
Leadership of School Principals in Improving the Quality of Vocational High Schools in Tanjung Selor District, Bulungan Regency

Puji Surya Putra, Nurtanio Agus Purwanto
Universitas Negeri Yogyakarta, Indonesia
Email: pujisurya.2022@student.uny.ac.id

ABSTRACT

This study examines the leadership of school principals in enhancing the quality of vocational high schools in Tanjung Selor District, Bulungan Regency. The background highlights the challenges faced by vocational schools, including inadequate infrastructure, curriculum relevance, and conventional teaching methods, which hinder educational quality. The research aims to analyze the principals' leadership programs, strategies, their impacts, and the supporting and inhibiting factors in their implementation. Using a qualitative descriptive method, the study involved principals and vice-principals from three vocational schools as subjects. Data were collected through in-depth interviews and observations, then analyzed using the interactive model of Miles, Huberman, and Saldaña, with triangulation to ensure validity. Findings reveal that principals implemented curriculum development aligned with industry needs, improved facilities, and fostered stakeholder collaboration. Strategies included mentoring, teacher training, and industry partnerships, which enhanced teacher competencies and student outcomes. However, challenges such as limited resources and outdated teaching methods persisted. The study concludes that industry-aligned curricula, adequate infrastructure, and continuous professional development are crucial for improving educational quality. Implications suggest the need for regular program evaluations, increased community and industry involvement, and targeted training to address existing barriers.

KEYWORDS School Principal Leadership, Programs, Quality Schools



This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International

INTRODUCTION

These demands revolve around the low quality of education and issues of relevance to the evolving needs of society in the increasingly open era of *Industry 4.0*. Education plays a strategic role in shaping superior human resources (HR), as excellence today is no longer based solely on natural resources but also on the ability of human resources to manage those resources (Bohlander & Snell, 2023; Darmawan et al., 2020; Ferdinan, 2018; Gerhart & Feng, 2021).

However, the reality faced by *Sekolah Menengah Kejuruan (SMK, Vocational High Schools)* is generally similar to that of other schools. These issues include weaknesses in infrastructure, the quality of educators and educational staff, student performance, curriculum, learning processes, and institutional management. The establishment of *SMK* by the community often fails to adequately consider the quality of learning services or anticipate

potential risks. The education system must ensure equal opportunities for quality improvement and relevance, as well as efficient education management, to address challenges in line with both domestic and international changes. Therefore, planned, targeted, and sustainable educational reforms are necessary.

Education requires professional management capable of developing and improving school quality. For this reason, educational leaders or principals are expected not only to master leadership theories but also to apply them skillfully in practical situations in today's work and technological environment (Yogi Irfan, 2015). Effective principals possess the skills needed to lead and manage schools. They must understand changes within the school to improve the quality of education. As leaders, principals should have plans to implement changes and introduce innovations aimed at increasing student interest.

Based on initial observations of the leadership in three vocational schools in Tanjung Selor District, Bulungan Regency, the principals strive to improve the quality of education. The current education quality is assessed based on financial aspects, facilities and infrastructure, educational staff, and community relations. Curriculum improvement is also crucial in enhancing the quality of education and learning by implementing high-quality components.

Further observations show that improving school quality is a well-established vision and mission, integrated into strategic and operational school plans. These plans include detailed outlines of planning, regulations, implementation, and monitoring of school programs. However, the implementation of school activities is suboptimal, resulting in lower absorption of graduates into the workforce and industry. This is attributed to principal leadership or environmental factors where school operations are not fully optimized, leading to subpar educational outcomes.

The quality of vocational education has become a critical focus in global educational reforms, particularly as industries demand graduates with relevant skills for the rapidly evolving workforce. Research by Hargreaves and Fullan (2020) emphasizes that effective school leadership is pivotal in driving educational improvements, particularly in aligning curricula with industry needs. Similarly, Darling-Hammond et al. (2017) highlight the role of principal leadership in fostering teacher professional development, which directly impacts student outcomes. Despite these insights, many vocational schools, especially in developing regions, continue to face systemic challenges, including outdated curricula and insufficient infrastructure, as noted by Saavedra and Opfer (2017). This discrepancy between theoretical advancements and practical implementation underscores a significant gap in the literature, particularly concerning localized leadership strategies in under-resourced educational settings.

A closer examination of existing studies reveals that while the importance of principal leadership is well-documented, there is limited research on how these leadership practices are tailored to address the unique challenges of vocational schools in rural or semi-urban areas. For instance, Smith and McKnight (2019) advocate for culturally relevant pedagogy, yet their work does not specifically address vocational education contexts. Similarly, Green et al. (2020) explore industry-school collaborations but focus predominantly on urban institutions, leaving a gap in understanding how such partnerships function in less industrialized regions. This gap is particularly evident in regions like Tanjung Selor District, where vocational schools struggle

with resource limitations and low industry absorption of graduates, as highlighted in preliminary observations.

The urgency of this research stems from the pressing need to bridge the divide between vocational education and labor market demands, especially in the era of *Industry 4.0*. Studies by Wang and Wu (2021) demonstrate that technological integration in education is essential for preparing students for modern workplaces, yet many vocational schools lack the infrastructure or leadership to implement such changes effectively. Furthermore, the work of Bowers (2020) underscores the impact of physical learning environments on student motivation and achievement, yet few studies explore how principals in resource-constrained settings navigate these challenges. Addressing these issues is critical not only for improving educational outcomes but also for ensuring equitable access to quality vocational training in underserved areas.

This study introduces *novelty* by focusing on the specific leadership strategies employed by principals in Tanjung Selor District, a region underrepresented in existing literature. Unlike broader studies on school leadership, this research delves into the contextual adaptations of these strategies, such as leveraging local industry partnerships despite limited resources. Additionally, it examines the interplay between leadership programs and their tangible impacts on teacher competencies and student readiness for the workforce—a dimension often overlooked in prior research. By adopting a qualitative *case study* approach, the study captures nuanced insights into how leadership practices are enacted and perceived at the grassroots level, offering a more granular understanding of their effectiveness.

The purpose of this research is to analyze the leadership programs and strategies implemented by vocational school principals in Tanjung Selor District, evaluating their effectiveness in improving educational quality. It seeks to identify the supporting and inhibiting factors in these initiatives, providing a comprehensive assessment of their real-world applicability. By doing so, the study aims to contribute actionable recommendations for policymakers and school leaders to enhance vocational education in similar contexts. The focus on localized challenges and solutions distinguishes this research from broader, more generalized studies on educational leadership.

The findings of this study hold significant benefits for multiple stakeholders. For school leaders, the research offers practical insights into optimizing limited resources and fostering collaborative networks with local industries. Policymakers can leverage the results to design targeted interventions that address systemic barriers in vocational education, such as funding for infrastructure or teacher training programs. Additionally, educators and researchers will gain a deeper understanding of how leadership practices can be adapted to diverse socioeconomic contexts, enriching the global discourse on educational improvement. Ultimately, the study aspires to contribute to the broader goal of equitable and quality education, aligning vocational training with the demands of a dynamic labor market.

By situating the study within the specific context of Tanjung Selor District, the research also addresses a critical gap in the literature regarding rural and semi-urban vocational education systems. Previous studies, such as those by Elmore (2019) and Bryk et al. (2017), have predominantly focused on urban or well-resourced settings, leaving a void in understanding how leadership dynamics operate in less advantaged areas. This research fills

that void by providing empirical evidence on the challenges and innovations unique to such contexts, thereby expanding the scope of educational leadership research.

RESEARCH METHOD

The research method used to address the problem is a qualitative research method. According to Sugiyono (2012), "*qualitative research is based on post-positivism philosophy and is used to study natural object conditions (as opposed to experiments), with the researcher acting as the key instrument. Data sources are sampled purposively and through snowball sampling, data collection is conducted through triangulation (a combination of methods), data analysis is inductive qualitative, and the results emphasize meaning over generalization.*"

This research employs *field study* techniques using a *qualitative descriptive* model. The qualitative approach is applied to comprehensively address research problems—not by testing hypotheses, but by describing and analyzing material to identify general trends that can serve as a basis for further study. The method employed in this research is a *case study* approach.

RESULT AND DISCUSSION

From the analysis results of SMK Negeri 1 Tanjung Selor, SMK Negeri 2 Tanjung Selor, and SMK Negeri 3 Tanjung Selor regarding the education quality improvement programs, the strategies implemented to improve education quality, the impacts of the program and strategy implementation, and the supporting and inhibiting factors in the application of these programs and strategies in vocational high schools in the Tanjung Selor district. This discussion also compares these findings with previous research published from 2017 to 2024.

Education Quality Improvement Program in Vocational High Schools in Tanjung Selor District

1. Curriculum Development

Findings at SMK Negeri 1 Tanjung Selor show that curriculum development focuses on integrating 21st-century skills and relevance to industry needs. The proposed curriculum involves skills such as critical thinking, effective communication, collaboration, and creativity. SMK Negeri 2 Tanjung Selor emphasizes integrating local wisdom with global content to stimulate student creativity. Meanwhile, SMK Negeri 3 Tanjung Selor proposes a flexible, technology-based curriculum.

Recent research shows that curriculum development that includes 21st-century skills, as done by SMK Negeri 1, aligns with global educational trends that emphasize the importance of these skills for future job readiness (Saavedra & Opfer, 2017; Hargreaves & Fullan, 2020). Research by Eynon et al. (2018) suggests that integrating technology into the curriculum, as proposed by SMK Negeri 3, can enhance student engagement and learning outcomes. Meanwhile, the integration of local wisdom at SMK Negeri 2 aligns with studies emphasizing the importance of culturally and contextually relevant education to increase student relevance and motivation (Smith & McKnight, 2019).

2. Development of Facilities and Infrastructure

Findings at SMK Negeri 1 Tanjung Selor indicate that the development of facilities involves classroom arrangement and adding green open spaces to create a comfortable learning environment. SMK Negeri 2 Tanjung Selor focuses on improving basic facilities and

integrating information technology. SMK Negeri 3 Tanjung Selor plans to utilize existing resources and build partnerships to support facilities and infrastructure development.

Research by Orphanou & Edwards (2018) emphasizes that good physical facilities contribute to a better learning environment and can improve student outcomes. Facility improvements, as implemented by SMK Negeri 1 and SMK Negeri 2, align with these findings, showing that a comfortable learning environment and adequate facilities can enhance student motivation and achievement (Bowers, 2020). Partnerships with external parties, as applied by SMK Negeri 3, are also supported by research that shows collaboration with industry can help schools gain additional resources and enhance the relevance of education (Berrett, 2019).

Strategies for Education Quality Improvement in Vocational High Schools in Tanjung Selor District

Findings from SMK Negeri 1 Tanjung Selor show regular meetings with parents and collaboration with industries. SMK Negeri 2 involves stakeholders in curriculum and facilities development, while SMK Negeri 3 establishes industry partnerships to enhance school programs.

Comparison with Previous Research: Collaboration with parents and industries has proven to improve education quality. Research by Epstein (2018) indicates that parental involvement in student education can improve learning outcomes and student participation. Industry collaboration at SMK Negeri 1 Tanjung Selor and SMK Negeri 3 Tanjung Selor also aligns with research by Green et al. (2020), which shows that collaboration between schools and businesses can enrich the curriculum and provide students with practical experiences relevant to the workforce.

Staff development and motivation are essential aspects of improving education quality. Research by Darling-Hammond et al. (2017) shows that continuous training and recognition can improve teacher competence and motivation, which in turn positively impacts student learning outcomes. These findings align with approaches implemented at SMK Negeri 1 Tanjung Selor, SMK Negeri 2 Tanjung Selor, and SMK Negeri 3 Tanjung Selor, demonstrating that effective staff development and motivation can create a positive work culture and improve staff performance (Hattie, 2018).

Impact of the Program and Strategy for Education Quality Improvement in Vocational High Schools in Tanjung Selor District

Findings from the programs and strategies at SMK Negeri 1 Tanjung Selor, SMK Negeri 2 Tanjung Selor, and SMK Negeri 3 Tanjung Selor show a positive impact on education quality, school reputation, and student learning outcomes.

Comparison with Previous Research: Research by Hargreaves & Fullan (2020) shows that well-integrated programs and strategies focused on improving education quality can significantly impact student learning outcomes and school reputation. These findings support the results from the analysis of the three schools, which demonstrate that the implementation of effective programs and strategies can enhance education quality and school reputation (Bryk et al., 2017).

Supporting and Inhibiting Factors

Supporting factors at SMK Negeri 1 Tanjung Selor, SMK Negeri 2 Tanjung Selor, and SMK Negeri 3 Tanjung Selor include a relevant curriculum, adequate facilities, and staff

motivation, while inhibiting factors include a lack of professional development opportunities and conventional teaching methods.

Comparison with Previous Research: Research shows that internal factors such as a relevant curriculum, adequate facilities, and staff motivation are key supports in achieving quality schools (Day & Gu, 2018). However, inhibiting factors such as a lack of professional development opportunities and conventional teaching methods are challenges faced by many schools (Darling-Hammond, 2017). These findings align with the analysis results, indicating the need for improvements in these areas to achieve optimal education quality.

From the discussion above, it can be concluded that the findings from the analysis of SMK Negeri 1 Tanjung Selor, SMK Negeri 2 Tanjung Selor, and SMK Negeri 3 Tanjung Selor align with recent research that emphasizes the importance of developing a relevant curriculum, adequate facilities, collaboration with stakeholders, and staff development and motivation. Previous research supports the approaches taken by the three schools, showing that these strategies can contribute to improving education quality and school reputation. However, challenges such as the lack of professional development opportunities and conventional teaching methods remain obstacles that need to be addressed to achieve optimal education quality.

CONCLUSION

The study found that vocational schools in Tanjung Selor District implemented several key programs to improve education quality, including industry-aligned curriculum development that incorporated local culture and technology, as well as infrastructure improvements to create better learning environments. Principals employed strategies such as stakeholder collaboration and teacher mentoring programs, which enhanced both teacher and student competencies through training and industry partnerships. While supportive factors included government infrastructure support and professional development programs, challenges remained, such as limited resources, outdated teaching methods, and motivation issues.

To address these challenges, the study recommends continuous curriculum updates—particularly through *Teaching Factory (TeFa)* project-based learning—along with better infrastructure planning. It emphasizes strengthening community and industry engagement to support student development, along with regular program evaluations to ensure effectiveness. Additionally, ongoing teacher training programs are crucial for maintaining educator skills and motivation. These measures aim to overcome existing barriers while aligning vocational education with industry demands for improved graduate readiness.

REFERENCES

- Bohlander, G. W., & Snell, S. (2023). *Managing human resources*. Cengage Learning.
- Bowers, A. J. (2020). The impact of school facility conditions on student achievement: A review of the literature. *Journal of School Administration*, 4(3). <https://doi.org/10.1080/15700763.2021.1977330>
- Darling-Hammond, L. (2017). Teacher quality and student achievement: A review of state policy evidence. *Journal of Educational Policy*, 8(1). <https://doi.org/10.14507/epaa.v8n1.2000>

- Darmawan, D., Mardikaningsih, R., Sinambela, E. A., Arifin, S., Putra, A. R., Hariani, M., Irfan, M., & Hakim, Y. R. Al. (2020). The quality of human resources, job performance and employee loyalty. *International Journal of Psychosocial Rehabilitation*, 24(3). <https://doi.org/10.37200/IJPR/V24I3/PR201903>
- Day, C., & Gu, Q. (2018). *Resilient teachers, resilient schools: Building and maintaining resilience in teachers* (17th ed.). Routledge. <https://doi.org/10.4324/9780203578490>
- Elmore, R. F. (2019). *School reform from the inside out: Policy, practice, and performance*. Harvard Education Press.
- Epstein, J. L. (2018). *School, family, and community partnerships: Preparing educators and improving schools* (48th ed.). Westview Press. <https://doi.org/10.4324/9780429494673>
- Eynon, B., et al. (2018). The impact of technology on education: Insights from research. *Educational Technology Research and Development*, 16(42). <https://doi.org/10.55885/jerp.v2i2.153>
- Ferdinan, B. A. (2018). Human resources as agents of change in organizations. *Indicator*, 2019.
- Gerhart, B., & Feng, J. (2021). The Resource-Based View of the Firm, Human Resources, and Human Capital: Progress and Prospects. *Journal of Management*, 47(7). <https://doi.org/10.1177/0149206320978799>
- Green, T. D., et al. (2020). The role of industry-academia collaboration in enhancing educational opportunities and outcomes under the digital driven Industry 4.0. *Journal of Educational Leadership*, 8(1).
- Hargreaves, A., & Fullan, M. (2020). *Professional capital: Transforming teaching in every school*. Teachers College Press.
- Hattie, J. (2018). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Routledge.
- Orphanou, S., & Edwards, S. (2018). Facilities management and school performance: A review of the evidence. *Facilities*, 16(1). <https://doi.org/10.1080/19475683.2016.1231717>
- Saavedra, A. R., & Opfer, V. D. (2017). Teaching and learning 21st century skills: Lessons from the learning sciences. *Asia-Pacific Education Review*.
- Smith, K., & McKnight, J. (2019). Culturally relevant pedagogy and its impact on student engagement. *Journal of Curriculum Studies*.
- Sugiyono. (2012). *Memahami penelitian kualitatif*. In *Metode penelitian kualitatif R&D*. Alfabeta.
- Wang, L., & Wu, Z. (2021). Integrating technology into education: Benefits and challenges. *Educational Technology & Society*.