

## Analysis of School Facilities and Infrastructure Standards to Support Learning Activities in Vocational High Schools

Rolly Robert Oroh<sup>1</sup>

<sup>1</sup>Universitas Negeri Manado, Indonesia

Israel Yonatan Fredrik Kamu<sup>2</sup>

<sup>2</sup>Universitas Negeri Manado, Indonesia

Maikel Wolter Kuhu<sup>3</sup>

<sup>3</sup>Universitas Negeri Manado, Indonesia

Arther Valentino Mananggal<sup>4</sup>

<sup>4</sup>Universitas Negeri Manado, Indonesia

Corresponding Author: [rollyoroh@unima.ac.id](mailto:rollyoroh@unima.ac.id)

### Abstract

*Vocational high schools (VHS) aim to produce graduates who are ready to compete in the world of work, so supporting facilities such as study rooms and practical equipment are very important. The aim of the research is to analyze the suitability of standards for educational facilities and infrastructure in vocational high schools. The research method used is descriptive. This research took place at a vocational school in Tomohon City, North Sulawesi, Indonesia, as a case study in this research. Data collection was carried out through location observations and analysis of secondary data from schools. The research results show that the availability of facilities and infrastructure in vocational schools does not fully meet educational standards. Several facilities and infrastructure in vocational schools need to be equipped, such as laboratories, curriculum development rooms and practice rooms. Vocational schools need to collaborate with the industrial world so that formal agreements can then be built as a collaborative effort to provide facilities and infrastructure for learning and as a form of support for industrial internship practice programs for students. This research can be important for all education stakeholders in the process of determining policies related to educational standard regulations in vocational high schools.*

**Keywords:** Educational facilities and infrastructure, vocational education, VHS



## INTRODUCTION

Vocational high schools (VHS) are schools placed at the secondary education level which aim to produce graduates who are ready to compete in the world of work. This shows that supporting facilities such as learning rooms and practical equipment are very important. Standards of educational facilities and infrastructure are important and fundamental in the learning process. The availability and adequacy of standard facilities and infrastructure in education is absolutely necessary in the educational process (Bararah, 2020). The educational process will be hampered if it is not supported by the existence of facilities and infrastructure. Educational facilities and infrastructure must be available optimally to support the implementation of the educational process, so that students will get a good learning experience. Because the principle is that the learning experience obtained by students is an interaction between students and things outside of themselves (Ichsan, et al, 2023) such as educational facilities and infrastructure in schools.

Education providers in Indonesia are not only limited to the government, but can also involve the public (private sector) to contribute to the implementation of education (UU RI No. 20/2003). The response of the private sector in providing education in Indonesia, especially at the secondary education level, is quite high. In fact, if we observe that the implementation of education at the vocational high school level is largely managed by the private sector. In the last five years, the percentage of public vocational schools compared to private ones is very different, namely 25% compared to 75%. In line with the increase in the number of vocational schools, the number of students in vocational schools in the 2019/2020 academic year also increased. Ministry of Education and Culture data shows that there are more vocational school students compared to general secondary school (SMU) students (around 5.25 million students compared to 4.98 million students). This illustrates the high interest of students in continuing their education to vocational schools (BPS, 2020).

The success of educational programs in vocational schools through the teaching and learning process is influenced by many factors. One of them is the availability of educational facilities and infrastructure to support learning (PP No. 57 of 2021). The availability of facilities and infrastructure greatly influences learning activities. This was also stated by Lunenburg and Orstein (2012) that infrastructure that is less supportive will be an obstacle to an optimal learning process. Barnawi and Arifin (2012) said that educational facilities and infrastructure are very closely related to the smooth running of the educational process. A similar idea was also put forward by Musa and Baharum (2012) who said that the existence of educational facilities plays an important role



in supporting the learning activities of vocational school students. Miski (2015) research shows that there is a significant influence between facilities and infrastructure and student learning outcomes. Without adequate facilities and infrastructure in vocational schools, it is certain that student learning activities will encounter various obstacles.

Educational facilities are equipment that is directly used to support the educational process (Mulyasa, 2004), especially the teaching and learning process, such as buildings, classrooms, tables, chairs, as well as teaching tools and media. Educational infrastructure is a facility that indirectly supports the educational or teaching process, such as yards, gardens, parks, roads leading to places of study, but if used directly for the teaching and learning process, such as parks used for teaching biology, yards as sports fields. , these components are educational facilities. Barnawi & Arifin (2012) explain that educational facilities are all equipment, materials and furniture that are directly used in the educational process at school, while educational infrastructure relates to all basic equipment that indirectly supports the implementation of the learning process at school. Sanjaya (2006) explains that the benefits of schools that have available facilities and infrastructure include: (1) facilities and infrastructure are useful for fostering student enthusiasm and motivation to learn; (2) the existence of facilities and infrastructure can make it easier for students to choose types of activities in the learning process, so that the learning process will be more varied.

The implementation of Vocational Schools is intended as an effort to create graduates who are ready to compete in the world of work. Vocational school is a type of school that is always oriented towards preparing its students to become skilled workers (Oroh, 2023). so it needs to be supported by the existence of adequate facilities and infrastructure. However, the fact is that there are still many vocational schools that do not meet the standard criteria for educational facilities and infrastructure as stipulated in the facilities and infrastructure standards for vocational high schools (Permendiknas RI No. 40 of 2008). There are also findings which state that the level of appropriateness of facilities and infrastructure in vocational schools is not in accordance with the facilities and infrastructure standards (Hidayatuloh, 2019) as set out in education standards. Thus, this research is important to get an overview of the condition of vocational school infrastructure. The aim of this research is to describe the suitability of facilities and infrastructure in vocational schools with educational facilities and infrastructure standards.



## **METHOD**

This research uses a descriptive approach (Sugiyono, 2013). The data collection technique used is secondary data analysis by taking data on educational facilities and infrastructure at vocational schools. This research involved several vocational schools in Tomohon City, North Sulawesi, Indonesia, and as the location of the vocational schools for this research case study, Dharma Bakti Tomohon Vocational School was taken. Facilities and infrastructure inventory data was obtained by observing the study location and analyzing existing documents at the school. Data on educational facilities and infrastructure in vocational schools is then adjusted to standard facilities and infrastructure. The feasibility analysis standards used in this research are the standards contained in the Republic of Indonesia Minister of National Education Regulation Number 40 of 2008 concerning facilities and infrastructure standards for vocational high schools.

## **RESULT AND DISCUSSION**

Based on the results of observations and analysis of the existence of educational facilities and infrastructure at several VHS in Tomohon City, results show that in general it can be said to be relatively almost the same in terms of the availability and adequacy of existing educational facilities and infrastructure. As an example, a case can be described as in Table 1 which is the result of a case study on VHS Dharma Bakti. The description of facilities and infrastructure at vocational high schools as in Table 1 shows that the availability of learning support facilities at vocational high schools is quite adequate.

Based on the results of this research, it shows that the majority of facilities and infrastructure in vocational schools are available according to the availability standards in the Republic of Indonesia Minister of National Education Regulation Number 40 of 2008 concerning Facilities and Infrastructure Standards for Vocational Schools. This regulation explains in detail the standard facilities and infrastructure that vocational school must have. A school at least has facilities and infrastructure that are grouped into general learning rooms, supporting rooms and special learning rooms. The general learning space consists of: classroom, library room, laboratory room, technical drawing practice room. Supporting rooms include: leadership room, teacher's room, administration room, prayer room, counseling room, health room, student organization room, toilet, warehouse, circulation room, play/exercise area. Special learning spaces include practice rooms tailored to skill programs.



Table 1. VHS Dharma Bakti Facilities and Infrastructure Data for 2022/2023

| Name                        | Amount  | Year        | Condition |     |
|-----------------------------|---------|-------------|-----------|-----|
|                             |         |             | Good      | Bad |
| <b>ROOM</b>                 |         |             |           |     |
| Class                       | 15      | 2015/2019   | √         |     |
| Laboratory.                 | 1       | 2016        | √         |     |
| Teachers                    | 1       | 2016        | √         |     |
| Library                     | 1       |             |           |     |
| Principals                  | 1       | 2016        | √         |     |
| Administration              | 1       | 2016        | √         |     |
| Student organizations       | 1       | 2019        | √         |     |
| Health unit                 | 1       | 2019        | √         |     |
| Counseling                  | 1       | 2019        | √         |     |
| Practice                    | -       | -           |           |     |
| Visitor                     | 1       | 2016        | √         |     |
| Warehouse                   | 1       | 2016        | √         |     |
| Toilet                      | 5       | 2022        | √         |     |
| <b>CLASSROOM FACILITIES</b> |         |             |           |     |
| Student desk                | 27      | 2015 - 2021 | √         |     |
| Student seats               | 54      | 2016 - 2021 | √         |     |
| Whiteboards                 | 7       | 2016 - 2021 | √         |     |
| Teacher's desk              | 7       | 2016        | √         |     |
| Teacher's chair             | 6       | 2016        | √         |     |
| state symbol                | 6       | 2016        | √         |     |
| Cupboard                    | 5       | 2018        | √         |     |
| Mading Board                | 2       | 2018        | √         |     |
| Wall clock                  | 3       | 2019        | √         |     |
| Recyclebin                  | 7       | 2016        | √         |     |
| <b>COMPUTER LABORATORY</b>  |         |             |           |     |
| Computer                    | 11 unit | 2018        | √         |     |
| Printer                     | 3 unit  | 2018        | √         |     |



From the data on the facilities and infrastructure of SMK Dharma Bakti Tomohon, there are still rooms that need to be equipped or provided according to standards, namely, the principal's room, administrative room, computer laboratory, curriculum room, counseling room, student room, teacher's room, OSIS room. , warehouse, canteen, parking lot and practice room. The practice room as an important space in supporting students' practicum activities is still far from the standard facilities and infrastructure stipulated in the existing regulatory standards.

National education standards read: 1) Every educational unit is required to have facilities which include: furniture, educational equipment, books and other learning resources, consumables and equipment needed to support an orderly and sustainable learning process. 2) Every educational unit is required to have infrastructure which includes: land, classrooms, leadership rooms, teachers' rooms, library rooms, laboratory rooms, canteens, places for exercise and places of worship, play places, recreation places, and other spaces needed for supports an orderly and sustainable learning process (PP Nomor 57 tahun 2021).

Adequate facilities and infrastructure in educational units will produce good outcomes for students. Students will also develop because there is a forum for them develop the potential of students. This states that educational and learning facilities and infrastructure such as workshops and laboratories are the main needs that must be available at vocational schools (Sofyan, 2015). This is in line with what Jamaluddin and Abdullah (2021) said that educational activities cannot be separated from facilities and infrastructure. Therefore, every educational unit needs to provide facilities and infrastructure in accordance with standards. Furthermore, the availability of adequate facilities and infrastructure will also facilitate the achievement of educational goals more effectively and efficiently.

Vocational high schools are schools that always focus on competency learning. Mulder (2017) stated that for competency-based learning to be successful, it must still require appropriate learning facilities and equipment. Efforts to provide adequate infrastructure in Vocational Schools are relatively an obstacle due to the limited resources available, as stated by Sudira (2012) that the major obstacle faced by Vocational Schools is the insufficient budget for developing educational facilities and infrastructure. Vocational schools must build collaboration with the industrial world in meeting the availability of infrastructure, by building formal agreements in learning such as industrial internship practice programs (Hiim, 2023; Oroh, et al. 2023). Thus, it is important for vocational schools to continue to strive to meet the availability of standard facilities and infrastructure so that the implementation of learning can be maximized in the process of



developing student competencies for the better.

## CONCLUSION

Based on the research results, it shows that educational facilities and infrastructure in vocational schools do not fully meet the facilities and infrastructure standards set out in Minister of National Education Regulation Number 40 of 2008. There are several facilities and infrastructure in vocational schools that need to be equipped or provided, namely computer laboratories, curriculum development rooms, and classrooms. practice. Vocational Schools need to collaborate with the industrial world in order to collaborate in providing the facilities and infrastructure needed by schools. Forms of collaboration with the industrial world such as building formal agreements in learning such as industrial internship practice programs.

## REFERENCES

- Bararah, I. (2020). Pengelolaan sarana dan prasarana pendidikan dalam meningkatkan kualitas pembelajaran. *Jurnal MUDARRISUNA*, Vol. 10. No. 2, p. 351-370. DOI: <http://dx.doi.org/10.22373/jm.v10i2.7842>
- Barnawi, & Arifin, M. (2012). *Manajemen sarana dan prasarana sekolah*. Yogyakarta: Ar- Ruzz Media.
- BPS. (2020). *Statistik pendidikan 2020*. Badan Pusat Statistik. Jakarta: BPS.
- Hidayatuloh, M. N. (2019). *Kelayakan sarana dan prasarana bengkel praktik teknik kendaraan ringan di SMK Piri Sleman*. <http://eprints.uny.ac.id/id/eprint/62920>.
- Hiim, H. (2023). How can collaboration between schools and workplaces contribute to relevant vocational education? Results of an action research project in the school-based part of Norwegian vocational education and training. *Vocations and Learning*, 16, 1–21. <https://doi.org/10.1007/s12186-022-09300-z>
- Ichsan, I., Arif Saefudin, & Fitria Meisarah. (2023). Constructivism Philosophy in Developing Prospective Educators on the Implementation of Merdeka Belajar in Vocational Schools. *International Journal of Education, Vocational and Social Science*, 2(01), 306-319. <https://doi.org/10.99075/ijevss.v2i01.173>
- Jamaluddin, M. A., & Abdullah, M. (2021), The infrastructure standards of early childhood education units in south sulawesi province. *Prosiding The 2<sup>nd</sup> International on Meaningful Education (2<sup>nd</sup> ICMEd)*. KnE Social Sciences, pages 584–603. 10.18502/kss.v6i2.10017.



- Lunenburg, F. C., & Ornstein, A. C. (2012). *Educational administration: concepts & practices*. London: Thomas Learning Berkshire House.
- Miski, R. (2015). Pengaruh sarana dan prasarana terhadap hasil belajar siswa. *Jurnal Ta'dibi*, 4(2), 69–73. <https://doi.org/10.30997/jtm.v4i2.341>.
- Mulder, M. (2017). *Competence-based vocational and professional education, bridging the worlds of work and education*. Springer International Publishing Switzerland.
- Mulyasa, E. (2004). *Kurikulum berbasis kompetensi*. Bandung: Penerbit PT Remaja Rosdakarya.
- Musa, M. F., & Baharum, A. Z. (2012). Higher education physical assets and facilities. *Procedia - Social and Behavioral Sciences*, 50(2012), 472–478. <https://doi.org/10.1016/j.sbspro.2012.08.051>.
- Oroh, R. R., Attaufiq, M. M., Daud, M., & Roring, R. F. (2023). Analysis of Vocational Student Performance Criteria on Work Skills Based on Industry Needs: An Analysis for Students' Skill Test Instruments. *International Journal of Learning, Teaching and Educational Research*, 22(10), 174-189. <https://doi.org/10.26803/ijlter.22.10.10>
- Permendiknas No. 40 tahun 2008 *tentang Standar Sarana dan Prasarana untuk Sekolah Menengah Kejuruan/Madrasah Aliyah Kejuruan (SMK/MAK)*. [https://luk.staff.ugm.ac.id/atur/bsnp/Permendiknas40-2008 SarprasSMK.pdf](https://luk.staff.ugm.ac.id/atur/bsnp/Permendiknas40-2008_SarprasSMK.pdf). Diakses Pada Tanggal 28 November 2023, Pukul 18.33 WIB.
- PP Nomor 57 tahun 2021 *tentang Standar Nasional Pendidikan*. Jakarta, Indonesia.
- Sanjaya, W. (2006). *Strategi pembelajaran*. Jakarta: Kencana Prenada Media Group.
- Sofyan, H. (2015). *Metodologi pembelajaran kejuruan*. UNY Press, Yogyakarta.
- Sudira, P. (2012). *Filosofi dan Teori Pendidikan Vokasi dan Kejuruan*. UNY Press, Yogyakarta.
- Sugiyono. (2013). *Metode penelitian pendidikan pendekatan kuantitatif, kualitatif dan R&D*. Bandung: Alfabeta.
- UU RI No. 20/2003 [Undang-undang Republik Indonesia Nomor 20 tahun 2003]. (2003). *Sistem Pendidikan Nasional*. Jakarta, Indonesia.

