



## Implementation of Academic Supervision for Human Resource Improvement at SMKN 1 Sungai Tabuk

Gilang Dwi Kurniawan\*, Resyadilla Azkia, Rida Maulidia, Marini, Ahmad Suriansyah, Aslamiah

Postgraduate Program, Master of Educational Administration, Lambung Mangkurat University Banjarmasin, Indonesia

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#### \* Corresponding author:

E-mail: [masgilangdwik@gmail.com](mailto:masgilangdwik@gmail.com)

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### ABSTRACT

The purpose of this study is to document best practices in the implementation of academic supervision by the principal to improve the quality of human resources (teachers) at SMKN 1 Sungai Tabuk. The research subjects consisted of 41 teachers. The research technique was carried out through pre-observation, observation (class visits by supervisors to observe the learning process) and post-observation, as well as collecting data from students about the learning process carried out by teachers. This study uses a qualitative approach, research data was collected through three main stages: pre-observation, observation, and post-observation and through triangulation of sources and techniques, namely by comparing the results of observations, interviews, and documentation to ensure the validity of the research findings. The results of the study indicate that academic supervision activities are able to improve various aspects of teacher weaknesses that have been obstacles to improving the quality of learning. Aspects such as discipline in carrying out teaching hours, orderly academic documents, awareness of educational innovation, implementation of Teaching Factory (TEFA) and Project Based Learning (PJBL), utilization of media and the internet, and utilization of information technology experienced significant improvements. Although not yet completely perfect, the results of supervision show positive changes towards increasing teacher professionalism at SMKN 1 Sungai Tabuk..

## 1. Introduction

Education is a strategic process in developing superior and competitive human resources. As the primary human resource in schools, teachers play a crucial role in determining the direction and quality of education. To maintain the quality of human resources (teachers), human resource management activities can implement several methods, including the implementation of managerial and operational

functions in human resource management (HRM). Management functions include planning, organizing, implementing, and supervising. Operational functions include procurement, development, compensation, integration, and maintenance (Wukir, 2013). The implementation of these functions must be based on conditions within the school, as procurement is not the school's authority for public schools. This is because the system of procurement of educational personnel in public schools is under the authority of the government, and schools need to consider other functions, particularly development, compensation, integration, and maintenance. These functions focus more on improving the human resources of teachers, because teachers are agents of change in schools (Yasin et al., 2024).

To create professional teachers, teacher quality improvement activities are necessary. There are several ways to improve teacher quality, including implementing development, coaching, compensation, and supervision functions. According to Prayogi et al. (2025), supervision is the oversight of academic activities, including the teaching and learning process, teacher supervision, student supervision, and the situations that cause them. Noviantry et al. (2025) added that supervision in education is a service that meets the basic needs of teachers so they can improve their potential and become truly professional human resources in schools on a sustainable basis. Implementation of supervisory activities in schools is entirely the responsibility of the principal, as one of the principal's primary duties is to act as a supervisor (Sirojuddin et al., 2021).

Previous research findings indicate that academic supervision contributes significantly to improving educational quality. Widyanto et al. (2023) found that supervision helps improve the overall performance of the education system in the region by ensuring teachers meet national and local teaching standards. Meanwhile, Hidayatullah and Yusrianti (2024) emphasized that principals' managerial competency strategies and educational supervision are crucial factors in efforts to improve teacher professionalism. Therefore, strengthening academic supervision is a key strategy in achieving sustainable educational quality. This strengthening emphasizes not only improving teachers' pedagogical competencies but also managerial, collaborative, and reflective aspects in learning practices, thereby creating an adaptive school culture oriented towards quality improvement.

Based on observations at SMKN 1 Sungai Tabuk, academic supervision has been implemented in a planned and sustainable manner as an effort to improve the quality of educational staff. The principal plays an active role as a manager, supervisor, and motivator, striving to ensure the effectiveness of learning activities through various forms of planned supervision. Supervision at this school is not only administrative but also serves as a means of developing teacher professionalism. The formative and summative stages are implemented consistently (Rivayanti et al., 2020). However, some teachers still face challenges in terms of teaching discipline, academic administration management, and the implementation of technology- and industry-based learning innovations.

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This prompted researchers to review academic supervision in a different location from previous research conducted at SMKN 1 Sungai Tabuk. Based on this, the performance of teachers, as the main human resources in education at SMKN 1 Sungai Tabuk, remains low. This occurs despite the demands of teachers to be agents of change and truly professional in their fields, thus ensuring quality education. To improve this situation, the principal, as the human resource manager, has implemented activities that can help achieve quality human resources through supervision. Therefore, this study aims to analyze the implementation of academic supervision at SMKN 1 Sungai Tabuk in an effort to improve the quality of human resources (teachers).

## **2. Methodology**

This study uses a qualitative descriptive approach to document best practices in the implementation of academic supervision by the principal to improve the quality of human resources (teachers) at SMKN 1 Sungai Tabuk. This approach was chosen because it allows for an in-depth description of the process and results of the implementation of academic supervision in the field without manipulating the variables studied (Syahrizal and Jailani, 2023). This study was conducted at SMKN 1 Sungai Tabuk, Banjar Regency, South Kalimantan. The research subjects consisted of 41 teachers directly involved in academic supervision activities led by the principal. Subjects were selected using purposive sampling, taking into account teachers' active involvement in learning and supervision activities at the school.

Research data was collected through three main stages: pre-observation, observation, and post-observation. The obtained data were analyzed descriptively and qualitatively through data reduction, data presentation, and conclusion drawing. This analysis focused on identifying changes in teacher behavior and improvements in teacher competency following the implementation of academic supervision. Data validity was strengthened through triangulation of sources and techniques, namely by comparing the results of observations, interviews, and documentation to ensure the validity of the research findings (Nurfajriani, 2024).

## **3. Results and Discussion**

Based on research conducted at SMKN 1 Sungai Tabuk, it was found that the principal plays an active role as a manager, supervisor, and motivator in improving the quality of human resources in the school through academic supervision activities. These activities are designed systematically and continuously, involving all teachers in the planning, implementation, and follow-up of supervision results. The series of academic supervision activities at SMKN 1 Sungai Tabuk includes formative and summative stages, scientific models, clinical approaches, collaborative approaches, and the use of various techniques such as class visits, class observations, and one-on-one conversations. This is one of the principal's

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fundamental roles in improving the quality of education through the development of human resources, especially teachers.

In the formative stage, supervision is conducted at the beginning of the semester to provide direct guidance to teachers, while the summative stage is conducted towards the end of the semester to assess overall learning outcomes. The scientific model used is systematic, planned, and continuous, supported by objective data collection procedures and instruments. A clinical approach is applied to improve teaching and learning activities (KBM) through in-depth planning, observation, analysis, and evaluation of teacher performance in the classroom. In addition, a collaborative approach is implemented through an agreement between teachers and supervisors to determine the structure, process, and criteria of supervision, so that supervision is two-way, open, and solution-oriented.

Academic supervision at SMKN 1 Sungai Tabuk is implemented through three main techniques: (1) Pre-Observation, which is the preparation (planning) stage before the supervision activity is carried out. This is done through interviews or discussions with teachers, exploring preparations before class visits, and determining the focal point of observation during the observation based on agreement. This preparation stage includes developing instruments and schedules with teachers. Supervisors conduct a needs analysis to identify aspects of learning that require improvement or development. As stated by Sergioivanni and Starratt (2007), good supervision planning begins with establishing clear objectives, identifying the teacher or group of teachers to be supervised, and determining the methods and instruments to be used. Research by Arikunto (2006) shows that the supervision planning stage includes developing a supervision program, setting targets, determining the implementation time, and preparing instruments to be used in supervision activities. Supervisors need to prepare various observation instruments, such as observation sheets, assessment rubrics, and interview guidelines that are tailored to the focus of the supervision.

The next stage (2) is observation, which is a classroom visit by the supervisor to directly observe the learning process and record important aspects of the implementation of teaching and learning by teachers and students. Masaong (2013) explains that the implementation of academic supervision includes classroom observations, individual meetings, group discussions, and teaching demonstrations, which aim to provide professional assistance to teachers. The supervisor records various findings, both positive and aspects that require improvement, while maintaining a professional and non-judgmental attitude. Research by Prasojo and Sudiyono (2011) revealed that the most effective supervision technique is a combination of classroom visits, private conversations, and teacher meetings tailored to the needs and conditions of the teachers being supervised. Sahertian (2008) emphasized that in carrying out supervision, supervisors must create harmonious, democratic, and non-authoritarian interpersonal relationships so that teachers feel comfortable and open to receiving guidance. Observational data is collected through various techniques, such as anecdotal notes, checklists, and video recordings, if necessary.

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The next stage is (3) post-observation, which involves a personal conversation to discuss learning problems and their solutions. Mukhtar and Iskandar (2009) added that the supervision evaluation stage must be conducted objectively using factual data from observations, so that the conclusions drawn can be justified and accepted by the teacher concerned. The supervisor conveys the observation findings by prioritizing positive aspects first, then identifying areas that require improvement in a constructive and solution-oriented manner. The observation results are analyzed and discussed together at the reporting stage. Next, the follow-up stage involves providing feedback, suggestions for improvement, and developing steps for teacher professional development. In providing feedback, the supervisor needs to use an appropriate approach and be tailored to the characteristics and needs of the teacher.

Based on the results of the supervision implementation, there was a significant increase in various aspects of teacher competency at SMKN 1 Sungai Tabuk. Before the supervision was implemented, teachers showed weaknesses in pedagogical and professional skills, such as still using conventional learning methods and minimal innovation in teaching practices. After structured academic supervision, teachers experienced improvements in time discipline, orderly academic administration, utilization of information technology, and awareness of learning innovations. This is in line with the findings of Sukma et al. (2024) who stated that teacher professional competence has a significant direct relationship to teacher performance and is influenced by the principal's instructional leadership and achievement motivation. Well-planned academic supervision can be a concrete manifestation of the principal's instructional leadership in improving teacher professionalism.

Supervision data shows that academic administration planning increased from 40% to 90%, IT-based administration increased from 40% to 90%, the use of learning media increased from 50% to 85%, and the implementation of Teaching Factory (TEFA) and Project-Based Learning (PjBL) increased from 20% to 75%. Teaching discipline also increased by 90%, and awareness of learning innovation reached 80%. These achievements indicate that the implementation of systematic, continuous, and sustainable academic supervision can gradually improve the pedagogical aspects and professionalism of teachers at SMKN 1 Sungai Tabuk.

From these results, the implementation of TEFA (Teaching Factory) in Vocational High Schools (SMK) follows principles that guarantee educational quality, such as the use of adequate practice facilities, effective learning methods, and accountability in resource management (Harbes et al., 2024). TEFA is an effective solution in creating a generation of workers who are not only competent but also have character, so they are able to contribute positively to the development of industry and society. The Directorate of Vocational High School Development (2017) defines Teaching Factory as a production- or service-based learning concept that refers to standards and procedures applicable in industry, implemented in an atmosphere similar to that which occurs in industry, with the aim of bridging the competency gap between the knowledge taught in schools and industry needs. This

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model changes the learning paradigm from simulative to productive, where students not only practice using equipment but also produce products or services that have economic value and can be marketed. The basic philosophy of TEFA is learning through practice and production-based educational training that emphasizes direct experience in an authentic work environment.

The implementation of Teaching Factory provides significant benefits for the development of technical competencies of vocational high school students. According to Abele et al. (2015), learning in a TEFA environment allows students to master technical skills more deeply because they work with real equipment and technology used in industry, follow work standards and procedures similar to industrial practices, and face various technical problems that occur in the production process. In contrast to conventional practical learning which is often repetitive and controlled, TEFA exposes students to real production situations with varying complexity and uncertainty, which encourages problem-solving and adaptation skills. Research by Nurtanto et al. (2020) shows that vocational high school students who learn through TEFA have higher technical competencies than those who only learn through conventional practices, as measured by aspects such as speed of work completion, accuracy and precision, ability to operate various types of equipment, and understanding of product quality standards. TEFA facilitates integrated and contextual skills learning, where students not only master technical procedures but also understand the rationale behind each procedure and are able to adapt to various work conditions. This is important considering that rapid technological developments demand workers who are not only skilled but also adaptive to change.

Another learning model developed by SMKN 1 Sungai Tabuk is project-based learning (PjBL). This model can improve students' critical thinking skills by utilizing creativity in creating products. The PjBL model has proven effective in motivating students to learn because this approach encourages them to actively participate in the learning process. Students are encouraged to express their thoughts during the learning process, which makes them more engaged (Widiawati et al., 2024). Project-based learning (PjBL) aligns closely with the characteristics and objectives of vocational education, which emphasizes mastery of practical competencies and work readiness. According to Hoachlander, Sikora, and Horn (2003), vocational education requires a learning approach that bridges the gap between classroom theory and workplace practice. PjBL offers a solution through authentic and contextual learning. Vocational high school students are required not only to understand theoretical concepts but also to be able to apply them in real-world work situations. Project-based learning provides an opportunity to develop these competencies in an integrated manner.

This is in line with research by Nursamsu and Kusnafizal (2017) which shows that project-based learning is very effective in vocational schools because it can improve students' critical thinking skills, creativity, and practical skills, which are key competencies needed in the industrial world. This model allows students to learn through direct experience in solving problems similar to challenges in the

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workplace. Furthermore, Suryani, Rusilowati, and Wardono (2016) found in their research that the application of project-based learning in productive subjects in vocational schools can increase student learning motivation because they see a direct relevance between what is learned and competency requirements in their field of expertise.

The alignment between Project-Based Learning (PjBL) and the vocational high school curriculum is also evident in the learning principles adopted. The vocational high school curriculum in Indonesia implements a competency-based learning approach that emphasizes the achievement of measurable graduate competency standards. According to Billett (2011), learning in vocational education must integrate theoretical knowledge with work practices through authentic and meaningful learning experiences. Project-based learning facilitates this integration by providing students with opportunities to work on projects that reflect real-world tasks in the industrial world. This aligns with the findings of Wardani, Nurhayati, and Safitri (2019) who showed that project-based learning can improve vocational school students' work readiness because they are accustomed to facing complex challenges and completing tasks professionally, as they will face in the workplace.

Widianingrum, Kusuma, and Anis's (2015) study of engineering vocational high school students showed that project-based learning significantly improved students' technical competencies compared to conventional learning. Students who learned through projects demonstrated better abilities in operating equipment, implementing standard work procedures, solving technical problems, and producing products that met industry quality standards. This is because in Project-Based Learning (PjBL), students are directly involved in the planning, implementation, and evaluation of projects, thus requiring them to master various technical skills in an integrated manner.

However, some teachers did not show maximum improvement due to factors such as age and low motivation to innovate in learning. Nevertheless, the academic supervision implemented at SMKN 1 Sungai Tabuk was generally successful in driving positive changes in teacher professionalism. This aligns with the findings of previous research by Astuti Arif (2020), which showed that academic supervision contributed significantly to improving teacher competence, motivation, and performance. Strategies to address the increasing teacher dropout rate include implementing open communication strategies, involving the entire school community, and partnering with various parties. The principal plays an active role in encouraging teacher professional development through the government-facilitated Skills Improvement and Reskilling program (Ranisa et al., 2025). The practical benefits of academic supervision are also reflected in the improvement of classroom learning quality. Based on interviews conducted in Caringin District, Bogor Regency, as reported in the *Karimah Tauhid Journal* (2024), at least four main benefits were identified from the implementation of academic supervision: first, an improvement in the quality of learning directly felt by teachers; second, an improvement in teacher performance in carrying out their duties; third, teachers gain knowledge to determine the use of appropriate learning methods according to

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student characteristics and material; and fourth, academic supervision serves as a means of self-reflection or intrinsic motivation for teachers to continue to develop. This is reinforced by findings showing that through academic supervision activities, teachers receive assistance in designing more systematic and structured learning, refining existing teaching methods, and improving the overall quality of learning, which has an impact on optimal student learning outcomes.

Overall, the results of this study confirm that academic supervision implemented collaboratively, participatively, and oriented towards teacher professional development can be a best practice in human resource development in vocational schools. Structured supervision and continuous follow-up not only improve teachers' pedagogical and professional competence but also strengthen a reflective and innovative culture within the school environment. Thus, academic supervision plays a strategic role as an effective managerial instrument in encouraging the creation of sustainable educational quality.

#### **4. Conclusion**

Academic supervision at SMKN 1 Sungai Tabuk significantly improved teacher professionalism and learning quality. Through systematic supervision using scientific, clinical, and collaborative approaches across pre-observation, observation, and post-observation stages, the principal effectively identified teachers' development needs. The results showed substantial improvements in academic administration and IT, learning media, TEFA and PjBL implementation, teaching discipline, and innovation awareness. The application of TEFA and PjBL also enhanced students' technical competence, critical thinking, creativity, and work readiness, demonstrating that academic supervision is an effective managerial instrument for fostering a reflective and innovative culture in vocational schools. This study is limited by its single-school context, short research duration, potential subjectivity of data collection, and the lack of control over external factors and long-term student outcomes. Therefore, vocational schools are recommended to implement structured and collaborative academic supervision, strengthen principals' supervisory competence, promote innovative learning models supported by technology, address teacher resistance through mentoring and communication, and build a culture of reflective practice. Future research should involve multiple schools, use mixed methods and longitudinal designs, and explore policy, digital supervision tools, and the long-term impact of academic supervision on student outcomes.

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