THE SCIENTIFIC APPROACH AND DEVELOPMENT OF STUDENTS' SCIENTIFIC ATTITUDES AT STATE ELEMENTARY SCHOOL (SDN) OF DEMANGAN YOGYAKARTA

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Abstract: The purpose of this research is to describe and analyze how the scientific approach and the development of students' scientific attitude in the thematic content of 2013 curriculum implementation. This type of research is qualitative research. Data are collected by using observation, interview, and documentation. This study intends to gain an understanding of the relevant facts about the application of the scientific approach to develop students' scientific attitude in the thematic teaching subject. The results of this research showed that the State Elementary School Demangan (SDN) of Yogyakarta has begun to implement 2003 curriculum in the grade 1 and 4 since 2014 to date, but the implementation has stopped in 2015 because the curriculum 2013 has slightly changed. The process of learning in the classroom is currently running quite well. Teachers provide feedback well, develop student curiosity, discussion, give positive reinforcement, appreciation and also reflection together that ended by the conclusion. The students' scientific attitude that appears is a high curiosity characterized by the emergence of questions containing curiosity, their responsibilities in completing tasks, their efforts to discuss group and presentation in front of the class, respect for others, cooperation, courage, critical thinking and open. The learning activities are implicated in the implementation stage of the scientific approach. Finally, the implementation of the curriculum 2013 approach essentially develops students' scientific attitude, not only on the content of science but also other content, known as the thematic content.

Keywords: Scientific Approach, Student's Scientific Attitudes, Curriculum 2013.

INTRODUCTION

The learning process can be matched with a scientific process. Therefore the 2013 curriculum mandates the essence of the scientific approach to learning. The scientific approach is believed to be the golden mark of the development and development of students' attitudes, skills, and knowledge.[1] The 2013 curriculum is a new form of a government effort to optimize national education standards in order to realize national education goals. In the 2013 curriculum, the focus is on students' cognitive, psychomotor, and affective development. This is done by applying a scientific approach that includes the three domains. The application of the scientific approach to learning involves process skills such as observing, classifying, measuring, predicting, explaining, and inferring. For the steps generally start by observing, asking, reasoning, trying, and forming networks.[2] Thus, learning with a scientific approach provides conditions and effective learning outcomes compared to traditional learning.

The implementation of Curriculum in 2013 with a scientific approach to learning is the learning process that is designed in such a way that learners actively construction of concept, law or principle through stages observed (for identifying or locate the problem), formulating the problem, propose or formulate hypotheses, collect data using various techniques, analyzing data, drawing conclusions and communicating a concept, a principle of law or "found". A scientific approach is intended to provide insight to the students in the know, understand various materials using a scientific approach, that information can come from anywhere, at any time, do not rely on direct information from the teacher.

The learning implementation of 2013 curriculum with a scientific approach is a learning process that is designed so that students actively construct concepts, laws or principles through stages of observation (to identify or find problems), formulate problems, submit or formulate hypotheses, collect data with various techniques, analyze data, draw conclusions and communicate concepts, laws or principles that

[1] Daryanto, *Pendekata Pembelajaran Saintifik Kurikulum 2013*, (Yogyakarta: Gaya Media, 2014), p. 55.

[2] *Ibid.,* p. 59.

are "discovered". The scientific approach is intended to provide understanding to students in recognizing, understanding various materials using a scientific approach, that information can originate from anywhere, anytime, does not depend on the same direction information from the teacher.[3]

Thus, the author argues that the scientific approach is adopted as the right approach that plays a major role in the implementation of the 2013 curriculum. This is because of the scientific approach in learning touches all aspects of the development of student abilities, namely cognitive, attitude, to psychomotor aspects. In other words, through the scientific approach students will be independent, get lessons from observing and then confirming, by asking the teacher, friend or anyone. Next students will find ways to become more informed by conducting experiments so that they are able to make conclusions. This process shows students' attitudes and psychomotor. So that, the 2013 curriculum actually emphasizes a very sharp scientific attitude.

Scientific attitude is an attitude that must be possessed by scientists, or knowledge seekers. From a number of expert opinions it can be stated that scientific attitudes include matters related to how we, the teacher, see, treat and treat the knowledge whose manifestations will be seen from their interaction with science, both education-teaching (instrumental science) and science or fields of science that are taught (substantial science). From the opinions, several points that characterize scientific attitudes are objective, open, diligent, patient, not arrogant, and not absolute something scientific truth. This means that we, the teacher, and anyone who seeks knowledge also needs to continue to cultivate that attitude in dealing with you because there is always the possibility that what is considered true today is like a theory, maybe at times, it will be replaced by another theory that has or shows new truth.[4]

Related to the scientific attitude of students, scientists have recognized that scientific approaches and methods influence scientific attitudes in science learning, with this often referred to as attitudes towards science. Both are interconnected and affected actions. At the school level, especially in elementary schools, the scientific attitude is focused on perseverance, openness, willingness to consider evidence, and willingness to distinguish facts from opinions.

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[3] M Hosanan, *Pendekatan Saintifik Kontekstual dalam Pembelajaran Abad 21*, (Bogor: Ghalia Indonesia, 2014), P. 34.

[4] Uhar Saharsaputra, *Menjadi Guru Berkarakter*, (Bandung: Refika Aditama, 2013), P. 147.

The scientific attitude is distinguished from the mere attitude towards science because it only showed whether students like or dislike towards the learning of science. Of course, a positive attitude towards learning science will contribute to the formation of the scientific attitude toward students but there are still other factors contributed. According to Harlen least, there are four types of attitudes that need to get attention in the development of a scientific attitude of elementary school students, that attitude toward jobs in schools, the attitude toward themselves as students, attitude towards science, and attitudes are towards object or surroundings.[5]

The level of scientific attitudes of students is influenced by the teacher's creativity in learning. Ceran, Gungoren, & Boyacioglu revealed that the teacher was the person who had the most role in the development of students' scientific creativity in the period of formal education. In line with the statement, Lee and Endorgan stated that teacher characteristics and teaching methods are important factors that influence student attitudes and creativity. The choice of teaching materials, specific teaching models and strategies also has a positive influence on students' creative thinking abilities. Thus, it can be concluded that the efforts of teachers in planning, implementation, learning process and evaluation greatly influence the scientific attitude of students.

Highlighting the facts on the ground, many elementary schools/Islamic elementary schools, especially in Yogyakarta, have implemented the 2013 curriculum. Most schools have already used the curriculum. For example, when conducting pre-surveys in Public and Private Primary Schools, the fact is that the 2013 curriculum has been implemented. Although in practice there are some schools that apply in some classes, not for the whole class. For example, only applying gradually in grades I and IV. Thus, if the 2013 curriculum has a scientific approach concept that is able to realize the main objective of developing the scientific attitude of this nation, then the attention and effort must be made more intensively.

[5] Anwar," Penilaian Sikap Ilmiah dalam Pembelajaran Sains" in *jurnal pelangi ilmu*. 2(5): 103-114 dalam www.ejurnal.ung.ac.id, dikkses 7 Mei 2016.

Based on this reality, the authors observed one of the elementary schools in the Yogyakarta city area, precisely in Yogyakarta's Demangan Elementary School. Where in general the learning process has been going on quite well. The school is a school that applies the 2013 curriculum that applies integrated thematic learning. The authors focused on how to develop students' scientific attitudes by teachers in integrated thematic learning implementation of the Scientific Approach of 2003 curriculum.

Based on the background of the problem, the authors focus on how the implementation of the 2013 Curriculum in Demangan Yogyakarta Elementary School, namely how to implement the scientific approach in the charge of integrated thematic lessons, and the scientific attitude of fourth-grade students of SDN Demangan Yogyakarta.

LITERATURE REVIEW

The authors have conducted a literature review to avoid repetition and also to limit the research area. As far as the authors search, a literature review that is relevant to the research topic is about achieving the scientific attitude of elementary school students with the scientific approach of the 2013 curriculum not yet found. The authors have just discovered the title of the research on efforts to develop students' scientific attitudes with various learning strategies that are not yet in the context of the application of 2013 curriculum integrated learning. The research titles that researchers have explored are:

First, the Dissertation entitled "The Influence of the Application of Learning Strategies and Preliminary Knowledge toward Understanding Science Concepts and Scientific Attitudes of V-Grade Elementary School Students." The findings in this study were elementary school teachers were advised to use a student-centered learning strategy and able to foster early scientific attitudes of students such as curiosity, respect for evidence, open-minded thinking, critical thinking.[6] Thus, this article is the successor to the dissertation. What is the achievement of the development of learning and the scientific attitude of today's students?

Second, Journal article entitled "Scientific Attitude of Students in Physics Learning by Using Computer Media through Cooperative Type STAD Model in

[6] Sudarma, I Komang. Disertasi, The Effect of Instructional Strategies Implementation and Prior Knowledge towards Science Concept Understanding and Scientific Attitude of 5th Graders of Elementary School. *Dissertation,* Education Technology Study Program, Graduate School, State University of Malang, 2012.

Class X Students of SMA N 1 Bangkinang Barat." Overall the scientific attitude of students can be trained with the use of computer media through the application of STAD type in students of class X3 of High School I Bangkinang Barat in heat material.[7]

Third, the Journal of Educational Research article entitled "Determination of scientific levels of middle school students and perceptions through their teachers". This study shows that the teacher is the person who has the most role in the development of students' creativity in the formal education period. In addition, teacher characteristics and teaching methods are important factors that influence student attitudes and creativity.[8]

Fourth, MA Thesis entitled "Curriculum 2013 in Realizing the New Science Paradigm of Science Learning in Madrasah Ibtidaiyah Wahid Hasyim Sleman Yogyakarta." Implementation of the 2013 curriculum in learning Science at MI Wahid Hasyim was only implemented in 2013 for grades 1 and 4 during one semester, the process runs well; begin the implementation of the learning process which takes place actively, creatively, effectively, and pleasantly.[9]

Fifth, undergraduate thesis entitled "Scientific Attitude of IVC Class Students in Science Learning at SD Muhammadiyah Condongcatur". The scientific attitude shown by students from high-quality to low-quality in a row is an attitude of curiosity, an objective attitude towards data or facts, an open-minded attitude, a critical thinking attitude, and a cooperative attitude.[10]

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[7] Fakhruddin, Elprina, E., & Syahril. 2010. "Sikap Ilmiah Siswa dalam Pembelajaran Fisika Dengan Penggunaan Media Komputer Melalui Model Kooperatif Tipe STAD pada Siswa Kelas X3 SMA Negeri Bangkinang Barat", *Jurnal Geliga Sains*. 4(1): 18-22. dalam www.ejournal.unri.ac.id, Akses pada: 9 Mei 2016.

[8] Ceran, S. A., Gungeron, S. C., & Boyacioglu, N. 2014. "Determintion of Scientific Creativity Level of Middle School student and Perception Through Their Teacher", *European Journal of Research on Education*. 2(2): 47-53 Special Issue: Contemporary Studies in Education. dalam www.iassr.org.journal, diakses pada 12 April 2016.

[9] Erfan Efendi, *Tesis*, Kurikulum 2013 dalam Mewujudkan Pardigma Baru Pembelajaran Sains IPA di Madrasah Ibtidaiyah Sleman Yogyakarta, UIN Sunan Kalijaga, 2015.

[10] Selly Gusmentari, *Skripsi*: Sikap Ilmiah Siswa Kelas IVC dalam Pembelajaran IPA di SD Muhammadiyah Condongcatur, Universitas Negeri Yogyakarta,2014

Thus, this study becomes a compliment and a more in-depth study of scientific attitudes and becomes an additional insight into the implementation of the 2013 Curriculum which later can be a reference for interested parties.

THEORETICAL FRAMEWORK

1. The 2003 curriculum

   The implementation of the curriculum is the implementation of curriculum programs that have been developed in the previous stage, then tested with implementation and management while always being adjusted to the field situation and characteristics of students, both intellectual, emotional, and physical development.[11] The 2013 curriculum is a curriculum actualization in learning and the formation of competencies and character of students. It requires teacher activeness in creating and growing various activities in accordance with the programmed plan.

   The implementation of the 2013 curriculum is based on the philosophy that education is to build a better life and future better than past with the intellectual capabilities, the ability to communicate, social attitude, concern, and participation to build better life and nation's life. With this philosopher, 2013 curriculum, intends to develop the potential of learners into reflective thinking ability to solve social problems in society, and to build the lives of better democratic society. Based on the philosophy, the 2013 curriculum develops learners in intellectual ability, communicating, thinking reflective, care about social problems.

2. Scientific approach

   The scientific approach is highly relevant to the three theories, i.e. theory of Burner, Piaget's theory, and the theory of Vygotsky. The learning theory of Bruner is also called the theory of discovery learning. There are four main things related to Bruner's learning theory. First, the individual only learned and developed his mind when using his minds to use his mind when using his minds when using his mind when using his mind thoughts in the cognitive process in discovery, students will obtain intensity and sensation satisfaction which is an intrinsic award. Third, the only one for one can learn the techniques in discovering the world's discovery, it is to have the chance of doing the discovery.

[11] Oemar Hamalik, *Dasar-Dasar Pengembangan Kurikulum*,(Bandung: Remaja Rosdakarya, 2007), P. 238.

"The above the following is a customized cognitive process in learning using the scientific method. [12] In summary here are the tables that are associated with the measures of the scientific approach

Table: stages of the scientific approach

Activities	Learning Activities
Observing	Looking, observing, reading, listening, observing attentively.
Asking	Asking questions from factual to hypothetical ones, beginning with the guidance of the teacher up independently (becomes a habit)
Gathering information	Determining the data needed from the questions asked, determining data sources (objects, documents, books, experiments), collect data.
Associating	Analyzing data in the form of creating categories, determine the relationship of data/categories to conclude from the results of data analysis
Communicating	Delivering the results of conceptualization in the form of oral, written, diagram, chart, image or other media.

3. Integrated Thematic Lessons

The description of the concept of integrated thematic learning in the 2013 curriculum for SD/MI is disclosed in government regulation No. 32 of 2013 Article 19 Paragraph (1) that, "The Learning Process in educational units is held in an interactive, inspirational, fun, challenging, motivating student to actively participate, and provide sufficient space for initiative, creativity, and independence according to talent, interest and physical and psychological development of students."[13]

Integrated thematic learning is one model of the current curriculum implementation in the elementary school unit. The integrated thematic learning model of essence is a learning system that allows students individually or active

[12] Hosanan, *Pendekatan Saintifik dan Kontekstual dalam Pembelajaran Abad 21. . .*, P. 34

[13] Andy Prastowo, *Menyusun Rancana Pelaksanaan Pembelajaran (RPP) Tematik Terpadu: Implementasi Kurikulum 2013 untuk SD/MI,* (Jakarta: Kencana, 2015), P. 20.

groups to search, explore, and find the concepts and principles of holistic, authentic, and sustainability through themes containing the integrated subjects.[14]

More than integrated learning, the thematic learning, is one of the forms or models of integrated learning, the webbed. The essential model of the initiating pattern of organizing material is integrated by a theme. The theme is taken from outside the subject but in line with the basic competence and the topics (standard of the content) of the subjects. The thematic model as an alternative to the pattern of organization of the sovereign materials that are very old and prevalent in the world of education is discrete subject or separates Curriculum. [15] In literature relating to the development of the curriculum, the authors found that the interaction model of Taba and Cohen showed the relationship between the difference between the curriculum element with the object model.[16]

In organizing materials, the design of thematic learning accommodates some subject subjects. At elementary schools, there are several subjects such as mathematics, natural science, social sciences, citizenship education, Indonesian. Five subjects are now added with the field of study of religious education, crafts, and arts, physical education, and health.[17]

4. The Scientific Attitude

Historically, the term "attitude" was first used by Herbert Spenser in 1862 which at that time was interpreted by him as a person's mental status. In the early days, the use of the concept of attitude was often associated with concepts about one's physical posture or body position. Furthermore, in 1888 Lange used the term attitude in the field of experiments regarding responses to describe the readiness of the subject in the face of a sudden stimulus. Thus, attitude is not only a mental aspect but also includes aspects of the physical response.[18]

In the Dictionary of Psychology, Reber states that the term attitude comes from Latin, "aptitudo" which means ability, so that attitude is used as a reference whether someone is capable or not capable of certain jobs. In more detail,

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[14] Rusman, *Pembelajaran Tematik Terpadu: Teori, Praktik, dan Penilaian,* P. 142.

[15] Deni Kurniawan, *Pembelajaran Terpadu Tematik: Teori, Praktik, dan Penilaian*, (Bandung: Alfabeta, 2014), P. 95.

[16] Laury Brady, *Curriculum Development*, 4th ed., (Australia: Impact Printing, 1992), P. 74.

[17] Abdul Kadir, *Pembelajaran Tematik*, (Jakarta: Rajawali Press, 2014),P. 29.

[18] Saifuddin Azwar, *Sikap Manusia: Teori dan Pengukurannya*, (Yogyakarta: Pustaka Pelajar Offset, 1998), P. 4.

Rahmat summed up some expert opinions and set five characteristics of one's attitude. (1) attitude is the tendency to act, perceive, think. (2) attitude has a driving force. (3) relatively more settled attitude. (4) attitude contains more evaluative aspects. (5) attitudes arise through experience.[19] Thus, attitude is a form or concrete response of things faced that involve cognition, emotions and finally have a tendency to act.

Furthermore, in some literature, scientific attitude is an extension of the ability that researchers use to find real truths. This scientific attitude begins by prioritizing a consistent attitude in scientific thinking. In the framework of scientific thinking, logic is used as a method of straightening thinking, both in deductive and inductive approaches. The scientific attitude is guided by the paradigm of positive sensory truth because it will further prove the relevance between theory and reality as it is. Therefore, the scientific method must seek a phenomenological approach.

A scientific attitude is a character that is a requirement of scientists in seeking scientific truth. The scientific attitude is fully influenced by scientific approaches and methods that have been recognized by scientists. Scientific attitude includes rational, empirical, objective, systematic, theoretical, critical, technological, relativistic.[20] One of the aspects of learning natural sciences is the formation of a scientific attitude. Getting the right criteria is difficult, but based on deeper literature it is formulated as follows:

a. Have curiosity or curiosity.
b. Cannot accept the truth without proof.
c. Honest.
d. Open.
e. Tolerant.
f. Skeptical, cautious, caring, skeptical.
g. Optimistic, which is always good hope.
h. Brave.

[19] Herson Anwar, "Penilaian Sikap Ilmiah dalam Pembelajaran Sains". dalam *www.ejurnal.ung.ac.id*, diakses pada tanggal 9 Mei 2016, P. 104.

[20] Herabudin, *Ilmu Alamiah Dasar*, (Bandung: CV Pustaka Setia, 2013), P. 67.

i. Creative.[21]

In addition, according to Harlen, scientific attitudes at the basic level contain two meanings, namely attitudes toward the science of enterprise and attitudes towards objects and events which are studied in science, and the use of evidence makes sense of them. To develop this attitude towards science requires the idea of what "science" is. Without this, attitudes will form as the basis of many myths about science and about scientists who have been widely trusted, caricatures perpetuated in the media and in various literature.

In elementary school (the basic level) the focus is to provide science experiences from scientific activities as a basis for thorough understanding, which will only be found later, from whether science exists and does not exist and from our responsibilities all apply it humanely. [22] So here the main focus is on the attitude that we call the attitude that we might call the attitude of science. The statement helps children develop "rigor, responsibility, respect for the environment" and make references to assessing other people's opinions, being sensitive to other people's feelings, and increasing curiosity. These all fall into the category of scientific attitudes and will support several areas of learning in learning. In this case Attitude toward science refers to the attitudes and perceptions of students towards science learning, while the attitude of science refers to the attitudes inherent in students after learning science. Thus the learning process is to develop students' scientific attitudes.

In addition, scientific attitude is a state of mind that enables creative thinking about nature and natural phenomena, and engaging in valid scientific research on these phenomena; it is not the same as “attitude to science”. A discussion of the scientific attitude needs to be prefaced by statements on what science is, the steps in the advancement of science that led to science is now called the greatest intellectual enterprise of man; also considered are the factors that are inherent in the scientific attitude.[23] Thus, scientific attitude is a form of the creative human mind as an impact of interactions with nature and

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[21] Maskoeri asin, *Ilmiah Alamiah Dasar: Untuk Perguruan Tinggi non Eksakta dan Umum*, (Jakarta: Raja Grafindo Persada, 2002), P. 44.

[22] Wynne Harlen and Anne Qualter, *The Teaching of Science in Primary Schools*, (London: Routledge, 2009), P. 96.

[23] Amiretus, Professor. “The Scientific Attitudes (The Scientific Temper) in Eastern and Western Societies”, *Anuradhapura Medical Journal 2014*; 8(1): 22-29, dalam www.doaj.org, diakses 21 Maret 2017. P. 2

all natural phenomena that exist. In relation to scientific attitudes at the elementary school level that apply the scientific approach of the 2013 curriculum, the thematic content in learning is a form of realization of this statement.

Regarding Harlen's opinion, Mas'ud in his book on the attitude of science explained that scientific attitudes have eight aspects of scientific attitude, namely curiosity, critical attitude, open attitude, objective attitude, willingness to respect other people's work, courage to defend the truth, attitude to reach forward.[24] Then there is also that the scientific attitude in science learning is often associated with attitudes towards science. Both are related and affect actions.

A variety of scientific attitudes has been formulated based on many experiences from previous scientists. Based on the present exposure, the scientific attitude in this study refers to the dimensions of the scientific attitude delivered by Harlen. Among the attitude in question is: Scientific attitude at the primary level: Attitudes towards science as an enterprise; Attitudes towards the objects and events which are studied in science, and the use of evidence in making sense of them.

Furthermore, related to teacher teaching style, teachers need to be aware that in addition to teaching and learning, changing attitudes is important also.[25] Teachers need to be aware of improving teaching and learning, changing attitudes is also important. In this case the attitude dimension will be shown by students if students are often or accustomed to conducting experiments or group discussions, fostering their expectations, enjoying and working with groups well, interacting in collaboration with group members without having a competitive feeling that tends to be negative. This is part of a scientific attitude. Therefore, this attitude can be further investigated, especially in elementary schools. This study discusses the development of scientific attitudes of students in participating in thematic content learning in the context of the implementation of the 2013 curriculum.

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[24] Ibnu Mas'ud & Joko Prayono, IAD: Ilmu Alamiah Dasar,... P. 112.

[25] Neal A. Glasgow, *What Successful Science Teachers Do*,(United State: A Sage Company, 2010), P. 28.

RESEARCH METHOD

This research uses qualitative methods to obtain deep data, meaningful data. Qualitative research emphasizes meaning rather than generalization.[26] The qualitative approach according to Nasution S, basically tries to describe the problem comprehensively, holistically, integratively, and deeply through the activity of observing people in their environment and interacting with them about the world around them.[27] This research involved a number of research subjects, namely Mr. Muryanto as the principal of the SDN Demangan school and Mr. Subekti Hari Wahyudi as the thematic teacher. Data collection techniques used in this study are observation, interviews, and documentation.

Data analysis was carried out from the beginning of the study to completion of the study. According to Milles and Huberman in the analysis of qualitative data that appears in the form of words and not a series of numbers. The data may have been collected in various ways such as observation, interviewing, or recording essence which are then processed through planning, typing or rearranging. The analysis phase is: (1) analysis before in the field; (2) analysis of data in the field, which includes: data reduction, data display, data presentation, and conclusion drawing.[28]

THE FINDINGS AND DISCUSSION

Implementation of 2013 Curriculum in SDN Demangan Yogyakarta

According to the principal of SDN Demangan, the curriculum that continues to change as a form of improvement efforts in the world of education as handling various phenomena of the development of attitudes or character of children that arise. This 2013 curriculum emphasizes attaining student attitudes. This is in accordance with the Legal Basis for the Implementation of the 2013 Curriculum by the Ministry of Education and Culture that the philosophy of the 2013 curriculum intends to develop the potential of students to be the ability to think

[26] Sugiyono, *Metode Penelitian Kuantitatif Kualitatif dan R&D,* (Bandung: Alfabeta, 2013), P. 8-9.

[27] Nasution S, *Metodologi Penelitian Naturalistic-Kualitatif*, (Bandung: Tarsito, 1998), P. 5.

[28] Matthew B. Milles dan A. Michael Huberman, *Analisis Data Kualitatif,* (Jakarta: UI Press, 1992), P. 15.

reflective for solving social problems in society and to build a better democratic society's life.[29]

Furthermore, during the implementation of the 2013 curriculum, problems were found related to the readiness of the teachers in the face of the implementation of the 2013 Curriculum which has changed twice. In addition, problems were also found in the publication of guidebooks for teachers and students, as well as problems with the assessment format. According to the principal, this problem is reasonable, it is common. As a result of policy changes in the application of the 2013 curriculum, SDN Demangan never stops the implementation of the curriculum 2013, and re-apply starting in 2016/2017. To address the issues of book issuance that comes late, some teachers coordinate to develop material but still use the book of previous guidelines. To improve the teaching ability of teachers, teachers, and coaching teachers with workshops, training and events are held both from schools and from the government.[30]

Furthermore, related to the scientific approach to the curriculum 2013, the following is the opinion of the principal of SDN Demangan: that the scientific approach in the 2013 curriculum is an approach that has existed for a long time, which at that time was in the form of listening and reading. However, the scientific term, in this case, is not exactly the case in universities. At present, this approach is officially stated in the 2013 curriculum thematic book, so that the emphasis of this scientific approach is sharper and structured according to the stage of child development, especially in elementary schools.[31] It is true that the stage of the 2013 curriculum scientific approach is contained in all thematic lesson manuals. What was conveyed by the principal about the stages of reading is in accordance with observing activities included in the 2013 curriculum manual? The stages of the scientific approach include observing, asking, seeking information,

[29] Kemendikbud, Direktorat Pendidikan Dasar Direktorat Pembinaan Sekolah Dasar 2013, *Dasar Hukum Implementasi Kurikulum 2013 Di Sekolah Dasar*, 2013.

[30] Hasil Wawancara dengan Bpk. Muryanto, S.Pd. selaku Kepala Sekolah SDN Demangan, Yogyakarta.

[31] Ibid.,

associating, communicating. This is in accordance with the theory described by Hosnan in his Scientific and Contextual Approach.[32]

In observing activities, when dealing with natural sciences, Indonesian language, skills or others, students will observe objects that are in accordance with the theme being studied. So, observing, finding information is an activity that is mutually exclusive. Furthermore, in the application of the scientific approach is closely related to the facilities to be used. Based on interviews with the school, that in applying the scientific approach requires sufficient facilities. For public schools such as SDN Demangan, they have limitations in developing existing facilities. As in the thematic book printing of student learning guidelines, or even student teaching aids. Therefore, the school is waiting for a guidebook from the government. To overcome this delay and the process of teaching and learning activities that must be carried out, the teacher uses the previous manual. Even looking for alternatives from book printers such as student worksheets (LKS) as learning resources and supporting student training activities for more intense learning. This is in line with the statement from the teacher of class IV thematic subjects at SDN Demangan, namely: "I have not received the 2016 edition of the revision book until now, so we from the thematic teacher coordinated with several other teachers, even other schools to develop the material themselves that will be studied.[33]

The principal stated that the essence of learning was an explanation from the teacher. Children will understand when explained, will not be separated from the lecture method, so it is not solely because of learning outside the classroom. This is a response from the procurement of the National Examination in this 2013 curriculum. So this has an impact on teachers who are still trying to emphasize the cognitive achievement of students. Even though the 2013 curriculum, especially the elementary school level, emphasizes greater attitudes. In relation to scientific attitudes, the following are the responses of the heads of Yogyakarta's SDN Demangan: "Regarding scientific attitudes, if they (students) know that they are judged, they can answer the right questions. This is still limited to knowledge of attitude, not yet intact. If this becomes implicit in the National Examination matters, it is not yet an attitude skill. Furthermore, how is responsibility, limited

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[32] Hosanan, *Pendekatan Saintifik dan Kontekstual dalam Pembelajaran Abad 21*, (Bogor: Ghalia Indonesia, 2014), P. 34.

[33] Hasil Wawancara dengan Bpk. Subekti Hari Wahyudi, S.Pd. selaku Guru Mata Pelajaran Tematik Kurikulum 2013 kelas IV A SDN Demangan, Yogyakarta. Pada 31 Januari 2017.

to what is limited. For private schools, the maximum can reach the maximum because funds can be processed by themselves. For what is the national examination, to enter school, no, for the actual value the value has been made, then actually what is the National Examination. Many problems were faced, but still implemented, Children became victims of that policy. Indonesia cannot yet be like "abroad".[34]

Based on this opinion, the school principal seemed to disagree with the holding of the national exam, because it made the school especially the teachers better prepare students' knowledge skills, so the essence of the 2013 curriculum's main objectives tended to decrease. The scientific attitude is observed as an assessment that takes place in the classroom. Thus, based on the results of the interview, it can be concluded that in the implementation of the 2013 curriculum, the scientific approach was clear and contained in the thematic text of the students' handbook. Where the steps of the scientific approach, including observing, seeking information, associating, communicating, are correctly stated in the flow of the thematic learning process activities.

The implementation of the 2013 curriculum in elementary schools, especially in SDN Demangan, still requires some policies. Then, about the implementation of outdoor learning activities (outside the classroom), not so emphasized, so that it is still dominated by indoor activities (in the classroom). Thus, the main objective is to emphasize the achievement of knowledge skills. This is as a result of national exam preparation. In developing the attitude or character of students, it can be seen through further discussion of the results of observations of researchers when the learning process takes place.

In connection with the scientific attitude of students, that scientific approach is an important role in the development of scientific attitudes, especially in science learning. However, in the 2013 curriculum thematic content, the scientific approach also contributes in all subjects including Indonesian Language, Social Sciences, Cultural Arts and Crafts, so that not only in Natural Sciences. Thus, with the habituation of doing the stages of the scientific approach, in essence, the

[34] Hasil Wawancara dengan Bapak Muryanto, S.Pd. selaku Kepala Sekolah SDN Demangan Yogyakarta, pada hari Jumat 9.30, 09 Februari 2017.

scientific attitude of these students is instilled more intensely so that the development must also increase.

A*pplication of the Scientific Approach in the 2013 Curriculum*

1. Observing

   Based on observations in SDN Demangan, the first activity was carried out by thematic teachers in the learning process by using a scientific approach to the learning process by observing or observing. As previously explained, observing activities are activities that utilize the senses that exist (see, read, hear, listen, can touch). The teacher begins the learning activities through observing theme 6 with the title "Beautiful Country" and sub-theme 1 "Diversity of Animals and Plants". Before the observation process was carried out, students and teachers showed some pictures of the sights in Indonesia, the scenery generally contained mountains, rice fields, trees, and several activities, then the teacher showed some pictures using slides by the projector.

   Furthermore, all students are encouraged to observe the picture, either in the student manual or slide show. The teacher should bring other media to the process of observing even the innovative ones. However, in reality, the teacher only provides a tool in the form of blank paper which is used for drawing. So there is no new media for object observations except books and slides. Thus, the scientific approach is modeled almost like a conventional or traditional learning process. Then, the time needed to observe is not too long. After students observe they are given the task to draw according to the theme.

   Observing activities carried out for the purpose of understanding the characteristics and significant extent of the interaction of elements of human behavior on social phenomena that are complex in certain cultural patterns. In the learning process, students observe objects to be studied, usually reading, seeing, listening, listening, and writing or taking notes. The developed competencies are training sincerity, accuracy, and seeking information. Thus, learning that takes place at the basic level or elementary school students have been instilled a scientific attitude.

   In observing activities, the teacher should present videos, pictures, miniatures, impressions, or original objects. Students are invited to explore the object being studied. However, the reality that researchers found during observation was: In the process of observing, the learning activities applied in SDN Demangan were: reading, seeing, listening, listening, enough with books.

In presenting learning, the teacher and students need to understand what they want to note, in observation. However, the real process in learning, the teacher only provides slides and displays images on slides and that is only the picture in the manual. For example, theme 6 "The beauty of my country" on the sub-themes of the diversity of animals and plants. Students are invited to observe pictures, then they are invited to identify what is in the picture and they also identify the characteristics of birds of paradise. The students only read while watching the picture, then they discussed together with classmates and teachers. In the discussion, there was an exchange of opinions so that they entered the stage of gathering information so that conclusions were found.

Apparently, the absence of adequate learning media because only using a handbook causes students to be less knowledgeable. This can be replaced with other sights, such as the view of the Indonesian hemisphere. Likewise with the observation of birds of paradise, because it is not possible to bring the bird in the classroom directly, the teacher can find examples of birds of paradise in various types and colors, so students can find out more.

Actually, the teacher has prepared the media and some simple tools, however, in teaching related to contextual matters, the implementation of learning is not maximal, because it is only explained by lectures and discussions without any evidence or direct action outside the classroom. Thus, the benefits of thematic learning have not been achieved perfectly. Even though thematic learning has many benefits. Among them is thematic learning to help teachers improve their professionalism. Thematic learning requires carefulness and seriousness of the teacher, both in finding contextual themes, designing learning plans, preparing appropriate learning methods, formulating learning objectives, implementing learning, and preparing evaluation instruments that are relevant to learning activities.[35]

In addition, thematic learning is very helpful for teachers in carrying out learning, especially to help students grow multiple intelligence, improve

[35] Mamat SB, dkk, *Pedoman Pelaksanaan Pembelajaran Tematik*, (Jakarta: Departemen Agama 2005), P. 16.

scientific attitudes by actualizing cooperative groups, so students will be more respectful of group members, responsibilities.

2. Asking

To stimulate students to ask actively, the teacher tries to provide stimulus through questions. For example, have you ever seen a bird of paradise? Where did the bird of paradise come from? Then there are students who answer right and there are answers that are not right. In the questioning stage, the teacher should ask easy questions first, then lead to the difficult ones. This is because if the teacher asks a difficult question first, there might be students who are afraid of being wrong, or afraid to answer. In other words, courage will be difficult to show.

Asking is the entrance to gain knowledge. Therefore, asking in learning activities is the activity of the teacher to motivate students, guide, and evaluate their attitudes. In the process of asking this question, students are greatly helped in sharpening their knowledge according to their abilities in answering questions from the teacher. The teacher motivates students by asking about the theme of the beauty of my country and students are encouraged to answer and question further about the various meanings of my beautiful country. With these activities, the expected competencies are to develop creativity, curiosity, responsibility, thoroughness, respect for the opinions of others. And this is all implied by the scientific attitude that has been embedded since being in elementary school.

The teacher's actions to motivate the children by questioning is an effort to develop students' scientific attitudes. Whatever the student's question, the teacher must be able to identify the type of question. The teacher tries to provide the right feedback when the student's question is not right or does not yet contain the curiosity. Therefore, teachers need to understand further the attitudes and mindsets of children and seek appropriate response solutions. This is related to the theory of respecting student questions, as explained: "It is necessary to appreciate the existence of various questions on the same answer. While we understand the value to students of their types of questions, including obscurity and saying nothing, it is useful for their learning if they begin to recognize the types of questions that can be demonstrated through scientific activity. In addition, the teacher really needs to cultivate the child's core in classroom learning. This can be done by continuously motivating students' questions, namely by providing interesting materials, giving them the task of

bringing learning tools and materials, supporting their responses. Thus, children feel valued so that the spirit emerges to continue to enjoy the learning process".

3. Gathering Information

The next learning process after the question-answer activity phase about what is observed by students in an effort to recognize the theme "Beautiful Country" is the stage of experimentation or information gathering. In this activity the teachers of SDN Demangan especially the thematic teacher started by guiding students to find out about how to recognize the sub-themes of animal and plant diversity. In this activity, the teacher carries out the discussion and this is in accordance with the planned implementation of learning, especially on clear and specific indicators. The discussion process is fully accompanied by the teacher. Groups whose discussions are active and which are less active. In addition to assisting and supervising students, the teacher can also observe students' attitudes when discussing and interacting with other students. Thus, the teacher has instilled and provided an example of the attitude of cooperation, respecting the opinions of others, and responsibility.

4. Reasoning and associating

The next activity in the application of the scientific approach is associating which means reasoning and processing information. The term reasoning in the scientific approach is intended so that teachers and students become active actors, but students must be more active than their teachers.

Associating, processing information or reasoning in learning activities as stated in Permendikbud Number 81a of 2013 is processing information that has been collected both limited to the results of collecting activities or experiments as well as the results of observing activities and collecting information. This activity is to add insight into the nature of finding solutions from various different or even conflicting sources. This activity aims to find a link between information and other information. Furthermore, this activity is also expected to develop honest, thorough, disciplined, obedient rules, hard work, the ability to apply procedures and the ability to make conclusions.

5. Communicating

The advanced stage of associating is communicating. The application of the scientific approach communicating on thematic content is realized by the role of students in conveying the results of discussions in groups. For example, the teacher asks students or one group to come forward to present the results of their discussion, as based on observations of researchers: on the sub-themes of the diversity of animals and plants. The activity in communicating to find out the achievement of the realm of skills is that the teacher tells the students to communicate with other friends in front of the class. At the presentation, they bring their respective books and have a conversation. The conversation is the result of their discussion, working together to make questions while looking for and writing down the answers. The activity of communicating the learning can only be done through writing or telling what is found in previous activities, such as observing, seeking information, associating which is then conveyed in class. This activity is in accordance with the Minister of Education and Culture Number 81a in 2013 which is conveying the results of observations, conclusions based on the results of the analysis verbally, written, or other media.

The final step in communicating is forming networks. In practice, in SDN Demangan it is done in writing, namely students present by writing what they have learned in the group starting from what they have understood. Then the teacher responds to the results of the presentation including questions and answers and confirmation or other responses. This activity can be done by writing or telling what has been found in the activity of seeking information, finding patterns and then students can deliver it in front of the class to classmates.

If we look at the paths listed in the student study guide, each lesson consists of a combination of subjects that are not the same content. At the beginning of each learning activity, there is a little snippet of information. This is a stimulus that aims to construct students' curiosity. From the phrase "Did You Know" to the very end "Cooperation with Parents" is the stage implicit in the scientific approach. "Do you know" is the stage of the question. "Let's Observe" is the stage of observing. Finding out is an act of seeking information and associating. "Let's Discuss, Come on Tell" is the stage of communicating.

Thus, the scientific attitude of students will always develop in the learning process and should appear at all stages, more specifically when studying all content, be it science, social studies, Indonesian Language, Pancasila, and civic education, and math. However, the scientific attitude of elementary school

students does not seem so complex. What often appears is their curiosity. This is indicated by asking many questions, actively asking questions. Another scientific attitude is precision, this will be trained during the observation phase, or when reading the text. Next is the sense of responsibility contained in their actions when working on the assignment from the teacher, collecting group assignments.

Appearing of Students' Scientific Attitudes

1. The attitude of accuracy

   The attitude of accuracy can be seen from several students activities such as recording information, paying attention and observing examples provided by the teacher, making material conclusions, proposing ideas to the teacher or classmates, listening to what the teacher explained

   Based on the results of the observation, it was found that fourth-grade students of SDN Demangan noticed and observed samples of material provided by the teacher on the projector. However, students have not seen recording information in a notebook. They only use material sources from the 2013 curriculum thematic handbook. When the teacher explains the material, it is seen that most students pay attention and listen carefully. They respond and they immediately ask if there are difficult words that appear. For example, the teacher invites students to say "Let's do it according to the information ...!" Then there are students who ask "Sir, what information is that?" Then the teacher explains it well. After understanding, students continue to work on the task.

2. The attitude of responsibility

   The attitude of responsibility can be seen with indicators, namely students collect tasks/worksheet; use the time to observe the material as well as possible, treat and put the equipment in place, follow the learning; perform the duties of a teacher, complete the task independently until it has been completed; attempt to complete the coursework, not much of a play; students read the subject matter; students doing reflection after following the process of learning.

   The results of the observation prove that students in grade IV A SDN Demangan collected their work after getting assignments from the teacher. In

learning science, the theme of the diversity of animals and plants in this time only uses slide media provided by teachers and student handbooks. Because material about rare animals, it only uses images. The teacher does not hold outdoor learning in both zoos and botanical gardens. This is constrained due to the unavailability of transportation facilities and far from the location, so it will take a lot of time.

Furthermore, the scientific attitude that appears is that students work on independent tasks and group assignments to completion. This is evidenced by the discussion of the results of group work with one of the presentation groups in front of the class. That was followed by an enthusiastic question and answer session. They seemed to ignore their attitude or not, they freely asked questions and scrambled until they shouted to their feet and ran forward to ask. They are not confident with their own questions, because there are those who ask questions based on the text in the book, there are also those who ask for curiosity. This is consistent with Harlen's theory that curiosity and curiosity play an important role in science learning.

Based on the questions that arise, it can be assumed that most of the students have read the subject matter. Some are making questions based on the text and there are also asked outside the text. For example, "where did bird come from?"; "What are the different types of marine animals "? While the question outside the text in books such as "do the benefits of the sea water?", there is also a "what the heck is" coral reefs? This shows that they have a good sense of responsibility more also has a high curiosity.

3. Respect for the surrounding environment

Respect for the surrounding environment can be seen from several indicators, namely caring about the environment, caring for the environment. The moment of observation is marked by a number of attitudes that look like throwing trash in a trash can, picking up rubbish scattered in the class. The attitude of respect towards the environment can be seen from some of the indicators, that is concerned with the environment, caring for the environment. Time of observation is marked by some manners seem like throwaway trash in the trash, take the trash scattered about in class.

The student of Grade IV SDN Demangan rarely and almost no use of animals as learning materials in thematic learning IPA, since at the material shown is the rare animals. So they are only animals that exist in the image that is in the manual and provided by the teacher. In the meantime, thematic learning

material on the SBdP those who use herbs, they can bring it from home, such as grain corn, green beans, rice. They use it as a learning resource to make a collage on the SBdP material. In the activities of these seeds stick to make a collage of them are very enthusiastic, attaching them carefully and neatly. However, it still looks to students to let some of the source material. Nevertheless, they eventually would take and clean it again. With this, the students have been sensitive to the conditions of its environment.

4. Attitude to respect other opinions and feelings

Sensitivity to the feelings of others can be demonstrated by expressing opinions to the teacher and friends well, students answer questions from the teacher. Based on the results of observations that have been made those fourth grade students of SDN Demangan express their opinions and questions well. But this is only done by a handful of students. The majority of them submit questions or responses immediately and spontaneously. In fact, they often scramble to ask questions, so they tend to ignore and not give other friends the opportunity to ask questions first.

Based on these events it can be assumed that most students are less sensitive to the feelings of others, in this case, classmates. However, they will still listen and pay attention to what the teacher has to say. They can always respond to statements and questions from the teacher. Thus, it can be concluded that the students have emerged sensitive scientific attitudes with the feelings of others who are more mature than their peers.

Thus, the teacher needs to instill a sense of sensitivity towards peers better, so that the class can be more conducive and no students feel insecure or succumb to and even hurt so they no longer ask questions. In other words, so students do not despair and always eager to respect the opinions of friends.

5. Curiosity

Curiosity can be seen from several indicators, namely: (1) students hold discussions and ask questions that contain curiosity; (2) asking for material/ data/things that are not clear; (3) Participate and actively participate in practice; (4) show business and carry out the learning process; (5) happy with the efforts that have been made in following thematic content learning.

Observing a new, strange and interesting object or event can be seen when it enters a subject that has many tools and materials or examples of objects. This can be seen in science, Indonesian and SBDP subjects, and social studies. During thematic learning, the theme of Diversity of Animals and Plants, precisely the sub-theme 1 of the first charge is science subjects. And during science learning about animal diversity in Indonesia, it is known that the initial activities of thematic books with scientific approaches were entered in the observing section. At first, students read information and most students read information followed by observing new and interesting objects. The object is a paragraph of information on various images of rare animal species in Indonesia.

With the presence of rare animal objects, it is interesting for students because they do not meet these animals in the surrounding environment. The next object is a picture of a scene. They observe the scenery and describe what objects are in the landscape image. They followed enthusiastically, mentioning all things. Then there are some questions that arise from students.

The questions are asked both related to things that have not been understood or other things that you want to understand. From the observations of some fourth-grade students at SDN Demangan asking questions to the teacher. The indicator of curiosity is asking questions. They ask for material and things that are not clear. Furthermore, while studying their groups actively participate, although most students still often work while playing. In SDN Demangan, the teacher usually divides groups of only two friends, usually their peers, so they rarely change the seating format and this is likely to reduce more complex student interactions. The groups are divided according to their seats. In every day, the students do not sit with the same friend on one bench. They take turns every day with other friends. The benefits of this action are students will be close to each other, there is no grouping of friends who tend to be fixed and monotony which can cause boredom. Classmates will experience the same intensity of interaction, so cooperation, togetherness will be maintained. Making a group with these peers the teacher does special on thematic content of Science, Social Sciences, or Indonesian Language. Meanwhile, for the content of Cultural Arts the teacher divides the group consisting of three or more students.

Regarding indicators that often emerge from scientific attitudes, curiosity, students show effort and do the learning process, asking a lot of things that appear in the content of science, social studies, and Indonesian. Meanwhile, the

indicators for students participating and being active in practice are shown in the SBdP content. Moreover, these indicators also appear in the learning process of all thematic content. Then their indicators are happy with the efforts that have been made, this can be seen at the end of the learning activities. They scream with their work after they are finished. This can be seen after making collage artwork on the SBDP contents and IPA content after discussion with scrambling to ask questions and looking happy when answering questions.

This shows that they have high curiosity. This is in accordance with Harlen's theory that curiosity and curiosity are very important in science learning.[36] Thus, students' scientific attitudes that grow and can continue to be developed in elementary school students are curiosity so that they will broaden their horizons.

6. Cooperation

In addition to the five aspects of scientific attitudes above as aspects of the discussion, it turns out that after observing the implementation of the thematic learning process several scientific attitudes emerged, including collaboration, courage, open thinking, and critical thinking. Some of these attitudes are at the top level, but this scientific attitude also starts to appear in elementary school level students.

Based on observations, it was found that the fourth-grade students of SDN Demangan gave rise to a cooperative attitude. This is indicated by their willingness to work in groups. Although groups formed often consist of only two members, there have never been fights between group members. In other words, they accept friends who are members of their groups. This is also a result of the habit of those who each day move sitting positions and also sit with other friends in turn.

Another indicator as evidence that they have a cooperation attitude is they are willing to do their respective tasks. For example, when they get the task of making a question at the stage of the time. They will take questions from the reading that is being the focus of the material. In SDN Demangan this regularly

[36] Harlen *Teaching of Science in Primary Schools*, (London: Routledge, 2009), P. 149

forming a group of two students, therefore each member got a fee of making questions and answering questions, as well as otherwise.

The obvious attitude of cooperation is when entering the class discussion activities. Even though they differed in groups, when one group came to the front of the class delivered a discussion, most students were willing to listen, pay attention, respond, give responses in the form of questions or statements. Their enthusiasm, their willingness to actively participate in this activity is an indicator of the attitude of cooperation.

7. Brave attitude

The scientific attitude possessed by a scientist is brave. At the elementary school level, students are prospective scientists. Therefore, the application of the scientific approach in the 2013 curriculum students is required to study groups, through the stage of communicating by presenting the results of group work in front of all friends and teachers in the class. This is the stage where students must dare to convey the results of group discussions without any shame. They are also ready and brave to receive and answer questions directly in front of the class, in front of all their friends and teachers.

In addition, there are also students who immediately give refutation spontaneously to friends who answer with wrong answers. For example, "Rice fields are not drained by sea water" This is a response from a student who heard his friend's answer that "the use of seawater to irrigate rice fields" and rice will not live if it is drained by sea water. ", fight against the truth that will have an impact on negative things. So that it can be concluded that they have begun to try to convey objections, dare to submit answers that they think are right.

8. Critical and open thinking

Based on observations, it turns out to be also a scientific attitude of students, namely critical thinking. This is indicated by the students at the time of discussion with classmates. When there is one of the presentations, others listen, pay attention, hear, then prepare questions to be asked for a question and answer session. For presentations students ready to answer questions from friends and ready to receive responses as they are the following conversations:

"What animal is stinging?"

He spontaneously replied: "Jellyfish!" "O ... How do you answer carelessly!

This is not careless! (he doubted whether his friend answered right or wrong, he thought that his friend answered carelessly)

Based on these conversations, the questioning students doubted the answers from friends who felt they were not right. This is in accordance with the indicators of critical thinking, including doubting opinions or answers from friends that are considered inappropriate; ask any changes or new things for him; trying to complete his friend's answers that are less precise based on the knowledge he has.[37]

The indicator of critical thinking that also arises is that there are students who try to answer in full, which is considered inappropriate. Following are conversations and discussions between students and teachers after the communication phase. The quotations of the results of the student conversation are as follows:

A: "What are the benefits of seawater?"

B: "To irrigate the fields."

A: "The ingredients might taste salty, they might die in the rice fields because they are salty."

B: "Oh no, the rice doesn't taste salty."

From the students' answers stating that "the rice doesn't taste salty" is the opinion of students based on their knowledge. In addition, it can also be concluded that this student completes answers based on self-experience and knowledge that he can get from the environment or people around him. And if analyzed more deeply, this student has also shown a creative attitude. Because, paying attention to the answer he is trying to complete, adding information about rice has shown that this student experiences a sensitive process of the problem of imperfection, incompleteness, making guesses. This is in accordance with the definition of creativity by Torrance in Mas'ud's book.[38]

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[37] Siti Fatonah & Zuhdan K. Prasetyo, *Pembelajaran Sains di SD/MI*, (Yogyakarta: Ombak, 2014), p. 33

[38] Ibnu Mas'ud & Joko Prayono, *IAD: Ilmu Alamiah Dasar*, (Bandung: CV Pustaka Setia, 1998), P. 65.

Thus, students at the elementary school level are times where they have the opportunity to develop scientific attitudes well. So that this is expected to be a provision to continue to a higher school level.

CONCLUSION

The 2013 curriculum of the thematic learning in SDN Demangan has been implemented since 2014 and is applied to class I and IV. The process is already running, although in the implementation of the learning process is not maximal. There is still a special additional schedule of the mounted load. Thus, this is a task for the school-site especially to teachers to always strive to fix what is a lack of the time of the learning process.

The scientific approach in SDN Demangan, especially in grade IVA has implemented the process of learning thematic learning in accordance with the procedure. Because it does not have enough facilities, then in the process of the stage of observing the students observed objects on the student book aired on the projector, consequently, students do not do practices outside the classroom. The highlight is at the stage of the time and associating realized by working groups, presenting the results in front of the class and continues with the discussion. Thus, student scientific attitude in the thematic learning is already seen, among them is curiosity, responsibility, respect for the environment around, respect the opinion of friends, critical thinking, open, cooperation, and creativity.

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