



## Quality Achievement of Vocational High Schools Based on the Education Report Card: The Configuration of Principals' Leadership, Teachers' Work Behavior, and Teachers' Performance Practices

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### ABSTRACT

The quality of vocational high schools can no longer be adequately understood solely through learning outcome indicators because, in practice, quality achievement is shaped by the interrelationship among principals' leadership, teachers' work behavior, teachers' performance practices, school culture, and data-based governance. This study was aimed at systematically mapping the configuration of these factors as a conceptual foundation for interpreting the education report card and determining the direction of preliminary studies in the vocational high school context. A systematic literature review guided by PRISMA was employed. The search was conducted in the Scopus database using predetermined keywords. Of the initial 154 documents, 60 articles passed the screening stage after limitations were applied to publication years 2021-2026, journal article type, English language, and all open access status. After selection based on abstracts, primary data, substantial relevance, and DOI verification, 13 articles were established as the included articles. The review results indicate that vocational high school quality is most consistently explained by the configuration of instructional or transformational leadership, teachers' work commitment and motivation, self-efficacy, professional development, school culture and climate, quality governance, and information system support for decision-making. the contribution of this study lies in integrating previously fragmented research maps into a more operational synthesis framework for interpreting vocational high school quality based on the education report card and for formulating more focused directions for further research.

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## **INTRODUCTION**

The improvement of vocational high school quality can no longer be explained only through student learning outcomes because school quality is, in practice, shaped by leadership capacity, the quality of teachers' work, and the strength of continuously improved instruction. Recent evidence has shown that school leadership development programs can be linked to improved academic achievement, indicating that schools cannot be managed merely through administrative approaches (Agirdag & Muijs, 2023). At the same time, principals' instructional leadership has been positioned as an important predictor of teachers' professional development, which subsequently affects the quality of instructional practice (He et al., 2024). The influence of leadership on teacher performance has also been demonstrated through authentic leadership operating through relational and balanced processing dimensions (Long et al., 2024). Moreover, the quality of teachers' professional development itself has been measured as a component that can be systematically validated in school improvement efforts (Richter & Richter, 2024). Therefore, vocational high school quality needs to be understood as the outcome of the configuration of school leadership, teachers' professional capacity, and the quality of instructional processes that mutually shape one another.

Developments in the literature over the last five years have shown a shift from direct-effect models to models emphasizing psychological, organizational, and professional mediation pathways. Transformational leadership, for example, has been linked to teachers' innovative behavior through their sense of meaning at work and has been influenced by teachers' levels of uncertainty avoidance (Bao, 2024). On the other hand, empowering leadership has been shown to be associated with teachers' well-being at work through reduced organizational ostracism, indicating that work quality is not determined solely by individual competence (Okçu et al., 2025). In the vocational context, school support and motivation to innovate have been identified as prerequisites for the innovative capacity of vocational teachers (Fongkanta & Buakanok, 2025). Even the professionalism of vocational teachers itself has been mapped as a multidimensional construct shaped by changes in the VET system and increasingly complex work demands (Sirk, 2024). This body of research confirms that vocational high school quality needs to be analyzed through the simultaneous relationships among leadership, work environment, motivation, and vocational teacher professionalism.

At the same time, data-based approaches have increasingly been positioned as an important foundation for school quality improvement, although their effectiveness is not determined by data availability alone. A systematic review showed that principals' data literacy includes the use of data to build a data-based culture, drive school improvement, and refine leadership practice itself (Lee et al., 2024). However, the sustainability of data-use professional learning communities in schools has remained strongly determined by the combination of formal and informal leadership and by their integration into organizational routines (van den Boom-Muilenburg et al., 2023).

At the school evaluation level, data use for self-evaluation has still been found to occur in a fragmented manner and to be influenced by data quality, data users, and organizational and contextual factors (Vanari et al., 2025). Within accountability systems, principals' practices and school conditions have also been shown to determine whether data are used merely for compliance or genuinely for instructional improvement (Rojas-Bravo et al., 2024). Therefore, vocational high school quality based on the education report card should be understood as a process of data interpretation guided by leadership, collaboration, and sustainable improvement routines.

Although evidence on school leadership, teachers' work behavior, vocational teacher professionalism, and data-based improvement has expanded, the relationships among these components have still largely been examined separately. Research on evidence-based school improvement has emphasized the importance of sustainable routines (Rääk & Eisenschmidt, 2025), school leaders' capacity to read variation in order to improve complex systems (Leger & Gomez, 2025), and the importance of the duration and sustainability of school improvement strategies (Kyriakides et al., 2024). On the other hand, the professional development of vocational teachers has also been shown to require contextual and practice-specific designs related to assessment and instruction (Baartman & Gulikers, 2025), while vocational teachers in school settings have different career pathways and motivations from general teachers (Rice et al., 2025). Therefore, this study was used to map the configuration of findings relevant to vocational high school quality achievement based on the education report card. The research questions were directed toward three issues, namely which factors are most consistently associated with vocational high school quality, how the relationships between principals' leadership and teachers' work behavior and performance practices can be mapped, and what conceptual contributions can be used as the foundation for preliminary studies. The main contribution of this study lies in integrating previously fragmented research maps into a more operational synthesis framework for selecting research themes and directions.

## **METHOD**

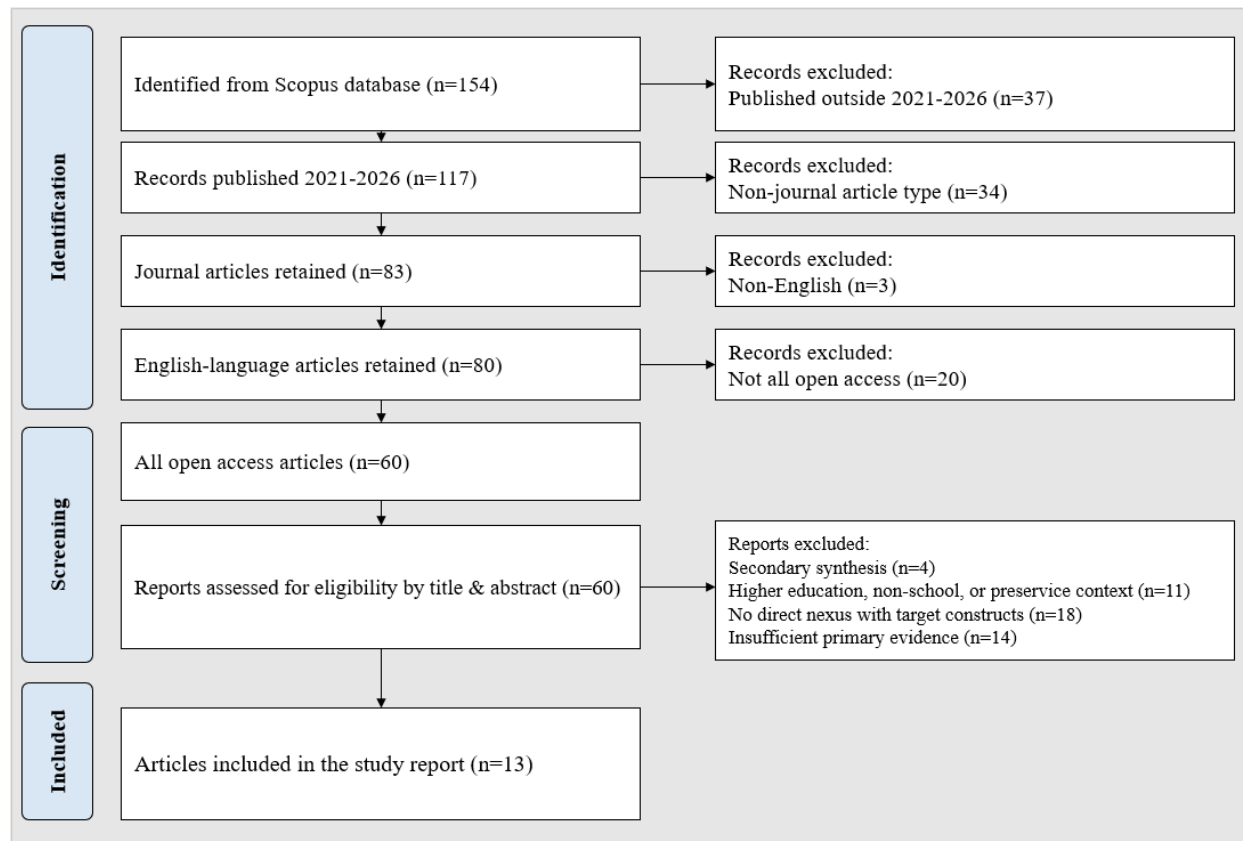
A systematic literature review guided by PRISMA was employed in this study. The search was conducted in the Scopus database using the following keywords: ( ( "vocational education" OR "vocational school\*" OR "technical and vocational education and training" OR TVET ) AND ( "school quality" OR "school effectiveness" OR "school improvement" ) AND ( "principal leadership" OR "school leadership" OR "instructional leadership" ) AND ( "teacher performance" OR "teaching performance" ) ). The initial identification yielded 154 documents. After limiting the search to English-language journal articles published between 2021 and 2026 and classified as all open access, the number was reduced to 60 articles.

The next selection stage was conducted through title and abstract review so that only articles relevant to vocational high school quality achievement, principals' leadership, teachers' work behavior, and teachers' performance

practices were retained. Articles were included when they were based on primary data, focused on school or vocational education contexts, and contained at least two core constructs, namely principals' leadership, teachers' behavior or commitment or motivation, teacher performance, school climate or culture, and school quality or effectiveness. Articles were excluded when they were systematic reviews or meta-analyses, focused on university students or preservice teachers, were situated in higher education contexts that were too distant from school governance, discussed only peripheral aspects, or did not provide sufficient primary evidence regarding at least two core constructs.

Data were extracted in a structured manner, covering authors, title, year, sample or subject characteristics, research design, interventions or mechanisms tested, and main findings as stated in the abstract. Of the 60 articles, 47 were excluded, consisting of 4 secondary synthesis articles, 11 articles in higher education, non-school, student, or preservice teacher contexts, 18 articles not directly intersecting with school quality, principals' leadership, and teacher performance or work behavior, and 14 articles that did not contain sufficient primary evidence regarding at least two core constructs. Therefore, 13 articles were established as the basis for the final synthesis.

In the PRISMA flow, the identification stage yielded 154 records, the initial screening stage produced 60 articles, the eligibility stage assessed 60 articles based on titles and abstracts, and the included stage established 13 articles for review.



## RESULTS

A total of 13 articles met the inclusion criteria. Quantitative approaches were found to be more dominant, particularly through survey-based SEM, PLS-SEM, regression, and decision modeling, while two articles used qualitative approaches. In general, the review results show that vocational school quality and teacher performance are explained by the configuration of principals' leadership, school culture or climate, managerial support, motivation, commitment, professional development, and the quality of governance and decision information systems.

**Table 1. Results of the Article Review**

No	Authors	Main Finding
1	Guo et al. (2025)	Principals' instructional leadership, especially in managing instructional programs and defining the school mission, was shown to build a positive organizational climate and increase teachers' job satisfaction.
2	Nellitawati et al. (2024)	Instructional leadership contributed to improved teacher performance, but work commitment made a greater contribution. Together, both explained variations in teacher performance in vocational high schools.
3	Kholifah et al. (2024)	Managerial support, working conditions, and family sociology influenced teacher performance through motivation and professional development, with both mediators serving as key leverage points for performance improvement.
4	Dacholfany et al. (2026)	Value-based leadership rooted in <i>Ing Ngarso Sung Tulodo</i> and a conducive school climate were found to have a positive and significant effect on improving teachers' professional competence.
5	Rejaan et al. (2025)	Principals' leadership and organizational culture were shown to support the implementation of the <i>Kurikulum Merdeka</i> , and its implementation had a positive and significant effect on improving educational quality.
6	Attsaury et al. (2024)	Teachers' professional competence was improved through regular meetings, continuous motivation, competency-based training, classroom supervision, and the consistent provision of learning facilities and infrastructure.
7	Tian and Jiang (2025)	Instructional leadership affected supportive teaching practices both directly and indirectly through organizational climate and teacher commitment as sequential mediators.

No	Authors	Main Finding
8	Elfira et al. (2024)	Principals' instructional leadership had a direct effect on teacher self-efficacy and performance, while self-efficacy significantly mediated that effect.
9	Khurniawan et al. (2021)	The improvement of the effectiveness of school-based enterprises in vocational high schools needs to begin with strengthening human resource quality through the collaboration of school governance and total quality management.
10	Habibi et al. (2025)	Top management strategy, commitment, and knowledge management were found to be significantly associated with motivation and teacher performance, with motivation acting as an important mediator.
11	Supriadi et al. (2021)	Management information systems improved the quality of vocational principals' decision-making, and this effect became stronger when supported by a decision support system.
12	Alzoraiki et al. (2024)	Transformational leadership and positive school culture significantly predicted better teaching performance, with school culture acting as a mediator.
13	Purwanto et al. (2024)	The evaluation of vocational principals' performance in Indonesia has still tended to be separated from school performance evaluation, whereas in Malaysia it has been integrated into school quality standards.

## DISCUSSION

The first synthesis shows that principals' leadership remains the main lever of teacher performance, especially when enacted as instructional leadership closely connected to the learning process. In vocational high schools in Padang City, this influence did not operate independently because work commitment was also found to make a strong contribution to variation in teacher performance (Nellitawati et al., 2024). However, findings from the broader Indonesian context show that principals' instructional leadership also works through the strengthening of teacher self-efficacy, so that its impact on teaching performance is not only direct but also indirect (Elfira et al., 2024). A similar pattern was observed in Yemeni public schools, where transformational leadership was associated with better teaching performance through a positive school culture (Alzoraiki et al., 2024). Therefore, teacher performance appears not to be shaped primarily by administrative control, but by leadership that directs learning, clarifies goals, and strengthens professional confidence.

The next finding indicates that the relationship between leadership and teachers' work quality is rarely linear in a simple sense because it is influenced by psychological and organizational mediators. Among vocational teachers, performance improvement became stronger when managerial support and working conditions were translated into real motivation and professional development (Kholifah et al., 2024). In secondary schools in Northwest China,

instructional leadership was shown to shape a collegial organizational climate and then increase teachers' job satisfaction as a further consequence (Guo et al., 2025). In higher vocational education, leadership influence was also transmitted through organizational climate and commitment, so that supportive teaching practice did not emerge automatically but was sustained by a convincing work environment (Tian & Jiang, 2025). In the Indonesian context, teacher competence could even be strengthened through the combination of culturally rooted leadership and a conducive school climate (Dacholfany et al., 2026). Therefore, the quality of teachers' work behavior will be more easily improved when schools manage climate, commitment, efficacy, and professional development simultaneously.

At the level of school quality, the results of this review confirm that principals' leadership needs to be read together with governance, information systems, and curriculum implementation. In Southeast Maluku, educational quality improved when principals' leadership and organizational culture consistently supported the implementation of the *Kurikulum Merdeka*, whereas teacher commitment alone was not strong enough to explain it (Rejaan et al., 2025). In vocational high schools, the effectiveness of school-based enterprise units also needs to begin with strengthening human resource quality through the collaboration of total quality management and school governance (Khurniawan et al., 2021). Findings from Yogyakarta show that the quality of vocational principals' decisions increased when the management information system was strengthened by a decision support system (Supriadi et al., 2021). A comparative study of Indonesia and Malaysia also shows that principals' performance evaluation becomes stronger when it is attached to school quality standards (Purwanto et al., 2024). In other words, the quality achievement of vocational schools will be more stable when leadership, governance, evaluation, and data infrastructure are arranged as a single improvement architecture.

This discussion also shows that effective leadership is not sufficiently defined at the conceptual level, but must be translated into everyday organizational practices. At SMK Setih Setio 2 Muara Bungo, improvement in teachers' professional competence was driven through regular meetings, continuous motivation, competency-based training, classroom supervision, and the provision of learning facilities (Atstsauray et al., 2024). These findings help explain why the influence of instructional leadership on teacher performance in vocational high schools is not always large when it is not accompanied by concrete follow-up mechanisms (Nellitawati et al., 2024). Results from China indicate that teachers' job satisfaction grew when the school mission was clarified and instructional programs were clearly managed (Guo et al., 2025). Meanwhile, leadership rooted in the values of *Ing Ngarso Sung Tulodo* shows that cultural exemplarity can be used to strengthen teacher competence (Dacholfany et al., 2026). These findings confirm that teachers' work behavior is more easily shaped by leadership practices that are structured, repeated, contextual, and closely aligned with daily work needs.

The implication for the interpretation of the education report card is that vocational high school quality cannot be reduced to learning outcome figures alone because a connected management configuration lies behind them. On a large scale in Indonesia, top management strategy, commitment, and knowledge management were shown to be significantly related to the motivation and performance of vocational teachers (Habibi et al., 2025). At the school level, managerial support and professional development were confirmed as important pathways in shaping vocational teacher performance (Kholifah et al., 2024). However, educational quality was more clearly promoted when school leadership was linked to organizational culture and effective curriculum implementation (Rejaan et al., 2025). Therefore, principals' decision information systems (Supriadi et al., 2021) and the performance evaluation of vocational principals integrated with school quality assessment (Purwanto et al., 2024) need to be positioned as part of the quality ecosystem. Taken together, this chain of findings indicates that this research theme is worthy of being used as the basis for a preliminary study as well as the foundation for selecting a research title because the research gap does not lie in the absence of variables, but in the incomplete reading of the relationships among the components of vocational high school quality within one interconnected configuration. Ultimately, the improvement of vocational high school quality will be more measurable when leadership, teachers' work behavior, teaching performance, and quality assurance are understood as a mutually reinforcing causal chain.



## CONCLUSION

The focused review of 13 articles shows that vocational high school quality achievement is most consistently explained by the configuration of principals' leadership, teachers' work behavior, teachers' performance practices, school culture or climate, and the quality of governance and managerial decision-making. Principals' leadership was shown to be more effective when enacted in the form of instructional or transformational leadership closely connected to learning, accompanied by the strengthening of teachers' self-efficacy, motivation, commitment, and professional development. School quality also appeared to be more stable when leadership was not treated as a single factor, but was integrated with curriculum implementation, principals' performance evaluation, decision information systems, and human resource management. Therefore, the interpretation of the education report card in vocational high schools should be directed not only to output indicators, but also to the structural interrelationships among school leadership, teachers' work behavior, teaching performance, and internal quality assurance systems.

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