CONFORMITY OF CURRICULUM MANAGEMENT OF THE PANCASILA STUDENT PROFILE STRENGTHENING PROJECT (P5) IN VOCATIONAL SCHOOLS WITH INDUSTRIAL NEEDS

Lukman Hakim
Universitas Hasyim Asy'ari Tebuireng Jombang
Email; hakimbho@gmail.com

Abstract. Vocational High Schools, abbreviated as SMK, are schools that produce graduates who are ready to work with the competencies, skills, and character needed by the industrial world. The existence of graduates with the necessary competencies, skills, and character is supported by a curriculum that delivers graduates who meet the industrial world's expectations. In this case, the independence curriculum is with the P5 program (Pancasila Student Profile Strengthening Project). Producing graduates who have meaningful learning experiences for students, where they are directly involved in project activities that are relevant to real life and issues around them, in this case, the industrial world. With P5, students are expected to develop various competencies, including faith, devotion to God Almighty, noble character, independence, cooperation, global diversity, critical thinking, and creativity. The industrial world needs skilled and integrated workers. So that the suitability of the independence curriculum with the P5 program is an answer to the needs of the industrial world.
Keywords. Curriculum Management, P5, Vocational School, Industrial Needs

Abstrak. *Sekolah Menengah Kejuruan yang disingkat SMK, adalah sekolah yang menghasilkan lulus siap kerja dengan memiliki kompetensi, keterampilan, dan karakter yang dibutuhkan dunia industry. Keberadaan lulus yang mempunyai kompetensi, keterampilan, dan karakter ditopang oleh adanya kurikulum yang dapat mengantarkan lulus yang dhiarapkan oleh dunia industry. Dalam hal ini, kurikulum merdeka dengan program P5 (Projek Penguatan Profil Pelajar Pancasila). Menghasilkan lulusan yang mempunyai pengalaman belajar bermakna bagi murid, di mana mereka dilibatkan secara langsung dalam kegiatan proyek yang relevan dengan kehidupan nyata dan isu-isu di sekitar mereka dalam hal ini adalah dunia industri. Dengan P5, siswa diharapkan dapat mengembangkan berbagai kompetensi, seperti: Beriman, bertakwa kepada Tuhan Yang Maha Esa, dan berakhlak mulia, mandiri, gotong royong, berkebinekaan global, bernalar kritis, dan kreatif. Dunia insdustri membutuhkan tenaga kerja yang terampil dan berintegritas. Sehingga kesesuaian kurikulum merdekan dengan program P 5 sebagai jawaban terhadap kebutuhan dunia industry.*
Kata Kunci. *Manajemen Kurikulum, P5, Sekolah Vokasi, Kebutuhan Industri*

A. INTRODUCTION

Vocational High Schools (SMK) play a crucial role in preparing a skilled and industrially ready workforce. Vocational education focuses on developing practical skills relevant to labor market needs, with a greater proportion of learning based on practice than theory. This aims to provide students with skills that can be directly applied in the workplace. (Chukwuedo & Ohanu, 2024; Qin, 2024b; Wang et al., 2023). According to data from BPS, in February 2025, the Indonesian workforce reached 153.05 million people, with an open unemployment rate of 4.76%. (Pusat, 2025) Thus, the existence of vocational schools (SMK) is crucial in addressing the challenge of unemployment and providing a highly competent workforce that meets industry needs.

Theoretically, vocational education can be linked to various expert perspectives that emphasize the importance of developing skills and character that align with the demands of the industrial world. Kaur stated that vocational education aims to prepare students to be work-ready and adapt to the jobs required by the business world.(Kaur, 2024). Wei and Nga also explained that vocational education is built on culture and history that prioritizes work-based activities.(Wei & Nga, 2024). Furthermore, Government Regulation No. 17 of 2013 emphasizes the importance of

collaboration between vocational high schools (SMK) and the business/industry sector (DU/DI) to produce a workforce ready to work with industry standards.

The implementation of a curriculum relevant to the world of work, such as a competency-based curriculum and the P5 Profile program (Pancasila Student Profile Strengthening Project), is a key factor in improving the quality of vocational high school graduates. The P5 program aims to develop students' character based on Pancasila values, which also includes the development of technical skills aligned with their vocational expertise. (Li & Rohayati, 2024; Qin, 2024a; Wahyuni, 2021). Furthermore, the independent curriculum supports more flexible learning, allowing students to choose learning paths that align with their interests and job market needs. This aims to ensure that vocational school graduates possess not only technical skills but also strong character traits, such as mutual cooperation, independence, and critical thinking. (Dzulkurnain et al., 2024; Roemintoyo & Budiarto, 2023; Suherman et al., 2022).

Vocational education also needs to be supported by policies that ensure the curriculum aligns with the needs of the business world. According to research by Ahyanuardi et al., a curriculum based on industry needs will provide greater benefits for both students and the business world. (Ahyanuardi et al., 2022). In Indonesia, government policy, reflected in Presidential Instruction Number 9 of 2016 concerning the Revitalization of Vocational High Schools (SMK) and the SMK Center of Excellence (SMK PK) program, aims to strengthen partnerships between vocational schools and the business and industrial world. This program focuses on improving the quality of vocational education through closer collaboration with the industrial sector, ensuring that vocational high school graduates can compete in the global job market.

This study aims to analyze the alignment of vocational high school curricula with the needs of the industrial world. Based on Regulation of the Director General of Vocational Education Number 05 of 2020, there are six key indicators that need to be analyzed: alignment of industry-based curriculum, implementation of industry-based learning, and involvement of industry teachers in schools. Furthermore, the development of industry-based facility and infrastructure standards and the implementation of industrial work practices are also important factors in assessing the extent to which vocational high school curricula meet industry demands. With in-depth analysis, it is hoped that solutions can be found to improve the quality of vocational education in Indonesia, encompassing not only technical skills but also the character and integrity required in the workplace..

B. RESEARCH METHODS

This research uses a qualitative approach with a naturalistic paradigm to examine the meaning contained in the data obtained from the research subjects in depth and holistically. This type of research is a case study, focusing on SMK Walisongo 1 Gempol Pasuruan as the research locus.(Salmona & Kaczynski, 2024; Tharaba & Wahyudin, 2024). The selection of these vocational schools was based on their relevance in implementing the industry-based vocational curriculum that is the focus of the study, as well as their direct relationship with the business and industrial world. Research informants included principals, teachers, students, and representatives of the business/industry world who collaborated with the schools. The sampling technique used was snowball sampling to obtain key informants in stages according to data needs. (Grenier, 2023; Suprayitno et al., 2024).

The collected data will be analyzed using Miles and Huberman's interactive analysis model, which consists of three main stages: data reduction, data display, and conclusion drawing/verification. To ensure a clearer and more structured analysis process, concrete steps will be presented in the form of a flowchart or table. To enhance data validity, this study will implement source triangulation and method triangulation. Source triangulation is conducted by collecting data

from various informants with different perspectives, while method triangulation involves various data collection techniques, such as participant observation, in-depth interviews, and documentation. Additionally, member checking and an audit trail will be used to ensure data validity. (Abdussamad, 2021; Khoa et al., 2023).

In conducting this research, research ethics were strictly adhered to by adhering to applicable norms, including providing clear explanations to informants about the research's objectives and benefits and protecting their rights. The use of member checking and audit trails also aimed to increase transparency and accountability in data collection and analysis.(Tharaba & Wahyudin, 2024; Vivek, 2023). All these steps are taken to ensure that the results of this research are valid, accountable, and useful for the development of vocational education in vocational schools, as well as relevant to the needs of the business world and industry..

C. RESULT AND DISCUSSION

Alignment of Curriculum with Industry Needs

Based on observations and interviews, the curriculum at SMK Walisongo 1 Gempol Pasuruan has been adapted to industry needs, but some technical materials have not been updated to reflect technological developments. This indicates a gap between the implemented curriculum and the latest technological needs in the industrial world. Chen KaiZhi stated that one of the major challenges in vocational education is the difficulty of updating the curriculum to keep up with rapid technological developments. Delays in introducing new technologies can hinder students' readiness to enter the workforce with relevant skills.(Chen KaiZhi, 2025).

Furthermore, Asiri revealed that the difference between vocational education curricula and industrial technology needs can create a skills gap that hinders graduates from adapting to job market demands (S. Asiri, 2025). For example, in some sectors, the technology used in the workplace develops much faster than curriculum updates in educational institutions, resulting in many students lacking direct experience with the tools and equipment used in industry. Furthermore, research by Mahmudah and Santosa also shows that a curriculum that is not integrated with the latest technology will result in students being unable to compete in a global job market that relies heavily on cutting-edge technology (Mahmudah & Santosa, 2021). Therefore, continuous curriculum updates and adaptation to industry needs are crucial to improving the quality of vocational education.

Popoviciu and Li also stated that stronger collaboration between schools and industry can help update learning materials to be more relevant to industry developments. Through this collaboration, schools can more easily identify the latest technological developments and incorporate them into their curricula, enabling students to acquire skills aligned with industry needs (Popoviciu & Li, 2023). Ramadhan et al. emphasize the importance of aligning vocational education with the technological needs of industry. They state that to close this gap, vocational education curricula must actively and systematically involve industry stakeholders (Ramadhan et al., 2024). Therefore, a curriculum that is more responsive to the latest technological needs will better support students' skills relevant to the world of work.

Therefore, although the Walisongo Vocational High School curriculum has been aligned with industry needs, there is still room to update the technical materials and tools used in schools to be more relevant to the ever-evolving technological developments in industry. More intensive collaboration between education and industry is needed to close this gap..

Implementation of Industry-Based Learning

Industry-based learning, which allocates 60% of the time to practical work, has been implemented at SMK Walisongo 1 Gempol Pasuruan. However, there are differences between the

tools used in school and those used in industry. Students stated that even though they have done practical work, the tools used in vocational schools are still different from those in industry. This suggests that practical equipment needs to be adapted to those used in the workplace to maximize student preparedness. Vilalta-Perdomo et al. emphasized that differences in tools and technology used in vocational education can reduce learning effectiveness, as students are not familiar with the equipment used in industry. (Vilalta-Perdomo et al., 2022).

In this context, Tortorella et al. stated that the tools used in vocational education must be equivalent to industry standards so that students can effectively apply the skills they learn in the workplace. When there is a mismatch between the tools used in schools and those in industry, students cannot gain hands-on experience relevant to the real world, which can reduce their competency after graduation (Tortorella et al., 2023). Furthermore, Mital' et al. suggested that collaboration between vocational schools and industry is essential to provide the right equipment. In this case, industry can assist in providing equipment that is more suited to the technology they use. This collaboration also provides an opportunity for schools to obtain more accurate information about the latest equipment needed in the industry (Mital' et al., 2021).

Research by Chakraborty et al. also highlights the importance of aligning the tools used in vocational education with those available in industry. According to them, this is crucial to ensure that students can adapt quickly and efficiently when entering the workforce. Mismatches between tools used in schools and in industry can create a skills gap, impacting graduates' competitiveness in the job market(Chakraborty et al., 2023). Furthermore, Doulougeri et al. highlight the importance of strengthening relationships between schools and industry to provide equipment relevant to industry needs (Doulougeri et al., 2024). By involving industry in the planning and provision of practical equipment, vocational education is expected to produce graduates who are better prepared and aligned with industry demands.

Overall, although industry-based learning, allocating 60% of time to practical work, has been implemented at Walisongo Vocational High School, the discrepancy between the tools used in schools and industry remains a problem that must be addressed immediately. To maximize student readiness, it is crucial to align practical equipment in schools with that used in industry. This requires closer collaboration between vocational schools and industry to ensure that students gain practical experience that is relevant to the world of work.

Pancasila Student Profile Program (P5) and Industry Needs

The P5 program at SMK Walisongo 1 Gempol Pasuruan focuses on developing students' character based on Pancasila values. However, the results are not fully aligned with industry needs, which focus more on practical skills. The principal stated that P5 emphasizes character, but the technical skills required by industry have not been fully integrated into the curriculum. Mahardhani and Roziq Asrori explained that while character development in vocational education is crucial, the curriculum must also balance character development with technical skills that align with industry needs. This imbalance can result in graduates with good character who are ill-prepared to face the challenges of the workplace, which demands more practical skills. (Mahardhani & Roziq Asrori, 2023).

Furthermore, Kadir emphasized that to produce work-ready graduates, vocational education must prioritize the development of technical skills that are highly sought after by industry. While character education, such as that implemented through P5, is crucial, practical skills must also be an integral part of the curriculum to enable students to adapt to the demands of real-world work (Kadir, 2023). Nuriya et al. argue that while character education is essential for developing a positive personality, character alone is not sufficient. Technical skills relevant to technological developments

and job market needs should be a key focus of vocational education. They argue that character and practical skills must go hand in hand to create superior graduates who are ready to compete in the workforce(Nuriya et al., 2023).

Meanwhile, Apeles Lexi Lontoh et al. stated that too much emphasis on character without being balanced with the development of relevant technical skills can result in graduates who are underprepared to face the demands of the industrial world. Therefore, the curriculum must be able to integrate Pancasila character values with the technical competencies required by business and industry, so that students are work-ready with a balance of skills and character (Apeles Lexi Lontoh et al., 2024). Sulistyosari et al. emphasized that integrating character education and practical skills is essential, but in practice, many vocational schools tend to focus on developing only one aspect (Sulistyosari* et al., 2024). Therefore, they recommend developing a curriculum that balances both aspects, ensuring that the technical skills required by industry remain a priority.

Overall, although the P5 Program at Walisongo Vocational High School focuses on character development in accordance with Pancasila values, it is important to integrate practical skills required by the industrial world into the curriculum. With the right balance between character education and technical skills, it is hoped that vocational school graduates will be ready to compete in the world of work with qualities that meet market demands..

Industry Teacher Involvement

The involvement of industry teachers at SMK Walisongo 1 Gempol Pasuruan is still limited. Although there are efforts to involve teaching staff from industry, as expressed by teachers, their involvement is more theoretical than practical. This indicates the need to increase the number and quality of industry teachers directly involved in the learning process to provide more applicable insights to students. Ehiobuche et al. emphasize that the involvement of industry teachers in vocational learning is crucial to ensure that students receive relevant and up-to-date knowledge of industry practices. The presence of industry teachers who actively provide practical insights will enrich students' learning experiences and bridge the gap between theory in school and practice in the workplace. (Ehiobuche et al., 2022).

Furthermore, Daujotienė et al. explained that the involvement of industry professionals in vocational education needs to be increased, as they possess the practical expertise that students desperately need to understand the dynamics of the world of work. Limited involvement of industry teachers in the learning process will hinder students from acquiring skills that are more aligned with actual industry needs (Daujotienė et al., 2020). Therefore, further efforts are needed to facilitate and expand collaboration between vocational education and industry. Finnanger and Prøitz also emphasized the importance of strengthening collaboration between schools and industry. They argued that the involvement of industry teachers should go beyond visits or seminars, but should involve industry teachers who can integrate hands-on experience and practical skills into everyday learning (Finnanger & Prøitz, 2024). This will help students better prepare for the world of work, which relies heavily on practical skills.

Romana Bano stated that although teachers in vocational high schools (SMK) possess strong academic competencies, they often lack direct industry experience. The involvement of industry practitioners in learning provides the advantage of imparting more applicable and up-to-date knowledge (Romana Bano, 2022). Therefore, it is important to design programs that facilitate closer collaboration between vocational education and industry. Finally, Maisaroh et al. highlighted the need for clearer policies and mechanisms for involving industry practitioners in the teaching process. They argued that teaching involving teachers from industry would provide a clearer picture of industry trends and needs, as well as provide valuable practical insights for students in preparing for

careers in the industrial world (Maisaroh et al., 2023). Therefore, strengthening collaboration between schools and industry, as well as increasing the number and quality of industry teachers involved in learning, is crucial.

Overall, although the involvement of industry teachers at Walisongo Vocational High School already exists, this involvement needs to be improved in quality and quantity to provide a more applicable and relevant learning experience for students. In this way, students will be better prepared to face the increasingly complex challenges of the world of work..

Development of Industrial-Based Facilities and Infrastructure

Although the standard of facilities and infrastructure at SMK Walisongo 1 Gempol Pasuruan is good, some of the tools used in the school do not match the latest technology in industry. Teachers revealed that some of the tools used in the school are still outdated compared to those used in the workplace, which presents a challenge in bridging the gap between theory in school and practice in industry. Bolshakov et al. explain that the use of tools and technology that are in line with industrial developments is very important in vocational education, because this allows students to acquire skills relevant to industry needs. If the tools used in schools do not keep up with the latest technological developments, students will face difficulties in adapting to the tools used in the workplace.(Bolshakov et al., 2023).

Dovletmurzaeva also emphasized that the facilities and equipment used in vocational education must be continuously updated to keep pace with industrial technological developments. They stated that a mismatch between the tools used in schools and those used in industry can hinder students from acquiring the necessary skills (Dovletmurzaeva, 2023). Therefore, it is important for educational institutions to maintain alignment between the tools used in schools and those used in industry, so that students are better prepared to face the challenges of the working world. Furthermore, Xu et al., in their paper "Improving Vocational Education through Industry-Driven Training," stated that the relationship between education and industry should lead to alignment between the curriculum and the tools used. They pointed out that good integration between the tools used in schools and those used in industry will improve students' practical skills and prepare them for the challenges of the real working world (Xu et al., 2024). Therefore, updating tools in schools should be a priority so that students acquire more applicable knowledge and skills.

Mannino et al. also emphasize the importance of tools and technology in vocational education. They note that the mismatch between equipment used in schools and that available in industry often hinders bridging the gap between theoretical and practical learning. Therefore, they recommend that schools regularly identify and update their tools to align with industry needs (Mannino et al., 2021). Wahyuningtyas and Trisnawati argue that updating tools in vocational schools is crucial for ensuring students' readiness for work in industry. They emphasize that aligning the tools used in schools with those available in industry will narrow the skills gap between what is learned in school and what is needed in the workplace (Wahyuningtyas & Trisnawati, 2021). Therefore, schools must continue collaborating with industry in selecting and updating the tools used in learning.

Overall, although Walisongo Vocational School already has good facilities and infrastructure, the need to continuously update tools and technology to align with those used in industry is crucial. This will help students to be better prepared to face the challenges of the working world and minimize the gap between theoretical learning in school and practice in the industrial world.

Student and Teacher Perceptions of Curriculum Suitability

Perception data shows a difference between students and teachers regarding the skills taught at SMK Walisongo 1 Gempol Pasuruan. Approximately 70% of students feel they have not acquired

sufficient skills in the use of the latest technologies used in industry, while 80% of teachers feel the curriculum is sufficiently relevant, despite an awareness of the need for continuous updating. Sultmann et al. explain that the gap in perception between students and teachers regarding the relevance of the skills taught can occur due to differences in views regarding industry needs and the existing curriculum in schools. Students often focus more on direct experience with the latest technology, while teachers prioritize the existing curriculum as the main reference in teaching (Sultmann et al., 2022).

Khan et al. noted that misalignment in student and teacher perceptions often relates to the teaching methods and resources available in schools. Teachers often feel that the curriculum is sufficiently relevant to industrial technological developments, but students directly involved in practical work experience a greater mismatch between the tools and skills taught in schools and those used in industry (Khan et al., 2023). This highlights the importance of continuous curriculum updates to meet evolving industry needs. Meanwhile, Zhang et al. emphasize that skills teaching in vocational schools must continually adapt to technological developments and industry practices. They argue that misalignment between student expectations and teacher perceptions often occurs due to the discrepancy between the curriculum taught and the needs of the rapidly changing industrial world (Zhang et al., 2022). In this regard, there needs to be a more intensive dialogue between educational institutions and industry to align the curriculum and teaching practices in vocational schools.

Kisige et al. suggest that it is important to conduct continuous curriculum evaluation by involving feedback from various parties, including students, teachers, and industry players. This evaluation will ensure that the skills taught in schools remain relevant to the needs of the labor market (Kisige et al., 2021). In this case, although the majority of teachers feel the curriculum is relevant, it is important to reassess the teaching approaches and technologies used to meet the expectations of students and the industry. Aytaç also mentioned that the difference in perceptions between students and teachers may be caused by the inadequate introduction of the latest technologies in learning. They emphasize that to increase the relevance of the curriculum, skills teaching must be supported by the latest technologies used in industry so that students can develop more applicable skills and be prepared for the ever-evolving world of work (Aytaç, 2023). Overall, the differences in perceptions between students and teachers regarding the skills taught in vocational high schools (SMK) indicate the need for continuous curriculum updates and increased industry involvement in the teaching process. For vocational high schools (SMK) to produce work-ready graduates, there needs to be alignment between what is taught in schools and what is needed by the industry.

Although SMK Walisongo 1 Gempol Pasuruan has implemented many aspects relevant to an industry-based curriculum, such as practice-based learning, the involvement of industry teachers, and adjustments to facility and infrastructure standards, challenges remain. One key challenge is the need for continuous curriculum updates to align with evolving technological developments and industry trends. Continuous curriculum updates are crucial to bridge the gap between what is taught in schools and what is needed in the workplace. Therefore, a curriculum that is not merely static but dynamic and adaptable to industry needs is essential.

Furthermore, more intensive involvement of industry teachers in the learning process at vocational schools is crucial. While there have been efforts to involve industry teachers, their involvement remains theoretical, while the industrial world requires more practical skills. More intensive involvement of industry teachers can help provide students with deeper insight into the latest technological applications and practical demands in the field. Therefore, increasing the

number and quality of industry teachers in vocational schools is crucial to ensure that vocational education in vocational schools produces graduates who are truly prepared for the industrial world.

D. CONCLUSION

While the P5 curriculum implemented at SMK Walisongo 1 Gempol Pasuruan is relevant to industry-based curricula, including practice-based learning, the involvement of industry teachers, and the adaptation of infrastructure, several challenges need to be addressed. Continuous curriculum updates and more intensive involvement of industry teachers are two key factors in improving the quality of vocational education in vocational schools to better align with the demands of the ever-evolving industrial world. Limitations in the tools and technology used in schools and the mismatch between the skills taught and industry needs further emphasize the importance of continuous renewal in this vocational education system.

As a recommendation, SMK Walisongo needs to focus on several areas to address these challenges. First, it is crucial to regularly update the curriculum and involve industry in the process to ensure alignment with the latest technological developments. Second, increase the involvement of industry practitioners in the learning process, either through internship programs or more intensive collaborations with industry. Third, vocational schools also need to improve the quality and quantity of equipment used in practicums, ensuring that the tools taught in schools are relevant to the technology used in industry. Finally, involve students and teachers in the curriculum evaluation process to directly understand the gaps between education and industry needs, and make necessary improvements based on that feedback.

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