



International Journal of Interdisciplinary Research

ISSN(Online): 3090-2959

Vol 2 no 2 (2026): July 2026

<https://journal.as-salafiyah.id/index.php/ijir/index>

Email: ijireditor7@gmail.com

Managing Industry-Based Curriculum Quality Improvement To Enhance Students' Competencies In Vocational Education

¹Mujiono, ²Akhyak, ³Prim Masrokan Mutohar

^{1,2,3}Universitas Islam Negeri Sayyid Ali Rahmatullah Tulungagung, Indonesia.

¹Mujiono.aldifa.dr@gmail.com, ²akhyak@uinsatu.ac.id, ³pmutohar@gmail.com.

*Correspondence Email: mujiono.aldifa.dr@gmail.com

Abstract: The advancement of globalization, the Industrial Revolution 4.0, and Society 5.0 has significantly transformed labor market demands, requiring human resources with strong competencies in both technical (hard skills) and non-technical (soft skills) domains, as well as the ability to adapt to rapid technological changes. In this context, vocational education institutions are expected to align their curricula with industry needs through an industry-based approach. This study aims to analyze the management of quality improvement in industry-based curricula in developing students' competencies at SMKS Magetan 1 YKP and SMKS 1 Penda (Ma'arif) Ponorogo. This research employs a qualitative approach with a multi-site study design to gain an in-depth understanding of the processes of planning, implementation, control, and follow-up in curriculum quality improvement. Data were collected through in-depth interviews, participant observation, and documentation. The analysis involved data condensation, data display, interpretation, and cross-site analysis. Data validity was ensured through credibility, dependability, confirmability, and transferability criteria. The findings indicate that the management of industry-based curriculum quality improvement in both schools is implemented systematically, collaboratively, and adaptively. Planning is conducted through a link and match approach with industry, implementation integrates theory and practice through project-based learning and teaching factory, control is carried out through monitoring, evaluation, and quality audits, and follow-up actions involve curriculum refinement, teacher competency development, and sustainable industry partnerships. These findings confirm that industry-based curriculum management enhances the relevance of vocational education and effectively develops students' competencies.

Keywords: Curriculum Management, Vocational Education, Teaching Factory, Student Competence, Link And Match

INTRODUCTION

The rapid advancement of globalization accompanied by technological progress, particularly in the era of Industry 4.0 and Society 5.0, has significantly transformed the structure and demands of the labor market. This transformation affects not only the types of jobs available but also the competencies required of the workforce. Contemporary industries require individuals who possess not only technical skills but also non-technical competencies such as critical thinking, creativity, communication, collaboration, and adaptability to rapid technological changes (Kurniawan &



International Journal of Interdisciplinary Research

ISSN(Online): 3090-2959

Vol 2 no 2 (2026): July 2026

<https://journal.as-salafiyah.id/index.php/ijir/index>

Email: ijireditor7@gmail.com

Pudjiarti, 2024; Rusydiyah, 2019). In this context, education, especially vocational education, plays a strategic role in preparing human resources that are aligned with industrial needs.

Globalization has also reduced geographical barriers in the labor market, allowing workers from different countries to compete within a single global system. This condition is reinforced by free trade and outsourcing practices, enabling industries to seek cost-efficient labor. At the same time, technological developments such as the Internet of Things (IoT), artificial intelligence, and big data have accelerated automation across various industrial sectors. As a result, routine jobs are increasingly replaced by machines, while the demand for technology-driven and innovation-based occupations continues to grow (Adha et al., 2020). These developments require education systems to continuously adapt their curricula to remain relevant to industry needs.

The concept of Society 5.0 emphasizes the integration of human values and advanced technology to create a more sustainable and human-centered society. In this context, education is not only oriented toward technological mastery but also toward character development, social-emotional skills, and ethical values. Consequently, relevant education must balance the development of technical competencies and character formation. This presents both challenges and opportunities for vocational schools, which are specifically designed to produce job-ready graduates (Siregar, 2024).

Despite these expectations, empirical evidence indicates a gap between vocational graduates' competencies and industry requirements. Data from the Indonesian Central Bureau of Statistics show that the open unemployment rate among vocational school graduates remains relatively high compared to other education levels (BPS, 2024). This condition reflects a mismatch between the skills taught in schools and those required by industry, both in terms of quality and quantity. Several contributing factors include curriculum irrelevance, limited facilities, inadequate teacher competencies, and insufficient involvement of industry stakeholders in the educational process (Supriadi et al., 2021; Wiyono & Hakim, 2023).

In this regard, curriculum management becomes a critical factor in improving the quality of vocational education. A curriculum should not merely function as a planning document but also



International Journal of Interdisciplinary Research

ISSN(Online): 3090-2959

Vol 2 no 2 (2026): July 2026

<https://journal.as-salafiyah.id/index.php/ijir/index>

Email: ijireditor7@gmail.com

as a guideline for implementing effective learning processes. It must be designed systematically, adaptively, and responsively to labor market demands (Hamalik, 2007; Hidayati et al., 2021). One relevant approach is the industry-based curriculum, which emphasizes alignment between education and industry through the concept of link and match.

An industry-based curriculum integrates learning with real-world work practices. It focuses not only on technical competencies but also on the development of work skills and professional attitudes required in industry. Its implementation can take various forms, including teaching factory models, project-based learning, industrial internships, and collaboration with industry partners (Kemendikbudristek, 2023; Febrina & Syafril, 2022). This approach allows students to gain both theoretical knowledge and practical experience relevant to the labor market.

Efforts to improve the quality of industry-based curricula require effective and sustainable management. Educational quality management involves systematic processes of planning, implementation, control, and follow-up to achieve predetermined goals. This approach aligns with the concept of continuous improvement, which emphasizes ongoing refinement in all aspects of education (Deming, 1986; Sallis, 2003). Through effective management, educational institutions can ensure that their curricula remain relevant, effective, and capable of enhancing students' competencies.

An interesting phenomenon can be observed in two vocational schools, namely SMKS Magetan 1 YKP and SMKS 1 Pemda (Ma'arif) Ponorogo. Both institutions demonstrate innovative practices in managing industry-based curricula despite having different characteristics. SMKS Magetan 1 YKP focuses on automotive industry partnerships and implements a teaching factory model based on official workshops. In contrast, SMKS 1 Pemda (Ma'arif) Ponorogo develops a locally oriented curriculum integrating agribusiness and livestock sectors. Both institutions have shown success in improving students' competencies and graduate employability.

Based on this phenomenon, this study focuses on analyzing the management of industry-based curriculum quality improvement in shaping students' competencies. The study specifically examines four main aspects: planning, implementation, control, and follow-up of curriculum



International Journal of Interdisciplinary Research

ISSN(Online): 3090-2959

Vol 2 no 2 (2026): July 2026

<https://journal.as-salafiyah.id/index.php/ijir/index>

Email: ijireditor7@gmail.com

quality improvement. The research questions include how curriculum planning is conducted, how it is implemented, how it is controlled, and how follow-up actions are carried out to improve students' competencies.

The objective of this study is to formulate propositions regarding the management of industry-based curriculum quality improvement at each stage. The findings are expected to contribute theoretically to the development of vocational curriculum management and practically to improving educational services aligned with industry needs. This study is also intended to serve as a reference for developing adaptive, innovative, and future-oriented vocational education systems.

METHOD

Research Approach and Design

This study employed a qualitative naturalistic approach, as the phenomena under investigation occurred in their natural settings and aimed to provide an in-depth understanding of the management process of industry-based curriculum quality improvement. This approach enables the researcher to explore reality holistically through data in the form of words, behaviors, and relevant documents (Sugiyono, 2016; Usman, 2006).

The research design adopted a multi-site study, conducted in two different institutions: SMKS Magetan 1 YKP and SMKS 1 Pemdada (Ma'arif) Ponorogo. This design was selected to obtain a comprehensive understanding through in-depth analysis at each site, followed by cross-site analysis to identify patterns, similarities, and differences in the management of industry-based curricula (Miles et al., 2014; Sukmadinata, 2011).

Researcher's Role

In qualitative research, the researcher acts as the primary instrument. The researcher was directly involved in the research sites to conduct observations, interviews, and document collection. The presence of the researcher was carried out transparently by establishing effective



International Journal of Interdisciplinary Research

ISSN(Online): 3090-2959

Vol 2 no 2 (2026): July 2026

<https://journal.as-salafiyah.id/index.php/ijir/index>

Email: ijireditor7@gmail.com

communication with all informants to ensure that the data obtained were valid, objective, and accountable (Usman, 2006).

The researcher also functioned as a participant observer by recording data through field notes, audio recordings, and visual documentation. Intensive interaction with informants enabled the researcher to obtain in-depth insights into the practices of industry-based curriculum management.

Research Sites

This study was conducted in two vocational education institutions:

1. **SMKS Magetan 1 YKP**, which has strengths in the automotive sector through the implementation of a teaching factory model and collaboration with national industries such as Astra and Kubota.
2. **SMKS 1 Pemda (Ma'arif) Ponorogo**, which develops an industry-based curriculum focusing on agribusiness and livestock, integrating local potential into learning practices.

These institutions were selected due to their distinct characteristics in implementing industry-based curricula while sharing a common goal of improving students' competencies.

Data Sources

The data sources in this study consisted of:

1. **Primary data**, obtained through interviews with school principals, vice principals, teachers, curriculum development teams, students, and industry partners.
2. **Secondary data**, including curriculum documents, activity reports, memoranda of understanding (MoUs) with industry, and learning evaluation documents.

Data Collection Techniques

Data were collected using the following techniques:

1. **In-depth interviews**, to explore information related to policies and the implementation of industry-based curricula.
2. **Participant observation**, to directly observe teaching and learning processes, industrial practices, and teaching factory activities.



International Journal of Interdisciplinary Research

ISSN(Online): 3090-2959

Vol 2 no 2 (2026): July 2026

<https://journal.as-salafiyah.id/index.php/ijir/index>

Email: ijireditor7@gmail.com

3. **Documentation**, to collect written data supporting the research findings.

These techniques ensured the richness and validity of the data collected (Arikunto, 1988; Sukmadinata, 2011).

Data Analysis

Data analysis was conducted through several stages:

1. Data condensation (data reduction)
2. Data display
3. Conclusion drawing and verification

The analysis was initially performed at each site (within-case analysis) and subsequently followed by cross-site analysis to identify general patterns and differences between the research locations (Miles et al., 2014).

Trustworthiness of Data

The validity and trustworthiness of the data were ensured through four criteria:

1. **Credibility**, achieved through triangulation of sources and methods
2. **Dependability**, ensured through an audit trail of the research process
3. **Confirmability**, established through member checking and supporting documentation
4. **Transferability**, achieved through detailed contextual descriptions

These criteria were applied to ensure that the research findings were reliable and could be appropriately interpreted within similar contexts (Sukmadinata, 2011; Usman, 2006).

RESULTS AND DISCUSSION

Planning of Industry-Based Curriculum Quality Improvement in Developing Students' Competencies.

The findings indicate that the planning of industry-based curriculum quality improvement in SMKS Magetan 1 YKP and SMKS 1 Pemd (Ma'arif) Ponorogo is conducted systematically, collaboratively, and adaptively. The process is oriented toward continuous improvement and is responsive to technological developments and industry demands. Curriculum development is



International Journal of Interdisciplinary Research

ISSN(Online): 3090-2959

Vol 2 no 2 (2026): July 2026

<https://journal.as-salafiyah.id/index.php/ijir/index>

Email: ijireditor7@gmail.com

based on a needs analysis involving internal stakeholders and industry partners through a link and match approach, and it is formally validated through institutional agreements such as Memoranda of Understanding (MoU) and cooperation agreements. Productive learning activities and practical facilities are designed in accordance with industry standards. These efforts are supported by teacher capacity development programs, including upskilling, reskilling, and industrial internships, as well as a quality control system based on graduate competency outcomes.

This systematic and adaptive planning aligns with curriculum development theory, which emphasizes that curriculum is a planned and continuous process starting from needs analysis and leading to evaluation as a basis for improvement (Hamalik, 2007). The adaptive nature of the curriculum reflects its role as a strategic instrument that bridges education and the labor market. This approach is consistent with the perspective that curriculum development requires the active involvement of multiple stakeholders to ensure that it remains dynamic and contextually relevant (Hidayati et al., 2021). Within vocational education, this principle reinforces the view that effective learning occurs when the learning environment corresponds closely to real working conditions (Prosser & Quigley, 1950).

The application of continuous improvement principles in curriculum planning demonstrates the integration of Total Quality Management in education. Educational quality is achieved through ongoing refinement based on stakeholder needs and expectations (Sallis, 2003). Collaboration with industry and responsiveness to technological change reflect a managerial approach oriented toward effectiveness, efficiency, and relevance of outcomes (Fattah, 2004). In this context, curriculum planning extends beyond administrative functions and becomes a strategic institutional effort to produce competitive graduates.

The curriculum is developed through a comprehensive needs analysis involving school leaders, curriculum teams, productive teachers, industry partners, and alumni. This practice reflects a participatory planning approach in which decision-making is conducted collectively to determine educational goals and strategies (Hamalik, 2007). The link and match approach ensures that curriculum content aligns with industry competency standards and technological



International Journal of Interdisciplinary Research

ISSN(Online): 3090-2959

Vol 2 no 2 (2026): July 2026

<https://journal.as-salafiyah.id/index.php/ijir/index>

Email: ijireditor7@gmail.com

developments. Formal validation through MoUs and cooperation agreements provides an institutional mechanism that ensures sustainability and accountability in curriculum implementation.

Productive learning and practical facilities aligned with industry standards further strengthen curriculum relevance to labor market needs. Curriculum implementation emphasizes competency-based learning through a learning-by-doing approach, enabling students to acquire practical skills that are directly applicable in the workplace (Hamalik, 2007). The alignment of facilities with industry standards reflects the principle that educational quality depends on the coherence between processes, resources, and outcomes. Productive learning is positioned as a central strategy for quality improvement rather than as a routine instructional activity.

Teacher capacity development through upskilling, reskilling, and industrial internships represents a critical component of curriculum planning. Both institutions demonstrate similar strategies in enhancing teacher competencies through training and collaboration with industry partners. This approach is consistent with human resource management principles in education, which emphasize continuous professional development to maintain instructional relevance (Usman, 2006). Strengthening teacher competencies contributes not only to the improvement of technical skills but also to the development of students' soft skills, including communication, collaboration, and professionalism.

The integration of quality assurance systems within curriculum planning further indicates a structured approach to continuous evaluation. Indicators of success include alignment of graduate competencies with industry standards, the level of industry involvement, and graduate employability rates. Evaluation mechanisms such as internal audits, classroom observations, and industry synchronization forums support the implementation of continuous improvement in vocational education. These processes demonstrate that curriculum functions as a managerial instrument for improving educational quality.

Overall, the planning of industry-based curriculum quality improvement in both institutions reflects the integration of quality management principles and curriculum development theory. The



International Journal of Interdisciplinary Research

ISSN(Online): 3090-2959

Vol 2 no 2 (2026): July 2026

<https://journal.as-salafiyah.id/index.php/ijir/index>

Email: ijireditor7@gmail.com

curriculum is developed through systematic needs analysis, formally validated, and implemented through practice-based learning aligned with industry standards. This approach has proven effective in enhancing students' technical competencies while simultaneously developing essential soft skills required in the workplace.

Despite these strengths, several challenges remain, including technological gaps, limitations in practical facilities, and variations in students' soft skill development. These conditions indicate that curriculum planning has not yet reached an optimal level. Strengthening managerial strategies and fostering continuous innovation are necessary to address these challenges.

In conclusion, the planning of industry-based curriculum quality improvement in SMKS Magetan 1 YKP and SMKS 1 Pemda (Ma'arif) Ponorogo represents a strategic practice that positions the curriculum as a central instrument in improving vocational education quality. The effectiveness of planning depends on the institution's ability to integrate industry needs, human resource development, and quality assurance systems in a sustainable manner. This approach confirms that an industry-based curriculum should be understood as an adaptive system that continuously evolves to produce competent, relevant, and globally competitive graduates.

Implementation of Industry-Based Curriculum Quality Improvement in Developing Students' Competencies.

The findings indicate that the implementation of industry-based curriculum quality improvement in SMKS Magetan 1 YKP and SMKS 1 Pemda (Ma'arif) Ponorogo is carried out through practice-oriented learning that is closely aligned with labor market demands. The approaches applied include project-based learning, teaching factory models, and internship programs conducted through formal collaboration with industry partners based on institutional agreements. In this process, productive teachers and industry instructors collaborate functionally. Teachers strengthen pedagogical aspects, while industry instructors ensure that practical activities meet professional standards. Industry involvement is also reflected in guest lectures, workshops, training programs, and internship evaluations. The learning process is supported by relevant



International Journal of Interdisciplinary Research

ISSN(Online): 3090-2959

Vol 2 no 2 (2026): July 2026

<https://journal.as-salafiyah.id/index.php/ijir/index>

Email: ijireditor7@gmail.com

facilities and technology, although development is conducted gradually according to institutional capacity.

This implementation reflects effective educational organization, emphasizing task distribution, coordination, and optimal use of resources to achieve learning objectives (Fattah, 2004). The application of project-based learning and teaching factory demonstrates a shift toward performance-based learning that mirrors real industrial environments. In this context, teachers act as facilitators who guide students in solving real-world problems through project activities, rather than functioning as the sole source of knowledge (Sanjaya, 2008). This approach strengthens the transformation of vocational education into a more contextual and application-oriented system.

The implementation also reflects the “Do” phase in Deming’s quality management cycle, which emphasizes systematic execution, clear role distribution, and continuous control to ensure goal attainment (Deming, 1986). Curriculum implementation is not limited to instructional activities but represents an integrated educational management system that combines structural, functional, and evaluative dimensions. This condition highlights that the success of learning is strongly influenced by the institution’s ability to manage collaboration and resources effectively (Terry, 1997).

Internship programs represent a key component of industry-based curriculum implementation. Student placement is conducted through formal collaboration with companies, aligned with areas of expertise and academic schedules. The process begins with mapping student competencies and industry needs, ensuring that learning experiences are relevant and meaningful. During internships, monitoring and coordination between schools and industry partners are conducted to ensure the achievement of competency standards. Internship evaluation results are used as a basis for continuous improvement in learning processes.

The collaboration between productive teachers and industry instructors reflects a systemic approach to improving the quality of vocational education. Teachers design learning, manage classrooms, and conduct assessments, while industry instructors ensure that practices align with operational procedures and workplace culture. From a quality management perspective, this



International Journal of Interdisciplinary Research

ISSN(Online): 3090-2959

Vol 2 no 2 (2026): July 2026

<https://journal.as-salafiyah.id/index.php/ijir/index>

Email: ijireditor7@gmail.com

collaboration represents system integration that produces consistent learning outcomes (Sallis, 2003). The synergy between educators and industry practitioners strengthens the relevance of learning to workforce needs (Siswanto, 2019).

Active industry involvement through guest lectures, workshops, training, and internship evaluations enriches students' learning experiences. Direct interaction with practitioners enables students to understand work standards, professional ethics, and industrial dynamics more comprehensively. Learning becomes more contextual and meaningful as students gain both theoretical knowledge and practical experience. In quality management terms, industry involvement functions as a quality assurance mechanism based on labor market demands (Gaspersz, 2001).

The availability of practical facilities and technological support plays a significant role in curriculum implementation. Both institutions have developed practice facilities aligned with industry standards and have begun integrating digital technologies such as simulations and simple production systems. This development indicates a transition toward an adaptive learning ecosystem capable of responding to technological advancements (Rusydiyah, 2019). Limitations remain, including gaps in facilities compared to industry standards, variations in competency requirements across industry partners, and differences in work rhythms between schools and industries.

From a Total Quality Management perspective, these conditions reflect the dynamic nature of quality improvement processes that require continuous evaluation and feedback. The gap between ideal conditions and actual practices is viewed as an opportunity for improvement through feedback mechanisms and strengthened partnerships (Tjiptono & Diana, 2003). The management of facilities and technology functions not only as instructional support but also as a strategic instrument for improving vocational education quality.

Overall, the implementation of industry-based curriculum in both schools demonstrates strong integration between theory and practice. Project-based learning, teaching factory, and internship programs enhance students' hard skills, including technical proficiency, work



International Journal of Interdisciplinary Research

ISSN(Online): 3090-2959

Vol 2 no 2 (2026): July 2026

<https://journal.as-salafiyah.id/index.php/ijir/index>

Email: ijireditor7@gmail.com

procedures, and product quality. At the same time, soft skills such as discipline, communication, teamwork, responsibility, and adaptability develop through contextual learning experiences. These findings indicate that curriculum implementation has successfully contributed to the comprehensive development of student competencies.

Challenges remain, particularly related to disparities in facilities, differences in industry standards, and the lack of synchronization between school and industry activities. These conditions indicate that feedback mechanisms and curriculum adjustments have not yet reached optimal effectiveness. Strengthening monitoring systems and increasing curriculum flexibility are necessary to address these challenges.

In conclusion, the implementation of industry-based curriculum quality improvement in both institutions represents a strategic process that integrates contextual learning, cross-sector collaboration, and technological utilization. The success of implementation depends not only on curriculum design but also on the institution's ability to transform curriculum into relevant and adaptive learning practices. This approach confirms that industry-based curriculum is a dynamic system requiring consistency, innovation, and sustainable partnerships to produce competent graduates who are ready to face the evolving demands of the workforce.

Control of Industry-Based Curriculum Quality Improvement in Developing Students' Competencies.

The findings indicate that the control of industry-based curriculum quality improvement in SMKS Magetan 1 YKP and SMKS 1 Pemda (Ma'arif) Ponorogo is implemented systematically through monitoring, evaluation, and internal quality audits integrated within the school quality assurance system. Both institutions apply multi-layered supervision involving quality assurance teams, productive teachers, and industry partners using standardized instruments such as written reports, direct observations, and periodic coordination forums. Learning evaluation refers to industry standards that include technical skills, professional attitudes, and adaptability to work rhythms and technological developments. The findings reveal a gap between theoretical



International Journal of Interdisciplinary Research

ISSN(Online): 3090-2959

Vol 2 no 2 (2026): July 2026

<https://journal.as-salafiyah.id/index.php/ijir/index>

Email: ijireditor7@gmail.com

achievement in schools and performance expectations in industry, particularly in efficiency, accuracy, and work culture.

Curriculum control through monitoring, evaluation, and quality audits reflects the implementation of the “Check” phase in Deming’s quality management cycle, which emphasizes systematic examination of alignment between planning and implementation (Deming, 1986). This process functions not only as a verification tool but also as a reflective mechanism to identify gaps between established standards and field practices. The use of structured evaluation instruments enables institutions to obtain accurate data on student competency achievement and the effectiveness of curriculum implementation. Control is therefore oriented toward system diagnosis as a basis for decision-making rather than solely focusing on final outcomes (Sukmadinata, 2006).

From the perspective of educational quality management, control integrated within the school quality assurance system serves as a quality assurance instrument to ensure that learning processes align with industry standards and stakeholder expectations (Sallis, 2003). Continuous monitoring and evaluation indicate that educational quality is not static but results from consistent and systematic control processes. Internal quality audits function as tools to assess the alignment between objectives, processes, and learning outcomes, while also serving as a foundation for continuous curriculum improvement (Hadis & Nurhayati, 2012).

The involvement of multiple stakeholders strengthens the objectivity and accountability of the control process. Quality assurance teams ensure compliance with standards, productive teachers conduct reflective evaluation of instructional practices, and industry partners provide external validation of competency relevance. This collaboration enables comprehensive evaluation that integrates academic, pedagogical, and labor market perspectives simultaneously. The use of standardized evaluation instruments reinforces data-driven decision-making, ensuring that curriculum improvements are based on empirical evidence (Arikunto, 1988).

The implementation of Internal Quality Assurance Systems (SPMI) and External Quality Assurance Systems (SPME) demonstrates comprehensive integration in quality control. SPMI functions as a continuous internal control mechanism, while SPME, through accreditation and



International Journal of Interdisciplinary Research

ISSN(Online): 3090-2959

Vol 2 no 2 (2026): July 2026

<https://journal.as-salafiyah.id/index.php/ijir/index>

Email: ijireditor7@gmail.com

industry partnerships, provides external validation of educational quality. The integration of these systems enables institutions to maintain consistency in curriculum implementation and ensure relevance to industry needs. Control becomes more objective by incorporating both internal and external perspectives (Tim Dosen Administrasi Pendidikan UPI, 2013).

Curriculum development aligned with local potential indicates that control is not limited to global standards but also considers regional contexts. This approach enables institutions to produce graduates who are relevant to local economic needs while meeting global competency demands. The alignment of curriculum with regional characteristics reflects institutional adaptability in responding to environmental dynamics, resulting in flexible and contextual curriculum control (Aliyyah et al., 2020).

Tracer studies and industry feedback represent essential components of curriculum control systems. Data on graduate employability, workplace performance, and emerging competency needs are used to update syllabi and learning materials. This evaluation is both formative and summative, as it is conducted continuously while also assessing program effectiveness over time. This approach indicates a shift toward evidence-based evaluation systems that support strategic decision-making (Hasan, 2009).

Overall, the control of industry-based curriculum quality improvement in both schools demonstrates systematic and integrated quality management practices. Monitoring, evaluation, and quality audits assess not only technical competencies but also soft skills such as discipline, communication, teamwork, responsibility, and adaptability to change. This condition confirms that curriculum control functions as an instrument to ensure comprehensive student competency achievement.

Challenges remain, particularly in addressing the gap between theoretical achievement in schools and performance expectations in industry. Evaluation results have not yet been fully integrated into comprehensive curriculum innovation. This condition indicates that the control function is still focused on problem identification rather than system transformation. Strengthening adaptive and responsive feedback mechanisms is required to address dynamic industry changes.



International Journal of Interdisciplinary Research

ISSN(Online): 3090-2959

Vol 2 no 2 (2026): July 2026

<https://journal.as-salafiyah.id/index.php/ijir/index>

Email: ijireditor7@gmail.com

In conclusion, curriculum control in both institutions has evolved from administrative supervision into a strategic quality-based evaluation system. Control ensures alignment with standards while simultaneously improving the relevance and quality of learning in a continuous manner. Future development should focus on contextual and forward-looking evaluation models based on emerging industry needs, ensuring that curricula produce competent, adaptive, and globally competitive graduates.

Follow-up Actions on the Control of Industry-Based Curriculum Quality Improvement in Developing Students' Competencies

The findings indicate that follow-up actions on the control of industry-based curriculum implementation at SMKS Magetan 1 YKP and SMKS 1 Pemd (Ma'arif) Ponorogo are carried out in a systematic, collaborative, and continuous manner. This process is grounded in four main pillars: curriculum improvement, human resource development, strengthening of industry partnerships, and the application of continuous improvement systems. Learning evaluation results and internship experiences serve as primary references for curriculum refinement to maintain alignment with technological developments and labor market demands.

Curriculum improvement based on evaluation results constitutes the core of follow-up actions. Data obtained from learning evaluations and internship assessments provide empirical insights into the alignment between competencies taught in schools and industry expectations. This approach reflects the application of educational quality management that positions data as the basis for strategic decision-making (Sallis, 2003). Evaluation extends beyond measuring achievement and functions as a reflective instrument to identify competency gaps in both technical and behavioral aspects. Internship evaluation plays a crucial role in portraying student performance in real work environments, including efficiency, accuracy, and adaptation to industrial culture. The integration of these evaluation outcomes contributes to the development of a more contextual and responsive curriculum, ensuring that learning processes support the formation of comprehensive professional competencies (Hasan, 2009).



International Journal of Interdisciplinary Research

ISSN(Online): 3090-2959

Vol 2 no 2 (2026): July 2026

<https://journal.as-salafiyah.id/index.php/ijir/index>

Email: ijireditor7@gmail.com

Human resource development, particularly for teachers, emerges as a key strategy in ensuring effective curriculum implementation. Both institutions utilize teacher performance evaluation results to design technical training programs, industry workshops, and industrial internships. This approach demonstrates that competency development is need-based and derived from systematic evaluation processes rather than sporadic initiatives. Upskilling and reskilling programs enable teachers to update their technological knowledge and industrial practices, allowing them to integrate such experiences into instructional processes. At the same time, the strengthening of industry partnerships is conducted through regular communication, joint action planning, and periodic evaluation. These partnerships evolve into strategic collaborations aimed at enhancing learning quality and graduate readiness. Sustained collaboration with industry plays a critical role in maintaining curriculum relevance in the context of rapid technological change (Siswanto, 2019).

Follow-up actions are also implemented through structured coordination mechanisms. Regular communication among stakeholders ensures that evaluation results are collectively understood and translated into operational strategies. The formulation of joint action plans reflects institutional commitment to collaborative quality improvement. Collaborative evaluation involving both schools and industry serves as a reflective platform to assess program effectiveness and identify implementation challenges. This process strengthens a culture of quality within educational institutions, where decisions are grounded in data and real needs. Follow-up actions therefore function not merely as corrective mechanisms but as strategic tools for institutional development (Fattah, 2004).

The application of continuous improvement principles through the Plan–Do–Check–Act (PDCA) cycle forms the foundation of follow-up processes. The planning stage is reflected in the formulation of follow-up programs based on evaluation results, designed in a systematic and measurable manner. The implementation stage includes curriculum revision, teacher training, and strengthening of industry partnerships. The control stage is conducted through ongoing monitoring and evaluation to ensure alignment between plans and outcomes. The action stage focuses on



International Journal of Interdisciplinary Research

ISSN(Online): 3090-2959

Vol 2 no 2 (2026): July 2026

<https://journal.as-salafiyah.id/index.php/ijir/index>

Email: ijireditor7@gmail.com

adjusting policies and instructional practices based on evaluation findings. This cycle establishes a dynamic quality system in which each component is interconnected and oriented toward continuous improvement (Deming, 1986; Gaspersz, 2001).

From a critical perspective, follow-up actions in both institutions demonstrate significant progress in developing adaptive curriculum management systems. The curriculum is no longer viewed as a static document but as a dynamic system that evolves through interaction between evaluation, industry needs, and instructional innovation. The effectiveness of follow-up actions remains influenced by several factors, including resource limitations, differences in expectations between schools and industry, and the rapid pace of technological change. The gap between theoretical learning outcomes and industrial performance expectations indicates that the integration of evaluation results into curriculum innovation is not yet fully optimized.

These findings suggest that the success of follow-up actions depends not only on the existence of improvement programs but also on institutional capacity to manage coordination, collaboration, and adaptation continuously. Effective follow-up must transform evaluation results into policies and instructional practices that directly enhance student competencies. Strengthening follow-up systems requires the development of evidence-based evaluation mechanisms that not only identify problems but also drive systematic curriculum innovation (Sukmadinata, 2011).

Overall, follow-up actions on industry-based curriculum control in both schools demonstrate strong integration between quality management, human resource development, and industry partnerships. This practice confirms that improving the quality of vocational education requires a holistic approach in which curriculum refinement, teacher capacity building, and industry collaboration operate as interconnected components. Through this approach, industry-based curricula function as strategic instruments in developing graduates who are competent, adaptive, and prepared to meet the evolving demands of the labor market.

Recommended Model for Improving Industry-Based Curriculum Quality in Developing Students' Competencies

Based on the findings and discussion presented, a recommended model for improving the quality of an industry-based curriculum can be formulated as a systematic, adaptive, and sustainable framework. This model positions the curriculum as a dynamic system that integrates planning, implementation, control, and follow-up within a comprehensive quality management cycle. The formulation of this model takes into account industry demands, educational quality standards, and student characteristics as the primary outcomes of vocational education.

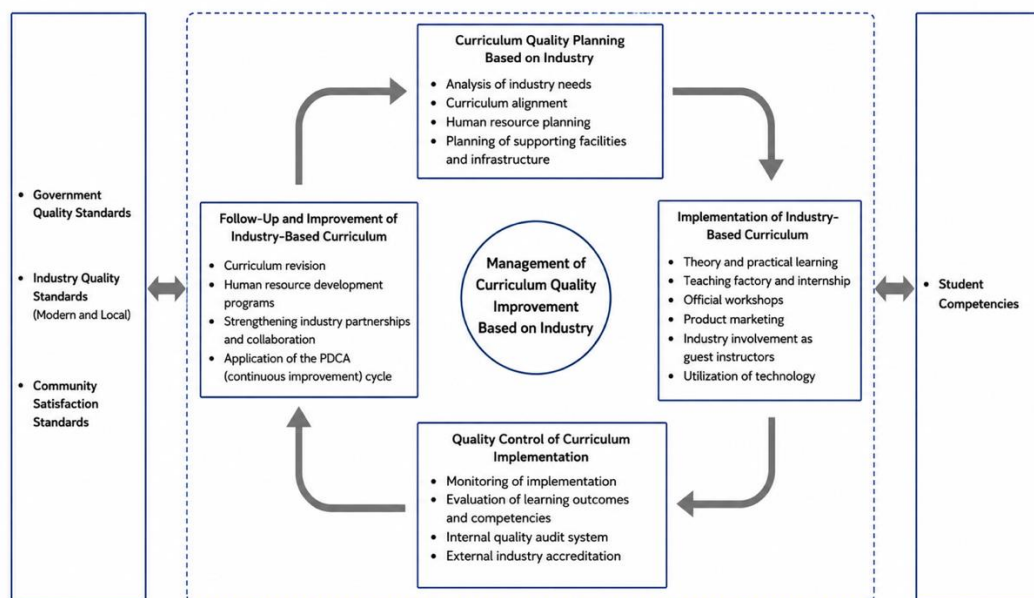


Figure 1. Recommended Model For Improving The Quality Of An Industry-Based Curriculum In Developing Students' Competencies.

The proposed model consists of four interconnected and cyclical components: (1) industry-based curriculum quality planning, (2) curriculum implementation, (3) implementation control, and (4) follow-up actions based on evaluation results. These components operate within a broader framework of quality improvement management aimed at developing students' competencies in a comprehensive manner.

The planning stage begins with a systematic analysis of industry needs through active engagement with business and industrial stakeholders. This analysis serves as the foundation for aligning the curriculum with technological advancements and labor market requirements. Planning



International Journal of Interdisciplinary Research

ISSN(Online): 3090-2959

Vol 2 no 2 (2026): July 2026

<https://journal.as-salafiyah.id/index.php/ijir/index>

Email: ijireditor7@gmail.com

also includes human resource development, particularly through teacher competency enhancement programs such as upskilling, reskilling, and industrial internships. The provision of learning facilities and practical infrastructure aligned with industry standards is also emphasized. This stage reflects the importance of the link and match approach, ensuring that the curriculum is not only academically relevant but also practically applicable in real-world work environments.

The implementation stage is realized through the integration of theoretical and practical learning in contextual settings. The model emphasizes the use of teaching factory, project-based learning, and internship programs as core instructional strategies. Industry involvement plays a significant role, including participation as guest lecturers, trainers, and mentors in practical activities. This stage aims to develop students' competencies holistically, encompassing both technical skills and soft skills such as discipline, teamwork, communication, and adaptability to workplace environments. Such an approach aligns with vocational education principles that emphasize learning in environments similar to actual workplaces.

The control stage involves systematic monitoring, evaluation, and quality audits integrated within an educational quality assurance system. This process includes the participation of quality assurance teams, teachers, and industry partners. Evaluation focuses not only on academic achievement but also on students' performance in industrial contexts, including efficiency, accuracy, and professional attitudes. The use of tracer studies is essential to measure the relevance of graduates to labor market needs. This stage ensures that all learning processes are aligned with established quality standards and supports data-driven decision-making in curriculum improvement

The final stage consists of follow-up actions based on evaluation outcomes, which represent the core of continuous improvement. Evaluation results are used to revise the curriculum, enhance teacher competencies, and strengthen industry partnerships. Follow-up actions also involve the development of adaptive programs that respond to technological changes and evolving industry demands. This process is implemented within the Plan–Do–Check–Act (PDCA) cycle, ensuring that each stage contributes to sustained quality improvement.



International Journal of Interdisciplinary Research

ISSN(Online): 3090-2959

Vol 2 no 2 (2026): July 2026

<https://journal.as-salafiyah.id/index.php/ijir/index>

Email: ijireditor7@gmail.com

The model also incorporates external quality standards as influential factors across all stages, including government regulations, modern and local industry standards, and community satisfaction benchmarks. These standards ensure that the curriculum meets regulatory requirements while remaining responsive to labor market needs and societal expectations.

The output of this model is the development of student competencies that include job readiness, technical expertise, and relevant soft skills required in the 21st-century workforce. These competencies are expected to enhance graduates' competitiveness at both local and global levels.

Conceptually, this model emphasizes that improving the quality of an industry-based curriculum cannot be achieved through isolated efforts. A systemic approach that integrates all educational components is required. The effectiveness of the model depends on strong collaboration between educational institutions and industry, consistency in implementing quality assurance systems, and institutional capacity to respond to rapid changes in technology and labor market demands.

This recommended model contributes both practically and theoretically to the development of vocational education. Practically, it provides a structured guideline for educational institutions in designing and implementing industry-based curricula. Theoretically, it reinforces the concept of educational quality management by emphasizing the integration of evaluation, industry collaboration, and competency development within a sustainable system

CONCLUSION

The findings demonstrate that the management of industry-based curriculum quality improvement at SMKS Magetan 1 YKP and SMKS 1 Pemda (Ma'arif) Ponorogo has been implemented in a systematic, collaborative, and sustainable manner through the integration of planning, implementation, control, and follow-up processes. Curriculum planning grounded in industry needs analysis has produced learning designs aligned with technological developments and labor market demands. Curriculum implementation reflects contextual learning practices



International Journal of Interdisciplinary Research

ISSN(Online): 3090-2959

Vol 2 no 2 (2026): July 2026

<https://journal.as-salafiyah.id/index.php/ijir/index>

Email: ijireditor7@gmail.com

through project-based learning, teaching factory, and internship programs, which foster the balanced development of both technical and non-technical competencies. Curriculum control, carried out through monitoring, evaluation, and quality audits, serves a strategic function in ensuring alignment between educational processes and industry standards. Follow-up actions derived from evaluation results are manifested in curriculum revision, teacher competency development, and strengthened partnerships with industry, all of which contribute to sustaining the quality of vocational education.

The study also reveals a gap between students' theoretical achievements and the performance expectations of industry, particularly in terms of work efficiency, work culture, and technological adaptability. This condition indicates that evaluation processes have not yet been fully integrated into comprehensive curriculum innovation. Strengthening data-driven evaluation systems is essential to ensure that control outcomes are effectively translated into adaptive policies and instructional practices. The study confirms that an industry-based curriculum should be understood as a dynamic system requiring continuous coordination, collaboration, and innovation. The proposed model offers both conceptual and practical contributions to vocational education by emphasizing the integration of quality management, industry partnerships, and competency development. This integrated approach is expected to enhance graduates' competitiveness in an increasingly globalized labor market.

REFERENCES

- Adha, H., Asyhadie, Z., & Kusuma, R. (2020). Digitalisasi industri dan pengaruhnya terhadap ketenagakerjaan dan hubungan kerja di Indonesia. *Jurnal Kompilasi Hukum*, 5(2).
- Aliyyah, R. R., Fauziah, S. P., & Safitri, J. (2020). *Manajemen berbasis sekolah: Optimalisasi mutu pendidikan melalui pengembangan kurikulum dan partisipasi masyarakat*. Samudra Biru.
- Arikunto, S. (1988). *Penilaian program pendidikan*. Bina Aksara.



International Journal of Interdisciplinary Research

ISSN(Online): 3090-2959

Vol 2 no 2 (2026): July 2026

<https://journal.as-salafiyah.id/index.php/ijir/index>

Email: ijireditor7@gmail.com

Badan Pusat Statistik. (2024). Tingkat pengangguran terbuka (TPT) sebesar 4,91 persen. <https://www.bps.go.id/id/pressrelease/2024/11/05/2373/tingkat-pengangguran-terbuka--tpt--sebesar-4-91-persen-.html>

Deming, E. W. (1986). *Out of the crisis*. MIT Press.

Fattah, N. (2004). *Landasan manajemen pendidikan*. Remaja Rosdakarya.

Febrina, D. F., & Syafril, E. P. E. (2022). Implementasi kurikulum berbasis industri melalui pendekatan pembelajaran sistem blok pada mata pelajaran PPKn di SMK Ma'arif Salam. *Proceedings Series on Social Sciences & Humanities*, 3, 2808–103X.

Gaspersz, V. (2001). *Total quality management*. Gramedia Pustaka Utama.

Gaspersz, V. (2001). *Total quality management*. Gramedia Pustaka Utama.

Hadis, A., & Nurhayati. (2012). *Manajemen mutu pendidikan*. Alfabeta.

Hamalik, O. (2007). *Dasar-dasar pengembangan kurikulum*. Remaja Rosdakarya.

Hasan, H. (2009). *Evaluasi kurikulum*. Remaja Rosdakarya.

Hidayati, W., Syaefudin, S., & Muslimah, U. (2021). *Manajemen kurikulum program pendidikan: Konsep dan strategi pengembangan*. Semesta Aksara.

Kemendikbudristek. (2023). *Panduan teaching factory sekolah menengah kejuruan*. Direktorat SMK.

Kurniawan, Y., & Pudjiarti, E. S. (2024). Mengurai jejak sejarah revolusi industri 4.0: Dari konsep hingga realisasi. *Transformasi: Journal of Economics and Business Management*, 3(1). <https://doi.org/10.56444/transformasi.v3i1.1663>

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). Sage Publications.

Prosser, C. A., & Quigley, T. H. (1950). *Vocational education in a democracy*. American Technical Society.

Rusydiyah, E. F. (2019). *Teknologi pembelajaran: Implementasi pembelajaran era 4.0*. UIN Sunan Ampel Press.

Sallis, E. (2003). *Total quality management in education*. Kogan Page.



International Journal of Interdisciplinary Research

ISSN(Online): 3090-2959

Vol 2 no 2 (2026): July 2026

<https://journal.as-salafiyah.id/index.php/ijir/index>

Email: ijireditor7@gmail.com

- Sanjaya, W. (2008). *Perencanaan dan desain sistem pembelajaran*. Kencana.
- Siregar, S. U. (2024). *Manajemen pendidikan*. Nakomu.
- Siswanto, R. (2019). *Manajemen kemitraan guru produktif SMK dengan dunia usaha dan dunia industri*. Pustaka Media Guru.
- Sugiyono. (2016). *Metode penelitian pendidikan: Pendekatan kuantitatif, kualitatif, dan R&D*. Alfabeta.
- Sukmadinata, N. S. (2006). *Pengendalian mutu pendidikan sekolah menengah*. Refika Aditama.
- Sukmadinata, N. S. (2011). *Pengembangan kurikulum teori dan praktik*. Remaja Rosdakarya.
- Supriadi, A., Sanusi, A., Wahidin, D., & Sujianto, H. (2021). Industry-based curriculum development management in improving student's competence. *Journal of Islamic Studies*, 4(1). <https://doi.org/10.32506/jois.v4i2.710>
- Terry, G. R. (1997). *Principles of management* (3rd ed.). Richard D. Irwin.
- Tim Dosen Administrasi Pendidikan Universitas Pendidikan Indonesia. (2013). *Manajemen mutu pendidikan*. Alfabeta.
- Tjiptono, F., & Diana, A. (2003). *Total quality management*. Andi Offset.
- Usman, H. (2006). *Manajemen: Teori, praktik, dan riset pendidikan*. Bumi Aksara.
- Wiyono, D. F., & Hakim, D. M. (2023). Management of curriculum and integrative learning of Islamic religious education and vocational school at SMKN 3 Malang Indonesia. *Technium Social Sciences Journal*, 47, 27–37.