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# Implementation Science Practical at SMP Negeri 1 Sambi, Boyolali, Indonesia

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**ABSTRACT**

Low frequency and minimal practicum facilities have become the main problems in the implementation of science learning at SMP Negeri 1 Sambi, Boyolali. According to the Minister of National Education Regulation Number 24 of 2007, the learning process requires facilities and infrastructure that support optimal implementation. The benefits of science practicum include increasing students' motivation to learn science and providing opportunities for them to satisfy their curiosity through scientific approaches. The purpose of this research is to examine the implementation of science practicum and to evaluate the quality of the facilities and infrastructure of the science laboratory at SMP Negeri 1 Sambi, Boyolali. This study used a descriptive qualitative method with data collected through observation, documentation, interviews, and questionnaires. The results show that the quality of facilities and infrastructure for science practical activities at SMP Negeri 1 Sambi, Boyolali is classified as good, as stated in the Minister of National Education Regulation Number 24 of 2007, with an average percentage of 71.62%. The implementation of science practicum is categorized as very good, with an average percentage of 97.8%. The results of the questionnaire also show that 93.4% of the science practicums fall into the very good category, meaning that the implementation of science practicum for Grade VIII in the odd semester runs well.

KEYWORDS

Science Laboratory, Quality facilities, Science Practical



## 1. Introduction

Science is a way to study nature and the processes in it through systematic and scientific processes (Sugiarti et al., 2021). Science learning basically has the same goal as the others, namely to create good interactions between two components: teachers and students (Wisma, 2021). Science subjects are one of the subjects that often use school infrastructure. The best learning for science learning is practicum-based learning. This is because it can improve students' skills in developing observations, laboratory equipment, and a sense of curiosity, active, creative, innovative, and scientific integrity (Khusnah, 2020). Practical activities allow the application of the use of various scientific process abilities and the development of scientific attitudes that support students' acquisition of knowledge (scientific products) in students. Science process skills are students' abilities to understand, develop and discover knowledge using scientific methods. Science Process Skills (SPS) are a scientific method that trains students to discover something through experimental and trial steps (Hartati et al., 2022).

In science learning, learning activities No only done in class, but laboratory is very important support. Laboratory can interpreted as place or equipped rides with equipment or means support needed to carry out experimental activities, research, proof ( verification ), and learning. In relation to with science laboratory at school, the laboratory is a rides that can used as place Study besides in class, which is equipped with equipment and materials needed for science learning (Dewi, 2020). In this case, the minimum standard for establishing a laboratory related to the completeness of tools/facilities in accordance with the standards for educational facilities and infrastructure is seen based on the Regulation of the Minister of National Education Number 24 of 2007. In accordance with the Regulation of the Minister of National Education Number 24 of 2007 concerning Science Laboratory

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Standardization including laboratory layout, laboratory administration, laboratory management, and storage of practical tools and materials (Susanti, 2021). The educational process need appropriate facilities and infrastructure For support activity teaching and learning For ensure optimal implementation of the learning process. Activities management includes : planning, procurement, inventory, excellent facilities and arrangement infrastructure, in order to create comfortable atmosphere for teachers and students Because appropriate facilities and infrastructure For all learning processes (Wasiya, 2021).

Importance facilities and infrastructure in, supporting the learning process impact on students Because with means and infrastructure running well and available well then the learning activities will effective with an effective learning process so in a way direct impact on students. One of the the aspect that impacts students is motivation Study the student himself, looks problem motivation learning experience students are the passion and desire to do activities. When done practice and Q &A, students not enough Spirit in follow directions carried out by the teacher, so that the teacher experiences difficulty in direct students to form group and practice assigned tasks. Another problem encountered is desire student in read book Still low. This is found when students are given questions by teachers, rarely student answer and even lessons that can be learned said has studied However they No Can answer questions given by the teacher, so No There is encouragement in self students to search know answer from questions asked And also because One of the means is limited learning media so motivation Study less, if party school provide learning media then the learning process more fun and motivating as well as Spirit they more big (Agustina, 2022).

Research Sarah (2023) with objective research to find out quality facilities and infrastructure, as well as implementation Science practicum in State Middle Schools was obtained conclusion that quality facilities and infrastructure science laboratory reviewed from completeness facilities and infrastructure (rooms) laboratory, facilities and infrastructure laboratory, equipment education, educational media and equipment others) including in good and fulfilling category as stated in regulation Minister of National Education Regulation Number 24 of 2007 is proven with an average percentage by 77.42 %. Insufficient equipment adequate and damaged equipment laboratory consequence equipment that has n't been around for a long time used cause maintenance tools and materials become less than optimal so that equipment laboratory damaged and some are missing. Implementation Science practicum at State Middle School from aspect preparation, implementation, and closing including in very good category where the average percentage obtained by 89.25%. The results of the questionnaire shows the average percentage implementation Science practicum reviewed from intensity implementation practical work, interest Study students, time implementation, as well as preparation and implementation practical work 65.8 % is in the good category, in meaning implementation Science practicum for grade IX, even semester walk well.

Schools used for research is a standard junior high school A accreditation located in Sambi District, Boyolali Regency. The junior high school own laboratory as one of the means existing infrastructure at school mentioned. Science laboratories usually used to support science learning in classes VII, VIII, and IX. Although a number of study previously has conducted, existing data and findings moment This it's been a long time and not reflect condition latest. Research previously at the same location that is research (Abdullah, 2015) only researching effectiveness use laboratory. Therefore, it is very important to do new research that can renew understanding we, especially in context implementation science practicum and quality laboratories in schools junior high school level. Research latest This expected can give more insight relevant and accurate to support taking effective and sustainable decisions. Based on interviews conducted, implementation practical work at school in one semester only implemented only 1-3 times. Based on background behind said, then objective study this is to find out How implementation science practicum and quality facilities and infrastructure science laboratory.

## 2. Method

Study This is study descriptive qualitative. The data obtained from study This will describe in a way objective Learning Science Practical at SMP Negeri 1 Sambi, Boyolali The 2024/2025 academic year is available seen from quality facilities and infrastructure, as well as implementation science practicum. In research This researcher describe and do observation to all data obtained from various source that is results interview, results observations that have been written moment field observations and pictures photography. In addition, research This under review based on existing conditions moment. Study This was held in November -January in the Science Laboratory Room of SMP Negeri 1 Sambi, Dusun IV, Sambi, Sambi District, Boyolali Regency, Central Java, Indonesia, Postal Code 57376.

Procedure study This started with stage preparation that includes activity studies literature For determine Topic research, formulate problems, and compile plan study in a way systematic. At the stage this too, researchers set subject and object research, as well as prepare all over necessary administration, including management letter permission study through the thesis bureau Faculty and send letter the to party the school that became location study.

After preparation finished, research to be continued with implementation in the field. Researchers observe condition laboratory based on instrument research that has been arranged previously. In addition, it was carried out interview with eye teacher science lessons for obtain relevant qualitative data, as well as observation direct to implementation practicum. Researchers also share questionnaire to student For collect data about implementation practical work from candidate participant educate. All data collected recorded and documented in a way systematic For ensure accuracy and completeness information.

Stage end from procedure study This is data analysis. At the stage this, researcher process and analyze all data that has been obtained during the research process ongoing. Results of the analysis the Then used For interesting conclusion that answers formulation problem research. With thus all over stages study done in a way structured and sustainabl, starting from preparation, implementation, until data analysis and conclusion conclusion, so that the results study can accountable in a way scientific.

Data in study This under review based on quality facilities and infrastructure laboratory Science, implementation Science practicum. Data sources obtained from science laboratory, 1 subject teacher science lessons, and students class VIII totaling 256. Reason for choosing class VIII because student Already be at the level development cognitive that enables they give relevant information about the process and results practicum. In research this, class IX does not chosen as sample because in the period observation, students class IX is in progress prepare yourself to face exam end very important school. Focus main they are on preparation and implementation exam, so that participation in practical work or research activities other can disturbed and not optimal. Data collection techniques in study These are observation, documentation, interviews, and questionnaires. In observation implementation practical work selected 1 class as sample that is class VIIIA with total 33 children. Taking sample use purposive sampling technique. Data collection design in study This use instrument in the form of questionnaire closed and interview in-depth. Questionnaire arranged in the format of your choice double and Likert scale for measure variable in a way quantitative, while interview done in a semi-structured manner For obtain richer and deeper qualitative data. Before use, instrument questionnaire has through a validation process by experts to ensure validity and suitability question with objective study.

Interview done against 12 selected informants purposively, consisting of from teachers and students who are considered own experience and knowledge relevant related topic research. Qualitative data obtained from results interview Then processed use technique categorization thematic. This process involving coding data systematic For identify themes the main thing that appears, so that make it easier in organize and analyze information in a way in-depth and structured. With approach this, research can dig more insight comprehensive about the phenomenon being studied.

Data analysis in study This done in a way descriptive with technique percentage, technique this used to find out quality facilities and infrastructure, as well as implementation practicum. The data

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that has been obtained from results observation, interviews, and questionnaires based on sheet instruments that have been arranged, then compared to with standard Minister of National Education Regulation Number 24 of 2007 for later counted the percentage with formula as following :

$$P = \frac{n}{n\ Maks} 100\%$$

Q: Percentage achievement (%), n: Achievement score, and n max : Maximum score

Referring to research (Sarah, 2023) results percentage achievement (P) obtained Then interpreted based on criteria as follows : 81% - 100% Very Good (SB), 61% - 80% Good (B), 41% - 60% Sufficient (C), 21% - 40% Less Good (KB), and 0% - 20% Not Good (TB). The context assessed namely : Quality facilities and infrastructure, Implementation Science Practicals and Questionnaires Implementation Science practicum.

## 3. Results and Discussion

Based on results research that has been done so data obtained in the form of observation to quality facilities and infrastructure Science laboratory for the 2024/2025 academic year which includes room laboratory, facilities infrastructure laboratory, equipment education, educational media, and equipment others, then customized with Regulation Minister of National Education Standard Number 24 of 2007. For other data sources like implementation practicum, implementation practicum, questionnaire, interview, and documentation used to find out description general laboratory school and how implementation science practicum in support science learning at school the

### 3.1. Quality facilities and infrastructure laboratory

Based on results observation about quality facilities and infrastructure laboratory at school research, obtained results data analysis regarding condition room laboratory, facilities and infrastructure laboratory, equipment education, educational media, and equipment others presented in Table 1.

**Table 1.** Quality facilities and infrastructure science laboratory

| *Number* | *Aspect* | *Percentage (%)* | *Category* |
|---|---|---|---|
| 1 | Laboratory | 100 | Very good |
| 2 | Laboratory furniture | 57.1 | Enough |
| 3 | Educational equipment | 41 | Enough |
| 4 | Educational media | 100 | Very good |
| 5 | Other equipment | 60 | Enough |
| | Average | 71.62 | Good |

Based on Table 1. can known that condition science laboratory at school study in a way general including in proven good category with an average percentage by 71.62%. This is show that completeness facilities and infrastructure the science laboratory is sufficient minimum criteria for an ideal laboratory as follows listed in Regulation of the Minister of Education and Culture Number 24 of 2007. In particular general condition This science laboratory including in good category, proven every aspect have different scores and percentages that is range between 41 – 100%.

### 3.2 Implementation Science Practical

Implementation results Science practicum for class VIII for the 2024/2025 academic year including in category enough with percentage 58%. Based on The reference for KD (Basic Competencies ) for class VIII Semester 1 is visible that material in one odd semester consists of of 6 materials. The practicum was carried out in one odd semester of 6 materials, only implemented in 3 materials, namely Introduction to cells in living things, the structure and function of the body of living things, and the energy of simple machines. In other materials, the practicum was not carried out because the management of the implementation schedule is still less effective so that improvements are

needed so that the practicum activities can run more orderly and efficiently. The results of observations of the implementation of the practicum are presented in Table 2.

**Table 2.** Implementation of Science Practicals

| *Number* | *Aspect* | *Percentage (%)* | *Category* |
|---|---|---|---|
| 1 | Preparation | 97.50 | Very good |
| 2 | Implementation | 100 | Very good |
| 3 | Closing | 96 | Very good |
| | Average | 97.80 | Very good |

Implementation Practical work in the science learning process is carried out based on 3 stages that is preparation, implementation and closing. Implementation Science practicum for class VIII this semester implemented as many as 3 times, namely material cells, structure and function creature life and plane simple. On observation cell involving use microscope to see structure cells, where the preparation used is onion epidermis red Then results observation will sketched on the table results observation and identification parts or visible organelles. In the material structure and function creature life student studying nutrients important things needed by the body, the practicum is carried out namely the vitamin C content test, where student prepare fruit fruits that are often found around to be tested vitamin C content. Then on the material of business, energy, and simple machines student do observation on the tool Mechanic simple, where The teacher presents tools in everyday life related to simple machines. Then students in groups identify the tools that fall into the category of simple machines from: levers, inclined planes and pulleys. Observation results at the stage This show that implementation practical work including in very good category where the average percentage obtained by 97.8%.

### 3.1.3 Questionnaire Implementation Practicum

The implementation of science practicums can be seen based on the questionnaires that were distributed. via Google Form, which was filled in by 86 of the total 256 students class VIII. The rest No fill in questionnaire Because limitations ownership device gadgets. Charging questionnaire This is one of method collecting data to find out implementation science practicum at school in the year academic year 2024/2025. The results of the questionnaire data recapitulation can be seen in Table 3. and the graph can seen in Figure 1.

In optimizing role laboratory required facilities and infrastructure that meet qualifications and standards in accordance with type laboratory. In the Regulation of the Minister of National Education Number 24 of 2007 which contains that component means Science laboratories in junior high schools include building or room laboratory, furniture, equipment education, tools and materials experiments, educational media, materials consumables, and supplies others. Practical activities can implemented optimally when fulfil standard quality laboratory based on Minister of National Education Regulation Number 24 of 2007. However although Regulation of the Minister of National Education Number 24 of 2007 has set clear standards related component science laboratory, many schools, especially at the junior high school level, are still face constraint in fulfil standard the in a way comprehensive. The main obstacle that often occurs found covering limitations room laboratory that does not adequate, complete lacking furniture and equipment, as well lack of facility Supporter like lighting, clean water, and space proper storage.

**Table 3.** Summary of Questionnaire Data Implementation Science Practical

| *Number* | *Aspect* | *Percentage (%)* | *Category* |
|---|---|---|---|
| 1 | Frequency/Intensity Implementation of practical work | 91.9 | Very good |
| 2 | Students' interest in practical work | 95.4 | Very good |
| 3 | Execution time practical work | 89.5 | Very good |
| 4 | Procedures and rules practical work | 97.07 | Very good |
| | Average | 93.4 | Very good |

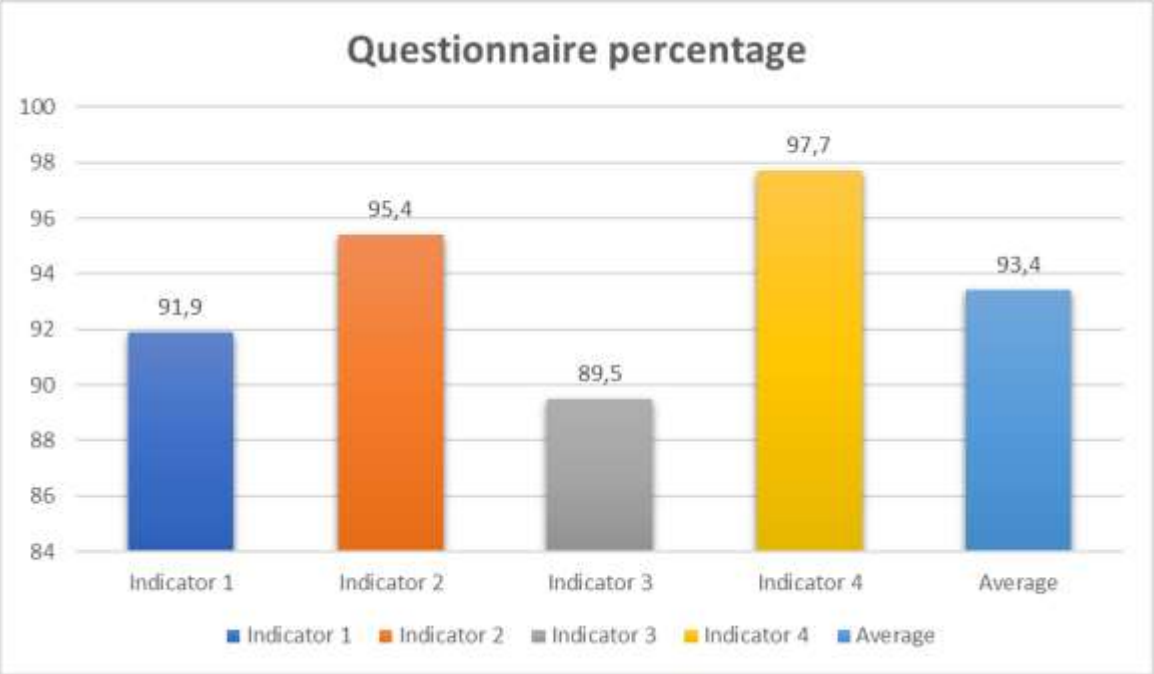


**Figure 1.** Questionnaire Average Graph

In addition, management laboratory Still less than optimal, including maintenance minimal tools and lack of supervision tight, causing Lots equipment damaged or No functioning well this is it aggravated with limitations budget and shortages training for teachers and power Work laboratory in manage and utilize means in a way maximum. Impact from constraint it is very significant to quality science learning. The laboratory is not complete and well maintained hinder implementation practical work in a way effective, so that student lost opportunity to learn in a way direct through experiments and observations. As a result, science process skills student No optimal development and motivation learning science also decreased Learning that is only nature theoretical without support adequate practicum also has the potential lower understanding the concept of science in general deep.

Solutions that can attempted covering improvement allocation budget specifically for procurement and maintenance means infrastructure laboratory in accordance standard Minister of National Education Regulation No. 24 of 2007 (Lianda, 2025). Government areas and schools need Work The same in do reconstruction or development laboratory that meets criteria space, facilities, and security. In addition, regular training for teachers and staff laboratory is very important to improve competence in management and utilization laboratory optimally (Kartikasari, 2021). Development management a good laboratory, including system maintenance periodic and inventory tools, also must become priority so that the facilities infrastructure can long lasting and always ready to use.

### 3.3 Quality facilities and infrastructure laboratory

School science laboratory This own very good condition with 100% achievement Laboratory own room strategically located, close to with room classes, teachers, bathrooms, prayer rooms, and libraries, as well as facing page outside so that easy accessible to teachers and students. The total area of the laboratory is 13x10 meters. fulfil standards, including room practical work, storage, and preparation. lighting, circulation air, and availability air clean adequate. However, the space storage and preparation Still need arrangement repeat to make it more efficient. This condition in accordance with Regulation of the Minister of National Education of the Republic of Indonesia Number 24 of 2007 which

regulates standard science laboratory, including Minimum area, facilities, and spatial layout that support optimal learning process. The science laboratory room can be seen in Figure 2.

**Figure 2.** Science Laboratory Room

Laboratory room own facility like sufficient lighting for practical activities as well as equipped with circulation air. In space laboratory lighting very much important Because serves to help lighting and circulation air. Location of space a good laboratory must own good lighting. Sunlight is very much needed to illuminate room, because of practical activities sometimes need observations that require lighting more. This room is also equipped with water taps and clean water. Rusydi (2018) said that the science laboratory room can accommodate at least one study group. The ratio of the science laboratory room is at least 2.4 m2/student. For study groups with less than 20 students, the minimum laboratory room area is 48 m2. The science laboratory room is equipped with sufficient lighting facilities to observe experimental objects. Then Wasiya (2021) said that the practical process need appropriate facilities and infrastructure For support activity teaching and learning For ensure optimal implementation of the learning process. Activities management includes : planning, procurement, inventory, excellent facilities and arrangement infrastructure, in order to create comfortable atmosphere for teachers and students Because appropriate facilities and infrastructure For all learning processes.

Facility furniture science laboratory has presentation achievement by 71% which includes in good category. Facilities laboratory furniture This including tables and chairs students, teacher's desks and chairs, tables demonstration, cabinet tools and materials, clean water sink. The results of the observations made obtained results among others: 7 tables Work students, 38 strong seats stable and able moved, and 2 tables teacher's work. In 1 table can accommodates 2 students / 4 students If in groups, 1 table and 1 chair are available for the teacher. Not available table demonstration and table preparation, time practical work in progress tools and materials placed on the front table moreover before. Tool cabinet in the room laboratory This totaling 4 pieces, including 2 cupboards glass for tools, 2 cabinets wood for tools. There is 1 cupboard open and unopened materials can simple model locked with material wood and old. In the room laboratory 4 sinks available with clean water located next door right and left of the table students, while in the classroom preparation No available sink. Facilities Equipment Science laboratory can seen in figure 3.

**Figure 3.** Facilities Equipment Science Laboratory

Equipment science laboratory has presentation achievement by 41% including in sufficient category. From 40 types equipment 77 system 77 in the laboratory, 17 of them fit for use with appropriate amount with standard Includes : 7 stopwatches, measuring cup totaling 8, globe, solar

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system model, experiment 78yste, experiment Electrical circuit, Monocular microscope totaling 6, glass magnifier totaling 7, genetics poster, human skeleton model, human body model totaling 3, picture or system model human digestion, picture or system model circulation human blood, image or system model human respiration, picture or human heart model, image or human eye model, image or a model of the human ear. Then, 10 equipment among them Not yet in accordance standard Because provision materials and quantities owned No in accordance with standard, including ruler, compass sorong, thermometer 100 °C, Multimeter AC/DC 10 kilo ohm/volt, magnetic rod equipped with pieces of various types of metal, graduated beaker, spirit burner, tripod equipped wire gauze, dropper plate, and dropper pipette + rubber with end short. Then 13 equipment among them Not yet available covering scales, meter roll, mass different types of metal, steel tuning forks, inclined planes with variable slope and surface roughness, dynanometers, pulleys fixed, pulley moving, block wood with different masses, surface areas, and coefficients of friction, the experiment expand long to demonstrate the phenomenon and provide minimum expansion data for three types of materials, the molecular model simple, cup evaporation with material ceramics, and pictures or human throat model (Noorjanah et al., 2023) stated that the suitability of science laboratory facilities and infrastructure based on Permendiknas No. 24 of 2007 and Permendikbud No. 8 of 2018 obtained the following percentages: a) laboratory space 100% (very good), b) laboratory furniture facilities 85.7% (very good), c) Educational equipment 60% (sufficient). D) experimental equipment 72.2% (good). Examples of science educational equipment can be seen in Figure 4.

**Figure 4.** Science Education Equipment

Educational media in the laboratory school, get presentation achievement 100 % included in very good category. Agustina (2022) said that related facilities and infrastructure with device learning is very supportive success or failure schools and teachers in teaching. Because learning media can help the learning process more fun and motivating as well as Spirit they more big. Facilities and infrastructure can in the form of table, chair, board write. On the aspect this, space laboratory provide 1 piece board write with size 120 cm x 240 cm which is equipped with with eraser and marker but for now Still Not yet installed. Apart from that, there are additional media such as LCD and projectors that can functioning well and utilized to display presentation material learning and practicum.

**Figure 5**. Educational Media

As for the equipment or equipment Supporter others in the school science laboratory percentage his achievements by 60% including in sufficient category. Equipment others on aspects This including power outlets electricity namely 1 socket stay ahead wall mount and 3 cables roller electricity, place trash inside room as many as 1 piece, wall clock as many as 1 and 2 APAR units. Aseng (2021) research mention that the APAR and first aid kit are facility special that should be there is in every laboratory. However, in the laboratory This facility like first aid kit not yet available in the room laboratory. This is because of lack of maintenance to first aid kit so many are missing. Equipment Other science laboratories Can seen on on Figure 6

**Figure 6.** Equipment Other Science Laboratories

Based on research that has been done, obtained results that quality facilities and infrastructure science laboratory at school study own comparison different percentages in each aspects. The average percentage obtained by 71.62%. This is show that completeness facilities and infrastructure the science laboratory is sufficient minimum criteria for an ideal laboratory as follows listed in regulation Minister of National Education Regulation Number 24 of 2007. Findings This in line with study Noorjanah (2023) stated that provision means infrastructure science laboratory including good category with average percentage of 79.1% of minimum standards set by the Minister of National Education Regulation No. 24 of 2007 and the Minister of Education and Culture Regulation No. 8 of 2018. Furthermore, research advanced from SMP Negeri 3 Langsa City showed that standardization science laboratory that supports implementation The Independent Curriculum achieves very good classification, with Power support infrastructure and facilities were 87.5% and 90.15% respectively ( Hadilla, 2023). Laboratory the No only fulfil standard national, but also has adopt digitalization information as part from management a modern and future - oriented laboratory. This is very relevant with principle learning based on inquiry and approach scientific in Independent Curriculum that encourages learning active and explorative. Research at SMPN 5 Kerinci also strengthens findings where the facilities and infrastructure science laboratory obtains average score of 77.78% with good category, especially aspect room designed laboratory comfortable and adequate for practical activities (Lianda, 2025). Adequate laboratory space with lighting and circulation good air is very supportive effective and safe science learning. However evaluation at SMA Edu Global School Bandung revealed existence lack of completeness tools and facilities the practicum that is still not yet optimal though a number of aspect has fulfil standard Minister of Education and Culture Regulation No. 8 of 2018 (Taufik et al., 2025). Conditions such as This potential hinder implementation learning based on demanding inquiry availability complete tools and space comfortable work for students can do experiment in a way maximum.

In general critical, findings the show that although part big science laboratory at school has fulfil minimum standard, still there is urgent need For improvement quality facilities and infrastructure, especially in matter completeness tool experiments and facilities supporters. This is It is important that science learning does not only nature theoretical, but also applicable and appropriate with approach

scientifically supported independent curriculum (Nurâ et al., 2023; Stuckey et al., 2013). Strengthening laboratory with facility complete and modern management, including digitalization, will increase motivation and engagement student in learning based on inquiry, which ultimately increase understanding concepts and science process skills (Bahtiar & Dukomalamo, 2019; Achor et at., 2018).

Therefore that, recommendation important is improvement investment in facilities and infrastructure laboratory, training for teachers and technicians laboratory, as well as implementation management an innovative and sustainable laboratory. With Thus, the science laboratory can play an optimal role as supportive learning development competence student in accordance demands Independent Curriculum and standards education center and also international.

### 3.4. Implementation Science Practical

Implementation Science practicum for class VIII this semester done as much as three times with material cells, structure and function creature live, and aircraft simple. In the practicum cell, student use microscope for observing onion epidermis preparation red, then describe and identify parts visible cells. For the material structure and function creature life, practice in the form of a test of vitamin C content in various the fruit that is around students. While on the material business, energy, and aircraft simple, practical focused on observation tool Mechanic simple, where students in a way in groups identify tools the as type aircraft simple like levers, inclined planes, and pulleys. Figure 7 shows the implementation of the practicum.

**Figure 7.** Implementation of Science Practicals

Based on Table 2. It is known that quality implementation science practicums include in very good category with an average percentage of 97.8%. Implementation Science practice is carried out based on 3 stages that is preparation, implementation and closing. At stage teacher preparation to do preparation start from place practice, tools and materials as well as its use, explained goals and methods implementation practice with as best as possible for practice can walk with smooth. After prepare students to carry out practice in accordance with material practiced with tools and materials that have been available so done data collection about implementation science practice. Next at the stage end that is closing student do presentation, discussion and clarification to the science teacher.

When the implementation science practicum is taking place, no can denied existence the obstacles that occur. According to with the interview that has been done, in implementation practical work usually there is a number of frequent obstacles experienced, one of them because of limitations tools and materials so that its use done in a way alternately. Haris (2019) said constraint in implementation practicum in developing countries is minimal equipment to support practical activities. Also in line with (Nahdiyaturrahmah, 2020) that implementation where is the science practicum laboratory used as source Study. It would be better if done management before used to be able to reach optimal target. In case implementation management laboratory at SMPN 2 Singaraja Not yet can walk well, thing This because of limitations tools and materials, as well as administration that has not been prepared well In addition, the lack of cooperation in groups also result in practical activities No walk in a way maximum.

### 3.5. Science Practical Implementation Questionnaire

Judge (2020) said that implementation Science practicums at junior high school level have challenge itself. In addition to the level teacher's ability and motivation in carrying out science practical activities, availability facilities and infrastructure Supporting science practical activities also determines the continuity of practical activities. Based on results questionnaire about implementation science practicum given to participant educate and contain grains drafted statement based on indicator, then results data recapitulation is calculated in form percentage for each indicators listed in Table 3.

Based on indicator frequency / intensity implementation practicum, average percentage from 5 samples namely 93.4% including in very good category. This is because of practice in one even semester has implemented as many as 3 times, even though Not yet all material held for practicum. Indicators interest student to practical work get the average percentage by 95.4% in very good category. This is because of participant educate or students are very enthusiastic in do practicum, although A little participant less educated enthusiastic and still playing around while practical work implemented. Indicators time implementation practical work get the average percentage by 89.5% in very good category. This is because of timetable practical work started in accordance with agreed time. Not all material can held in practical work because of limitations time. Indicator procedures and rules implementation practical work get the average percentage by 97.07% in very good category. This is because of before practical work carried out by students to prepare tools and materials moreover formerly assisted by the teacher, following all regulation laboratory moment do practical work, and cleaning tools and materials that have been used. Average results of implementation science practicum at school study to obtain average percentage of 93.4% in very good category, in meaning implementation science lab work in progress very well. From 6 materials in one semester of practicum implemented as many as 3 times, allocation time implementation practical work it's good. Considering dense curriculum so be chosen three material the most relevant one with daily life students to practice, with hope can increase greater involvement and understanding deep.

According to Setiawan et al. (2022) in Journal of Science Education and Technology, frequency practical work that has a very influential ability in increase science process skills and understanding draft student in a way significant. The practicum is carried out at least three times in one semester, even though Not yet covers all over material, already Enough For give experience meaningful and supportive learning learning based on inquiry. High student interest to practicum, with percentage of 95.4%, also became indicator positive reinforced by research international. According to Hidayati & Nugroho (2023) in International Journal of Science and Mathematics Education, enthusiasm student in activity practicum is greatly influenced by the approach learning that prioritizes exploration and engagement active, as applied in Independent Curriculum. Approach scientific pressure observation, experimentation, and reflection help student build better understanding deep and enhance motivation Study.

Execution time practical work that obtains score 89.5% in very good category show timetable effective management, although limitations time become constraint in accommodate all over material practicum. This is in line with findings of Pratiwi et al. (2023) which highlight challenge allocation time in science learning at school medium. They provide priority on material relevant and applicable practicum For increase involvement student without donate coverage overall. Procedures and regulations implementation Very good practicum (97.07%) shows discipline and awareness student in guard smoothness practicum. This is important For create environment safe and conducive learning, as put forward by Santoso and Wulandari (2024) in Journal of Indonesian Science Education. Discipline in prepare tools, follow rule laboratory, and cleaning equipment post-practicum is an integral part of learning based on inquiry that fosters mark not quite enough Responsibility and Skills Work laboratory.

In general overall implementation Very good science practicum This support implementation Independent Curriculum which emphasizes learning based on projects and approaches scientific. According to the Ministry of Education, Culture, Research, and Technology (2023), the Independent Curriculum encourages contextual and relevant learning with life daily students, so that election three material the most relevant practicum with daily life student is the right strategy For increase involvement and understanding deep. With Thus, the results study this No only show implementation effective practicum in a way quantitative, but also supports principles modern learning that is oriented towards development competence student in a way holistic. For development Furthermore, it is recommended that schools Keep going increase quality facilities and infrastructure laboratory as well as give training for teachers to be able to manage practical work in a way innovative and appropriate with demands Independent Curriculum.

## 4. Conclusion

Based on research that has been done, obtained conclusion that quality facilities and infrastructure science laboratory reviewed from completeness facilities and infrastructure (rooms) laboratory, facilities and infrastructure laboratory, equipment education, educational media and equipment other. Facilities The science laboratory at SMP Negeri 1 Sambi was assessed is in the good category with average completeness facilities and infrastructure by 71.62%, according to standard Minister of National Education Regulation No. 24 of 2007. However Still there is lack tools and some equipment experience damage consequence not enough optimal care and rarely used, so that Not yet all need practical work can fulfilled in a way maximum. Implementation science practicum, which includes aspect preparation, implementation, and closing, showing very good results with an average implementation of 97.8%. The results of the questionnaire also strengthen that intensity implementation, interest students, time, and readiness practical work is in the very good category, with an average of 93.4%. This is to signify that the practical activities walk effective and get response positive from students. The main obstacle found was the lack of completeness and damage tool laboratory, which has an impact on the limited material practical work that can implemented. This condition can hinder development science process skills students and effectiveness learning based on practicum. Required effort repair and procurement tool as well as improvement maintenance for facilities laboratory can support optimal science learning according to applicable standards.

School need increase maintenance tool laboratory in a way periodically and prioritize procurement new tools to complement means practicum. Improvement frequency practical work recommended to deepen understanding students. Teachers are expected optimize preparation and implementation practical work with utilise existing means as well as increase discipline student during the activity. Head school and taker policy must give attention to management laboratory through allocation adequate budget, regular monitoring, and training for teachers. Policies that support implementation practical work scheduled and ongoing in accordance curriculum will strengthen effectiveness science learning in schools. With step this, quality means and implementation practical work expected increase so that competence student can achieved optimally.

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