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Strategic Leadership Practices in Fostering Innovation Culture in Vocational Education: A Case Study

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ABSTRACT
Purpose – This study explores how principals' strategic leadership practices foster an innovation culture in vocational education and contribute to school competitiveness, using SMK 14 Samarinda as a case study. Previous studies have discussed strategic leadership and school innovation separately, yet limited research explains how leadership visions are translated into operational practices within vocational school contexts.
Methods – This research employed a qualitative case study design. Data were collected through in-depth semi-structured interviews with the school principal, supported by document analysis. Thematic analysis following the Miles and Huberman interactive model was applied, involving data reduction, coding, categorization, and conclusion drawing. Credibility was strengthened through source triangulation and member checking.
Findings – The findings indicate that strategic leadership at SMK 14 Samarinda promotes an innovation culture through consistent vision communication, data-driven decision making, collaborative teacher engagement, implementation of project-based learning, and continuous academic supervision. These leadership practices function as micro-mechanisms linking strategic policies with innovative classroom practices, contributing to improved learning quality and strengthening the school's competitiveness in vocational education.
Research Implications – This study provides practical implications for vocational school leaders in implementing data-driven, adaptive, and collaborative strategic leadership to foster sustainable innovation cultures. As this study focuses on a single case school and a limited set of informants, the findings are context-specific and cannot be broadly generalized. Future research should involve comparative multi-school designs and multi-informant data sources to strengthen external validity.

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Introduction

Strategic leadership has been widely acknowledged as a decisive factor in driving school innovation and organizational transformation. International studies emphasize that school leaders are no longer positioned merely as administrative managers but as change agents responsible for shaping institutional vision, mobilizing human resources, and facilitating continuous innovation to respond to rapid technological and industrial development. Particularly in vocational education, principals are expected to integrate industry demands, digital transformation, and student employability into the school's strategic agenda, ensuring that learning processes remain relevant to the evolving labor market (Witthöft et al., 2024)

In Indonesia, the government has initiated various policies to enhance the quality and relevance of vocational education, including the Revitalisasi SMK Program, which promotes the link and match strategy between schools and industry. Despite these efforts, empirical evidence indicates that inconsistencies remain between vocational graduates' competencies and labor market requirements, contributing to persistent graduate unemployment (Wisnu Bramantiya & Nurhadi, 2024). These challenges highlight the critical role of school principals in translating national policy frameworks into concrete school-level innovations, including curriculum adaptation, partnership development with industry, and the implementation of innovative learning models such as Project-Based Learning (PjBL).

At the organizational level, effective school leadership is closely associated with the principal's ability to develop professional school management characterized by long-term vision, systematic planning, and collaborative knowledge sharing. School leaders act as knowledge facilitators who convert tacit knowledge into shared professional practices through collegial dialogue, organizational learning, and knowledge management processes, thereby supporting digital innovation and institutional transformation (Witthöft et al., 2024). Strong leadership has also been empirically linked to improvements in teacher performance and instructional quality, confirming the principal's position as a key driver of sustainable school development (Puspitaningsih et al., 2024)

Nevertheless, local empirical studies reveal that not all school leaders have successfully cultivated innovative school cultures. Challenges such as limited instructional leadership capacity, ineffective collaboration mechanisms, and unresolved internal conflicts among teachers continue to hinder the development of a conducive working environment. Poor organizational climate, in turn, weakens teacher motivation and reduces overall instructional performance (Rahayuningsih & Iskandar, 2022). These findings suggest that leadership effectiveness in fostering innovation cannot be assumed; rather, it requires empirical examination within specific institutional contexts.

Although previous studies have explored strategic leadership, school management, and digital innovation separately, there remains a lack of integrated research that examines how principals' strategic leadership concretely translates into the development of innovation culture within vocational schools and how this process contributes to schools' competitive advantage. Existing literature tends to either emphasize conceptual leadership frameworks or assess technological integration without systematically linking leadership practices, organizational culture, and competitive outcomes. Particularly, empirical case studies from Indonesian vocational schools remain limited in analyzing the micro-mechanisms through which leadership strategies are implemented and sustained at the school level.

Based on these gaps, this study aims to investigate the role of strategic leadership of the principal at SMK 14 Samarinda in fostering a culture of innovation to enhance the school's competitive advantage. Specifically, the study explores how leadership vision is communicated, how data-based decision-making is applied, how teachers are engaged through collaborative practices, and how innovation policies are implemented, monitored, and evaluated at the organizational level. Through a qualitative case study approach, this research is expected to provide empirical insights that contribute to the enrichment of leadership studies in vocational education and offer practical implications for school leaders facing similar challenges in navigating educational innovation within rapidly changing industrial contexts.

Methods

This study employed a qualitative approach with a case study design to gain an in-depth understanding of strategic leadership phenomena within a specific social context. The findings of qualitative research are not intended for broad generalization but rather for meaningful interpretation in other contexts that share similar (Komara et al., 2024). This approach was selected as it aligns with the research objective, namely to explore comprehensively the role of principal strategic leadership in fostering a culture of innovation at SMK 14 Samarinda as the particular case under investigation.

The research data consisted of both primary and secondary sources in accordance with qualitative case study procedures. Primary data were obtained through in-depth interviews with the principal as the key informant, given his central role in the formulation, implementation, and evaluation of school strategic policies directly related to the development of an innovation culture. Secondary data were collected through a literature review of previous studies and supporting school documents (Komara et al., 2024)The integration of primary and secondary data was intended to enhance the depth of analysis and strengthen the validity of the research findings. The interviews were conducted using a semi-structured format lasting approximately 60 minutes, recorded, and transcribed verbatim for data analysis.

Data analysis was conducted using the interactive model of Miles and Huberman, which includes data reduction, data display, and conclusion drawing and verification stages. The analytical process began with field data collection, followed by data reduction to focus the investigation on aspects relevant to the research objectives. The reduced data were then organized into descriptive narratives to facilitate the drawing of conclusions (Sugiyono, 2012)

The analytical process was further developed through thematic coding techniques, which consisted of: (a) initial coding, where relevant interview excerpts were identified and labeled; (b) node development, involving the grouping of codes into main themes and subthemes; and (c) the use of query functions to explore relationships among themes and to identify the frequency of specific thematic occurrences(Hartono Hartono et al., 2025) . Conclusions were drawn based on the main themes of the study, providing clarity to the investigated issues and strengthening the interpretation of the findings in accordance with the principles of thematic analysis in qualitative research (Winarto & Diat Prasojo, 2017). Thematic coding was applied to categorize data into several key themes that served as the foundation for structuring the discussion, ensuring that the analysis was not merely descriptive but also interpretive and reflective of field dynamics (Mahmudah et al., 2025)

To ensure data credibility, this study applied source and method triangulation in line with methodological recommendations for qualitative research (Anam et al., 2025). Triangulation was conducted by comparing interview findings with school documents and relevant literature to test the consistency of information and to ensure that the research findings are scientifically accountable (Sakinah et al., 2025).

Data trustworthiness was established to ensure that the qualitative research process was conducted in a rigorous and scientifically accountable manner. Trustworthiness was examined using four criteria: credibility, transferability, dependability, and confirmability (Susanto et al., 2023)

a) Credibility was ensured through source and method triangulation by comparing interview data with school documents and prior research findings, as well as through *member checking* with the informant to confirm the accuracy of the interpreted data.
b) Transferability was supported by providing detailed descriptions of the research context, including school characteristics, the research setting, and the study focus, enabling readers to assess the applicability of the findings to other vocational schools with similar characteristics.
c) Dependability was addressed by maintaining procedural consistency through systematic documentation of all research stages as part of an *audit trail*, from data collection and analysis to conclusion drawing.

d) Confirmability was ensured by preserving interview transcripts, field notes, and coding documentation as evidence that the research findings were grounded in actual field data rather than researcher subjectivity.

Result

Based on the in depth interview with the school principal and document analysis, fifteen major themes were identified related to strategic leadership practices at SMK 14 Samarinda. These themes encompass vision communication, industry alignment, strategic program dissemination, teacher understanding of policy, open dialogue, risk-taking leadership, implementation consistency, teacher engagement, consultation mechanisms, supervision practices, teacher readiness for innovation, inter teacher collaboration, ICT infrastructure support, reward systems, and the impact of innovation on school competitiveness. Each theme is supported by empirical findings derived from interview data as summarized.

The findings show that school leadership at this institution is practiced in a structured and communicative manner, with a clear orientation toward innovation and long-term strategic goals. The principal plays an active role in ensuring that the school's vision aimed at producing graduates who are religious, character oriented, innovative, and competitive is well understood by teachers and staff. This vision is conveyed not only through formal meetings and school events, but also embedded in key planning documents, including the School Budget Plan (RAPBS), annual work programs, and school development plans. As a result, policy directions and development priorities are generally well internalized across the school organization.

Importantly, the school vision reflects current workforce expectations and the broader demands of Industry 4.0, particularly in relation to digital competence, automation, creativity, collaboration, and professional attitudes. Major strategic programs, such as P5 or Project-Based Learning (PjBL), work culture strengthening, industry partnerships, and accreditation preparation, are communicated through a combination of formal meetings, digital platforms including WhatsApp Groups, social media, and the school website, and written documents such as circular letters, standard operating procedures, and technical guidelines. While this layered communication approach supports teachers' understanding of school policies, differences remain among departments in terms of technical readiness and perceptions of long term initiatives, especially those related to digitalization and teaching factory development.

Leadership practices are also marked by openness and a readiness to take calculated risks. The principal provides opportunities for both formal and informal dialogue, allowing teachers to raise concerns, offer suggestions, and seek clarification regarding school policies. Instructional innovations such as the implementation of Project Based Learning, the digitalization of administrative processes, and collaboration with

industry partners continue to be pursued despite the adjustments required in curriculum design and work culture. At the same time, leadership decisiveness is evident in the formulation of work regulations, the establishment of strategic teams, the appointment of key teachers, and the setting of performance targets based on competency mapping and school quality priorities.

At the implementation level, the school maintains continuous monitoring and supervision through regular PjBL evaluations, academic supervision activities, routine coordination meetings, and ongoing mentoring for teachers. Teachers are not positioned merely as implementers of policy, but are actively involved in planning processes, curriculum development, instructional material preparation, and participation in strategic school teams. Accessible consultation mechanisms and institutional support for creativity have contributed to the emergence of instructional innovations, cross disciplinary projects, and extracurricular activities that align with teachers interests and professional strengths.

Collaboration among teachers is further strengthened through subject-based professional learning communities (MGMP), school innovation teams, and the joint development of instructional materials using shared digital documents. The availability of ICT infrastructure including computers, internet access, learning management systems, and vocational laboratories plays a crucial role in enabling these innovations. In addition, the school recognizes teachers contributions through both formal mechanisms, such as awards and opportunities for advanced professional development, and informal forms of appreciation, including public acknowledgment and support for experimentation. Collectively, these leadership practices contribute to improvements in graduate quality and reinforce the school's competitiveness and reputation among the wider community and industry partners.

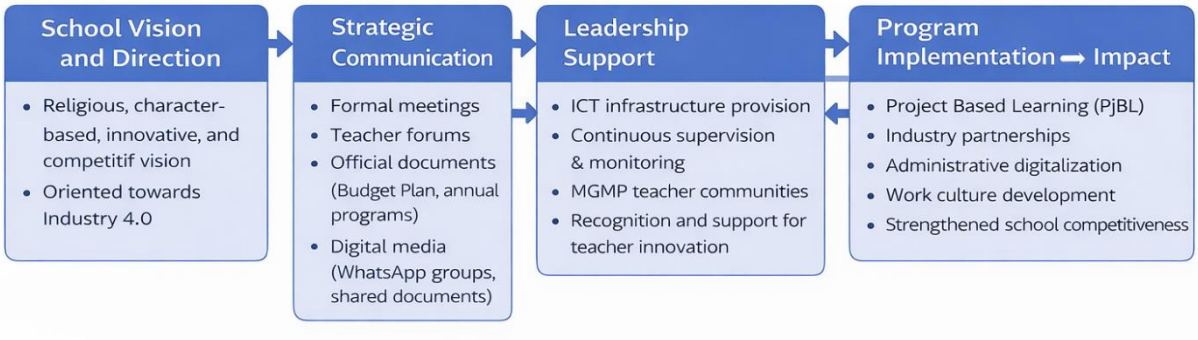

Figure 1. Strategic Leadership Practice Model of the School Principal at a Vocational High School

Discussion

Based on interview findings and the literature review, this discussion examines how the practice of strategic leadership by the principal of SMK 14 Samarinda contributes to strengthening a culture of innovation and the school's competitive advantage.

1. Strategic Leadership of the Principal and the Culture of Innovation

The findings of this study indicate that the strategic leadership of the principal at SMK 14 Samarinda plays a fundamental role in fostering a culture of innovation through the formulation of a clear vision, consistent communication of school values, and adaptive decision-making in response to change. The school vision is not merely formulated as a value statement but is systematically disseminated through official meetings, teacher forums, digital communication platforms, and school planning documents. This leadership pattern aligns with the concept of strategic leadership, which emphasizes the leader's function as a vision director, a guardian of values, and a manager of change within the educational system (Salsabila et al., 2025).

In addition to vision consistency, the findings also show that the principal plays a crucial role in mobilizing an organizational culture that is open to innovation. Practices such as open dialogue with teachers, providing opportunities for participation in school program planning, and strengthening cross-departmental teamwork contribute to fostering a sense of ownership toward innovation policies. These conditions reflect that a culture of innovation does not emerge instantly but is developed through leadership processes that encourage trust, collaboration, and the courage to experiment with new learning approaches. This is consistent with studies on the development of innovative school cultures, which emphasize the importance of leadership in creating a work climate that supports creativity and sustainable change (Siswanto et al., 2024)

Furthermore, the strategic leadership of the principal at SMK 14 Samarinda is relevant to the challenges faced by schools in the era of the Fourth Industrial Revolution. The findings show that the principal actively directs project-based learning innovations and the use of educational technology to align graduates' competencies with the demands of the labor market. This leadership approach reinforces the view that progressive leadership and a supportive school culture are key factors in promoting the realization of innovative learning in secondary education, particularly within vocational education, which is required to remain adaptive to technological advancements and modern industrial developments (Subasman, 2023).

2. Data Driven Leadership as a Driver of School Innovation

The findings indicate that the principal of SMK 14 Samarinda applies data-driven leadership in strategic decision-making by utilizing education report data, results of academic supervision, evaluations of project-based learning (PjBL), and partnership achievement data with industry (DU/DI). These data are used as the basis for determining

program priorities, assigning teaching responsibilities, and formulating policies aimed at improving learning quality. This finding is consistent with the study by (Nurbani et al., 2025) which explains that systematic use of school data enables principals to develop planning processes that are more objective, responsive to students' needs, and aligned with the evolving demands of education.

Furthermore, the data-driven leadership approach contributes to building a reflective culture within the school. Learning evaluation results are not only used to measure performance outcomes but also serve as material for professional discussions with teachers to identify strengths and weaknesses in instructional practices. This reflective practice supports continuous improvement of teaching materials, learning strategies, and student assessment. This condition aligns with the findings of (Nisa & Kurniawati, 2024) in their systematic review of data-driven decision-making, which states that the use of data as a tool for professional reflection can enhance teacher effectiveness and strengthen the quality of innovative learning implementation in schools.

In addition, data-driven leadership at SMK 14 Samarinda is further strengthened through the integration of digital technology into the processes of monitoring and academic supervision. The use of digital platforms for PjBL reporting, documentation of supervision activities, and cross-team coordination allows decision-making to be conducted more efficiently and systematically. This practice is consistent with the study by (Indrayani et al., 2024) on digital instructional leadership and distributed leadership, which demonstrates that the use of technology to manage learning data can improve teacher performance and support the implementation of project-based learning in a more structured and effective manner.

3. Teacher Involvement and Collaboration as the Foundation of an Innovation Culture

The findings indicate that the active involvement of teachers in school program planning, development of instructional materials, internal MGMP forums, and participation in Project-Based Learning (PjBL) teams constitutes a critical foundation for fostering a culture of innovation at SMK 14 Samarinda. Through teamwork and collegial communication, teachers do not merely implement policies but also contribute to designing instructional innovations. This finding is consistent with the study by (Willianto Pratama et al., 2024), which emphasizes that strengthening achievement motivation, teamwork, and a positive organizational climate significantly promotes teachers' innovativeness in designing and implementing creative learning practices.

Teacher involvement also reflects the application of distributed leadership, where the development of innovation is not centralized solely on the principal but is shared among cross-disciplinary teacher teams. At SMK 14 Samarinda, this leadership model is manifested in the establishment of PjBL teams, teacher learning communities, and cross-departmental collaboration that collectively support the implementation of project-based

learning. This practice is consistent with studies on the effects of distributed leadership, which indicate that teacher participation in educational decision-making contributes to increased instructional innovation and the emergence of creative initiatives at the classroom level (Gong, 2025).

Furthermore, intensive teacher collaboration functions as a form of professional learning community (PLC) a professional forum where teachers engage in discussions, exchange best practices, and collaboratively develop solutions to instructional challenges. At SMK 14 Samarinda, internal MGMP activities and routine reflection forums serve as platforms for this collaborative process, strengthening teachers' capacity to adapt PjBL models and authentic assessment practices. This finding aligns with the study by (Wijarwadi et al., 2025) on the conceptualization and practice of teacher collaboration, which confirms that collective professional work among educators is a fundamental prerequisite for sustainable innovation in schools.

The collaborative capacity of both the principal and teachers further enhances the school's ability to anticipate changes and continuously update instructional strategies. The findings show that open dialogue, data-based discussions, and strengthened teamwork assist the school in formulating innovative strategies to respond to the dynamic demands of industry. This perspective is supported by the research of (Magdato et al., 2025) on collaborative leadership capacity, which highlights that collaboration among educational stakeholders, combined with data-driven decision-making, enhances a school's strategic foresight and improves teachers' readiness to develop innovative learning practices.

4. Micro-Mechanism: Implementation of Strategic Leadership Based on Field Practices

Based on the interview results, the mechanism for implementing strategic leadership at SMK 14 Samarinda begins with the formulation of school policies guided by the vision of strengthening a culture of innovation and enhancing graduates' competitiveness. These policies are translated into operational school programs, including the implementation of project-based learning (PJBL), the development of collaborative instructional materials, and the establishment of partnerships with business and industry sectors. During the implementation stage, the principal facilitates innovation by organizing cross-departmental teams, conducting in-house training (IHT), and providing teachers with creative flexibility to design learning activities in accordance with the specific competencies of each vocational program.

Monitoring and evaluation are conducted regularly through academic supervision, classroom observations, and teacher reflection forums. Supervision is positioned as a form of professional mentoring that provides constructive feedback on instructional practices rather than merely functioning as administrative control. The evaluation results are subsequently discussed within internal MGMP meetings as the basis for revising

teaching materials, refining project designs, and adjusting instructional strategies. This continuous cycle of planning, implementation, monitoring, evaluation, and follow-up constitutes the micro-mechanism of strategic leadership at SMK 14 Samarinda, enabling educational innovation to be implemented in a systematic, focused, and adaptive manner.

5. The Impact of an Innovation Culture on School Competitive Advantage and Research Limitations

The culture of innovation developed through the strategic leadership of the principal at SMK 14 Samarinda has had a positive impact on improving graduate quality and enhancing the school's competitiveness. The implementation of project-based learning, the strengthening of partnerships with business and industry sectors, and curriculum adaptation to meet labor market demands have produced graduates who are better prepared for employment and equipped with contextual skills. This finding is consistent with the study by (Edwiyan Pradana et al., 2024) on school–industry collaboration, which demonstrates that strengthening work–school partnerships is an effective strategy for improving the quality of vocational education and increasing the relevance of graduates' competencies to workforce demands.

Furthermore, the improvement in graduate quality at SMK 14 Samarinda is also reflected in the development of 21st-century skills, including communication, collaboration, creativity, and problem-solving abilities fostered through innovative learning approaches. These findings support previous research showing that innovative instructional approaches significantly contribute to enhancing vocational students' employability skills, thereby preparing them more effectively for both workforce competition and further education (Kusuma Lestari et al., 2024)

The school's competitive advantage is also influenced by the availability of adequate learning support facilities as an implication of the principal's innovative policies. SMK 14 Samarinda has gradually strengthened its practice facilities, educational technology resources, and student collaboration spaces to support the implementation of competency-based project learning. This condition aligns with the findings of (Puspitaningsih et al., 2023) who reported that improving and maintaining educational facilities in vocational schools directly strengthens instructional quality and enhances graduates' competency achievement.

In terms of work readiness, the study reveals that graduates of SMK 14 Samarinda demonstrate positive development in work confidence, adaptability, and work ethic cultivated through innovative learning processes. This is consistent with empirical findings indicating that mastery of employability skills has a significant influence on the work readiness of vocational students, making it an important indicator for building a school's competitive advantage (Tsaqib et al., 2025)

Beyond its impact on graduate quality, innovative learning and strategic leadership also contribute to improving the school's reputation within the community. The integration of curricula based on local potential and labor market needs enhances the school's relevance and adaptability to its surrounding environment. These results correspond to findings showing that implementing vocational curricula grounded in local wisdom and industry needs can increase school competitiveness and strengthen public trust in the quality of educational services (Ranu et al., 2025).

Nevertheless, this study has several limitations. The primary data source was limited to interviews with the principal; therefore, the perspectives of teachers, students, and industry partners were not directly explored. Additionally, the focus on a single vocational school restricts the generalizability of the findings to other vocational contexts. Future research is recommended to involve multiple informants and adopt comparative approaches across schools to broaden insights into the role of strategic leadership in fostering innovation cultures and competitive advantage in vocational education.

Conclusion

The findings indicate that the principal's strategic leadership plays a central role in cultivating an innovation oriented school culture that supports the competitive positioning of SMK 14 Samarinda. Leadership practices such as the consistent articulation of school vision, the use of data in decision making processes, and the active involvement of teachers through cross departmental collaboration have contributed to the development of an adaptive and innovation responsive school climate. The implementation of project based learning further reinforces this climate by translating leadership vision into concrete instructional practices at the classroom level.

From a theoretical standpoint, this study contributes to the strategic leadership literature by drawing attention to the micro level processes through which leadership vision is operationalized in daily school practices. Rather than viewing leadership solely as a conceptual or normative construct, the findings demonstrate how strategic intentions are enacted through structured communication, collaborative work mechanism, and instructional innovation. In this way, the study extends existing frameworks of strategic leadership by emphasizing implementation processes that directly shape teaching and learning practices.

Methodologically, the study shows that a qualitative case study approach, supported by systematic thematic analysis and data triangulation, is well suited to capturing the complexity of leadership practices in vocational school contexts. This design enables a detailed examination of how leadership decisions, teacher collaboration, and instructional innovation function together as an integrated organizational system. The findings suggest that strategic leadership is more effectively understood through context

sensitive, process-oriented inquiry rather than relying exclusively on perception-based survey data.

In practical terms, the results offer several implications for vocational school leadership. These include the importance of maintaining structured and continuous communication of school vision, making more strategic use of educational performance data in program planning, strengthening cross departmental professional learning communities as drivers of instructional innovation, and applying consistent cycles of supervision, reflection, and follow up to sustain change initiatives. Future studies are encouraged to involve a wider range of stakeholders such as teachers, students, industry partners, and policymakers and to adopt comparative, multischool designs in order to enhance the transferability of findings and deepen understanding of how strategic leadership fosters innovation cultures in vocational education settings.

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