SMP) in Indonesia with C accreditation and schools in the 3T zone (frontier, outermost and underdeveloped) voluntarily and seriously implement it. Until now the campus teaching program has been promoted to -7, that means the ministry has launched the teaching campus 7 times with this frequency of course being able to provide students with experience of teaching in educational units outside the campus.

The Independent Campus program itself is an extension of the independent learning program which is still hotly discussed in the field of

education. Independent campuses give students the freedom to seek learning experiences outside their department or campus. In this regard, the implementation of the program is supported by the Education Fund Management Institution (LPDP). This program will be able to improve the skills of graduates, both in soft skills, to be better prepared to enter the world of work and to prepare for the needs of the times. Preparing graduates who are professional, successful and ethical. (Suhartoyo, 2020)

Attitude is a general tendency to respond consistently which is patterned on thoughts, feelings and tendencies (cipta, 2016: 111). Scientific attitude is a character possessed by a scientist. The character possessed by a scientist must also be possessed by students in science lessons. The science learning process should be carried out using scientific inquiry to foster an attitude of curiosity, respect for facts, a willingness to change views, and an attitude of critical thinking. Scientists take a certain scientific attitude and then develop it to achieve the expected results.

Several characteristics of scientific attitudes according to experts are explained by (Cipta, 2016: 111), namely;

- A. **Objective/honest attitude.**
- B. **Don't rush to conclusions.**
- C. **Open**
- D. **Do not mix facts with personal opinions.**
- E. **Be careful.**
- F. **An attitude of wanting to investigate or high curiosity.**

According to the opinion expressed by several experts, it can be concluded that scientific attitude is a combination of concepts, feelings or emotions that arise in students which can change according to new experiences and phenomena. The experiences that arise from students can emerge through the actions they take. The actions taken by students are based on new phenomena. New phenomena emerge from nature and are then solved based on the experience or insight that has been gained.

The development of a scientific attitude in science lessons is of course very necessary, because in essence a scientific attitude exists within students rationally and has been there since birth. Science lessons require students to be involved in scientific activities, so that they can develop a scientific attitude. A scientific attitude in each student needs to be developed so that later it can help students develop a positive attitude in each student. To foster a scientific attitude in students, there are three roles, (Rapi, 2014)namely;

- A. **Show examples of ethical behavior.**
- B. **Provide reinforcement in the form of motivation, praise and approval.**

Provide opportunities to develop attitudes.

The opinion expressed by the experts above can be concluded that the development of a scientific attitude at junior high school level needs to be developed so that later it can develop a positive attitude in students. Measurement of scientific attitudes can be based on grouping dimensions, attitudes are then developed into attitude indicators for each dimension to make it easier to prepare scientific attitudes to be measured. According to scientific attitudes, (Anwar, 2019)there are four indicators of scientific attitudes, namely;

- A. Curious attitude.
- B. Respect for facts.
- C. An attitude of willingness to change views.
- D. Critical thinking attitude.

Attitude is something that is learned and determines how individuals react to situations, so that the interactions studied will influence it. The tendency to react to a thing, person or object with favor, or indifference. (Hamdani, 2014).

The opinions of several experts stated above can be concluded that the feelings shown by each person have different tendencies and reactions. The reaction of these feelings is manifested through certain actions in a pleasant or unpleasant way. Each person's pleasant and unpleasant feelings are different. The actions shown by each person are related to the person's feelings of inclination towards an object, either a person or a thing.

This research focuses on analyzing scientific attitudes towards science learning in the campus teaching program at SMP Negeri 5 Kampung Rakyat, Perlavian Village, South Labuhanbatu Regency, North Sumatra Province.

Based on the results of the decision letter by the Ministry of Education, Culture, Research and Technology, Directorate General of Higher Education, a letter of notification of the results of the Teaching Campus Program selection for classes 1, 2, 3, 4, 5, 6 and 7 was determined so that the number of participants could be known. the campus program teaches each generation, which is then recorded by researchers.

Table 1. Number of Campus Teaching Program Participants

Program Campus Teach	Amount	Year
Force 1	14.621	2021
Batch 2	22,000	2021
Force 3	22,000	2022
Force 4	14.504	2022
Force 5	22,000	2023
Force 6	13.019	2023
Force 7	32,000	2024

Source: Decree of the Ministry of Education and Culture, Research and Technology.

METHOD

This research was conducted in January 2024 on students in class VIII of SMP Negeri 5 Kampung Rakyat in Desa, Perlavian, South Labuhanbatu Regency, Province, North Sumatra. The population in this study were students at SMP Negeri 5 Kampung Rakyat. Next, to determine the research sample, a selected sampling technique (purposive sampling) was used. This selected sampling technique was used because it is in line with the research objective of analyzing students' scientific attitudes towards science learning in campus teaching programs. Therefore, the sample chosen was class VIII students at SMP Negeri 5 Kampung Rakyat who studied science subjects in the campus teaching program. The number of samples taken was 27 class VIII students of SMP Negeri 5 Kampung Rakyat. In sampling using total

sampling is sampling where the number of samples is equal to the population which is less than 100 (Sugiono, 2014).

Type of descriptive qualitative research. Theoretically, descriptive is used to obtain data from certain places scientifically in which researchers collect data by distributing questionnaires and interviews. This method is used because it is in line with the research objectives which focus on analyzing scientific attitudes in lessons without any treatment as in experimental research.

The data collection techniques used were observation, interviews and questionnaires. The data collection technique used in this research is a data collection technique using a questionnaire distributed to respondents, namely class VIII students in science subjects in the campus teaching program at SMP Negeri 5 Kampung Rakyat.

Data analysis techniques by distributing questionnaires to students and teachers directly and

conducting interviews with students and teachers, then the data that has been obtained is continued by collecting the data that has been obtained, then processing and analyzing it based on understanding and drawing conclusions from the initial data obtained from the beginning. until the end of the research data collection using the four indicator technique.

The indicators in this research are; (1) an attitude of curiosity, (2) an attitude of respect for facts, (3) an attitude of willingness to change views, and (4) an attitude of critical thinking in learning science in the campus teaching program in class VIII SMP Negeri 5 Kampung Rakyat is a modification of (Anwar, 2019) regarding The scientific attitude in science learning in the campus teaching program for class VIII students at SMP Negeri 5 Kampung Rakyat can be seen in table 1.3 regarding the questionnaire grid.

Grid of the Scientific Attitude Questionnaire in Science Learning in the Campus Teaching Program at SMP Negeri 5 Kampung Rakyat.

No	Indicator	Positive	Negative	Amount Item Per-real
1.	Curious Attitude	1,2	3	3
		4,5	6	3
		7,8	9	3
		10	11	2
2.	Respect for Facts	12	13	2
		14	15,16	3
		-	17,18	2
		19	20,21	3
3.	Attitude of Willingness To Change View	22,23	24	3
		25,26	27	3
		28	29	2
		30	31	2
4.	Attitude Think Critical	32	33	2
		34	35	2
		36	37	2
		38	39,40	3
Amount				40

Source : (Riduwan, 2015)

From the results of the data obtained regarding scientific attitudes towards science learning in the campus teaching program at SMP Negeri 5 Kampung Rakyat. Students who were given a questionnaire statement were given the 40 statements obtained, then students were given answer choices consisting of strongly agree, agree, doubtful, disagree and strongly disagree. The answers given by the students were analyzed by giving a value (score) for each answer to the statement given to the respondent using a Likert Scale with a maximum value of 5. In providing responses to the statements, respondents were asked

to respond to what they felt about science learning in campus programs. teaches at SMP Negeri 5 Kampung Rakyat.

Table 2. Guidelines for Scoring Attitude Scale

Answers			
Answer Statement	Score	Answer Statement	Score
Positive		Negative	
Strongly Agree (SS)	5	Strongly Agree (SS)	1
Agree (S)	4	Agree (S)	2
Doubtful (R)	3	Doubtful (R)	3
Disagree (ST)	2	Disagree (ST)	4
Strongly Disagree (STS)	1	Strongly Disagree (STS)	5

RESULTS AND DISCUSSION

Results

The results of this research have shown that the scientific attitude towards science subjects in the campus teaching program for class VIII students at SMP Negeri 5 Kampung Rakyat is below. The indicators contained in the research regarding the scientific attitude towards science subjects in the campus teaching program for class VIII SMP students Negeri 5 People's Villages namely; (1) an attitude of curiosity, (2) an attitude of respect for facts, (3) an attitude of willingness to change views, (4) an attitude of critical thinking. The research data are as follows;

Observation

The results of the observations obtained were data from students, teachers at SMP Negeri 5 Kampung Rakyat and campus teaching program students. The results of the observation sheet were found to be based on conditions that actually occurred in the field in a natural setting as qualitative research should.

Teacher and Student Interviews

Based on the results of interviews with science subject teachers at SMP Negeri 5 Kampung Rakyat in class VIII and campus teaching program students, the interview data obtained was a curious attitude such as students being curious about new things so that students were enthusiastic about asking questions to teachers or campus program students. teaches science subjects in class VIII of SMP Negeri 5 Kampung Rakyat. Attitude Respect for facts, namely being objective or honest, not manipulating data and not mixing facts and personal opinions. The attitude of willingness to change views is the attitude of considering alternative views to one's own views. A critical thinking attitude, such as the attitude of students who often ask questions about learning that they do not yet understand.

Student Interview

The interview results obtained by researchers from 6 respondents included two students in the high achieving category, two people in the medium category and two people in the low category. So the results of the interview obtained are the dominant attitude shown by students in science subjects in the campus teaching program in class VIII of SMP Negeri 5 Kampung Rakyat, namely a curious attitude such as students being curious about new things so that students are enthusiastic about asking questions, an attitude of respect for facts, namely be objective or honest, do not manipulate data and do not mix facts and personal opinions. The

attitude of willingness to change views is the attitude of considering alternative views to one's own views. A critical thinking attitude, such as the attitude of students who often ask questions about learning that they do not yet understand.

Student Questionnaire

Results of student questionnaires regarding scientific attitudes towards science learning in the campus teaching program at SMP Negeri 5 Kampung Rakyat . The statement indicators provided in the questionnaire in this study are Strongly Agree (SS), Agree (S), Undecided (R), Disagree (TS), Strongly Disagree (STS).

Based on indicators of attitude, it can be seen that scientific attitudes are more dominant, seen in an attitude of curiosity, an attitude of respect for facts, an attitude of willingness to change views and an attitude of critical thinking. So the results of the questionnaire obtained from 27 respondents from class VIII students at SMP Negeri 5 Kampung Rakyat can be described as follows; Based on the information above, conclusions can be drawn from the results of the student questionnaire, namely that the indicator of the attitude of curiosity obtained a total of 22.92% of results, while the second indicator of the Attitude of Respect for Facts obtained the number of results of 22.76% and the third indicator of the Attitude of Willingness to Change Views obtained the number of results. 6.26%. And the fourth indicator obtained results of 12.87%.

The results of the presentation on the indicators regarding the research that has been carried out can be seen in the diagram. The values obtained in the percentages are as below.

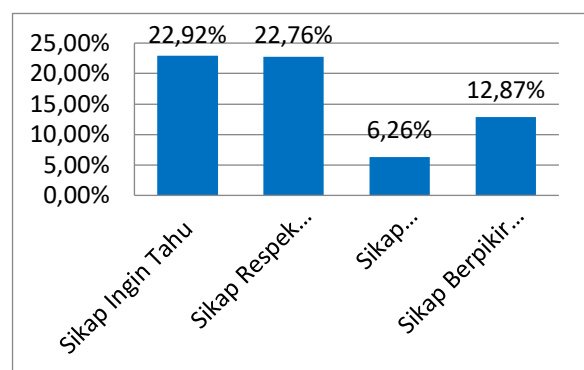


Figure 1. Graph of Summary of Questionnaire Results

In this case, it is stated that the analysis of the scientific attitude towards science learning in class VIII students in the campus teaching program at SMP Negeri 5 Kampung Rakyat, that the indicator of the attitude of curiosity obtained a total of 22.92% of results, while the second indicator of the Attitude of Respect for Facts obtained the number of results. 22.76% and the third indicator of Attitude Willingness to Change Views obtained a total result of 6.26%. And the fourth indicator obtained results of 12.87%.

DISCUSSION

Based on the research that has been carried out on the data, the results obtained in the field can be described as follows;

Students' Curious Attitudes in Science Learning in the Campus Teaching Program in Class VIII of SMP Negeri 5 Kampung Rakyat

Based on the results of the interview, students' curious attitudes can be revealed from the teacher's way of assessing students' curious attitudes during discussions, which can be seen from several indicators as follows; 1) pay more attention to new things that can make students feel confused, with the aim that students have questions to ask about these new things. 2) the teacher tests students about new things and asks questions about these new things by using questions, for example "what, how and why". 3) the teacher makes the surrounding environment an object of investigation to find answers to questions asked by students. 4) students' enthusiasm in conducting group discussions. This is in accordance with the statement made by Fadillah and Khorida (Oktavioni, 2017:4) who argue that "curiosity is an attitude and action that always seeks to know more deeply and broadly from what one learns, sees and hears.

Based on the results of interviews regarding the inquisitive attitude possessed by students, it is characterized by students' high interest and curiosity towards the learning material. Another statement that strengthens the results of this interview is the results of a questionnaire from 27 students and 11 statement items from the indicators of students' curious attitudes. The results of data analysis, namely the indicators of curious attitudes above, show that the majority of students have shown a curious attitude, such as students who are interested in things. - new things, students have a

high sense of curiosity about the learning material, students can solve problems in group discussions and students often ask questions about learning material that they did not understand during the discussion. This can be seen from the percentage results of the curiosity attitude indicator with a total score of 1,264 and a percentage score of 22.92% is included in the good category.

Respectful attitude towards students' facts about science learning in the campus teaching program in class VIII SMP Negeri 5 Kampung Rakyat

Based on the results of interviews regarding students' respect for facts from several indicators, namely: 1) students can respect or accept the opinions expressed by their teachers and friends. 2) students report what happened even though it is contrary to expectations. 3) students make conclusions based on sufficient evidence. This statement is in accordance with the opinion expressed by (Lisa, 2018: 27) those who explain that their attitude is willing to change their opinion if data is lacking. And don't feel like you're always right and participate actively in discussion groups. Based on the results of teacher interviews, students' attitudes towards facts can be seen when the teacher is carrying out discussion activities in groups.

So the results of the interviews obtained are such that students can appreciate and accept the opinions expressed by teachers and their friends. Students report results that actually occurred and make conclusions based on sufficient evidence. This statement is also strengthened based on the results of the student response questionnaire obtained, namely 27 students and 10 statement items from the indicators of respect for students' facts, so the results of data analysis are obtained, namely the presentation of indicators of students' respect for facts with a total score of 963 and a percentage score of 22.76. % in the good category.

Attitude of Willingness to Change Views Students Studying Science in the Campus Teaching Program in Class VIII of SMP Negeri 5 Kampung Rakyat

Based on the results of interviews regarding the attitude of willingness to change students' views from several indicators, namely: 1) students realize changes to a new, more reasonable view of the facts. 2) students can conclude the results of group discussions well in accordance with the learning that has been delivered. 3) students can

convey the results of the discussion according to existing facts.

So the results of the interviews obtained were that students were able to realize changes in their views that made more sense towards the facts. Students can conclude the results of the discussion well according to the learning that has been delivered. Students can convey the results of the discussion according to existing facts.

This statement is also strengthened based on the results of the student respondent questionnaire which was obtained, namely 27 students and 10 statement items from the attitude indicator of the willingness to change students' views. The results of data analysis were obtained, namely the presentation of the attitude indicator of the willingness to change students' views with a score of 946 and a percentage score of 6.26. % in the quite good category.

Critical Thinking Attitude Facts Students learning science in the campus teaching program in class VIII SMP Negeri 5 Kampung Rakyat

Based on the results of interviews regarding students' critical thinking attitudes from the following indicators, namely; 1) the desire to review what has been done to consider things that can still be improved. 2) consider the use of alternative procedures. 3) students can express their opinions if there is a difference of opinion between what the teacher conveys and the results of the discussion group's opinion. This statement is in accordance with the opinion expressed by Scriven and Paul (Nugraha, 2017: 37), who explained that critical thinking is important to develop because it can improve the quality of thinking for an individual to appear to analyze, assess and reconstruct what is in his mind to solve problems.

So the results of the interviews obtained were students who doubted the opinions or answers of other friends, students asked about learning they had just learned about, and students were able to express their opinions if there were differences in opinion between what the teacher conveyed and the results of the opinions of other discussion groups. This statement is also strengthened based on the results of the student response questionnaire obtained, namely 27 students and 9 statement items from the indicators of students' critical thinking attitudes, so the results of data analysis are obtained, namely the presentation of indicators of students' critical

thinking attitudes with a total score of 807 and a percentage score of 12.87% with categories Good.

CONCLUSION

Based on the results of research data analysis, a general conclusion can be drawn that: Analysis of scientific attitudes towards science learning in the campus teaching program at SMP Negeri 5 Kampung Rakyat has shown that four scientific attitudes based on subproblems in this research are in the good category. So the following conclusions can be drawn:

1. Students' Curious Attitudes in Science Learning in the Campus Teaching Program in Class VIII of SMP Negeri 5 Kampung Rakyat, namely: the results of the percentage of indicators of students' curious attitudes are known indicators that the majority of students have shown a curious attitude such as students being interested in new things, students have high level of curiosity about the learning material, students can solve problems in group discussions and students often ask questions about learning material that they did not understand during the discussion. This can be seen from the percentage results of the curiosity attitude indicator with a total score of 1,264 and a percentage score of 22. 92% is included in the good category.

2. Attitudes of Respect for Students' Facts in Science Learning in the Campus Teaching Program in Class VIII of SMP Negeri 5 Kampung Rakyat, namely: the percentage results of indicators of attitudes of respect for facts that students can appreciate and accept the opinions expressed by teachers and their friends. Students report results that actually occurred and make conclusions based on sufficient evidence. This statement is also strengthened based on the results of the student response questionnaire which was obtained, namely 27 students and 10 statement items from the indicators of respect for students' facts, so the results of data analysis were obtained, namely the presentation of indicators of students' respect for facts with a total score of 963 and a percentage score of 22.76%. with good category.

3. Attitude of Willingness to Change Students' Views on Science Learning in the Campus Teaching Program in Class VIII of SMP Negeri 5 Kampung Rakyat, namely: The percentage results of the attitude indicator of willingness to change views such as students being able to realize a

more reasonable change in view of the facts. Students can conclude the results of the discussion well in accordance with the learning that has been delivered. Students can convey the results of the discussion according to existing facts.

This statement is also strengthened based on the results of the student response questionnaire obtained, namely 27 students and 10 statement items from the attitude indicator of the willingness to change students' views. The results of data analysis are obtained, namely the presentation of the attitude indicator of the willingness to change students' views with a score of 946 and a percentage score of 6.26. % in the quite good category.

4. Critical Thinking Attitudes Facts about Students in Science Learning in the Campus Teaching Program in Class VIII of SMP Negeri 5 Kampung Rakyat: Results of obtaining percentage indicators of critical thinking attitudes such as students who doubt the opinions or answers of other friends, students asking about learning that they have just learned about. , and students can express their opinions if there are differences in opinion between what the teacher conveys and the opinions of other discussion groups. This statement is also strengthened based on the results of the student response questionnaire obtained, namely 27 students and 9 statement items from the indicators of students' critical thinking attitudes, so the results of data analysis are obtained, namely the presentation of indicators of students' critical thinking attitudes with a total score of 807 and a percentage score of 12.87% with categories Good.

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