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ANALYSIS OF 2013 CURRICULUM IMPLEMENTATION USING A SCIENTIFIC APPROACH IN SCIENCE LEARNING IN SMP 24 BENGKULU CITY

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Abstract

SMP 24 Bengkulu City has implemented the curicculum 2013 and students' critical thinking habits when learning science are the emphasis of the curriculum 2013. So that the habit of thinking in a scientific approach is not easy, challenging, and requires preparation. This study aims to find out how the results of the analysis of the science learning process in the implementation of the curicculum 2013 at SMP 24 Bengkulu City. The method used in this study uses descriptive qualitative research methods. The subjects in this study were 2 science teachers, the school principal and 10 class IX students. This research was conducted at SMP 24 Bengkulu City in the 2022 academic year, odd semester. So the results obtained in this study came from the results of questionnaires, observations and interviews. The data obtained from this study showed that overall SMP 24 Bengkulu City had implemented the 2013 curriculum very well, but several obstacles were found in its implementation which caused students to become less active during learning.

Keywords: *Curicculum 2013, Scientific Approach, and Science Learning*

Abstrak

SMP 24 Kota Bengkulu telah menerapkan kurikulum 2013 dan kebiasaan berfikir kritis siswa saat pembelajaran IPA merupakan penekanan kurikulum 2013. Sehingga pembiasaan berfikir pada pendekatan saintifik tidak mudah, menantang, dan membutuhkan persiapan. Penelitian ini bertujuan untuk mengetahui bagaimana hasil analisis proses pembelajaran IPA dalam pelaksanaan kurikulum 2013 di SMP 24 Kota Bengkulu. Adapun metode yang

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digunakan dalam penelitian ini menggunaka metode penelitian deskriptif kualitatif. Subjek dalam penelitian ini adalah 2 guru IPA, Kepala Sekolah dan 10 siswa kelas IX. Penelitian ini dilaksanakan di SMP 24 Kota Bengkulu pada tahun ajaran 2022 semester ganjil. Sehingga hasil yang didapatkan dalam penelitian ini berasal dari hasil angket, observasi dan wawancara. Perolehan data hasil dari penelitian ini menunjukkan bahwa secara keseluruhan SMP 24 Kota Bengkulu sudah melaksanakan kurikulum 2013 dengan sangat baik, akan tetapi ditemukan beberapa kendala dalam pelaksanaannya yang menyebabkan siswa menjadi kurang aktif selama pembelajaran.
Kata Kunci: Kurikulum 2013, Pembelajaran IPA, dan Pendekatan Saintifik

INTRODUCTION

Apriwanda and Hanri, (2022) say that in the 21st century the world is entering the Industrial Revolution 4.0 which has made world demands change. So this also causes several aspects to change, including the impact on the world of education. Apart from that learning in the 21st century is more guided by critical thinking skills, communication, creativity, and collaboration. Therefore, by developing human resources (HR), the quality of human resources is largely determined by good education. Being one of the ways in order to face the Industrial Revolution 4.0.

Suryadi, (2009) states that education plays a very important role in the dynamics of a nation's life, because education can be said to be an agent of development and an agent of change. Therefore, without education, there will be no meaningful development and there will also be no change. On the other hand, according to Sukmawati, (2016) that which has been described in Law no. 20 of 2003 education is a conscious and planned effort to create a learning atmosphere and learning process so that students are active in developing their potential.

According to Kurniawati et al., (2019); Setiawan and Koimah, (2019) learning that aims to optimally improve student abilities must be carried out through structured and

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measurable steps. Therefore, in the learning structure it is carried out in stages, from the simple stage to the most complicated stage, so that it can be measured in terms of implementation and achievement. This applies universally, including in science learning such as astronomy, biology, chemistry, earth science, and physics. Therefore the scientific approach is one way to arrange appropriate learning.

According to Permendikbud Number 103 of 2014, the scientific approach is operationalized in the form of learning activities which include learning experiences in the form of observing, asking, gathering information (trying), reasoning (associating), and communicating. So that in the process of organizing learning that can build ideas to express a freedom, imagination, and creativity in children. So learning that is presented to attract children's interest should be a pleasant atmosphere.

Budiani, et al, (2017) stated that the latest curriculum that emphasizes the use of a scientific approach is the 2013 curriculum. The 2013 curriculum is one that is expected by the Indonesian generation who are critical and creative in accordance with the demands of the times. As for the initial implementation, the 2013 Curriculum raised a lot of criticism and protests because it was considered to be causing problems. In implementing the 2013 Curriculum, there is still one big obstacle that must be addressed, namely the issue of the readiness of the teaching staff as the key to successful implementation. (Alawiyah, F. 2014). Meanwhile, according to Ahmad, S. (2014) Implementation problems are the content and packaging of the curriculum, teacher readiness, and the emergence of multiple interpretations in its implementation.

Norris, (1998) stated that the activity of gathering information about a curriculum to provide consideration for perfection and decision making is the meaning of curriculum

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evaluation. Meanwhile, according to Hasan, (2014) curriculum evaluation is a systematic effort to collect information about a curriculum that is used as material for consideration in the value and meaning of the curriculum in a particular context.

This research has the advantage of influencing the implementation of the 2013 curriculum, this can be seen from the characteristics contained in the stages in the learning process, namely guiding students to solve problems through careful planning activities, data collection, data analysis to produce conclusions. . Apart from that, it can also emphasize the character education of students in junior high school, this can provide an opportunity for educational institutions to maximize their ability to solve the problems they face in order to have high learning outcomes.

This research has one objective, one of which is to measure information about the readiness, implementation, and results of implementing the appropriate curriculum, therefore, from the description above, it is necessary to conduct evaluation research on the implementation of the 2013 curriculum in schools, especially at the junior high school level. As for the things that must be prepared for implementation activities, namely the readiness of books, what is the condition of infrastructure, teachers, and the condition of lesson plans. In this implementation, the implementation has a learning process and evaluation, where the implementation results include the acquisition of learning outcomes and student responses.

RESEARCH METHODS

The method used in this research is to use qualitative methods with descriptive research types. Descriptive is research that is intended to investigate circumstances and

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conditions whose results are presented in the form of a research report. (Arikunto, 2019). The subject of this research was conducted at SMP 24 Bengkulu City and involved the school principal, 2 science teachers, and class IX students. The technique used in the data collection process was obtained from 2 (two) ways, namely the results of observation and in-depth interviews, where interviews were conducted with school principals, class IX students, and science teachers to obtain information regarding teacher readiness in the 2013 curriculum, the condition of lesson plans taught, and books. While observation activities have the aim of knowing the condition of infrastructure, assessment documents, student responses in learning, and the learning process inside the classroom and outside the classroom.

RESULTS AND DISCUSSION

The strong flow of modernization has demanded various educational institutions to prepare their best students who are competent in the era of globalization. So an educational program is needed to apply this which is made according to the needs needed in the field. The government, especially the Ministry of Education, is updating the curriculum, which is named the K13 curriculum.

Even though the 2013 curriculum is considered the best choice for changes and development of the curriculum, of course it must still be carried out in an orderly, synergistic manner, and have a positive impact on the application of learning processes. These reforms must also have clear goals and directions, so that the national education system can bring big changes to the Indonesian nation. Therefore, it would be nice for various educational institutions, starting from elementary education, junior secondary

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education, and senior secondary education, to have a better understanding of the mandate for national education.

Curriculum analysis in science learning at the junior high school level is carried out on an integrated basis. Science learning in junior high schools is developed as an integrative science subject, not as an educational discipline. This concept of integration is demonstrated in Core Competency (KI) and Basic Competency (KD), science learning, that is, in one KD already combines science concepts from the fields of biology, physics, and chemistry.

Blended learning (integrated learning) is a learning approach that deliberately combines various aspects within and across subjects. This integration equips students with comprehensive knowledge and skills to make learning meaningful for students. The importance of blended learning is learning that covers many subjects and provides students with meaningful experiences. Blended learning is intended for students to immediately understand the concepts they have learned through experience and relate them to other concepts they already understand. In general, integrated learning focuses on developing students' abilities optimally, meaning that students must play an active role in the learning process, which is of course in accordance with the objectives of the 2013 curriculum in learning science.

Science and science scientific learning is a collection of information obtained using a systematic method (scientific method), and with a scientific attitude. besides that science can also help people understand themselves and the world around them. So that the process of learning science is more useful to be experienced directly from concrete learning sources. Learning from real sources can represent a more natural learning environment, so

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it is safer and more successful. this is because learning from a more real source is better than imagining it, so that the information obtained is easier for the brain to digest.

Mac Donald, (1965) states that the school system consists of four subsystems, namely learning, teaching, learning and curriculum. Teaching (teaching) is an activity or professional supervision of a teacher. Learning is an activity or effort carried out by students in response to class activities given by the teacher. The process of interaction between teaching and learning is called learning (teaching). Curriculum is a plan that provides guidelines for teaching and learning. Learning activities with a scientific approach in the 2013 curriculum, which includes science learning objectives.

The scientific approach is a mechanism for obtaining information based on the scientific method. This scientific approach has several criteria, one of which is: press and encourage students to engage in critical, analytical and critical thinking accurately in identifying, understanding, problem solving and applying learning material (Kemendikbud 2013). Fauzia et al, (2013) in their research emphasized that the scientific approach is applied scientifically in learning which is quite good and has a positive impact on students' soft skills. Erlangga's research results, (2014) show that in learning, using a scientific approach can improve students' affective and psychomotor areas.

Based on the results of analysis, interviews and data collection that have been obtained by researchers in learning science at SMP 24 Bengkulu City, it can be presented in each dimension, namely about:

1. Implementation of K13 with a scientific approach to science learning at SMP 24 Bengkulu City

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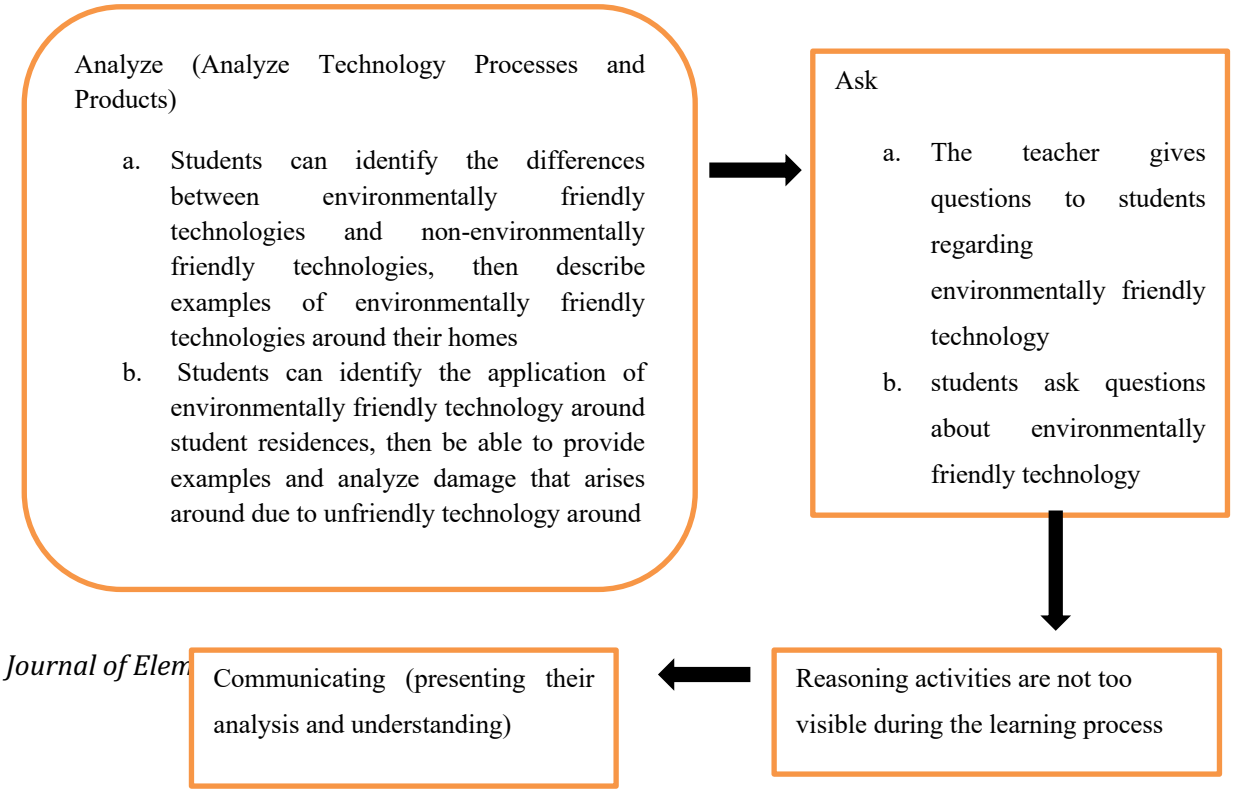
Implementation of learning is applying the interaction process of students with educators and learning resources in a learning environment that includes teachers and students exchanging information (Hamzah, 2012). Teachers should know the characteristics of their students and media that are appropriate to the material to be delivered before using the implementation of learning media. So that students can learn actively and creatively.

In this study, the application of a scientific approach to learning, especially learning science in class IX semester 1, was held 3 meetings a week, where at the last week's meeting, learning science was discussed at that time in physics. The basic knowledge that is expected in this study has an understanding of KD 3.10 analyzing environmentally friendly technology.



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(Graph of the stages of implementing a Scientific Approach in the Science Learning Process at SMP 24 Bengkulu City)

Based on the table above, it can be seen that when learning begins, it begins with the division of groups consisting of one group of 4 to 5 people. then the activities carried out by each group are discussing in analyzing environmentally friendly technologies around them within 30 minutes. During the process of analyzing students can collect relevant information to identify examples of environmentally friendly technologies around schools such as analyzing sunflower plants, water hyacinth, mother-in-law's tongue flower, and so on. Not only that, students can also identify the various causes of damage from technology that is not environmentally friendly, and how it is applied.

At the analyzing stage, the teacher's role is to interact with students by asking questions, the teacher also provokes questions to students related to the material being analyzed, and students also ask questions to the teacher. While activities in reasoning students are not very active during the learning process. After analyzing and asking questions, each group took turns presenting the results of their analysis regarding environmentally friendly technology material.

The instrument used in addition to the observation form of the researcher also used a questionnaire filled out by students regarding the application of the scientific approach. The result is a list of questions, as follows:

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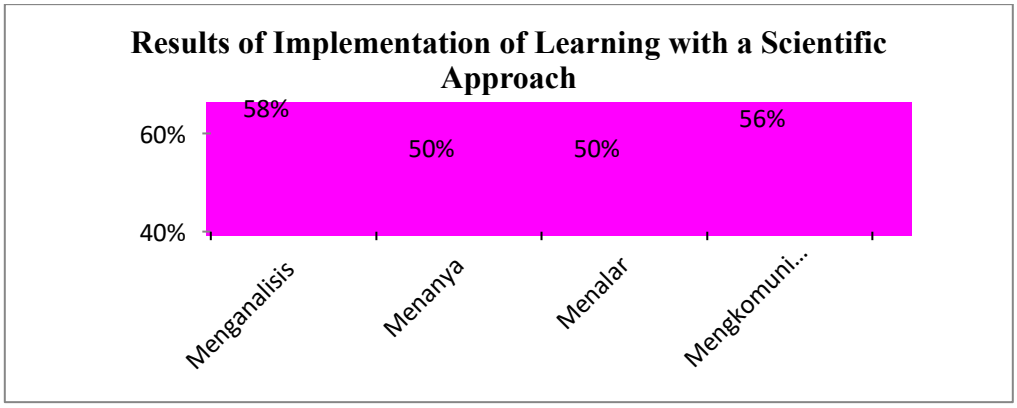

(Bar chart of the results of implementing a scientific approach to science learning at SMP 24 Bengkulu City)

The table above shows that the implementation of the scientific approach in learning science at SMP 24 Bengkulu City was carried out by analyzing only 58% of students who could analyze the material, asked 50%, reasoned 50%, and communicated 56%. The implementation of the scientific approach is quite good at the analyzing and communicating stage, while at the questioning and reasoning stage it is still not good.

Students' thinking activities draw conclusions in the form of information and there is no hypothesis yet. This causes students' thinking skills are still not good. Reasoning is a process of logical thinking based on facts that can be observed systematically to get a conclusion in the form of information. Students can collect information from various sources, then process the data. The purpose of several learning processes in science learning with this scientific approach is the same, namely emphasizing that learning does not only occur internally in the classroom, but also in the school environment and others.

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The scientific approach can build students' critical thinking skills, because the implementation process requires students' skills to analyze, ask questions, reason, and communicate these things which are learning objectives by implementing them. This statement is in accordance with the results of Weni's research, (2021) that teaching in the classroom also requires what is planned to find out which learning method is best to apply, so that changes and competencies arise within oneself for independent learning in the desired direction.

2. Learning Design

Almost as a whole currently learning in schools almost uses the 2013 Curriculum. The 2013 Curriculum is thematic-based learning. To achieve the goals in learning activities such as so that students easily understand the material presented, students are more active in learning activities, students are more creative, and students do not feel bored with the material presented. So that the use of learning media in thematic learning can be one of the variations.

Science learning media design is a process carried out by someone to convey messages to students using tools or objects by making preparations or planning in advance, so that students have the motivation to learn to obtain effective and efficient learning outcomes. The design of science lesson plans assesses topics such as curriculum, lesson plans and the principles of making lesson plans.

The Learning Implementation Plan (RPP) contains school identity, subject identity, class/semester, subject, time, learning objectives, basic competencies (KD) and competency indicators (KI), learning materials, learning methods, learning

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media, learning resources, learning steps, and assessment of learning outcomes. The principles of lesson planning include:

a. Student variability, initial ability, intellectual level, talent, potential, interest, willingness to learn, social skills, emotions, learning styles, special needs, learning speed, cultural background, norms, values and/or student environment.
b. Active participation of students.
c. Focus on students to encourage passion, motivation, interest, creativity, initiative, inspiration, innovation and independence in learning.
d. Develop literacy culture and provide feedback (fix, strengthen, strengthen).
e. Integrating KD, materials, learning activities, indicators, assessments and learning resources into a complete learning experience.
f. Integrated Learning Topics (Permendikbud No. 22 of 2016).

Based on the results of interviews with the principal at SMP 24 Bengkulu City, that related to the condition indicators of the RPP, the result was that the principal required each teacher or teacher to make a plan in the form of learning devices before teaching in class. All science teachers must create syllabus and lesson plan formats that are in sync using these standards/juknis. In compiling the RPP, it is also formed referring to the principles of making RPP according to technical guidelines. The following is a teacher readiness table, namely:

TEACHER PREPARATION TABLE			
Number	Teacher Readiness	Technical Manual or	Performance

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	Component	Standard	
1.	Planning	Learning Design includes syllabus, RPP, and preparation of RPP principles	The results of interviews that have been conducted by researchers with the Principal, Science teacher, that in preparation for the learning process the teacher has made plans for planning, implementing, and evaluating learning in accordance with technical guidelines or standards that have been set.
2.	Implementation	Implementation of learning includes introduction, core, and closing	
3.	Evaluation	Evaluation uses assessment with written and oral test methods and tools	

As for other things in designing activity planning in learning includes four indicators, namely:

1) The teacher arranges learning objectives in the Learning Implementation Plan (RPP) by considering the needs of students

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2) The teacher creates material sequentially, analytically, conditionally and actually
3) The teacher designs the correct learning activities
4) Teachers use learning media based on material and strategies/methods in learning

So it can be concluded that the condition of the RPP in SMP 24 Bengkulu City is good and at this school it carries out MGMP activities to evaluate the design of the 2013 curriculum planning for science subjects in making lesson plans in accordance with the principles of preparing lesson plans referring to technical instructions and for other training, as well as equating the concept with learning objectives.

3. Facilities and infrastructure at SMP 24 Bengkulu City.

Armani, (2014) states that facilities are objects that move or can be moved easily which are needed to help, facilitate and speed up goals or actions. so it can be concluded that facilities are anything that is not fixed and can be carried anywhere or moved from one place to another. Meanwhile, infrastructure is an object or inanimate object that is permanent, which is difficult or even impossible to transfer to help, support, facilitate and to accelerate goals or actions until the end, Ardiansyah, (2012).

Based on observations made by researchers that the facilities and supporting tools in the natural science learning practicum process at SMP 24 Bengkulu City have met the predetermined standard criteria. For example, the facilities and infrastructure in the laboratory are adequate and can be used by students and

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teachers to the fullest, so as to facilitate students and teachers in the learning process of the 2013 curriculum with a scientific approach.

CONCLUSION

Implementation of the curriculum using a scientific approach to the science learning process at SMP 24 Bengkulu City has gone well at the analyzing and communicating stages, but it has not gone well at the questioning and reasoning stages. Where in the results of analyzing 58%, communicating 56%, asking 50%, and reasoning 50%.

While in the learning process related to the conditions of lesson plans, the teacher has made plans for the planning, implementation, and evaluation of learning in accordance with the technical guidelines or standards that have been set. And the facilities and infrastructure have also met the predetermined standard criteria.

REFERENSI

Alya, J., Mexda, P., Mukhaiyar, R., Stake, C., & Mertayasa, E. (2020). *EVALUASI PEMBELAJARAN DARING PADA PERKULIAHAN DI LABORATORIUM DASAR DAN PENGUKURAN UNP*. *2*, 1–12.

Aggustin, L. (2018). *Efektivitas Penerapan Model Pembelajaran dalam Kurikulum 2013 di SMP Negeri 1 Delanggu*. 15(1)

Arisa, N., & Septiadi, F., Keguruan, F. (2018). *KEPUASAN PESERTA DIDIK TERHADAP SARANA DAN PRASARANA PENJASORKES DI SMP/ SEDERAJAT SE-KECAMATAN*. 83–90.

Astuti, D. A., Haryanto, S., & Prihatni, Y. (2018). *Evaluasi Implementasi Kurikulum 2013.* 6(1). Doi: https://doi.org/10,30738/wd.v6i1,3353

Attadib: Journal of Elementary Education *Edisi: Vol.7, No.1,April 2023*
Number p-ISSN: 2614-1760, e-ISSN: 2614-1752

Budiani, S., & Syamwil, R. (2017). *Evaluasi Implementasi Kurikulum 2013 di Sekolah Pelaksana Mandiri Abstrak*. *6*(53), 45–57.

Febriyanti, D., & Biru, L. T. (2022). *Analisis Proses Pembelajaran IPA Terpadu Dalam Pelaksanaan Kurikulum 2013 Di SMP Kecamatan Sumur - Banten*. *6*(1), 218–225.

Festiyed, F. (2018). *Studi Pendahuluan Pengimplementasian Kurikulum 2013 dalam Mengintegrasikan Pendekatan Saintifik Melalui Model Inkuiri dan Authentic Assessment dalam Pembelajaran IPA di Kota Padang.* Doi: http://repository.unp.ac/id/eprint/15421.

Fussalam, Y. E., & Inggris, P. B. (2018). *Implementasi kurikulum 2013 (k13) smp negeri 2 sarolangun 1*. *3*(1).

Juselani, N., Pardimin, P., & Prihatni, Y. (2019). *Pengembangan Lembar Kerja Peserta Didik yang Mengintegrasikan Literasi dengan Pendekatan Saintific Mata Pelajaran IPA*. 7(1).

Kusumaningrum. (2018). *Literasi Lingkungan dalam Kurikulum 2013 dan Pembelajaran IPA di SD*. 1(2).

Magdalena. I., Maulana, N. H., Amelia. S. A., & Ismawati, A. (2020). *Evaluasi Penerapan Pembelajaran K13 Di Sekolah Dasar Dharmawati Arief Tangerang*. *2*, 19–28.

Makaborang, Y. (2019). *Evaluasi Implementasi Kurikulum 2013 Mata Pelajaran Biologi Di SMA Negeri*.

Maryani, I., Ruyani, A., Karyadi, B., & Suhartoyo, H. (2018). *Studi Pertumbuhan Awal Kuya Batok (Cuoro Ambonensis) di Kolam Kehutanan UNIB serta Implementasinya sebagai Bahan Ajar Zoologi Vertebrata*. *2*(3), 200–205.

Mastur, G. (2017). *Implementasi Kurikulum 2013 dalam Pelaksanaan Pembelajaran di SMP. Doi: http://journal.uny.ac.id/index.php/jitp*. *4*(1), 50–64.

Mega, O., & Paut, S. (2018). *PENERAPAN PENDEKATAN SAINTIFIK PADA SISWA KELAS IV DI SD THE IMPLEMENTATION OF SCIENTIFIC APPROACH TO STUDENTS GRADE IV IN SD PUJOKUSUMAN 1 , YOGYAKARTA*. 511–517.

Noor, D., Widyaningrum, L., & Sugiharto, D. Y. P. (2017). *Penerapan Pembelajaran dengan Pendekatan Saintifik di TK Negeri Pembina Nalumsari Jepara Abstrak*. *6*(1),

Attadib: Journal of Elementary Education *Edisi: Vol.7, No.1,April 2023*
Number p-ISSN: 2614-1760, e-ISSN: 2614-1752

44–49.

Prasani, A., Herdiyanti, D., Puspita, L., & Walid, A. (2021). *Evaluasi Pembelajaran Daring Terhadap Materi Pembelajaran IPA Kelas IX SMPN 18 Kota Bengkulu.* 12(2).

Ramdani, A., Jufri, A. W., Gunawan, G., Hadisaputra, S., & Zulkifli, L. (2019). *Pengembangan Alat Evaluasi Pembelajaran IPA yang Mendukung Keterampilan Abad 21.* 5(1).

Realita, R. (2019). *Kompetensi Guru MIN Sabang dalam Melaksanakan Evaluasi Pembelajaran.* 19(2).

Rohmawati, S., Sihkabuden, S., & Susilaningsih, S. (2018). *Penerapan Pendekatan Saintifik pada Mata Pelajaran IPA di MTS Putri Nurul Masyihoh Lumajang.* 1(3).

Setiawan, A. R. (2019). *Penerapan Pendekatan Saintifik dalam Pembelajaran Biologi sebagai Upaya Melatih Literasi Saintifik Siswa Sekolah* . ISBN: 978-602-0951-26-3

Simatupang, H., & Purnama, D. (2019). ANALISIS PELAKSANAAN KURIKULUM 2013 DITINJAU DARI STANDAR PROSES DALAM PEMBELAJARAN IPA KELAS VII SMP AL-ULUM KOTA MEDAN. *JURNAL BIOLOKUS. Vol: 2 No. 1.*

Sunardjo, R. N., Yudhianto, S. A., & Rahman, T. (2016). *Analisis Implementasi Keterampilan Berpikir Dasar dan Kompleks dalam Buku IPA Pegangan Siswa SMP Kurikulum 2013 dan Implementasinya dalam Pembelajaran*. *13*(1), 133–144.

Syafriana, D. (2017). *Penerapan Model Problem Based Learning (PBL) dalam Pendekatan Saintifik untuk Meningkatkan Hasil Belajar IPA Kelas V SDN 63 Surabayo. 1(1).*

Sylviani, D. D. (2018). *Kondisi Sarana Dan Prasarana Pendidikan SMP NEGERI SE-KECAMATAN Pengasih Kabupaten Kulon Progo*. 1–14.

Attadib: Journal of Elementary Education *Edisi: Vol.7, No.1,April 2023*
Number p-ISSN: 2614-1760, e-ISSN: 2614-1752

Wina, D. R., Hindarto, N., Priyono, A., & Prasetyo, B. (2017). Studi Kasus Pendekatan Saintifik dalam Pembelajaran IPA pada Kurikulum 2013 di SMP Negeri 5 Semarang. *Journal of Innovative Science Education*. *6*(1).