INTERNATIONAL

JOURNAL OF ADMINISTRATION AND EDUCATION

Volume 3, Number 2, 2026

ASHA PUBLISHING

E-ISSN: 3046-7632
International Journal of Administration and Education (IJAE)
https://journal.ashapublishing.co.id/index.php/ijae/hm

Effectiveness of Office Management and Business Services Laboratory Management at State Vocational High School 3 Pinrang

Nuralam[1], Haedar akib[2*], Muh. Nasir[3]
[1,2,3]Universitas Negeri Makassar
Corresponding author's email haedar.akib@unm.ac.id

ABSTRACT

Effectiveness refers to the extent to which laboratory management supports its intended learning functions. This study examined the management of the Office Management and Business Services (MPLB) laboratory at State Vocational High School 3 Pinrang using a qualitative descriptive approach. Data were collected through interviews, observations, and documentation and analyzed through data reduction, data display, and conclusion drawing. The findings were organized into input, process, and output dimensions. In the input dimension, laboratory personnel had relevant qualifications, but facilities and procurement funds were limited. In the process dimension, practical scheduling, administrative records, equipment maintenance, and time utilization required improvement. The limited number of functioning computers also required students to take turns during practical activities. In the output dimension, students undertook practical tasks such as typing, writing official letters, and managing archives, although some still reported difficulties and a need for additional practice. Overall, the findings indicate that laboratory management faces constraints, particularly in the input and process dimensions. The characterization of management as "less effective" represents a qualitative interpretation of the identified limitations rather than a score derived from a standardized assessment instrument. The study does not establish measurable improvements in student competency or work readiness. Therefore, improvements in equipment availability, administrative documentation, scheduling, maintenance, and student feedback mechanisms are recommended.

Keywords: Effectiveness, Laboratory, Management

INTRODUCTION

Vocational High Schools (SHS) are educational institutions that prioritize academic activities in areas of expertise based on students' interests and talents. They focus on teaching knowledge to enhance skill development and practical skills, focusing on subjects aligned with students' interests, thus preparing them for entry into the workforce within their areas of competence.

Laboratories play a crucial role in enhancing student skill mastery. Laboratories are where students develop their skills in Office Management and Business Services. They are essential for supporting various practical learning activities and are one of the most effective ways to enhance student skills. The presence of laboratories in vocational schools is beneficial for the advancement of educational institutions. Laboratories serve as a platform for practical learning, integrating theory and practice, fostering deeper understanding, and providing students with opportunities to practice using the necessary tools and media. The laboratory is a place for students to develop themselves, as well as a place to teach a competency. (Dao et al., 2024; Inchan & Akatimagool, 2025; Nguyen et al., 2011) Meanwhile, according to Law Number 19 of 2005 concerning National Education Standards in the Minister of National Education Regulation Number 24 of 2007, "A laboratory is a place to apply scientific theories, theoretical testing, proof of research trials, and so on by using tools that are complete with

adequate quantity and quality facilities." So, the existence of a laboratory is needed in every school, various activities in the laboratory room are carried out well if balanced with structured laboratory management.

Effectiveness can be understood as the level of success in optimally achieving predetermined goals. Effectiveness can be seen from several indicators: input, process, and output, which must be systematic and mutually supportive to determine the achievement of laboratory management goals in schools. Effective laboratory management is a series of activities carried out in a location that requires special equipment to carry out the learning process in accordance with the specified targets. (Deng et al., 2023; Setsena, 2021; Wibowo & Sari, 2018) States that "Effectiveness is the main element in achieving a goal or target that has been previously determined and effectiveness is the achievement of various targets that have been determined at the right time by using certain resources that have been allocated to carry out various activities.

A laboratory equipped with complete facilities and skilled staff will not function effectively without proper management. Laboratory management is crucial for the success of a laboratory, and its success depends heavily on effective management. Vocational laboratory management, specifically in the MPLB (Learning and Learning) expertise competency, requires various laboratory facilities to support successful practical learning. For example, computer use, office equipment, service practices, and meeting practices are essential for optimal practical learning. Schools can equip themselves with adequate laboratory facilities to ensure optimal laboratory performance. Laboratory management in vocational high schools is often neglected due to budgetary constraints, infrastructure, and the need for qualified laboratory managers.

Laboratory facilities and infrastructure are crucial components that support the smooth implementation of practical learning. Facilities include various equipment and media used directly in learning activities, such as computers, software, and office supplies. Meanwhile, infrastructure encompasses indirect supporting facilities, such as laboratory space, tables, chairs, electrical connections, and adequate lighting. The availability and management of good infrastructure will create a conducive learning environment, allowing students to gain practical experience aligned with competency needs and the demands of the workplace.

State Vocational High School 3 Pinrang is a formal secondary school offering various vocational competency programs. One of the vocational competencies at State Vocational High School 3 Pinrang is Office Management and Business Services (MPLB). To enhance student mastery of these skills, supporting laboratory facilities and infrastructure are necessary.

In January 2025, observations at State Vocational High School 3 Pinrang indicated that the Office Management and Business Services (MPLB) department used a laboratory consisting of a computer room, a teacher's room, a multifunctional room, and a meeting practice area. The initial observations identified several constraints, including limited room capacity, an insufficient number of functioning computers, maintenance and cleanliness issues, and the need for better archive organization. The adequacy of the laboratory space should also be assessed against the applicable minimum area standards, taking into account the relevant room functions and student capacity. Although previous studies have examined laboratory management and facilities, this study provides a context-specific qualitative analysis of the relationships among resource availability, management processes, and reported practical learning activities in the MPLB laboratory at SMK Negeri 3 Pinrang. Rather than treating the research location itself as evidence of novelty, the study examines the interrelationships among the input, process, and output dimensions to identify practical management gaps and areas for improvement in this setting.

METHODS

In this study, a qualitative approach is combined with a descriptive method to describe the phenomena being studied in depth, (Patton, 2015; Paul & Arup, 2018; Sardana et al., 2023) states that, "Qualitative research is more descriptive in nature. The data collected is in the form of words or images, so it does not emphasize numbers. The collected data, after being analyzed, is then described so that it is easily understood by others.". Thus, this research can illustrate the effectiveness of the Office Management and Business Services laboratory management. It focuses on evaluating the effectiveness of the Office Management and Business Services laboratory management at SMK Negeri 3 Pinrang as a supporting tool for practical learning aimed at equipping students with office administration skills according to the needs of the workplace.

(Miles, 1994; Miles et al., 2014; Sutton & Austin, 2015) The analysis was organized around three dimensions: (1) input, including the qualifications and competencies of laboratory personnel, the availability and condition of facilities, and school-management support; (2) process, including planning, scheduling, implementation, administration, maintenance, and the use of practical time; and (3) output, including evidence reported or observed concerning students' practical tasks, work readiness, evaluation, and follow-up. These dimensions served as an analytical framework for organizing the evidence, not as a standardized numerical scale. Interview, observation, and documentary evidence should be compared within each dimension and across sources to identify convergence, differences, and gaps. The assessment of management as 'less effective' is based qualitatively on recurring evidence of inadequate functioning equipment, irregular or incomplete administration, scheduling conflicts, and reduced practical time. Because no predefined scoring rubric or standardized effectiveness threshold is reported, this category should be interpreted as an evidence-based qualitative judgment rather than a measured score. The manuscript reports seven informants; the authors should ensure that the description of informant roles and the total number is consistent throughout the paper.

Data were collected through observation, interviews, and documentation. Observation was used to record laboratory conditions and practices; interviews were used to obtain accounts from relevant school personnel and students; and documentation was used to examine available school and laboratory records. The manuscript states that data validity was supported through extended observation, persistent observation, triangulation of techniques and sources, and member checking. Data analysis followed an interactive model of data collection, data reduction, data display, and conclusion drawing. For transparency, the analysis should show how relevant statements and observations were assigned to the input, process, or output dimension, how evidence from different sources was compared, and how contradictory or incomplete evidence was treated. Direct quotations may be added only from the original interview transcripts; no quotation should be reconstructed from a summary or invented for illustration.

RESULT AND DISCUSSION

The findings are presented using the input–process–output framework. The input dimension covers personnel, facilities, and management support; the process dimension includes planning, implementation, administration, maintenance, and time utilization; and the output dimension focuses on students' practical activities and competency-related evidence reported by informants or observed by the researchers, as well as evaluation and follow-up.

Evidence from interviews, observations, and available documents is compared to provide a comprehensive understanding of laboratory management. The reported limitations are interpreted in relation to the laboratory's operational conditions, while conclusions regarding student outcomes remain within the limits of the qualitative evidence. When a finding is supported only by informant accounts and cannot be corroborated by documentary or observational evidence, it is presented as a reported perception rather than as an independently verified fact.

Input

Input indicators include manager qualifications, laboratory facilities, and management support. Based on interviews, the MPLB laboratory manager at SMK Negeri 3 Pinrang has the appropriate qualifications, including an educational background in office administration and experience participating in training programs such as upskilling for productive teachers. The Head of Department and the Head of Laboratory are deemed competent in managing the laboratory, but implementation is still limited by the school's technical guidelines regarding procurement budgets. The Head of Laboratory and productive teachers are quite helpful during the practical learning process. Observations also indicated students' proficiency in ten-finger typing, writing letters, and managing archives, and the absence of a guest book upon entry to the laboratory.

The MPLB laboratory facilities at SMK Negeri 3 Pinrang are still inadequate. Although some improvements have been made, such as the addition of air conditioning and curtains for comfort, additional equipment, such as computers, indicate the need for more effective practical and in accordance with the "one person, one device" principle. In line with the observation results, it also shows that the laboratory space is 12 x 7 meters, divided into several sections: a 3.5 x 2-meter computer room, a 4 x 2-meter teacher's room, a 3.5 x 2-meter multifunction room, and a meeting practice area. Furthermore, the number of computers available in the laboratory space is only five: one in the multifunction room and one in the meeting practice area, and two at the reception desk that were damaged. Thus, the laboratory space is only five computers, so students must take turns practicing. Furthermore, management support for the management of the MPLB laboratory has been carried out in stages and evenly across departments, although there are still limitations. The school responds to reports of needs from departments, from repairs to equipment procurement, although the realization is gradual due to regulations and budget. The head of the department also submits proposals and prepares plans for laboratory needs according to conditions in the laboratory. Although not all needs can be met, coordination between the school and laboratory management continues to ensure the laboratory continues to optimally support student practical activities.

As the first indicator, input is used to measure the effectiveness of the management of the Office Management and Business Services laboratory. The input aspect includes all resources used to support the education system. This input is biased in the form of teaching staff (teachers), infrastructure (school buildings, classrooms), Education funds or budgets, books and teaching materials, and technology used in the learning process. The input also includes aspects of students, such as their socio-economic background, motivation, and initial abilities (Latham et al., 2020; Suprianto et al., 2021; Tanveer, 2024) Specifically, the qualifications and competencies of the management staff, laboratory facilities, and management support are examined. Based on this theory, the research results indicate that the Office Management and Business Services laboratory managers have relevant educational backgrounds, specifically Office Administration Education, and have participated in competency-improving training, such as upskilling for productive teachers. Observations also indicated students' proficiency

in ten-finger typing, letter writing, and archive management, and the absence of a guest book upon entry to the laboratory.

The input findings indicate that the laboratory resources available at SMK Negeri 3 Pinrang do not fully meet the practical learning needs of the Office Management and Business Services (MPLB) program. The limited availability of functioning computers requires students to take turns during practical activities, restricting opportunities for individual hands-on practice. Although this arrangement allows practical learning to continue, it highlights the operational challenges associated with limited equipment availability. In addition, the laboratory space is divided into several functional areas, making it important to assess its adequacy in relation to the number of students and the applicable standards. The school has provided support through gradual improvements to laboratory facilities and equipment procurement; however, these efforts have not yet fully addressed the reported resource limitations. These findings indicate that effective laboratory management depends not only on school support but also on the adequacy and availability of resources to support practical learning activities.

Process

Process indicators include planning, implementation, administration, and effective time utilization. Planning for practical activities in the MPLB laboratory at SMK Negeri 3 Pinrang involved the department and laboratory management, particularly in developing the practical schedule and arranging equipment loans. However, this planning was not yet structured. The practical schedule was poorly organized and often clashed with other school activities. Laboratory activities were implemented through coordination between the department head and productive teachers. The laboratory was utilized to support practical learning activities, such as correspondence and receiving visitors, although equipment was still limited. Practical activities were in accordance with the established schedule, but implementation was sometimes disorganized due to adjustments to laboratory conditions.

Furthermore, laboratory administration included a schedule for laboratory use, cleanliness, and an annual schedule. The laboratory head appointed a student to record a list of students borrowing equipment. However, observations showed that the room was poorly maintained, dust and trash were present, and equipment was not neatly organized. Attendance administration used only an attendance list without a dedicated agenda book, and equipment loan documents were not readily available upon request. Furthermore, the utilization of practical time in the laboratory was still not optimal due to limited practical equipment. The department head and the productive teacher, who is also the head of the laboratory, have arranged the schedule so that all students can participate, but the practicals still have to be done in shifts. As a result, time feels limited, and learning is less than optimal for students.

Process is the second indicator of the effectiveness of Office Management and Business Services laboratory management. According to (Arrahma et al., 2023; Mahanani et al., 2020; Suseno et al., 2019) "A process is a series of steps or activities that occur to produce a result. These steps or series of actions are designed with the intention of achieving a goal or expectation.". Thus, this activity refers to the planning and implementation of laboratory activities, laboratory administration, and the effective use of practical time by teachers and students. Based on this theory, practical activities in the Office Management and Business Services laboratory have been planned, such as developing a practical schedule and arranging for equipment loans. However, their implementation often clashes with other school activities, such as extracurricular activities. Furthermore, the laboratory work program is in place, but its preparation is not yet fully structured, and the need for practical equipment and materials is not yet fully met.

Furthermore, in terms of implementation, activities demonstrate how a plan is actually implemented to achieve its objectives. Practical learning activities in the Office Management and Business Services laboratory have proceeded according to the established schedule. Learning materials are usually delivered first in class, followed by practical work in the laboratory. However, practical activities do not always run smoothly due to adjustments to specific situations and conditions. Furthermore, limited laboratory facilities are one of the obstacles encountered. Nevertheless, practical activities such as letter writing and guest service simulations can still be carried out using available facilities. This reflects that the implementation of the practice continues and provides learning experiences to students, even though there are limitations in its implementation.

The process findings indicate that the existence of a schedule or borrowing arrangement does not necessarily demonstrate that laboratory administration is functioning effectively. Observations of dust accumulation, disorganized equipment, the absence of a dedicated laboratory agenda book, and the lack of borrowing records indicate gaps between established administrative arrangements and their consistent implementation. Similarly, rotating students to accommodate limited equipment is a practical strategy, but it may increase waiting times and limit individual opportunities for hands-on practice. These findings suggest that the input and process dimensions are interrelated. Inadequate equipment places additional demands on scheduling, while incomplete documentation and inconsistent maintenance routines hinder the effective planning of laboratory use and the identification of equipment needs. Although the available evidence supports this interpretation, claims regarding the extent to which these conditions affect learning outcomes should be avoided unless they are directly supported by empirical data.

Output

The output dimension concerns the practical tasks students undertake and the evidence available about their learning, evaluation, and readiness for work. The manuscript reports activities involving ten-finger typing, writing official letters, managing archives, and using office equipment. Some students reportedly still experience confusion and want more practice. These accounts suggest that the laboratory provides opportunities to practice relevant tasks, but they do not, on their own, demonstrate the magnitude of competency improvement or establish that work readiness has increased. Such claims should be framed as reported experiences or perceived development unless supported by documented assessment results. The study also reports that evaluation relies on students' work products, while student feedback on the practical activities is not systematically collected; this limits the evidence available for evaluating the learning experience and planning improvements.

(Arrahma et al., 2023; Mohzana et al., 2023; Tiwi et al., 2024) Within the input–process–output framework, output evidence should be interpreted in relation to the resources available and the way practical activities are organized. Students' participation in typing, correspondence, and archive-management tasks demonstrates that some practical learning activities take place despite resource constraints. However, the qualitative design and the evidence presented do not establish a causal relationship between laboratory management and measured gains in student competency or work readiness. The more defensible conclusion is that the laboratory offers practice opportunities, while limited equipment, insufficient practice time, and uneven student confidence may restrict the consistency of those opportunities. If the authors wish to make stronger claims about improvement, they should provide relevant assessment records or other direct evidence already collected during the study.

The reported evaluation process includes teachers' review of student work and the collection of practical-task documents in folders or by email. The findings also indicate that

students have not routinely been asked to provide feedback on practical activities. This suggests that evaluation is primarily focused on student products and may not fully capture students' experiences of equipment access, waiting time, or scheduling. The reported repairs and room-comfort improvements are relevant follow-up actions, but the manuscript should distinguish actions that were completed from recommendations that remain outstanding. A more systematic record of equipment condition, borrowing, maintenance, practical attendance, and student feedback could help the school identify recurring constraints and prioritize improvements.

Inhibiting and Supporting Factors in MPLB Laboratory Management

a. Inhibiting Factors

Interview results revealed that the inhibiting factors in the management of the MPLB laboratory at SMK Negeri 3 Pinrang are inadequate facilities and infrastructure, and the limited budget allocated to the department for equipment procurement. Despite this, the school has made efforts.

The findings identify inadequate facilities and limited procurement funds as major constraints on laboratory management. These constraints affect not only the availability of equipment but also the organization of practical activities, as students must take turns using the available devices and laboratory scheduling becomes more challenging. Under these conditions, accurate borrowing records and consistent maintenance documentation become increasingly important. When administrative records are incomplete, laboratory managers have less systematic information to monitor equipment conditions, identify maintenance needs, and justify procurement priorities. Although the school's efforts to address equipment needs gradually provide important institutional support, the findings suggest that improvements should be prioritized based on equipment functionality, frequency of use, and the practical tasks required by the curriculum. These implications are grounded in the conditions reported in the study. However, because the study does not quantify the budget shortfall or assess the effects of additional funding, conclusions regarding the financial requirements and potential impact of increased investment should remain cautious.

b. Supporting Factors

Interview results indicated that supporting factors in the management of the MPLB laboratory at SMK Negeri 3 Pinrang include cooperation between teachers, collaboration with industry, and regular evaluations by the principal and curriculum.

The research findings indicated that supporting factors in the management of the MPLB laboratory at SMK Negeri 3 Pinrang include support from the school, including the principal and productive teachers, as well as the availability of several facilities that can be used in the learning process. Although some equipment is still incomplete, teachers continue to conduct practical activities in the laboratory to provide appropriate learning experiences for students.

CONCLUSION

The findings indicate that the management of the Office Management and Business Services (MPLB) laboratory at SMK Negeri 3 Pinrang remains less effective, particularly in the input and process dimensions. The main constraints include limited functioning computers, inadequate facilities, budget limitations, scheduling difficulties, incomplete administrative records, and insufficient equipment maintenance.

Despite these constraints, school support, teacher involvement, and the availability of some functioning equipment enable practical activities to continue. Students undertake relevant tasks, including ten-finger typing, writing official letters, managing archives, and operating office equipment. However, the available evidence does not establish measurable improvements in student competencies or work readiness. Therefore, the assessment of laboratory management as less effective represents a qualitative interpretation of the observed and reported limitations rather than a classification based on a standardized assessment instrument.

Improvements should prioritize essential equipment, systematic inventory and borrowing records, coordinated practical schedules, routine maintenance, and student feedback. Further research involving multiple schools and documented competency assessments is recommended to examine the relationship between laboratory management and student learning outcomes.

REFERENCES

Arrahma, A., Afiqah, N., Erlinawati, E., Randa, G., Linda, R., & Rahmad, M. (2023). The effectiveness of science laboratory management at junior high school. *Prisma Sains: Jurnal Pengkajian Ilmu Dan Pembelajaran Matematika Dan IPA IKIP Mataram*, *11*(3), 660–671.

Dao, V. P., Nguyen, T. L., Bui, V. H., Tran, V. H., Phan, P. N. T., & Nguyen, M. D. (2024). Development of a laboratory-based learning model via digital platform environment. *Frontiers in Education*, *9*. https://doi.org/10.3389/feduc.2024.1495724

Deng, C., Gulseren, D., Isola, C., Grocutt, K., & Turner, N. (2023). Transformational leadership effectiveness: an evidence-based primer. *Human Resource Development International*, *26*(5). https://doi.org/10.1080/13678868.2022.2135938

Inchan, S., & Akatimagool, S. (2025). A Blended Laboratory-Based Learning Model for Embedded Systems Education. *Journal of Technical Education and Training*, *17*(1 Special Issue). https://doi.org/10.30880/jtet.2025.17.01.001

Latham, C. L., Ringl, K., & Hogan, M. (2020). *Transforming students' educational experience through cultural mindedness, peer mentoring, and student input*. *59*(4), 194–202. https://doi.org/10.3928/01484834-20200323-04

Mahanani, C., Wening, S., Susanto, M. R., & Sudirman, A. (2020). The effect of laboratory knowledge, teaching practice experience, and work motivation on laboratory management. *Journal of Physics: Conference Series*, *1446*(1), 012042.

Miles, M. B. (1994). Qualitative data analysis: An expanded sourcebook. *Thousand Oaks*.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook*. Sage publications.

Mohzana, M., Murcahyanto, H., Fahrurrozi, M., & Supriadi, Y. N. (2023). Optimization of management of laboratory facilities in the process of learning science at high school. *Jurnal Penelitian Pendidikan IPA*, *9*(10), 8226–8234.

Nguyen, N. C., Bosch, O. J. H., & Maani, K. E. (2011). Creating "learning laboratories" for sustainable development in biospheres: A systems thinking approach. *Systems Research and Behavioral Science*, *28*(1). https://doi.org/10.1002/sres.1044

Patton, M. Q. (2015). *Qualitative Research & Evaluation Methods* (Fourth Edi). SAGE Publications, Inc.

Paul, U., & Arup, B. (2018). Qualitative Research: Data Analysis. *Bengal Physician Journal*, *5*(2). https://doi.org/10.5005/jp-journals-10070-5206

Sardana, N., Shekoohi, S., Cornett, E. M., & Kaye, A. D. (2023). Qualitative and quantitative research methods. In *Substance Use and Addiction Research: Methodology, Mechanisms, and Therapeutics*. https://doi.org/10.1016/B978-0-323-98814-8.00008-1

Setsena, L. N. (2021). Relationship between organisational commitment and effectiveness of human resource management practices in a south african information technology company. *SA Journal of Human Resource Management*, *19*. https://doi.org/10.4102/sajhrm.v19i0.1586

Suprianto, S., Sirait, E. J. M., & Arhas, S. H. (2021). The Influence of Classroom Management on Students' Learning Motivation in the Department of Office Administration. *Jurnal Office*, *7*(1), 159–168.

Suseno, N., Harjati, P., & Dedy, H. A. (2019). School laboratory management information system. *Journal of Physics: Conference Series*, *1361*(1), 012068.

Sutton, J., & Austin, Z. (2015). Qualitative research: Data collection, analysis, and management. *Canadian Journal of Hospital Pharmacy*, *68*(3). https://doi.org/10.4212/cjhp.v68i3.1456

Tanveer, A. (2024). A Guide to Office Equipment Management to Boost Workplace Productivity . *Ezofficeinventory*.

Tiwi, T., Niswaty, R., & Saleh, S. (2024). Laboratory Management in the Department of Office Governance Automation at SMK Nasional Makassar. *Journal of Educational Development and Learning (JEDAL)*, *1*(2), 69–76. https://doi.org/10.70188/9831qg80

Wibowo, A., & Sari, M. W. (2018). Measuring enterprise resource planning (ERP) systems effectiveness in Indonesia. *Telkomnika (Telecommunication Computing Electronics and Control)*, *16*(1). https://doi.org/10.12928/TELKOMNIKA.v16i1.5895