

Management Strategies for Vocational High Schools (SMK) and Industry Partnerships in the Revitalization of Vocational Education

Nursaima Siregar¹, Fathur Rokhman², Eko Handoyo³, Gunawan Tjokro⁴

¹ Graduate School of Universitas Negeri Semarang (UNNES), Jl. Lamongan Tengah No. 2, Bendan Ngisor, Gajahmungkur District, Semarang City, Central Java 50233, Indonesia

¹ Dr. Soedjono Health Academy, Jl. Urip Sumoharjo No. 48, Wates, North Magelang District, Magelang City, Central Java 56113, Indonesia

^{2,3,4} Graduate School of Universitas Negeri Semarang (UNNES), Jl. Lamongan Tengah No. 2, Bendan Ngisor, Gajahmungkur District, Semarang City, Central Java 50233, Indonesia

Correspondence: nursaima@mail.unnes.ac.id

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ABSTRACT

Vocational education in Indonesia faces an employment paradox, evidenced by a high Open Unemployment Rate (TPT) among graduates of Vocational High Schools (SMK)—ranging from 7.68% to 7.74% (813,776 graduates). This unemployment is most prevalent in industrial regions, such as West Java and Banten, particularly within technical fields (Automotive, Mechanical, and Computer/Informatics). In contrast, the health-related vocational sector has largely avoided this crisis, thanks to strict quota regulations and high demand within the home care market. This study aims to analyze the effectiveness of vocational education revitalization policies and to formulate management strategies for vocational schools, along with substantive industry partnership models, through the integration of the "8+i Link and Match" scheme. Utilizing a Systematic Literature Review (SLR) methodology based on the PRISMA approach, an in-depth analysis was conducted on 35 reputable national and international journals published over the last five years. The synthesis identifies four primary drivers of unemployment in industrial regions: skills mismatch, superficial partnerships (limited to formal MoUs), competition from migrant workers, and outsourcing systems. To break this cycle, school management must transform into "CEOs of vocational entities" by implementing five strategic steps: radical curriculum synchronization, upgrading teacher competencies through industrial internships, optimizing "Teaching Factories" to meet industry standards, restructuring digital-based school job centers (BKK), and integrating internships directly with recruitment processes. In conclusion, the success of vocational revitalization hinges significantly on the acumen and proactive approach of school management in building substantive, mutually beneficial partnerships with local businesses and industries.



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INTRODUCTION

Vocational education in Indonesia currently occupies a crucial position amidst national efforts to drive social and economic transformation, with the aim of optimizing the demographic bonus. The government has established several key regulatory frameworks, including Law Number 20 of 2003 concerning the National Education System, Presidential Instruction (Inpres) Number 9 of 2016 on the Revitalization of Vocational High Schools (SMK), and Presidential Regulation (Perpres) Number 68 of 2022 on the Revitalization of Vocational Education and Training [3-5]. From the theoretical perspective of public policy implementation, the success of these regulations depends heavily on the accuracy of

the policy content, the capacity of those implementing them in the field, and adaptive support from the external environment. These macro-level policies mandate a restructuring of curricula and the enhancement of resource quality, ensuring that graduates of vocational secondary education possess global competitiveness and are well-prepared for employment within the industrial sector.

However, implementation in the field faces a formidable challenge: a significant employment paradox within industrial regions. According to periodic reports from Statistics Indonesia (BPS), vocational high schools (SMK) consistently account for the highest Open Unemployment Rate (TPT) in Indonesia, with figures fluctuating between 7.68% and 7.74%—representing more than 813,000 graduates who have yet to secure employment. Major manufacturing hubs, such as West Java and Banten, are the largest contributors to this unemployment, particularly within three fields of study that have reached an acute state of market saturation: Automotive Engineering, Computer & Informatics Engineering (TKJ/RPL), and Mechanical Engineering [14-16]. Conversely, a positive anomaly is observed in the health-related vocational stream; these programs have managed to avoid the cycle of high unemployment, thanks to strict regulatory quotas on the establishment of new schools, combined with the rapid expansion of the home-care market and the growing international demand for caregivers.

This absorption gap indicates the existence of four main structural obstacles, namely skills mismatch, school-industry partnerships that are formalities on paper (paper MoU), tight competition with migrant workers, and the rise of contract recruitment work systems (outsourcing) [19-21]. In order to overcome this dysfunctional partnership, the Ministry of Education, Culture, Research and Technology launched the Vocational Center of Excellence (SMK-PK) program which requires the implementation of the Link and Match 8+i concept comprehensively, including radical curriculum alignment, involvement of guest teachers, certified internships, and absorption commitments [22-24]. This ongoing transformation demands a radical repositioning of the role of school management. Principals, Deputy Heads of Industrial Relations, and Heads of Skills Programs must no longer simply act as passive, conventional "academic administrative managers", but must transform into "vocational entity CEOs" who are aggressive and adaptive to the dynamics of local job market needs.

Given the complexity of these spatial and sectoral barriers, the evaluation of vocational education policy requires a structured, evidence-based mapping process to formulate actionable mitigation strategies. This research primarily examines how internal school management strategies and the effectiveness of industry partnerships can address the absorption gap between saturated technical-vocational fields and more resilient health-related vocational sectors. The study employs a Systematic Literature Review (SLR) methodology, following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework, to analyze and synthesize findings from 35 reputable scholarly articles and key policy documents published over the last five years. This systematic review aims to identify empirical gaps in the governance of partnerships between vocational schools and the business and industrial sectors. The findings are intended to contribute theoretically to the discourse on national education policy while offering tactical recommendations for policymakers and vocational school administrators to help break the cycle of unemployment among vocational graduates in Indonesia.

RESEARCH METHODS

This study employs a Systematic Literature Review (SLR) method to systematically identify, evaluate, and synthesize empirical evidence relevant to the implementation of vocational education policy and the revitalization of vocational high schools (SMK) in Indonesia. The research protocol was developed in accordance with the PRISMA 2020 (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to ensure the transparency, replicability, and validity of the review findings. This systematic review process was conducted through four primary stages: identification, screening, eligibility, and inclusion.

Literature Search Strategy (Identification)

A search for scholarly articles was conducted electronically across three reputable global and national academic databases: Scopus, Google Scholar, and Sinta (Science and Technology Index). The publication timeframe was limited to the last five years (2022–2026) to capture the most recent policy dynamics, particularly those following the issuance of Presidential Regulation (Perpres) No. 68 of 2022.

The keywords used in the search strategy were structured using Boolean operators (AND/OR) as follows:

Indonesian Boolean string: ("Pendidikan Vokasi" OR "Revitalisasi SMK") AND ("Pengangguran Terbuka" OR "Link and Match") AND "Manajemen Sekolah".

English Boolean string: ("Vocational Education" OR "Vocational High School") AND ("Unemployment" OR "Link and Match") AND "School Management".

The initial search across these three databases yielded a total of 185 articles deemed potentially relevant to the research topic.

Inclusion and Exclusion Criteria (Screening & Eligibility)

To ensure the quality of the articles analyzed, the researchers applied rigorous inclusion and exclusion criteria. Inclusion Criteria: (a) Articles sourced from peer-reviewed scientific journals indexed in Scopus or ranked Sinta 1 through Sinta 4; (b) Studies focusing on the implementation of vocational education policies, industrial relations management, the effectiveness of the SMK-PK (Center of Excellence Vocational High School) program, or the mitigation of unemployment among vocational high school (SMK) graduates in Indonesia; (c) Studies employing empirical research methods (qualitative, quantitative, or mixed-methods). Exclusion Criteria: (a) Theses, dissertations, seminar proceedings not published in journals, or opinion/popular articles; (b) Studies focusing on vocational education outside the Indonesian context or outside the vocational high school (SMK) level; (c) Duplicate articles or articles for which full-text access is unavailable. Through an initial screening process of titles and abstracts, 185 duplicate or irrelevant articles were removed. Subsequently, 135 articles remained for full-text eligibility assessment. Following an in-depth assessment, 100 articles were excluded for failing to meet specific substantive criteria. Ultimately, 35 articles were identified as meeting all inclusion criteria and were selected for further analysis [1,2,6-35].

Table 1. Operational Definitions of Terms

No	Term / Variable	Operational Definition	Indicators / Measurement Tools
1	Implementation of Vocational Policy	The process of translating government macro regulations (UU No. 20/2003, Presidential Instruction No. 9/2016, Presidential Decree No. 68/2022) into operational work programs at the vocational school level.	Accuracy of policy content, capacity of school-level implementers, and the supportiveness of the external environment
2	Revitalization of Vocational High Schools (SMK)	Systematic efforts to reorganize the vocational school ecosystem to increase the relevance of graduates to industry needs.	Improvements across 4 pillars: Curriculum, Educators/Educational Personnel, Facilities/Infrastructure, and Industry Collaboration
3	Center of Excellence Vocational High School (SMK-PK)	A continuous transformation program from the Ministry of Education, Culture, Research, and Technology, serving as a catalyst for the revitalization of vocational high schools (SMK) to achieve specific performance quality standards.	Strong school leadership, school digitalization, and the comprehensive implementation of linkages and alignment

No	Term / Variable	Operational Definition	Indicators / Measurement Tools
4	Open Unemployment Rate (TPT) for Vocational High School (SMK) Graduates	The percentage of vocational high school (SMK) graduates who have entered the labor force but are not yet employed or are currently seeking employment during a given period.	Referring to BPS macro data for 2026: Percentage: 7.68% – 7.74%, Volume: 813,776 graduates
5	Saturated Fields of Study	A field of study in which the number of graduates has exceeded the regular absorption capacity of the local industrial sector.	Focused on 3 engineering specializations: Automotive Engineering, Computer & Informatics Engineering (TKJ/RPL), and Mechanical Engineering.
6	Resilience of Vocational High Schools (SMK) in the Health Sector	The adaptability and stability of the employment absorption ecosystem for vocational high schools (SMK) in the healthcare sector help them avoid being among the top contributors to national unemployment.	Growth of the home care/caregiver market, overseas job opportunities, and strict quota restrictions on the establishment of schools
7	Skills Mismatch	The gap between the quality or type of competencies taught in schools and the actual skill qualifications required by the industry.	Graduates' inability to operate the latest industrial equipment; school curricula that lag behind factory technology.
8	Formal Partnership (MoU Document)	A partnership between vocational high schools (SMK) and industry that exists only on paper—in the form of a memorandum of understanding—solely to satisfy administrative requirements.	A passive MoU with no program implementation; lacks any commitment toward job placement or high-quality internships.
9	Management Based on the "Vocational Entity CEO" Model	Repositioning the roles of school leadership (principals, industry relations coordinators, and program heads) from passive academic administrators to proactive, corporate-style managers.	Proactive in building reciprocal partnerships, aggressive in reaching out to the industry, and focused on an output-based governance model centered on absorption.
10	Link and Match 8+i	Substantive alignment framework between SMK and DUDI which includes core elements plus industry accelerator elements.	8 Elemen: Kurikulum bersama, PjBL, guru tamu, PKL, sertifikasi, diklat guru, TeFa, komitmen serap. +i: Beasiswa, donasi alat, CSR.

Table 1 operationalizes the implementation of vocational policy and the revitalization of vocational high schools (SMK-PK) as a macro-governance variable, translated into school work programs through the "8+i Link and Match" framework and the "Vocational Entity CEO" leadership model. The effectiveness of these management intervention variables is measured in terms of their capacity to mitigate skills mismatches, transcend the limitations of formal agreements (MoU documents), and reduce high Open Unemployment Rates (TPT) in certain "saturated" fields of study within industrial regions. Furthermore, the resilience of vocational high schools in the healthcare sector is analyzed comparatively to map the characteristics of an ideal labor-absorption ecosystem, contrasting the technical and healthcare fields.

Table 2. Literature Synthesis Coding Matrix (N = 35)

Code Category	Substantive Focus of the Article	Article Code	Reference Sources
Cluster A (Management Policy & Strategy)	Evaluation of the implementation of macro-level regulations (Presidential Instruction No. 9/2016, Presidential Regulation No. 68/2022), the Vocational High School Center of Excellence (SMK-PK) program, and the effectiveness of partnership management regarding curricula between schools and the business/industrial sector (DUDI).	A01 through A20	[1, 2, 3, 4, 5, 6, 7, 8, 9, 20, 22, 23, 24, 25, 26, 27, 30, 31, 32, 35]
Cluster B (Labor Market and Unemployment)	An analysis of the causes of open unemployment rates (TPT) among vocational high school (SMK) graduates in industrial regions, covering skills mismatch, the phenomenon of "paper-only" Memorandums of Understanding (MoU), and the impact of the outsourcing system.	B01 through B10	[10, 11, 12, 13, 14, 15, 16, 19, 21, 34]
Cluster C (Specialized Resilience Studies)	An exploratory analysis of the successful job placement of graduates from the vocational high school (SMK) health cluster, the impact of strict quota regulations, and the market for home care/caregiver services.	C01 through C05	[17, 18, 28, 29, 33]

Table 2 operationalizes the synthesis of 35 selected articles into three interconnected analytical clusters. Cluster A (Management Policy & Strategy) evaluates the structural execution of macro-level vocational regulations and the integration of school-industry curriculum frameworks across twenty studies. This management dimension is critically juxtaposed against Cluster B (Labor Market and Unemployment), which deconstructs the socio-economic drivers behind the open unemployment rates (TPT) and surface-level partnerships in industrial regions. Finally, Cluster C (Specialized Resilience Studies) provides a comparative baseline by exploring the micro-level drivers and strict quota policies that sustain high job placement rates within the healthcare vocational ecosystem.

RESULTS AND DISCUSSION

Cluster 1: A Critical Analysis of the Key Factors Behind High Unemployment Among Vocational High School (SMK) Graduates in Industrial Regions

The implementation of policies for the revitalization of vocational high schools (Presidential Instruction No. 9/2016 and Presidential Regulation No. 68/2022) faces a significant challenge: an employment paradox within national manufacturing hubs. Industrial zones—which ought to be the primary absorbers of vocational graduates—instead exhibit the highest Open Unemployment Rates (TPT) for SMK graduates, particularly in the provinces of West Java and Banten. A synthesis of 10 articles in Cluster B (B01–B10) reveals that this high unemployment rate—reaching 7.68%–7.74%, or approximately 813,776 graduates—is not a random occurrence; rather, it is driven by four interconnected structural factors.

1. **Skills Mismatch:** The pace of technological innovation within the business and industrial sectors (DUDI) far outstrips the adaptability of curricula and facilities in vocational high schools. School workshops remain dominated by conventional machinery, while the manufacturing sector has already adopted the Internet of Things (IoT) and Artificial Intelligence (AI). This has resulted in a

- massive competency gap, particularly in saturated fields such as Automotive Engineering, Mechanical Engineering, and Computer & Informatics Engineering.
2. **Superficial Partnerships ("Paper-based" MoUs):** Most collaborations are merely formal arrangements existing only on paper to satisfy administrative requirements for accreditation. These partnerships remain passive and fail to address the substantive aspects of the "Link and Match 8+i" framework, such as radical curriculum synchronization and concrete commitments to graduate recruitment.
 3. **Open Competition with Newcomers:** Local graduates in industrial hubs must compete directly against an influx of job seekers from outside the region individuals who often possess international industry certifications and greater mental resilience.
 4. **Contract-Based Recruitment (Outsourcing):** The implementation of short-term contract systems via third-party agencies drives high turnover rates, creating a cycle of recurring unemployment (cyclical unemployment) within industrial areas.

Table 3. Causality Matrix for High Unemployment Among Vocational High School (SMK) Graduates in Industrial Regions

No	Key Factors	Root Causes and Tangible Impacts	Supporting Article
1	Skills Mismatch	School workshop facilities and equipment lag behind industrial technology. Graduates are unable to operate modern machinery; their competencies are considered obsolete by the business and industrial sector.	B01, B03, B07, B10 [14,15,19,33]
2	Formal Partnership (Paper MoU)	School partnerships are transactional, driven by the need to meet accreditation documentation requirements. There is no commitment to job placement, causing the internship (PKL) program to lose its substantive essence.	B02, B05, B08 [20,24,31]
3	Open Competition with New Entrants	A lack of international industry certifications and insufficient mental resilience among local graduates put them at a competitive disadvantage during open, large-scale recruitment processes.	B04, B09 [11,16]
4	Contract-Based Recruitment System (Outsourcing)	Schools fail to adequately equip students with literacy regarding labor law. Graduates become trapped in a cycle of short-term contracts, leading to a growing number of unemployed alumni..	B06 [21]

Table 3 outlines four key factors affecting the job readiness of graduates, along with their tangible consequences. These factors include a skills mismatch stemming from educational facilities that lag behind industry standards and formal partnerships that are merely transactional (serving only to satisfy accreditation requirements rather than committing to job placements). Furthermore, graduates face open competition against other entrants due to a lack of international certifications and a lack of psychological resilience, compounded by a recruitment system based on short-term (outsourcing) contracts. Cumulatively, these issues render graduates' competencies obsolete, diminish the value of internship programs, leave alumni in a position of poor competitiveness, and ultimately trap them in a cycle of short-term contracts a situation that continuously swells the ranks of unemployed graduates.

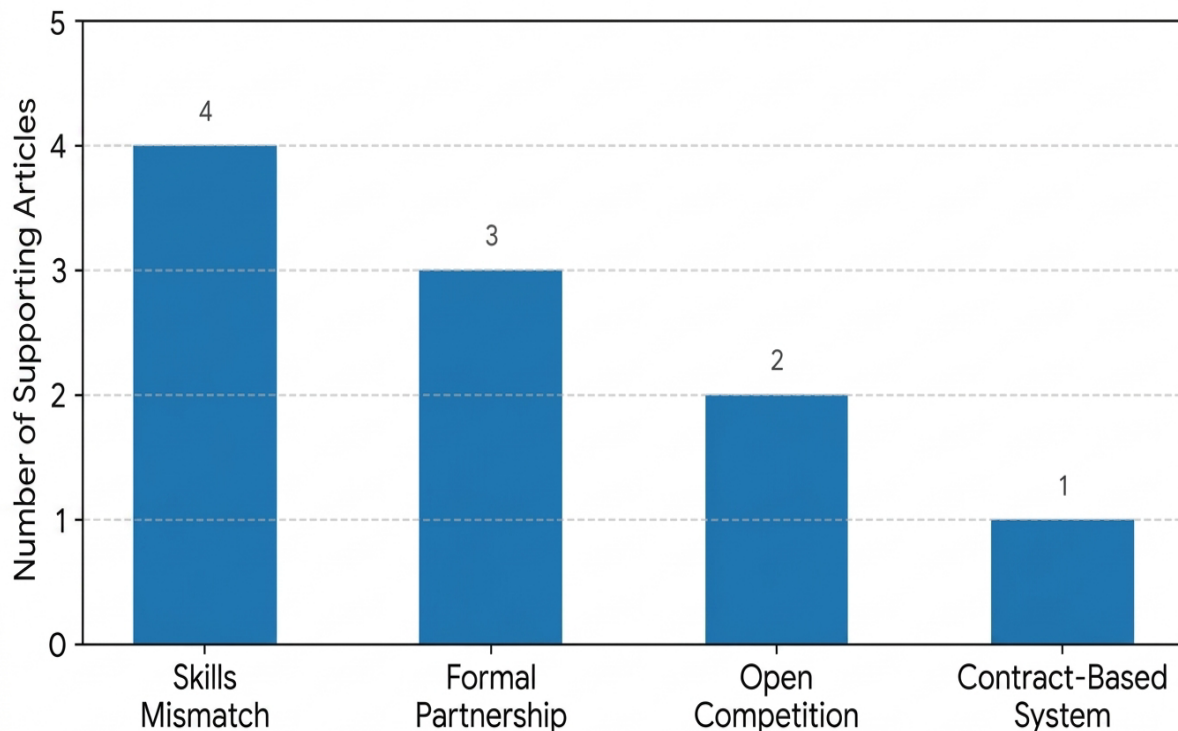


Figura 1. Causal Factors for Unemployment Among Vocational High School (SMK) Graduates

Figure 1, outlines four primary factors contributing to high unemployment rates among vocational high school (SMK) graduates in industrial regions, along with their root causes. The first factor is a "skills mismatch" resulting from outdated school practical facilities, which renders the graduates' competencies obsolete in the eyes of the industry. The second factor involves formal partnership often limited to "paper MoUs" that serve merely as transactional arrangements to satisfy accreditation requirements, lacking any genuine commitment to job placement. The third factor is open competition with newcomers, in which local graduates struggle to compete due to a lack of international certifications and a lack of mental resilience. Finally, a recruitment system based on outsourcing traps alumni in a cycle of short-term contracts, a situation exacerbated by a lack of education regarding labor laws during their time in school.

Cluster 2: Resilience Cluster Analysis of Vocational High Schools (SMK) in the Health Sector

A literature synthesis of five articles in Cluster C (C01–C05) reveals a positive anomaly within the vocational education ecosystem. While unemployment rates remain high among graduates of technical vocational programs, those from health-related vocational high schools (SMK Kesehatan) have consistently managed to avoid being among the top three fields with the highest national open unemployment rates. This resilience is driven by four stable factors: (1) a constantly growing demand within the public healthcare sector; (2) massive expansion of new labor markets, specifically in niche areas such as home care and global caregiver roles (e.g., in Japan, Germany, and the Middle East); (3) a high rate of progression to higher education (in health-related diploma or bachelor's degree programs), which serves as a natural safety valve; and (4) strict external quality control regulations—governed by the Health Law and recommendations from professional associations such as the Indonesian Health Vocational High Schools Association (PERSEMKI)—that tightly regulate the establishment of new schools and the opening of new study programs.

Table 4. Comparison of Job Absorption Ecosystem Characteristics Between Engineering and Health Groups

Dimensions of Comparison	SMK Engineering/Technology Cluster	SMK in the Health Sector	Supporting Article
Market Saturation	Very High (Acute saturation point in the fields of Automotive, Mechanical Engineering, and ICT/Software Engineering in West Java & Banten).	Low to Moderate (Constant demand at primary healthcare facilities and private clinics).	C01, C03
Regulatory Dynamics of Establishment	Lax (The growth in the number of schools and engineering majors has been massive, without any regional quota controls).	Very strict (governed by Health Law regulations and stringent recommendations from the professional association, PERSEMKI).	C02, C05
Market Niche Characteristics	Depending on the macro-manufacturing industry, corporate investment, and regional economic fluctuations.	Shifting toward the personal and specific (the booming market trend for home care and global caregiving).	C02, C04
Continuity of Further Studies	The majority of graduates enter the job market immediately (only a small percentage go on to pursue further studies).	A very large percentage of graduates continue their studies in health-related diploma or bachelor's degree programs.	C03, C05
Job Recruitment System	Dominated by a system of short-term third-party contracts (outsourcing) that triggers recurring unemployment.	Predominantly based on institutional contracts with hospitals/clinics or placements through official overseas agencies.	C01, C04

Table 3, illustrates a direct comparison between SMK Engineering/Technology Cluster and SMK in the Health Sector across five distinct dimensions, supported by articles C01 through C05. The engineering cluster faces high market saturation in fields like automotive and ICT due to lax regulatory controls on school expansion, with most graduates entering an unstable job market dominated by short-term third-party outsourcing contracts. Conversely, the health sector shows higher resilience and strict quality control under Health Law regulations, featuring low-to-moderate market saturation alongside an expanding niche market for global caregiving. Furthermore, while the engineering sector is heavily dependent on macroeconomic fluctuations, the health sector benefits from strong institutional contract-based recruitment pathways and high continuity of further studies in higher education.

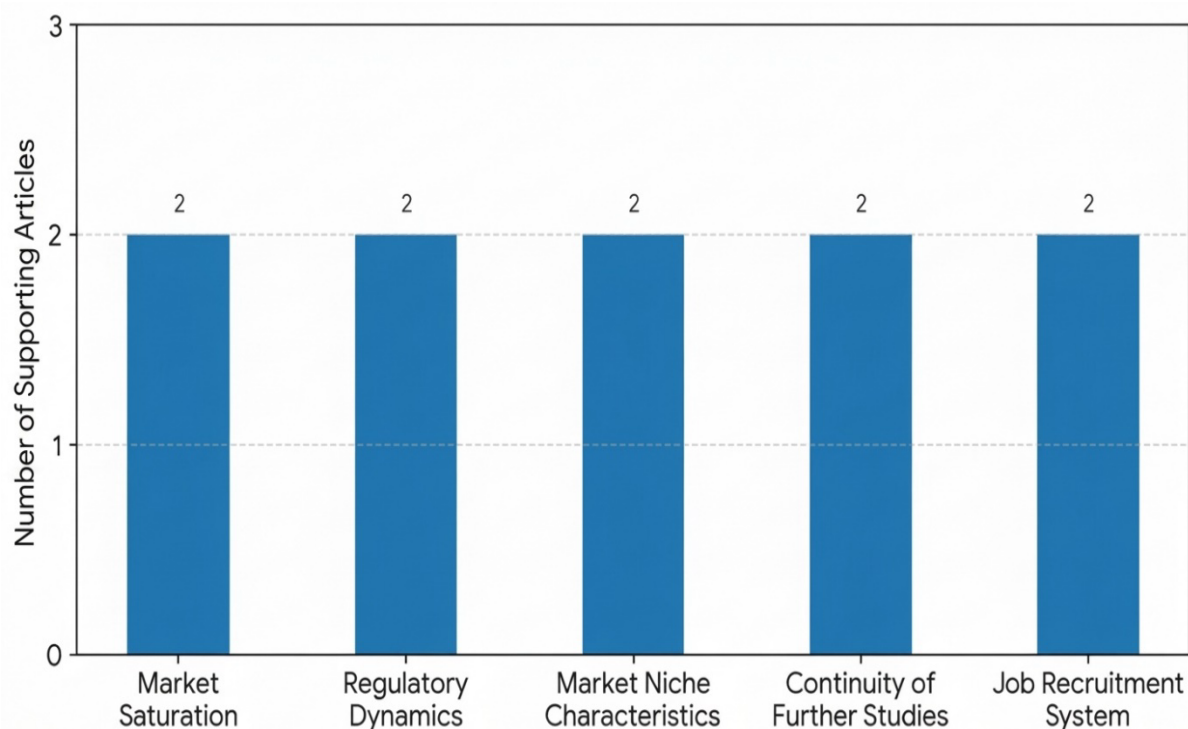


Figure 2. Comparative dimensions of vocational high schools (SMK) in the Engineering vs. Health clusters

Figure 2, there are significant differences between SMK Cluster Engineering/Technology and SMK Health in five main dimensions supported by articles C01 to C05. The engineering sector faces very high market saturation due to loose school quota regulations, is dependent on macroeconomic fluctuations, has low continuity of further studies, and is dominated by a contract recruitment system (outsourcing). In contrast, Health Vocational Schools show better resilience with low to moderate saturation levels due to very strict quota controls under the Health and Housing Law, supported by the expansion of the global caregiver market niche, the high number of alumni continuing their studies, and stable institutional cooperation-based recruitment channels.

Cluster 3: Management Strategy Intervention Based on the "Vocational Entity CEO" Model

A synthesis of 20 articles in Cluster A (A01–A20) confirms that the failure to implement vocational high school (SMK) revitalization policies often stems from weak instructional leadership capacity at the school level. To radically break the cycle of unemployment, school management comprising the Principal, the Industry Relations Coordinator, and Program Heads must shift their paradigm from that of passive "academic-administrative managers" to that of proactive, market-oriented "CEOs of a Vocational Entity." This CEO-style leadership entails an aggressive, outreach-driven approach, proficiency in negotiating mutually beneficial (reciprocal) partnerships, and a governance model focused on substantive graduate absorption—achieved through the tactical "Link and Match 8+i" intervention framework.

Table 5. Strategic Step Matrix for Vocational CEO-Based School Management

No	Management Steps	Radical Implementation Method (Link and Match 8+i) & Tangible Results	Supporting Article
1	Radical Curriculum Synchronization	Fully engage industry practitioners to overhaul the operational curriculum, ensuring it is adaptive to local competencies. The result: minimization of the skills mismatch, with students acquiring real-world, factory-floor expertise.	A02, A05, A12, A17
2	Upgrading Kompetensi Guru	Sending vocational teachers to undertake internships directly within local industries on a regular basis. Outcome: Teachers are able to impart workplace culture, standard operating procedures (SOPs), and the latest industrial technologies.	A04, A08, A11, A19
3	Utilization of the Teaching Factory (TeFa)	Integrating industrial production lines into school workshops through business-oriented supply partnerships for goods or services. Outcome: Students become accustomed to product quality targets and the pressure of a real-world work environment.	A03, A09, A14, A20
4	Digital BKK Restructuring	Manage the Special Job Fair (BKK) professionally using an integrated digital platform for alumni tracking. Result: DUDI easily obtains ready-to-use labor supplies directly.	A01, A07, A15, A18
5	Integrated Internship Recruitment	Drafting industrial internship contracts with a specific clause: high-performing students are offered direct recruitment. Result: Transforming formal internships into a high-value employee screening phase (+i).	A06, A10, A13, A16

Table 5 presents a matrix of strategic steps for vocational school management modeled on a CEO-style approach that focuses on radical methods (the "8+i Link and Match" framework) and their tangible outcomes. This strategy encompasses five key measures: synchronizing curricula with industry practitioners to minimize skills mismatches; enhancing teacher competence through periodic industry internships; and utilizing "Teaching Factories" (TeFa) to familiarize students with real-world professional quality standards. Furthermore, the digitalization and restructuring of the Special Job Exchange (BKK) along with the integration of internship recruitment have proven effective in helping industry partners track and absorb job-ready talent, while simultaneously transforming formal internship programs into a high-value screening phase for new hires.

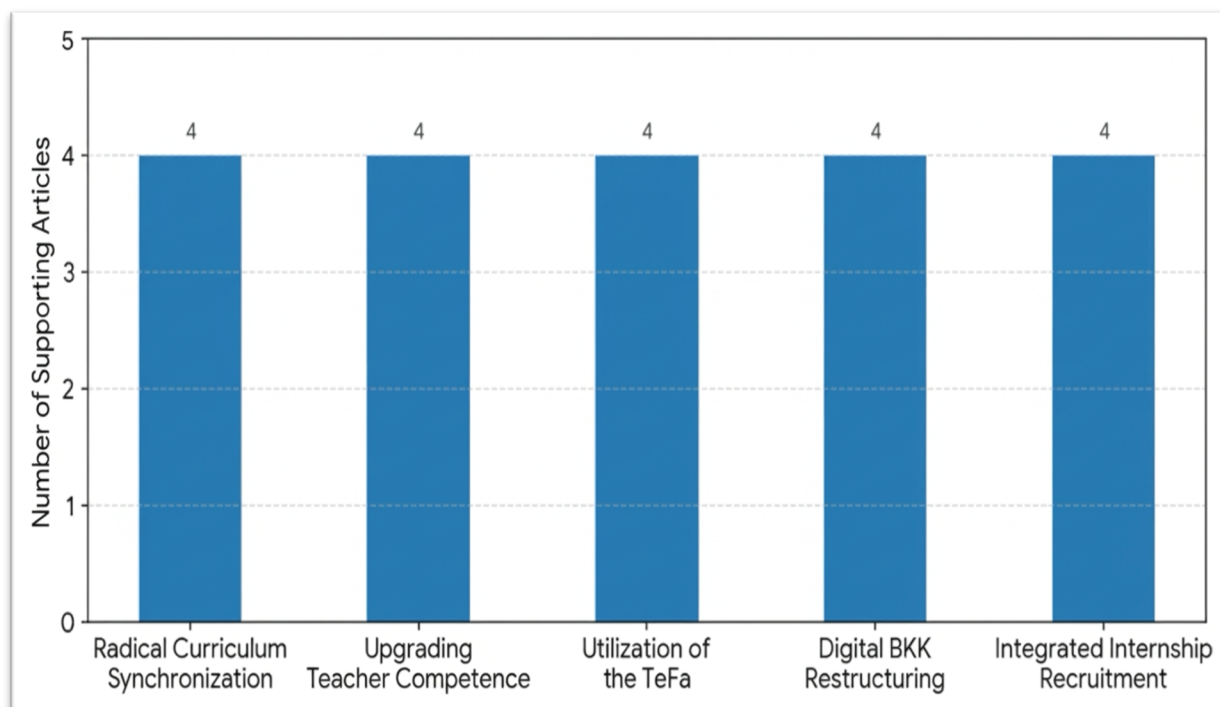


Figure 3. Management steps for the Vocational School

Figure 3, the attached strategic action matrix, outlines five radical implementation methods aligned with the "Link and Match 8+i" framework for vocational school management, with tangible outcomes supported by articles A01 through A20. These measures focus on the radical synchronization of curricula with industry practitioners to minimize skills mismatches, the enhancement of teacher competencies through periodic industry internships, and the utilization of "Teaching Factories" (TeFa) to train students to meet the quality standards of actual work environments. Furthermore, the restructuring of specialized job placement centers (Bursa Kerja Khusus/BKK) via integrated digital platforms, combined with the implementation of integrated internship recruitment, has proven effective in facilitating the industry's absorption of job-ready talent, while simultaneously transforming formal internship programs into a screening phase for identifying high-performing new employees.

CONCLUSIONS

Based on a systematic literature review (SLR) of 35 selected scholarly articles ($N = 35$), three primary conclusions are drawn: (a) The struggles faced by graduates of technical vocational high schools (SMK) in manufacturing-industrial regions are driven by skills mismatches, superficial partnerships (formalistic MoUs), competition from migrant workers, and the constraints of outsourcing arrangements; (b) Vocational schools in the health sector demonstrate high resilience, supported by strict quota regulations, high rates of students pursuing further education, and the expanding global niche for home care and caregiver services; (c) The effectiveness of revitalization policy implementation is not determined by mere administrative compliance, but rather by the proactive management strategies of school leaders acting as "CEOs of Vocational Entities" in executing five substantive steps toward industry partnerships.

Theoretically, this study demonstrates that the capacity of school-level implementers must manifest as entrepreneurial leadership that is adaptive to the macro labor market. Practically, it provides guidance for vocational school management to elevate industry partnerships into truly reciprocal relationships. In terms of policy, it suggests that local governments should consider imposing quotas or a moratorium on the establishment of technical study programs in saturated fields, while replicating the strict regulatory model currently applied to the health sector.

This SLR-based study is limited to the use of secondary data from the last five years (2022–2026). Furthermore, it does not provide an in-depth examination of the specific geographical challenges

faced by schools in underdeveloped, frontier, and outermost (3T) regions, where the local industrial ecosystem lacks the necessary supporting capacity.

REFERENCES

- Darmawan IGN, et al. Indonesian Education Past, Present, and Future. London: Routledge; 2025.
- The World Bank. The Promise of Education in Indonesia. Washington, DC: The World Bank; 2020.
- Republik Indonesia. Undang-Undang Nomor 20 Tahun 2003 tentang Sistem Pendidikan Nasional. Jakarta: Sekretariat Negara; 2003.
- Presiden Republik Indonesia. Instruksi Presiden Nomor 9 Tahun 2016 tentang Revitalisasi Sekolah Menengah Kejuruan dalam Rangka Peningkatan Kualitas dan Daya Saing Sumber Daya Manusia Indonesia. Jakarta: Sekretariat Negara; 2016.
- Presiden Republik Indonesia. Peraturan Presiden Nomor 68 Tahun 2022 tentang Revitalisasi Pendidikan Vokasi dan Pelatihan Vokasi. Jakarta: Sekretariat Negara; 2022.
- Tilaar HAR, Nugroho R. Kebijakan Pendidikan: Pengantar untuk Memahami Kebijakan Pendidikan dan Kebijakan Publik. Yogyakarta: Pustaka Pelajar; 2008.
- OECD. Education Policy Outlook: Indonesia. Paris: OECD Publishing; 2019.
- Sudira P. Modernisasi Kurikulum Pendidikan Vokasi Abad 21. Jurnal Pendidikan Vokasi. 2022;12(1):45-56.
- Wardina TA, et al. Tantangan Implementasi Kebijakan Revitalisasi SMK. Jurnal Kebijakan Pendidikan. 2023;15(2):112-125.
- Handayani S. Paradoks Pendidikan Vokasi: Tingginya Angka Pengangguran Lulusan Menengah Kejuruan. Jurnal Ilmu Pendidikan. 2024;30(3):201-215.
- Kurniawati R. Analisis Penyerapan Tenaga Kerja Lulusan Vokasi di Kawasan Industri. Jurnal Ekonomi & Sosial. 2025;11(2):89-102.
- Badan Pusat Statistik. Laporan Keadaan Ketenagakerjaan Indonesia 2026. Jakarta: Badan Pusat Statistik; 2026.
- Suryadi A. Analisis Makro Ketenagakerjaan dan Pengangguran Terbuka Lulusan SMK. Jurnal Ketenagakerjaan Indonesia. 2026;18(1):12-25.
- Wibowo A. Evaluasi Kejenuhan Lapangan Kerja Jurusan Teknik Otomotif di Jawa Barat. Jurnal Pendidikan Teknik Mesin. 2024;14(2):78-91.
- Pratama M, Rosadi K. Rekayasa Kurikulum Teknik Komputer dan Informatika Terhadap Dinamika Industri Teknologi Informasi. Jurnal Pendidikan Vokasi Teoretis. 2025;13(1):34-47.
- Setiawan B. Pemetaan Spasial Pengangguran Lulusan Vokasi Rumpun Rekayasa di Banten. Jurnal Dinamika Daerah. 2025;9(4):310-322.
- Persatuan SMK Kesehatan Indonesia (Persemki). Laporan Tahunan Daya Serap Lulusan Rumpun Kesehatan. Jakarta: Persemki; 2025.
- Republik Indonesia. Undang-Undang Nomor 17 Tahun 2023 tentang Kesehatan. Jakarta: Sekretariat Negara; 2023.
- Triyono MB. Skills Mismatch dalam Sektor Pendidikan Vokasi dan Solusi Alternatifnya. Jurnal Ilmiah Pendidikan Teknik. 2023;21(3):144-158.
- Nugroho S. Kritik Kemitraan Sekolah Menengah Kejuruan: Dari Paper MoU Menuju Kemitraan Substantif. Jurnal Manajemen Pendidikan S3. 2024;8(2):101-115.
- Wijaya C. Dampak Sistem Kerja Outsourcing Terhadap Keberlanjutan Kerja Lulusan Baru SMK. Jurnal Kajian Industri. 2025;14(3):212-226.
- Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi. Panduan Manajemen Link and Match 8+i: Akselerasi Transformasi Pendidikan Vokasi. Jakarta: Direktorat Jenderal Pendidikan Vokasi; 2022.
- Lestari P. Implementasi Program SMK Pusat Keunggulan (SMK-PK) di Rumpun Rekayasa. Jurnal Evaluasi Vokasi. 2023;7(1):56-69.
- Ramadhan F. Mengukur Efektivitas Skema Link and Match Generasi Baru pada SMK-PK. Jurnal Manajemen Mutu Pendidikan. 2024;12(3):180-195.
- Siregar N. Draf Dinamika Kebijakan Pendidikan Vokasi. Semarang: Universitas Negeri Semarang; 2026.
- Mulyasa E. Reposisi Kepala Sekolah Sebagai CEO dalam Penguatan Ekosistem Vokasi. Jurnal Akuntabilitas Manajemen Pendidikan. 2024;12(2):135-149.

- Rohman F. Kepemimpinan Kewirausahaan Kepala SMK dalam Menggandeng Industri Lokal. *Jurnal Administrasi Pendidikan*. 2025;22(1):44-58.
- Snyder H. Literature Review Sebagai Metodologi Penelitian: Sebuah Panduan Praktis. *Jurnal Metodologi Penelitian Pendidikan*. 2022;10(2):88-97.
- Page MJ, et al. The PRISMA 2020 Statement: An Updated Guideline for Reporting Systematic Reviews. *BMJ*. 2021;372(n71):1-9.
- Budisuari MA. Tinjauan Sistematis Kebijakan Revitalisasi Pendidikan Menengah Kejuruan di Indonesia. *Jurnal Analisis Kebijakan*. 2024;16(2):167-182.
- Gunawan I. Studi Meta-Analisis Kemitraan SMK dengan Dunia Usaha Dunia Industri (DUDI). *Jurnal Teori Manajemen Pendidikan*. 2025;13(3):201-214.
- Hidayat R. Kesenjangan Kompetensi Lulusan Vokasi: Integrasi Metode SLR dalam Kajian Manajemen Humas/Hubin. *Jurnal Komunikasi Pendidikan*. 2024;8(1):15-29.
- Kusuma W. Optimalisasi Teaching Factory (TeFa) Berbasis Standar Operasional Prosedur Industri. *Jurnal Pendidikan Teknologi dan Kejuruan*. 2025;31(2):120-133.
- Hasanah N. Rekomendasi Restrukturisasi Bursa Kerja Khusus (BKK) Berbasis Ekosistem Digital. *Jurnal Konseling dan Karir*. 2026;11(1):45-59.
- Utomo S. Model Kemitraan Mutualisme Berkelanjutan Antara SMK dan Korporasi Manufaktur Global. *Jurnal Dinamika Vokasi*. 2026;15(2):98-111.