



## **Analysis of Quantitative Perception of Students and Teachers towards Availability and Condition of Physical Education Facilities and Infrastructure in SMK Bojonegoro**

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### **ABSTRACT**

This study aims to analyse the perception of students and teachers towards availability and conditions, means infrastructure, physical education, sports and health (PE) in five Intermediate State Vocational Schools (SMK) in the District of Bojonegoro, Regency Bojonegoro, Indonesia. A quantitative approach was used by distributing a questionnaire to 428 students and 11 PE teachers. The results of the study show a significant variation in satisfaction level. As many as 31% of students feel satisfied or very satisfied, but the other 33% feel not sufficiently satisfied or very satisfied. Not satisfied, especially because the cleanliness room was poor ( mean score 2.97 ) and the sports tools ( average score 3.50). On the other hand, the teacher showed satisfaction at a higher level, with 54% feeling satisfied or very satisfied, especially in the scheduling field ( average score 4.01). The gap. This perception indicates the need for improvements in maintenance and management facilities to support effective PE learning.

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A. Conception and design of the study;  
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## **INTRODUCTION**

Physical education, sports, and health are integral components in the system of formal education that aims to improve health, fitness and motor skills in students. Facilities and infrastructure, such as field sports, team sports, and space change, play a crucial role in supporting the effectiveness of Physical Education (PE) learning. According to Deng et al. (2023), adequate facilities not only increase participation among students but also influence their motivation and learning outcomes. However, in many schools, especially in regional areas such as Bojonegoro, challenges such as limited, less than optimal maintenance, and lack of attention to facility supporters often hinder the quality of PE learning.



Availability and quality mean that infrastructure in PE learning correlates directly with the achievement curriculum objective of education in physical education. When students have access to safe, clean and appropriate facilities, they can be more actively involved in various physical activities designed to develop aspects of physical fitness, motor skills, and social values such as cooperation and sportsmanship. On the other hand, facilities that are minimal or not suitable for use can hinder the learning process, reduce the interest of students, and even increase the risk of injury during the execution of physical (Maudi et al., 2020). Therefore, investment in the development of Facilities and infrastructure is not only about physical completeness, but also the part from strategy improvement, quality comprehensive education.

In areas like Bojonegoro, geographical conditions and disparity in development contribute to complicating effort equalisation facility educational facilities, including in the field of physical education. Schools in the area rural or suburban areas often rely on the facility as is, even sometimes carry out sports on the open ground that is not specifically designed for educational physical. This shows the need for synergy between the government area, the unit education, and society to seek innovative solutions, such as optimization room open public room, and involving the community in facility maintenance. With the approach, PE learning can be carried out more effectively and provide maximum benefit for the development participant.

This research focused on five schools. Intermediate State Vocational School (SMKN) located in the District of Bojonegoro, namely SMKN 1 to SMKN 5, each of which represents context vocational education context in urban areas of the Regency of Bojonegoro. These schools were selected because own characteristics, environment, varied education, as well as amount sufficient students, which allows for more exploration wide to problem facilities and infrastructure in physical education.

Main focus The research covers three important aspects: (1) evaluating the perception of students and teachers towards availability and conditions, which means PE infrastructure, (2) identifying strengths and weaknesses of facilities, and (3) analysing the difference in perception between students and teachers. Through this approach, research is expected capable serve as a factual and comprehensive about condition current state of PE infrastructure in vocational schools. Differences in perceptions that may arise between students and teachers can be important indicators in assessing the effectiveness use facility, as well as the facility's support for the achievement of learning objectives.

Further results. This finding will be made into the basis for compiling applicable recommendations for party schools, the Department of Education, and stakeholders interested in others. The recommendation is not only directed at improving physical facilities, but also at aspects of management such as maintenance, ongoing procurement, and training on use. Facilities optimally. Thus, efforts to improve the quality education physical education in vocational schools can run more directly and sustainably.

Facilities and infrastructure management education physical includes five main stages: planning, procurement, use, maintenance, and evaluation (Khanmoradi & Abbas, 2024). Facilities, such as tools, sports and space class, and infrastructure, such as fields

and building supporters, must fulfil standard national education as regulated in the Government Republic of Indonesia No. 19 of 2005. According to Morma (2023), cleanliness and comfort facilities, such as space replacement, is indicator key to effective management. Poor facilities can reduce the motivation of students to participate in physical activities, as confirmed by Hossain et al. (2022).

In Indonesia, Permenpan RB No. 16 of 2009 emphasises the importance of involving stakeholders' interests, including students, in the management facility public facilities to ensure quality service. Research previously, as done by Nova et al. (2023), shows that consistent maintenance and involvement of active teachers and students can improve the effectiveness of PE learning.

Importance of planning strategically in facility management infrastructure, education physical cannot be ignored. According to Nugroho & Lubis (2022), careful planning includes identifying the need facility based on the number of students, types of PE activities, and availability of budget. Research highlights that failed school planning often faces problems such as excessive use field or damage tool, sports consequences lack of preventive maintenance.

In the context of PE learning in vocational schools, where students have a hectic schedule between academic and vocational learning, effective planning must ensure that facilities can be accessed flexibly without bother activity other activities. The standards set out in the Minister of Education and Culture Regulation no. 24 of 2020 also emphasised that schools must have a management plan to facilitate the term to support continuous learning. Therefore, the stage planning becomes the foundation for the success of good (Rismayani et al., 2021) facility management.

Impact means infrastructure towards PE learning has also been explored from perspective psychological and social perspective. According to Ahmad (2021), adequate facilities, such as well-maintained fields, well-maintained sports and equipment, complete exercise, can increase self-confidence self students and strengthen social bonds during activity groups. On the other hand, poor facilities, such as space to replace dirty or broken sports equipment, can cause frustration and decrease the interest of students to participate. This research strengthens findings by Deng et al. (2023) that a quality facility has a direct correlation to the motivation intrinsic student.

Involving stakeholders' interests, in particular students and teachers, is are important element in ensuring effective management means infrastructure. Setiawan dan Wibowo (2023) confirm that the participatory approach, where students are involved in the decision-making process decisions such as scheduling the use field or reporting damage to facilities, can increase the sense of ownership and responsibility answer to the facility school. Research they found that schools that implement mechanisms for regular feedback from students and teachers have higher satisfaction tall to quality facilities. This approach also supports principles of good governance, which emphasise transparency and accountability in the management asset public assets. In the context of physical education, student involvement can be a formation committee, sports students or a session discussion routine to evaluate the condition facility Mokaya & Samuel, 2022). Thus, the management facility not

only becomes a non-traditional administrative facility, but also a collaborative processes that strengthen the connection between schools and their communities.

From the perspective psychological and social perspective, quality means the infrastructure's impact is significant to motivation and the well-being of students. Brusseau et al. (2020) find that adequate facilities, such as field sports with safe surfaces and equipment Various sports can increase self-confidence self students and encourage positive social interaction during activity groups. On the other hand, facilities that are not adequate, such as space change dirty or obsolete sports can cause discomfort and decrease the interest of students to participate in PE learning.

This finding is in line with Deng et al. (2023), which confirms that a supportive physical environment contributes to the motivation of intrinsic students. In the context of vocational schools, where students often face pressure both academic and vocational, quality PE facilities can be a means to reduce stress and foster non-academic skills, such as collaboration, teamwork and leadership. Therefore, the management of good facilities not only supports learning outcomes but also develops holistic students.

Aspect policy also plays a role important role in management, meaning infrastructure, education physical. According to Rahman et al. (2023), policy government, such as the allocation of Operational Assistance funds School Board (BOS) and guidelines management asset school assets, often do not fully support the need for specific PE facilities, especially in vocational schools that have unique characteristics. Research shows that Lots schools face challenges in meeting standard facilities because of limited budget and lack of training for staff managers.

To overcome this is necessary to have more targeted policies, such as incentives for facility maintenance or facility management training programs. Infrastructure for the teachers and staff school. In addition, Permenpan RB No. 16 Tahun 2009 emphasises that management facilities for the public must respond to the needs of users, which in this context includes students as user main PE facilities. Thus, synchronisation between national policy and local practice becomes key to ensure the quality of physical education.

## METHODS

Research uses a quantitative descriptive approach by method survey as the main technique in data collection. This approach was chosen because capable give an objective and systematic picture of the perception of students and teachers towards availability as well as the condition of PJOK facilities and infrastructure. The survey was conducted using instruments in the form of a closed-ended questionnaire arranged based on indicators of facility education physical, such as existence field, sports tools, space for replacement, and completeness of support. This questionnaire is designed to measure qualitative aspects such as comfort and safety, as well as quantitative aspects such as frequency of usage and quantity of available facilities. Validity and reliability instrument are tested first to ensure accurate results measurement.

A study was implemented in five schools in the sub-district area of Bojonegoro in 2024, namely SMKN 1, SMKN 2, SMKN 3, SMKN 4, and SMKN 5. Respondents in this study consisted of students from student active classes X and XI who follow eye PJOK lessons, as well as PJOK teachers from each school. The technique of taking the sample was taken using *purposive sampling*, taking into account the representation of respondents from every school and their direct involvement they are in the process of learning PJOK. The data collected was then analysed descriptively using statistical frequency and percentage to see the trend perception of respondents, and a difference test was conducted to compare perceptions between students and teachers if required. Thus, the results of this research are expected to give a real and scientifically accountable picture of the current condition of PJOK facilities at the vocational school in Bojonegoro.

The sample study consists of 428 students from classes X and XI, who come from various majors such as Digital Business, Culinary, Engineering Devices Software, and Petroleum Engineering. Distribution of students based on school is as follows: SMKN 1 (192 students, 45%), SMKN 2 (57 students, 13%), SMKN 3 (50 students, 12%), SMKN 4 (43 students, 10%), and SMKN 5 (86 students, 20%). In addition, 11 PJOK teachers also became respondents, with distribution: SMKN 1(2 teachers), SMKN 2(1 teacher), SMKN 3 (3 teachers), SMKN 4 (4 teachers), and SMKN 5(1 teacher).

The questionnaire used consists of 30 statements with a five-point Likert scale (1 = Very Strongly Agree, 5 = Very Strongly Disagree). This instrument is grouped into four indicators: (1) Availability and Condition Facilities, (2) Management and Maintenance Facilities, (3) Benefits and Effectiveness of Physical Learning, and (4) Impacts Psychosocial and Satisfaction of Students. The questionnaire was validated by two education lecturers, a physical and a person from facility management practitioner infrastructure, to ensure the validity of content and editorial clarity.

Questionnaire data were analysed to calculate the average score of each item, which reflects the perception of availability and facility conditions. Satisfaction level categories become Very Satisfied , Satisfied , Enough , Not Satisfied , and Very Not Satisfied . Descriptive statistics are used to compare the perceptions of students and teachers as well identify the strengths and weaknesses facility.

## RESULTS AND DISCUSSION

### Result

Distribution level satisfaction of students (n=428) is presented in Table 1:

**Table 1.**  
Satisfaction Level of Student

Category	Frequency	Percentage
Very Satisfied	28	7%
Satisfied	104	24%
Enough	154	36%
Less satisfied	87	20%
Very No Satisfied	55	13%

Research results show that the condition of field sports in five state vocational schools in the district of Bojonegoro has an average score is 3.81. This value indicates that the quality and accessibility field sport is rated quite good by respondents, although there is still room for improvement, especially in terms of maintenance and completeness of facility supports such as lines, lighting, or surface field. Meanwhile, the aspect of scheduling the use field gets the highest score with an average of 4.01, which shows that the arrangement time for using the field has been running clearly and effectively. This has become the main strength supporting the smoothness of PJOK learning, because it enables teachers and students to access facilities in a regular and structured manner.

However, the findings differ on the availability tool sports and hygiene rooms. Availability tool sport takes notes average score of 3.50, which describes the quantity and variety tool. Still limited. This condition can affect diverse learning activities and reduce the effectiveness exercise motor skills students. More worrying again, the cleanliness room change or the toilet obtained the lowest score, which is 2.97. This score shows enough dissatisfaction significant from the Respondent to condition sanitation and comfort room change. This problem needs to be given special attention, because facilities that are not hygienic not only reduce comfort, but also have the potential to cause health problems for students.

The Findings from the perception of students (Table 2) are as follows:

**Table 2.**  
Perception Student to Aspect Facility

Item	Average Score
Condition Field Sport	3.81
Scheduling Field	4.01
Availability of Sports Equipment	3.50
Changing Room Cleanliness	2.97

The teacher has a level of relative satisfaction more tall compared of students due to the condition of Physical Education facilities and infrastructure in the five State Vocational Schools in the District of Bojonegoro. As many as 54% of teachers stated they are in the category Satisfied until Very Satisfied, which reflects a positive view of available facilities. One of the most important aspects of appreciation from the teacher is the scheduling field, with an average score of 4.01. This indicates that the teacher views the aspect arrangement time and utilisation field as running efficiently and supports the learning process. Teachers' focus is greater on aspects. This function shows that they evaluate the facility based on the smooth implementation of teaching tasks and regular learning activities. Distribution level Teacher satisfaction (n=11) is presented in Table 3:

**Table 3.**  
Teacher Satisfaction Level

Category	Frequency	Percentage
Very Satisfied	4	36%
Satisfied	2	18%
Enough	3	27%
Less satisfied	1	9%
Very No Satisfied	1	9%



There is a trend that teachers are lacking emphasis on conditions, cleanliness, room change, as well as complete tool sports. When compared to the perception of students, teachers appear not critical enough to this aspect, which is shown by the differences in scores and trends more responses permissive. This difference may be caused by the angle view managerial skills that teachers have, where they evaluate more from aspect eligibility operational aspect rather than the comfort and experience, use more everyday felt by students. In this context, it is important to consider a second perspective –both from the party user directly and the learning implementer –so that the evaluation of PJOK facilities becomes more comprehensive and balanced. This approach can also help schools in compiling priority improvement facilities in more detail appropriate target.

### **Comparison Perception**

Students show lower satisfaction (31% Satisfied or Very Satisfied ) compared to teachers (54%). As many as 33% of students feel Less Satisfied or very dissatisfied, compared to only 18% of teachers. The gap is the biggest seen in cleanliness room change ( score students 2.97) and availability tool sports tools ( scores students 3.50), which is less become a teacher's attention. Schools with the highest student satisfaction, such as SMKN 1(76.54%) and SMKN 4 (77.12%), indicate better management practices compared to SMKN 5 (65.78%).

### **Discussion**

Research results show that field sports and their scheduling are strength main strengths in management, meaning PJOK infrastructure at SMK Bojonegoro, with average scores of 3.81 and 4.01, respectively. Clear scheduling allows use efficient field efficiently, which is in line with the findings of Nova et al. (2023) that good coordination improves accessibility to facilities. However, cleanliness room change(score 2.97) and availability tool sports tools (score 3.50) become the main weakness, which has an impact on student comfort and participation. Khanmoradi & Abbas(2024) confirm that cleanliness facilities are important indicators in effective management, and non-compliance with this standard can reduce the motivation of students, as supported by (Deng et al., 2023).

The Gap perception between students and teachers reflects a difference in priorities. Students, as the user end, are more sensitive to aspects of comfort, such as clean room replacement, which affects their learning experience. On the contrary, teachers, as managers of facilities, focus more on functionality, such as scheduling and availability for learning. This gap shows a lack of involvement of students in management facilities, which is contrary to the principle Regulation of the Minister of Administrative and Bureaucratic Reform No. 16 of 2009 concerning service-inclusive public.

Variation in satisfaction between schools, such as SMKN 1 and SMKN 4, which have score satisfaction more high, is possibly big due to better budgeting and active engagement of PJOK teachers in maintaining facilities. On the other hand, SMKN 5, with a score for satisfaction, faces challenges such as limited budget and land. This finding is in line with Febrian et al. (2025), which highlights the importance of regular maintenance to maintain a quality facility.

## CONCLUSION

This study revealed that means Physical Education infrastructure at Bojonegoro Vocational School own strengths in condition field of sports and their scheduling, but faces significant on cleanliness, room replacement and availability tool sports tools. Students show lower satisfaction (31% Satisfied or Very Satisfied) compared to teachers (54%), with 33% of students feeling that no satisfactory consequence facility bad behaviour. Gap . This perception confirms the need for more management-inclusive and consistent maintenance to support effective PJOK learning.

Based on findings, some recommendations are proposed :

- a. Improvement: Schools must set a timetable cleaning routine for space replacement, involve students through a system picket to build not quite together.
- b. Procurement of Sports Equipment: The Allocation of the budget needs to be increased to add quantity and variety of tools that sports use to fulfil the needs of students.
- c. Involvement Student: The School must provide a formal channel, such as a suggestion box or monthly forum, to integrate student input students in the management facility.

Study Continued: Research future may involve non-teaching staff (e.g., officers, cleanliness) and expand coverage to all vocational schools in the district of Bojonegoro for a better, comprehensive picture.

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