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Digital-Based Change Management for Enhancing Vocational Students' Work Readiness

Muhtadin[1*], Enung Hasanah[2], Sukirman[3]
Educational Management Department, Universitas Ahmad Dahlan Yogyakarta,
Daerah Istimewa Yogyakarta, Indonesia
Email: 2407046006@webmail.uad.ac.id[1], enung.hasanah@mp.uad.ac.id[2],
sukirman@mp.uad.ac.id[3]

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Abstract:

This study aims to develop a digital-based change management model to enhance vocational students' work readiness in vocational schools. Rapid technological change and evolving industry requirements have intensified the mismatch between vocational graduates' competencies and labor market expectations. Previous studies highlight that limited digital integration and weak change management reduce the relevance of vocational education. This research employed a qualitative case study involving school leaders, vocational teachers, industry partners, and students. Data were collected through in-depth interviews, observations, and document analysis, and were analyzed thematically using Atlas. Ti 9. The findings indicate that effective digital transformation is shaped by six interrelated factors: the urgency for change, school–industry collaboration, continuous teacher competency development, technology-embedded curriculum implementation, systematic evaluation mechanisms, and graduate outcomes. These factors collectively strengthen students' technical skills, digital literacy, and employment-readiness. The proposed model demonstrates that adaptive change management and active stakeholder involvement improve curriculum relevance and perceived employability. This study contributes theoretically by enriching perspectives on change management in vocational education and, practically, by offering a contextual framework for digital curriculum development. It recommends continuous curriculum updating, infrastructure investment, and sustained industry partnerships to ensure long-term workforce readiness.

Keywords: *Job Readiness, Digital Competence, Change Management, School-Industry Collaboration*

Abstrak:

Penelitian ini bertujuan untuk mengembangkan model manajemen perubahan berbasis digital untuk meningkatkan kesiapan kerja siswa vokasi di sekolah vokasi. Perubahan teknologi yang cepat dan kebutuhan industri yang berkembang telah mengintensifkan ketidaksesuaian antara kompetensi lulusan kejuruan dan harapan pasar tenaga kerja. Studi sebelumnya menyoroti bahwa integrasi digital yang terbatas dan manajemen perubahan yang lemah mengurangi relevansi pendidikan kejuruan. Penelitian ini menggunakan studi kasus kualitatif yang melibatkan pemimpin sekolah, guru kejuruan, mitra industri, dan siswa. Data dikumpulkan melalui wawancara mendalam, observasi, dan analisis dokumen, dan dianalisis secara tematik menggunakan Atlas.ti 9. Temuan ini menunjukkan bahwa transformasi digital yang efektif dibentuk oleh enam faktor yang saling terkait: urgensi untuk perubahan, kolaborasi sekolah-industri, pengembangan kompetensi guru yang berkelanjutan, implementasi kurikulum yang tertanam teknologi, mekanisme evaluasi sistematis, dan hasil lulusan. Faktor-faktor ini

secara kolektif memperkuat keterampilan teknis, literasi digital, dan kesiapan untuk bekerja siswa. Model yang diusulkan menunjukkan bahwa manajemen perubahan adaptif dan keterlibatan pemangku kepentingan aktif meningkatkan relevansi kurikulum dan kemampuan kerja yang dirasakan. Studi ini berkontribusi secara teoritis dengan memperkaya perspektif tentang manajemen perubahan dalam pendidikan kejuruan dan, secara praktis, dengan menawarkan kerangka kontekstual untuk pengembangan kurikulum digital. Ini merekomendasikan pembaruan kurikulum berkelanjutan, investasi infrastruktur, dan kemitraan industri yang berkelanjutan untuk memastikan kesiapan tenaga kerja jangka panjang.
Kata Kunci: *Kesiapan Kerja, Kompetensi Digital, Manajemen Perubahan, Kolaborasi Sekolah-Industri*

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INTRODUCTION

Industry and the world of work are undergoing rapid change due to technological advances, global market dynamics, and increasing demands for labor competencies (Jagannathan et al., 2019; Muzam, 2023; Wadley, 2021). These changes require vocational education institutions to respond strategically by aligning the learning process with industry needs. One important approach is to strengthen collaboration between schools and the business and industry (DUDI) sectors as an integrated management mechanism that connects education to the realities of work needs (Tahshir, 2022). In this context, vocational schools are required not only to achieve formal educational goals but also to maintain their institutional relevance amid continuous change by understanding their strategic positions, conducting trend analyses, and formulating adaptive strategies (Cabreros, 2023; Koros & Kamau, 2024).

However, there remains a significant gap between the competence of vocational education graduates and the real needs of the world of work. Although the national education policy emphasizes the development of human resources who master science and technology to respond to the demands of the ever-changing job market (Godwin et al., 2025; Kopackova et al., 2024; Petrychenko et al., 2023), various studies show that vocational school graduates are not fully prepared to face the transformation of the global world of work (Bühler et al., 2022; L. Li, 2024; McGrath & Yamada, 2023a). This gap reflects the weak integration among technological change, institutional management, and graduate job readiness; therefore, more systematic and strategic interventions are needed, particularly through digitally based change management approaches (Aldogiher et al., 2025; Samara et al., 2025; Veseli et al., 2025a).

Several previous studies have examined the responses of vocational education institutions to the demands of the world of work, including studies that identify Vocational Schools as institutions that have developed various adaptive strategies to address competition and labor market needs (Bozhkov et al., 2024; Zhao et al., 2022). These studies highlight change management practices through the development of industry-based curricula, improvements in teacher competency, and strengthened cooperation with DUDI (I. Ahmad & Mastiani, 2025; Johnson, 2024; Kikasu et al., 2025; Pepilina & Fauzi, 2024; Somantri & Pramudita, 2024). The strategy is framed as an adaptation to rapid industrial

change and increasingly dynamic competency demands (Amaral et al., 2023; Marlapudi & Lenka, 2024).

Although innovations in vocational education have been linked to the national agenda of human resource development (J. Li & Pilz, 2023; Ling et al., 2023; McGrath & Yamada, 2023b), a study that specifically examines the role of digital-based change management on graduate job readiness is still relatively limited (Purnomo et al., 2024a). In addition, most research addresses digitalization, curriculum alignment, and teacher development separately rather than as a single organizational change process (Hiim, 2023a; Nguyen et al., 2023; Veseli et al., 2025b; Wohlfart & Wagner, 2023). This fragmentation limits theoretical understanding of how digitally based change management operates in an integrated manner within vocational schools, particularly in contexts with diverse industrial characteristics and ecosystems (Rauseo et al., 2023; Yoto et al., 2024). Therefore, this study aims to address these gaps through contextual and in-depth analysis.

Based on these theoretical and empirical gaps, this study aims to examine in depth how digital-based change management strategies are applied to improve students' work readiness in Vocational Schools. The research question is: How is a digital-based change management strategy applied to improve students' work-readiness at SMK Muhammadiyah Long Ikis?

This research departs from the argument that adaptive digital-based change management, integrating technology adoption, strengthening collaboration with stakeholders, and developing teacher competencies, has the potential to enhance the job-readiness of vocational education graduates. When digital change is managed systematically and integrated into organizational processes, vocational schools are not only able to adapt to industry demands but also to produce graduates who are better prepared in terms of competence, attitude, and competitiveness to enter the workforce.

RESEARCH METHODS

This study employs a qualitative case study design, chosen for its ability to examine the process, context, and dynamics of change within an institution (Gretschel et al., 2023; Miller et al., 2023; Mtisi, 2022). The research is conducted at the Vocational School, a vocational high school located in the industrial area of Kalimantan, which was chosen for its active involvement in the implementation of digital-based change management. The unit of analysis in this research is a digitally based change management practice that encompasses school policies, learning processes, teacher competency development, and collaboration with industry (IDUKA). Informants are selected through purposive sampling, using criteria of direct involvement in the change process, understanding of the research context, and willingness to participate, as recommended in contextual qualitative research (Ahmad & Wilkins, 2025; Tajik et al., 2025). The informants consisted of the principal, five productive teachers, three IDUKA representatives, and five students. In addition to informant data, this study uses institutional documents, such as curriculum, industrial cooperation documents, school work programs, and activity reports, as

supporting data sources to strengthen the analysis (Bayanbayeva et al., 2023; Hiim, 2023b).

Table 1. Data Collection Techniques Comprised

No.	Data Collection Techniques	Description	Purpose
1.	In-Depth Interviews (Semi-Structured)	Use open-ended questions to elicit participants' (teachers, students, industry partners) views.	Reveal participants' perspectives, experiences, and understandings related to school and industry collaboration.
2.	Observation	Direct observation of classroom learning activities and collaboration activities with industry.	Document real-world practices and interactions during the learning process and industry cooperation.
3.	Document Analysis	Review of documents such as the curriculum, the MoU on industrial cooperation, and school reports.	Identify the appropriateness of planning, implementation, and reporting for educational collaborative programs.

Data were collected through in-depth interviews guided by semi-structured interview protocols, non-participant observation of learning activities, industry collaboration, and document analysis, which are the main techniques in qualitative case study research (Arif et al., 2025; Mtisi, 2022). Data analysis is conducted thematically through the stages of data reduction, data presentation, and interpretive drawing of conclusions using Atlas. TI software version 9 to improve traceability and data coding sharpness (Chen & Hu, 2024; Riskin et al., 2025). The validity of the data is ensured through a credibility strategy that employs triangulation of sources and methods, as well as systematic documentation of the research process, to enhance reliability and confirmability of findings, as recommended in the trustworthiness standards of qualitative research (Arias Valencia, 2022; Schlunegger et al., 2024).

Table 2. Data Analysis Followed A Thematic Approach Using Atlas. Ti 9 Software, Structured In Three Stages

No.	Data Analysis Stage	Process Description	Purpose
1.	Data Reduction	Interview transcripts, field notes, and documents were analyzed by coding and categorization using *Atlas.ti 9*.	Filter important information and group data according to the initial theme that emerges.
2.	Data Presentation	The data are compiled as a matrix and a thematic narrative to identify patterns and relationships.	Simplify interpretation by visualizing relationships between categories and codes.
3.	Conclusion	Key themes are synthesized to formulate a digital-based change management model.	Produce in-depth final findings and develop a practical theoretical construct.

RESULTS AND DISCUSSION

Results

Based on the study's results, a technology-based change management policy was formulated to improve students' work readiness in Vocational

Schools, and the study synthesized four main findings. First, the school's leadership motivation and collaborative culture serve as the primary drivers of digital transformation, fostering openness to change and active involvement by teachers and students. Second, strong collaboration with external stakeholders, especially industry partners, has a strategic role in ensuring alignment between curriculum content, learning processes, and competency standards with the needs of the world of work. Third, continuous teacher capacity building, both in mastering digital skills and industrial practices, is an important step in supporting the effective implementation of the curriculum. Fourth, the implementation and evaluation of technology-based curricula have been shown to affect graduate outcomes, particularly in job readiness, digital literacy, and alignment with industry expectations. Overall, these findings confirm that students' job readiness is not achieved through a single intervention but through an integrated, systematic change-management process that links leadership motivation, collaboration with industry, human resource capacity development, curriculum implementation, and continuous evaluation of learning outcomes.

Motivation

The illustration above depicts the key factors that drive motivation for change in the context of digital transformation in education. Positioned as the culmination of a process, the motivation for change arises from three interrelated factors, namely: (1) the urgency of technology implementation that reflects the need to adapt the learning process to the rapidly evolving digital landscape; (2) a shift in mindset that shows a fundamental change in the way educators view and respond to innovation; and (3) the drive to develop which represents the internal motivation of stakeholders to continue to move forward and make improvements. These fundamental elements, metaphorically described as the hidden structures that underpin visible outcomes, affirm that sustainable educational change must begin with psychological readiness, technological awareness, and aspirational developmental goals.

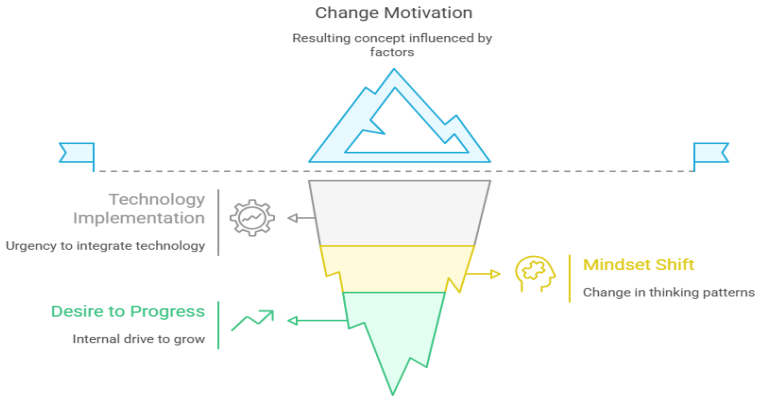

Figure 1. Change Motivation: Unveiling the Underlying Drivers

Change management in schools is motivated by the aim of improving school quality and the quality of graduates, to surpass prior levels. This is motivated by the perception of the surrounding community, which still views

private vocational high schools as having low quality. Therefore, the principal invites the entire teacher council to shift its mindset toward efforts to improve the school. One of the main challenges is the mindset of some teachers, who view technology integration and collaboration as troublesome and burdensome to the learning process.

The shift from conventional learning practices to a digitally based education paradigm has become an almost inevitable response to the demands of the Fourth Industrial Revolution. The integration of technology into the curriculum requires a fundamental transformation not only in teaching methods but also in learning orientation, assessment practices, and the alignment of the curriculum with industry needs. These changes are evident in Vocational Schools, where digital learning is regarded as an important strategy to ensure that graduates possess technological literacy and competency relevant to the dynamics of the world of work. School leadership recognizes that, to respond effectively to technological transformation, significant changes are needed in teachers' instructional methods, in how students learn and think, and in assessment systems that no longer rely on conventional paper-based practices. The study's findings indicate that the alignment of the curriculum through digital learning in the Vocational School reflects an overall transformation in pedagogical orientation toward student-centered learning and digitally based assessment, delivering an industry-oriented curriculum that is responsive to changes in the educational environment and the world of work.

According to UNESCO, reshaping the future of education requires teachers to strengthen their digital literacy and develop innovative learning approaches so that students can meet the demands of the contemporary world of work. Consistent with this, various studies indicate that the success of digital transformation in schools is primarily determined by ongoing teacher training, the availability and accessibility of adequate technological infrastructure, and collaboration between educational institutions and industry. These three components form an interdependent ecosystem in which teachers meaningfully integrate technology into learning, schools are supported by reliable digital infrastructure, and partnerships with industry ensure that educational practices remain relevant to the needs of the job market.

Industry's participation in curriculum development at the Vocational School reflects a shared awareness among school stakeholders that educational practices must align with technological and industrial developments. Based on the views of school leaders and education practitioners, this shared readiness is needed among teachers, students, and industry partners to abandon old practices and collaboratively learn new digital approaches, with collaboration serving as the primary means of changing practices. This is reflected in the application of specific pedagogical models, such as the Teaching Factory and Project-Based Learning, which emphasize the relevance of the real world and industry involvement in preparing students to enter the workforce. Both approaches have been shown to enhance graduate readiness through contextual and practice-based learning experiences. The efforts made by the Vocational School, including strengthening partnerships with various industries and the implementation of

digital learning in the curriculum, show that curriculum alignment is not a stand-alone initiative, but rather part of a comprehensive digital-based change management process, with industry involvement as a key element in maintaining the relevance of vocational education.

Table 3. Digital Transformation of Education at Vocational School

Aspects	Description of Efforts of Vocational School
Digital Transformation	Developing teachers' digital skills and learning innovations to face the technology-based world of work.
Training and Infrastructure	Provide teacher training and enhance digital infrastructure support to support learning.
Collaboration with Industry (DUDI)	Establish close partnerships with industry to align the curriculum with job market needs.
The "Link and Match" Approach	Adapting the curriculum to the needs of the industry through the synchronization of competencies and real work practices.
Innovative Learning Models	Applying the Teaching Factory and Project-Based Learning approach based on technology.
Improving Graduate Competencies	Preparing students to be competent and ready to work in the era of the Industrial Revolution 4.0.
DigitalLearning	Integrating digital learning as part of the transformation of teaching methods.
Digital Assessment	Develop a technology-based assessment system to evaluate student achievement effectively.
Strategic Position of the School	To be a pioneer in the transformation of vocational education in the region, with a strong commitment to innovation and collaboration.

Table 3 illustrates the various strategic efforts of Vocational Schools to transform education for the digital era. The school focuses on strengthening teachers' digital skills, implementing innovative learning approaches, providing continuous training, and improving infrastructure. Through a link-and-match approach, the curriculum is aligned with industry needs and supported by a Teaching Factory and a technology-based Project-Based Learning model. In addition, the school is developing a digital assessment system and strengthening its partnership with DUDI, positioning itself as a pioneer in preparing competent, job-ready graduates in the era of Industry 4.0.

School Collaboration with External Parties

These findings show that the partnership between the Vocational School and industry is the focal point of the school's curriculum development and change management. Industry partners have been involved in all phases since the early stages of curriculum development, with joint discussions on the objectives of the link-and-match programme and on curriculum alignment and revision. School stakeholders argue that formal agreements with companies such as United Tractor provide an anchor to position the industry as a curriculum designer. Industry representatives are likely to be required to attend a meeting at the beginning of each academic year, where they will review the current curriculum, identify competencies to be added or revised, and ensure the program remains aligned with current industry practices. For each vocational department, the department directly engages with the relevant industry sector to align competency standards. This shows that curriculum development in Vocational Schools is not a one-sided affair undertaken solely by schools, but

rather stems from discussions with industry, thereby ensuring relevance to workplace demands and supporting the implementation of industry-oriented, practice-based learning.

Table 4. Collaboration of the Curriculum of the Vocational School with Industry

Aspects	Description of Efforts
Curriculum Collaboration	The curriculum is designed in conjunction with the industry to enhance the relevance of students' competencies to market needs.
MoU with Industry	Establishing formal cooperation with large companies, such as United Tractor, to foster sustainable synergy.
The Role of Industry as a Co-Designer	Industry is actively involved as curriculum designers to ensure the material is suitable for the world of work.
Regular Discussions with the Industry	Inviting the industry to share the latest competency needs so the curriculum can be updated regularly.
Teaching Factory Model	Integrate Project-Based Learning that simulates real-world work.
Increased Employability	Graduates are better prepared to work because they are equipped with skills aligned with industry standards.
Real Implementation Examples	Collaboration with Toyota in the Light Vehicle Engineering department to ensure the mastery of specific competencies.
The Role of Schools as Pioneers	Becoming a pioneer in implementing a link and match approach between education and the business/industry world.

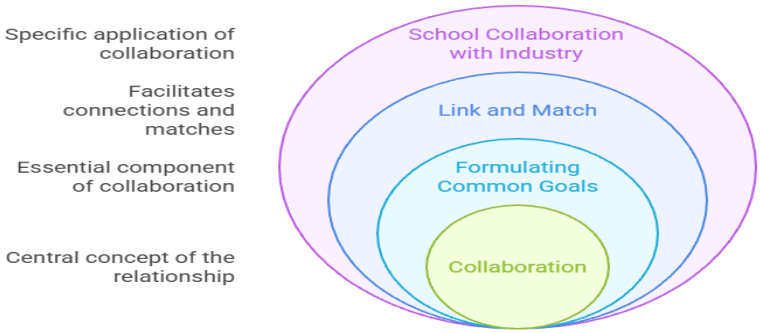

Figure 2. Collaboration Concept Breakdown

Improving Teacher Competence

The visualization above illustrates the key components of teacher competency development as identified in this study. It highlights six strategic elements: (1) teacher training by industry, which encourages direct collaboration to improve practical skills; (2) general teacher training programs that support sustainable professional growth; (3) digital curriculum training that aims to align pedagogical practices with technology-based frameworks; (4) the involvement of guest teachers to bring real-world perspectives into the classroom; (5) the implementation of the digital curriculum, which reflects the readiness of teachers to integrate digital tools; and (6) inviting experts, who ensure the inclusion of specialized knowledge in the training process. Together, these components form an integrated model that strengthens vocational educators' capacity to meet the demands of a digitally connected workforce.

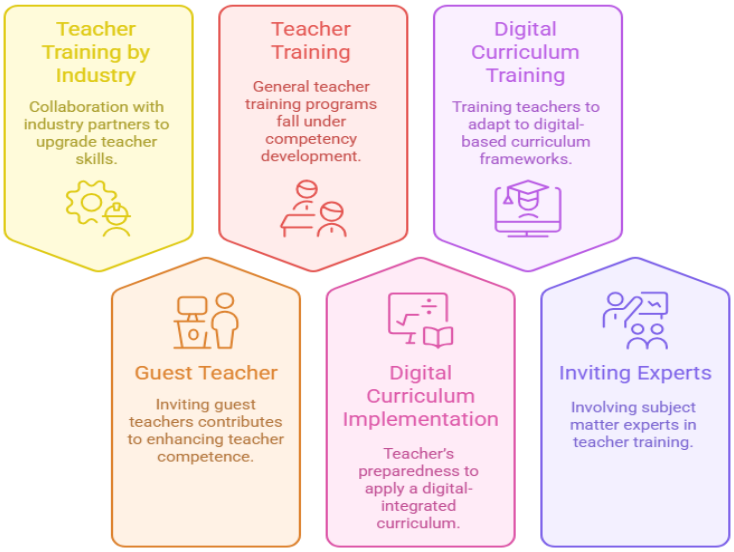

Figure 3. Teacher Competency Development

Implementation of Technology-Based Curriculum

The figure above presents the key elements of curriculum implementation identified in this study, illustrating how digital transformation and industry collaboration intersect in vocational education. Seven core components were found to support the effective implementation of the curriculum: (1) monitoring of learning to ensure a quality teaching and learning process, (2) evaluation of industrial work practices to assess student performance during internships, (3) development of an industry-based curriculum that is in line with market demands, (4) the use of digital media in classroom teaching, (5) integration of digital and industry-based learning models, (6) providing equal access to digital learning for all students, and (7) implementing technology-based curriculum in teaching practice. Together, these components form a comprehensive framework that strengthens vocational education outcomes and bridges the gap between classroom teaching and industry expectations.

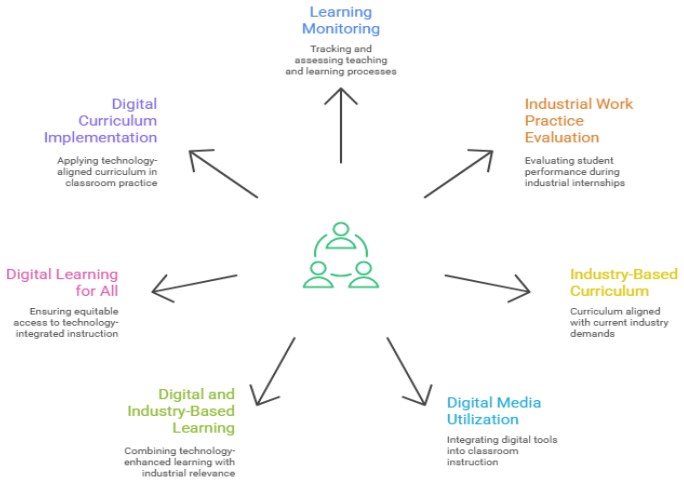

Figure 4. Curriculum Implementation Elements

The research examines how the implementation of the curriculum in Vocational Schools is strongly influenced by industry-supervised learning and

driven by industry best practices. Describing how the orphanage curriculum was initially developed, school leaders and teachers indicated that it was developed through intensive immersion with industry partners, including direct exposure to industry workflows, operational standards, and workplace culture. Thus, they can internalize industry-standard operating procedures (SOPs) and turn them into classroom instruction and practical training for students. The teaching materials are fully aligned with industry partners to reflect the conditions of the workplaces in which they operate, enabling students to be trained in authentic industry practices. Furthermore, the practice and monitoring structure is implemented using industry-specific guidance and reference materials for each sector to account for sector-specific differences. The app has demonstrated how the curriculum is implemented in schools through experiential learning grounded in industry, thereby providing vocational education that is almost directly aligned with the actual standards and demands of the workplace.

Evaluation of the Implementation of Technology-Based Curriculum

Evaluating the implementation of technology-based curriculum is an important component in ensuring the relevance and effectiveness of learning in Vocational Schools. This process involves systematic feedback from industry partners, competency gap analysis, and curriculum adjustments in response to technological developments and labor market needs. The evaluation results not only identify challenges, such as limited equipment and industry dynamics that are incompatible, but also yield strategic solutions, ranging from teacher training to updating learning content. The following diagram illustrates the positive impacts of implementing a digital curriculum, including mechanisms for industry feedback, strategies to maintain curriculum relevance, and approaches to address implementation challenges.

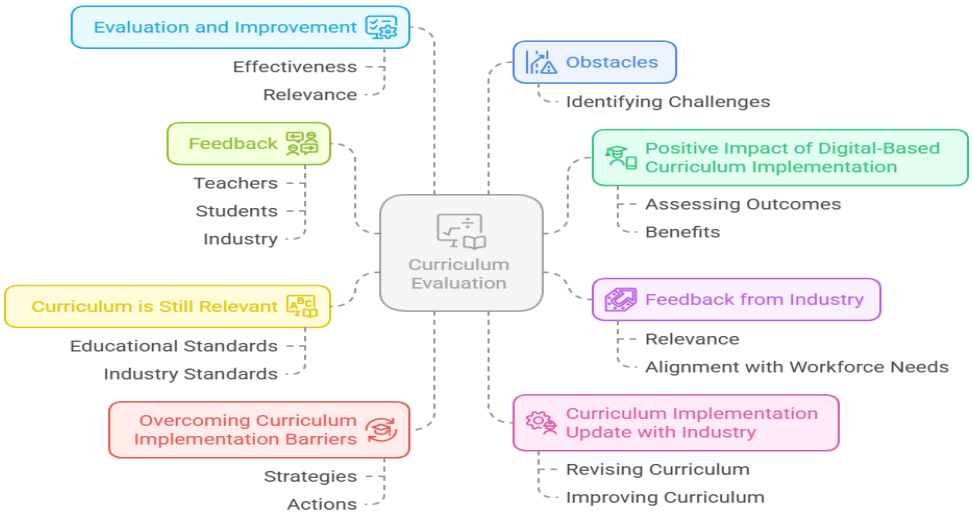

Figure 5. Curriculum Evaluation Process

The image above illustrates the curriculum evaluation process as identified in this study, emphasizing the continuous improvement and relevance of the vocational education industry. Key components of this process include evaluation and improvement to assess the curriculum's effectiveness and

relevance, as well as the identification of implementation barriers. Feedback from teachers, students, and industry stakeholders plays an important role in assessing the positive impact of implementing a digital-based curriculum. The model also highlights the importance of confirming curriculum relevance to current educational and industry standards, obtaining specific feedback from industry partners on workforce alignment, and updating the curriculum through collaborative revision. In addition, strategies to overcome barriers to curriculum implementation ensure that challenges are addressed systematically. This comprehensive framework supports the development of an adaptive, data-driven curriculum aligned with technological and industry advancements.

Exodus

The study finds that various factors contribute to educational achievement in the Vocational School, particularly with respect to tracking and graduates' achievement. The school has greatly benefited from collaborations with the World of Business and Industry (DUDI), which provides real opportunities for students to engage directly with the world of work. In addition, the Special Job Fair (BKK) serves as a strategic platform for helping graduates secure positions aligned with their competencies. Efforts to track graduates, the level of entrepreneurial activity among graduates, and their integration into the workforce are key indicators of school success. All these aspects contribute to the achievement of the Vocational School, which can be summarized as follows:

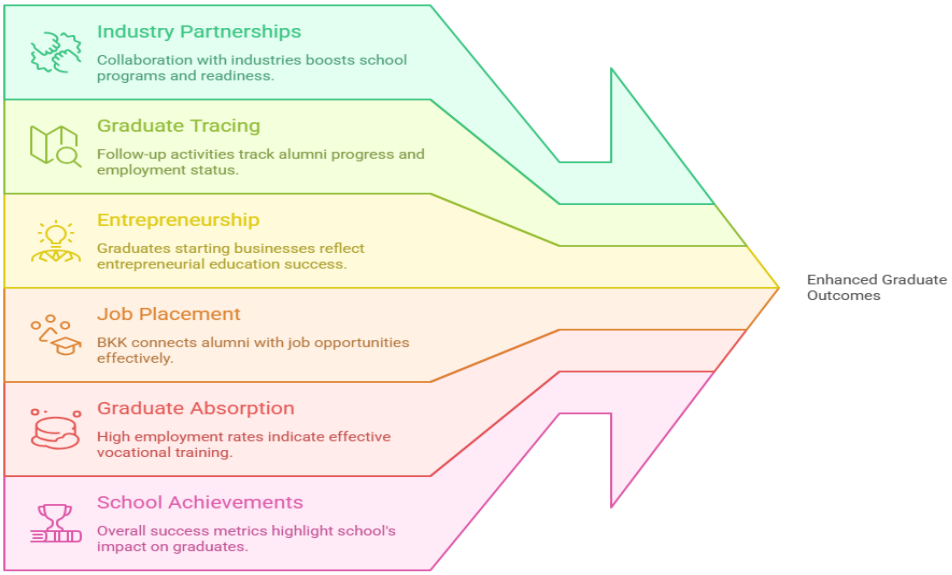

Figure 6. Pathways to Graduate Success

The diagram titled "*Pathways to Graduate Success*" illustrates six important components that contribute to improved graduate outcomes. These components include: (1) Industry Partnerships, which strengthen school readiness and align programs with real-world demands; (2) Graduate Tracing, used to monitor alumni progress and employment status; (3) Entrepreneurship, reflecting the success of entrepreneurship education through alumni business ventures; (4) Job Placement, where BKK functions as a bridge connecting graduates with job

opportunities; (5) Graduate Absorption, which shows how high the level of employment indicates adequate vocational preparation; and (6) School Achievement, representing an overall success metric that demonstrates the positive impact of a school on its graduates. Together, these elements form an integrated strategy to improve the quality and relevance of vocational education outcomes.

This model comprises four main stages: planning, organizing, mobilizing, and controlling. Each stage is integrated into a management cycle that is adaptive to technological change and the needs of the industrial world. Through this approach, schools are not only able to answer the challenges of the digital era but also proactively prepare graduates who are competent, innovative, and ready to compete in the modern world of work. This digitally based change management model is an important foundation for creating a relevant, dynamic, and highly competitive vocational education ecosystem.

Discussion

Digital transformation in Vocational Schools can be understood as a change management strategy systematically designed to improve students' job-readiness through curriculum restructuring, pedagogy, and vocational education governance (Purnomo et al., 2024b; Veseli et al., 2025c). This change is not interpreted as an instrumental adoption of technology, but as a process of redefining the learning orientation to strengthen adaptive competencies, digital literacy, and readiness to navigate the dynamics of the world of work. From a change management perspective, this initial phase represents an unfreezing process (Lewin) that aims to build awareness of the urgency of digital transformation as a prerequisite for the relevance of vocational education in the era of technology-based industries (Ezeani, 2024; Tjahjono et al., 2025).

At the planning stage, the change strategy is implemented by aligning the curriculum with the needs of the business and industry (DUDI) through formal collaboration mechanisms and continuous dialogue with industry partners. The involvement of industry as a curriculum co-designer strengthens the link-and-match mechanism and ensures that the competencies designed are not only normative but also contextual and applicable. This approach is in line with Taofeek et al.'s (2025) recommendations, which emphasize the strategic role of industry in vocational education planning to ensure graduates have relevant and sustainable job-readiness.

The organization of change is demonstrated through collaborative and adaptive curriculum governance, with school leaders, curriculum coordinators, effective teachers, and industry partners as key stakeholders. This organizational structure reflects a participatory change-management model, in which the industry does not merely function as a graduate user but rather as a strategic partner in developing learners' competencies (Asa et al., 2023; Bari, 2025). The integration of technical skills with digital literacy across study programs, including in non-technology majors, strengthens graduates' work-readiness by developing flexibility and adaptability to labor-market changes (Farrell et al., 2024; Mahajan et al., 2022; Wismansyah et al., 2024).

The mobilization stage represents the change phase in Lewin's theory, in which the digital curriculum is implemented through the active involvement of all teachers, without the formation of a dedicated digital unit. This strategy places digital competencies as an integral part of educator professionalism and encourages collective organizational culture change (Adiyono & Sholeh, 2025; Kiryakova & Kozhuharova, 2024). Collaboration with industry through the adoption of standard operating procedures (SOPs), the involvement of practitioners as guest teachers, and the use of digital devices in learning strengthen the integration of industrial work culture into the classroom and increase student work readiness contextually (Hiim, 2023a; Jia & Huang, 2023; Naseer et al., 2025).

However, the study's findings indicate that the effectiveness of digital transformation is determined not only by technical and structural readiness but also by students' psychological readiness. Changes in mindset, learning motivation, and readiness to learn independently are determinants of successful implementation of the digital curriculum. Therefore, the change management strategy in Vocational Schools adopts a holistic approach that integrates strengthening students' character, ethical values, and mental readiness with the use of technology, as suggested by studies on the transformation of technology-based education (Purnomo et al., 2024c; Saminan et al., 2025).

The control stage serves as a refreezing process that ensures the sustainability of change through collaborative evaluation with industry, tracer studies, and curriculum updates based on graduate data. Although it is still faced with limited infrastructure and practice facilities (Alhassan et al., 2025; Herath et al., 2023), this evidence-based control mechanism allows schools to adapt their curriculum in an ongoing manner to stay in line with technological developments and labour market needs (Kabashkin, 2025; Rajaram, 2023; Riza Ubihatun et al., 2024). Overall, these findings confirm that the increase in students' job readiness results from digitally based change management strategies that are integrated, adaptive, and stakeholder-engagement-oriented, rather than from the provision of technology infrastructure alone (Akour & Alenezi, 2022; Martínez-Peláez et al., 2023).

CONCLUSION

This study provides the main lesson that increasing students' work-readiness in Vocational Schools cannot be achieved through partial technological interventions, but rather through an integrated, systematic, digitally-based change-management strategy. The findings show that leadership motivation, collaborative culture, active industry involvement, teacher capacity building, and the implementation and evaluation of technology-based curriculum form an ecosystem of mutually reinforcing change. This process emphasizes that digital transformation in vocational education is simultaneously cultural and structural, requiring changes in mindset, pedagogical practices, and school governance to ensure that graduates are job-ready, digitally literate, and competent in ways that align with the needs of a dynamic industrial world.

In terms of scientific contribution, this research strengthens the discourse on educational change management by integrating the POAC framework and Lewin's theory of change in the context of digitally based vocational education, and by enriching empirical evidence on the role of industry as a curriculum co-designer. The resulting change management model makes a conceptual and practical contribution to the development of vocational education, especially in bridging the gap between school and the world of work. However, this study has limitations: it focuses on a single educational unit, limiting the generalizability of the findings. Therefore, further research is recommended to conduct cross-school or regional comparative studies and to develop quantitative measures of the long-term impact of digitally based change management on the sustainability of graduate careers and the competitiveness of vocational education institutions.

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