

**SYNERGIZING MULTI-STAKEHOLDER
COLLABORATION FOR TRANSFORMATIVE
VOCATIONAL TRAINING REVITALIZATION****Hendra Utama^{1*}, R. Hamdani Harahap², Heri Kusmanto³, Hatta Ridho⁴**^{1,2,3,4} Universitas Sumatera Utara, Dr. T. Mansur No.9, Padang Bulan, Medan***Email:** hendrau2@gmail.com**ABSTRACT**

Rapid technological evolution and shifting labour market demands necessitate the revitalization of vocational training programs. However, many vocational training institutions face various challenges, including outdated curricula, inadequate infrastructure, and limited coordination between educational institutions and industry needs. This study examines the role of multi-stakeholder collaboration involving government, industry, educational institutions and civil society in transforming vocational training into a responsive and sustainable system. Using a qualitative case study approach, data were collected through interviews, document analysis and observation to assess the effectiveness of the collaboration model in aligning vocational education with industry needs. The findings show that public-private partnerships, curriculum modernization, and sustainable funding mechanisms significantly improve workforce readiness and economic competitiveness. Case studies from Germany, Switzerland and Singapore highlight best practices in vocational training that can be adapted in Indonesia. The study provides policy recommendations to strengthen government-industry-education linkages, promote inclusive access to vocational training, and encourage innovation in skills development. By implementing strategic partnerships between stakeholders, vocational education can bridge the skills gap, support economic growth and increase employment opportunities.

Keywords: Curriculum, Education, Multi-Stakeholder Collaboration, Revitalization, Skills, Vocational Training,

INTRODUCTION

In an era of rapid technological advancement and shifting labor market demands, vocational training has become an important component of workforce development (Li, 2024). Along with industrial development, the need for skilled labor continues to increase, so the training system must be more responsive, adaptive, and aligned with industry needs. However, many vocational training institutions face challenges such as outdated curricula, inadequate infrastructure, and lack of coordination between educational institutions and the labor market. To address these issues, a transformative approach to vocational training revitalization is needed that emphasizes multi-stakeholder collaboration to ensure training programs remain relevant and effective in preparing individuals to enter the workforce. Vocational training plays a critical role in bridging the skills gap by equipping individuals with the practical knowledge and competencies needed in various industries. Unlike

Proceeding 2nd Medan International Economics and Business

Volume 2, Issue 1, 2024

“Human Resource Transformation and Collaborative Innovation to Build Independent and Competitive Business in the Digital Era”

traditional academic education, vocational training focuses on hands-on experience and technical skills, making it an important pathway to employment and economic development (Mustajab & Irawan, 2023). However, the effectiveness of vocational training largely depends on how well it matches industry demands. Many vocational education institutions struggle to keep up with technological developments and shifting economic priorities, leading to a mismatch between graduates' skills and labor market needs. Therefore, collaboration between government agencies, private sector actors, vocational training institutions and community organizations is essential to create a sustainable and industry-driven vocational training ecosystem. Multi-stakeholder collaboration in the revitalization of vocational training involves a synergistic partnership between government, industry, educational institutions, and community organizations. Government plays a role in policy formulation, funding and regulatory frameworks, while industry contributes resources, expertise and real-world training opportunities. Educational institutions serve as key training providers, ensuring that curricula are aligned with industry needs, while civil society organizations advocate for inclusive access to vocational training, especially for marginalized groups. Effective multi-stakeholder collaboration can improve workforce readiness, enhance economic competitiveness and drive innovation in vocational education. According to Agranoff (2007), multi-stakeholder cooperation can increase the effectiveness of training programs through synergy and good coordination. Countries with strong vocational training models, such as Germany, Singapore and Switzerland, have successfully implemented such collaborative approaches, demonstrating their effectiveness in workforce development.

Several previous studies have examined the impact of vocational training and multi-stakeholder collaboration in workforce development. Billett (2015) explored how integrating practice-based learning, such as internships and apprenticeships, can enhance vocational education by developing the practical skills, problem-solving ability and adaptability of the workforce. The role of government policy, employer engagement and curriculum adaptability in sustaining vocational training during times of economic hardship (Pilz, 2017). Policies with a social inclusion theme with a more integrated approach that aligns vocational training and national development strategies and labor market demand (McGrath, 2012). However, funding inequalities, overemphasis on academic pathways, and undervaluation of vocational education remain barriers in the Education system (Wolf, 2011). A diversified funding strategy that balances state investment, private sector contributions, and student financing mechanisms ensures a sustainable vocational education system (Ziderman, 2025). For example, countries with strong vocational systems, such as Germany and Switzerland, have key success factors in vocational education, including industry collaboration, digital skills integration and policy support (Lanvin & Monteiro, 2021; Safira et al., 2025). It is important to innovate with more flexible and adaptive training approaches that are aligned with industry standards and technological advances (Brennan Kemmis & Green, 2013). Vocational education and training (VET) systems must be continuously updated to meet the evolving needs of the labor market, ensuring that graduates have the necessary skills for employment (Vasilev, 2024). This study aims to analyze the role of multi-stakeholder

Proceeding 2nd Medan International Economics and Business

Volume 2, Issue 1, 2024

“Human Resource Transformation and Collaborative Innovation to Build Independent and Competitive Business in the Digital Era”

collaboration in revitalizing vocational training programs by identifying key challenges faced by training institutions in aligning curricula with industry needs and exploring best practices. The study seeks to propose innovative strategies to improve workforce readiness, economic competitiveness and industry relevance. The findings are expected to make an academic contribution by enriching the discourse on vocational education, while providing policy recommendations to strengthen industry-education partnerships and improve governance in vocational training. In addition, this research offers practical benefits to industry by ensuring a skilled workforce, supporting social inclusion by promoting equitable access to vocational education, and contributing to sustainable development by fostering long-term economic growth and resilience.

METHODS

This study uses a qualitative case study approach to examine the role of multi-stakeholder collaboration in revitalizing vocational training programs. Qualitative methods are appropriate because they can provide an in-depth understanding of the interactions among key stakeholders, including government agencies, industry representatives, vocational training institutions and civil society organizations (Creswell & Poth, 2018). Data collection was conducted through semi-structured interviews, document analysis, and observation. Interviews with policymakers, industry leaders and training administrators provided insights into the effectiveness of collaboration, while analysis of policy documents and reports provided contextual understanding (Snyder, 2019). Direct observation at vocational training centers further helped assess how collaborative models were implemented and aligned with industry demands. Data were analyzed using thematic analysis, to identify patterns of stakeholder collaboration and policy implementation (Xie et al., 2023). Triangulation was applied by cross-verifying findings from different data sources to increase validity. In addition, checking by team members ensured accuracy by allowing participants to revisit the interpretation of their responses. Ethical considerations, including informed consent, confidentiality, and voluntary participation, were strictly followed, adhering to APA research ethics.

RESULTS AND DISCUSSION

Current Challenges in the Vocational Training System

Despite its pivotal role in workforce development, the vocational training system faces several significant challenges that hinder its effectiveness and sustainability. Among these challenges are institutional barriers, mismatches between training programs and industry needs, and limited funding and infrastructure. Addressing these issues is critical to ensure that vocational training remains relevant, responsive and able to equip individuals with the skills needed in today's dynamic labor market. One of the key challenges is institutional barriers, which include bureaucratic inefficiencies, rigid regulatory frameworks and lack of coordination among stakeholders. Many vocational training institutions operate under outdated administrative structures that slow down decision-making processes and limit their ability to adapt to changing industry demands. In addition, fragmentation in the

Proceeding 2nd Medan International Economics and Business

Volume 2, Issue 1, 2024

“Human Resource Transformation and Collaborative Innovation to Build Independent and Competitive Business in the Digital Era”

vocational education system - where government agencies, industry players and educational institutions often work separately - results in disjointed and inefficient efforts. In some cases, rigid accreditation processes and regulatory constraints prevent vocational training providers from quickly updating their curricula to match technological advances and evolving labor market trends. These barriers not only reduce the effectiveness of training programs, but also discourage private sector participation, which is critical to ensuring the relevance and applicability of vocational education. Another major issue is the mismatch between vocational training programs and industry needs. Many vocational education curricula are designed based on outdated skill requirements, so they cannot keep pace with rapid technological advancements and shifting labor market demands. This gap results in graduates who may have theoretical knowledge but lack the practical skills required by employers. For example, industries increasingly require workers with expertise in automation, digital literacy and emerging technologies, yet vocational training institutions often struggle to incorporate these new competencies into their programs due to the slow pace of curriculum development (Lubis & Nasution, 2024). Furthermore, the lack of direct engagement between vocational training providers and industry exacerbates this mismatch. Employers often report difficulties in finding skilled workers who meet their specific requirements, leading to high unemployment rates among SMK graduates despite labor shortages in certain sectors. Bridging this gap requires stronger industry-academic partnerships, regular curriculum updates and a more flexible approach to skills development.

Another challenge is limited funding and inadequate infrastructure in vocational training institutions. Many vocational training programs, especially in developing countries, suffer from chronic underfunding, which limits their ability to upgrade training facilities, invest in modern equipment and attract qualified instructors. Without adequate financial support, institutions struggle to provide the hands-on training experiences that are critical to skills development. In addition, outdated or inadequate training equipment makes it difficult for students to gain practical experience with the tools and technologies they will encounter in the workplace. In rural and underserved areas, the problem is even more severe, where vocational training centers lack basic facilities, access to digital resources and industry linkages. Limited funding also affects instructor quality, as low salaries and limited professional development opportunities make it difficult to attract and retain skilled trainers who can effectively impart industry-relevant skills to students. Taken together, these challenges of institutional inefficiency, mismatch between training programs and labor market needs, and inadequate financial support and infrastructure significantly hamper the effectiveness of vocational training systems. Addressing these issues requires a multi-stakeholder approach involving government agencies, private sector actors, educational institutions and civil society organizations working together to develop a more responsive, well-funded and industry-aligned vocational training model (Arifin et al., 2025). By addressing these barriers, vocational education can equip individuals with the skills needed to secure decent jobs and contribute to national economic growth.

Proceeding 2nd Medan International Economics and Business

Volume 2, Issue 1, 2024

“Human Resource Transformation and Collaborative Innovation to Build Independent and Competitive Business in the Digital Era”

The Collaborative Role of Various Stakeholders in Revitalization

The revitalization of vocational training in Indonesia requires a multi-stakeholder collaborative approach involving government, industry, educational institutions, and community organizations. One of the key initiatives in this revitalization is the renewal of Vocational Training Centres (BLK) and the implementation of the '3 in 1' program, which aims to produce graduates who are competent and in line with the needs of the labour market. The revitalization of BLK includes aspects of management, facilities, human resources (instructors), as well as training programs that end with certification to improve the competitiveness of graduates. However, the challenge is still great because many BLKs have not been accredited. BNSP data (2017) shows that from 2014 to 2016, only 33% of all BLKs have been accredited, indicating that the quality and capacity of BLKs still need to be significantly improved. BLKs face various challenges, including outdated equipment that is not in line with industry developments, lack of qualified instructors, and high training costs (Afrina, 2018). In addition, training programs at BLKs are considered too general and less flexible, thus not fully meeting the specific needs of the industrial sector. The 2017-2025 vocational education and training roadmap identifies that BLKs across Indonesia are currently only able to accommodate 290,308 trainees per year, or only 0.042% of the total unemployed workforce. In fact, 80% of BLK participants come from vocational school graduates who have not yet found a job. Vocational sectors with the largest capacity in BLK include electricity (17%), trade (16%), automotive (15%), mechanical technology (13%), agriculture (9%), and other fields (22%). The low capacity of BLK in accommodating unemployed workers emphasizes the need for stronger synergy with the industrial sector so that graduates can be more quickly absorbed into the world of work. The importance of collaboration between government and industry in developing vocational training was further emphasized through a joint declaration between the Coordinating Ministry for Economic Affairs, the Ministry of Manpower, and the Indonesian Chamber of Commerce and Industry (KADIN) in April 2016. This declaration marks the beginning of systematic involvement of the private sector in apprenticeship programs and skilled workforce development. The initiative aims to (1) strengthen cooperation between central and local governments, the private sector, and vocational training institutions in improving workforce competitiveness, and (2) align the curriculum of vocational schools and BLKs with industry needs. The concept of “link and match” between BLK and the latest technology in the industry is key so that graduates have skills that are relevant to the development of the labor market. However, the effectiveness of multi-stakeholder collaboration still faces a number of challenges, such as different priorities between training institutions and industries, limited funding, and the lack of a standardized certification system. Many companies are still hesitant to invest in training without certainty of long-term benefits. In addition, bureaucratic red tape and slow policy implementation often prevent the private sector from actively participating. Therefore, there needs to be policies that encourage industry investment in vocational training, including through tax incentives and ease of regulation. By learning from successful models such as the vocational education systems in Germany, Singapore

Proceeding 2nd Medan International Economics and Business

Volume 2, Issue 1, 2024

“Human Resource Transformation and Collaborative Innovation to Build Independent and Competitive Business in the Digital Era”

and Australia, Indonesia can create a more adaptive, industry-oriented vocational training system that can improve the competitiveness of its workforce in the global economy.

Strategic Innovations for Transformative Vocational Training

To ensure the successful transformation of vocational training, all key stakeholders-industry, government and educational institutions-must work together to align training programs with labor market demands. The following recommendations outline specific actions that each stakeholder can take to contribute to a sustainable and industry-relevant vocational education system.

Industry: Increase Participation in Workforce Development

The private sector plays a critical role in ensuring vocational training remains relevant to industry needs. To maximize its impact, industry should: Actively invest in training facilities and technology that are aligned with evolving labor market demands. By upgrading training centers with modern equipment, digital tools, and industry-standard machinery, vocational graduates will be better prepared to enter the workforce. Expanding apprenticeship and job placement programs to provide vocational graduates with real work experience. Structured apprenticeship programs, particularly in sectors such as manufacturing, automotive, IT and renewable energy, can help bridge the gap between training and employment. Companies should also consider offering on-the-job training to further refine graduates' skills before full employment.

Government: Strengthen Regulation and Financial Support

The government should act as a facilitator and regulator to ensure smooth cooperation between industry and vocational training institutions. Key policy actions should include: Developing a strong regulatory framework that encourages multi-stakeholder involvement in vocational training. This includes offering incentives such as tax breaks, subsidies, or funding grants for companies that actively participate in training and apprenticeship programs. Regulations should also enforce clear industry involvement in curriculum design to maintain alignment with labor market demands. Allocate sufficient financial resources to support vocational education. This includes funding for infrastructure improvements, instructor upskilling, and digital integration in vocational training centers. The government should also ensure equal access to vocational training, especially for marginalized communities and areas with limited training facilities.

Educational Institutions: Strengthening Industry-Responsive Training

Vocational training institutions must ensure that their programs are dynamic, industry-driven and aligned with technological advances. To achieve this, they should: Regularly update curricula based on industry input to ensure graduates have the competencies required by the labor market. This can be achieved through continuous dialogue with businesses, trade unions, and trade associations to assess workforce needs. Competency-based learning models should also be clarified to ensure that training outcomes match industry expectations. Improve the capacity of teachers and trainers by providing regular professional development programs and certification opportunities. Educators should be equipped with the latest technical knowledge and teaching methodologies,

Proceeding 2nd Medan International Economics and Business

Volume 2, Issue 1, 2024

“Human Resource Transformation and Collaborative Innovation to Build Independent and Competitive Business in the Digital Era”

particularly in areas such as digital literacy, automation and data-driven technologies (Lubis et al., 2024). Establish specialized units for industry-government collaboration in vocational institutions. These units will act as liaison bodies that facilitate internships, joint training programs, and employment linkages, ensuring that vocational graduates can transition smoothly into the world of work. For vocational training to be truly transformative, industry, government and educational institutions must collaborate in a structured and sustainable manner. A well-coordinated vocational training system that integrates industry-relevant skills, supportive policies, and adaptive curricula will help increase labor productivity, reduce unemployment, and position Indonesia as a competitive player in the global labor market.

CONCLUSION

The conclusion of this study confirms that Indonesia's vocational training system still faces significant challenges, including institutional barriers, program mismatches with industry needs, and limited funding and infrastructure. Addressing these issues requires multi-stakeholder collaboration involving government, industry and educational institutions to create more relevant, responsive and labor market-oriented training. The revitalization of the Vocational Training Center (BLK) and the application of the “link and match” model are strategic steps in improving the competitiveness of graduates. In addition, innovations in regulation, increased funding, and integration of technology in the curriculum are needed for vocational training to be truly transformative. With a coordinated and sustainable approach, the vocational education system can contribute to increasing labor productivity, reducing unemployment, and strengthening Indonesia's competitiveness in the global market.

REFERENCES

- Agranoff, R. (2007). *Managing within networks : adding value to public organizations*. Georgetown Univ. Press PP - Washington, D.C.
- Arifin, A., Ardian, M., Fauzan, I., & Lubis, I. R. A. (2025). Training on National Education and Statehood to Educators of Integrated Islamic Junior High School Perguruan Baiti Jannati Tanjung Morawa. *Sovereignty Journal of Community Service*, 2(1), 33-42. <https://jurnal.literasipublisher.co.id/index.php/sjcs/article/view/72>
- Billett, S. (2015). Integrating Practice-Based Experiences with Higher Education. *Professional and Practice-Based Learning*, 1–26. https://doi.org/10.1007/978-94-017-7230-3_1
- Brennan Kemmis, R., & Green, A. (2013). Vocational education and training teachers' conceptions of their pedagogy. *International Journal of Training Research*, 11(2), 101–121. <https://doi.org/10.5172/ijtr.2013.11.2.101>
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (International student edition). In SAGE Publications, Inc.
- Lanvin, B., & Monteiro, F. (2021). The Global Talent Competitiveness Index 2021 Talent Competitiveness in Times of COVID. <https://www.insead.edu/sites/default/files/assets/dept/fr/gtci/GTCI-2021-Report.pdf>

Proceeding 2nd Medan International Economics and Business

Volume 2, Issue 1, 2024

“Human Resource Transformation and Collaborative Innovation to Build Independent and Competitive Business in the Digital Era”

- Li, L. (2024). Reskilling and upskilling the future-ready workforce for industry 4.0 and beyond. *Information Systems Frontiers*, 26(5), 1697-1712. <https://doi.org/10.1007/s10796-022-10308-y>
- Lubis, S., & Nasution, N. F. (2024). Utilizing Digital Literacy in Anticipating the Political Education Gap for Women. *Journal Elections and Political Parties*, 1(2), 9–16. Retrieved from <https://jurnal.literasipublisher.co.id/index.php/jepp/article/view/61>
- Lubis, A. S., Fahreza, I., & Nasution, N. F. (2024). Bridging the Digital Divide: Improving the Leadership Quality of Women Politicians through Digital Literacy. *Wedya Journal of Multidisciplinary*, 1(1), 21–28. Retrieved from <https://jurnal.literasipublisher.co.id/index.php/wjm/article/view/31>
- McGrath, S. (2012). Vocational education and training for development: A policy in need of a theory? *International Journal of Educational Development*, 32(5), 623–631. <https://doi.org/10.1016/j.ijedudev.2011.12.001>
- Mustajab, D., & Irawan, A. (2023). The effectiveness of vocational training programs on employment outcomes. *Advances in Community Services Research*, 1(2), 54-63. <https://doi.org/10.60079/acsr.v1i2.344>
- Pilz, M. (2017). Vocational Education and Training in Times of Economic Crisis. In *Technical and Vocational Education and Training: Issues, Concerns and Prospects*. Springer International Publishing PP - Cham. <https://doi.org/10.1007/978-3-319-47856-2>
- Safira, C., Luqman, Y., Lailiyah, N., Yasa, A., Al-Razi, M. R. A., & Simeon, N. P. B. (2025). Empowering Batik MSMEs in Semarang Through Live Video Content Creation: A Digitalization Initiative. *Sovereignty Journal of Community Service*, 2(1), 25-32. <https://jurnal.literasipublisher.co.id/index.php/sjcs/article/view/88>
- Snyder, H. (2019). Literature Review as a Research methodology: an Overview and Guidelines. *Journal of Business Research*, 104(1), 333–339. <https://doi.org/10.1016/j.jbusres.2019.07.039>
- Vasilev, I. (2024). Overview of the problems of VET education: an Attempt for Classification and Cross-Mapping the Problems from 2024: A Case study. *International Journal of Current Science Research and Review*, 07(11). <https://doi.org/10.47191/ijcsrr/v7-i11-23>
- Wolf, A. (2011). Review of vocational education : the Wolf report. Stationery Office PP - London.
- Xie, X., Pan, C., Xu, M., He, A., & Shu, Y. (2023). Cross-cultural experiences and self-development: a psychobiographical study of Bruce Lee. *International Review of Psychiatry*. <https://doi.org/10.1080/09540261.2023.2257326>
- Ziderman, A. (2025). Financing vocational training to meet policy objectives: sub-Saharan Africa. In *Voced.edu.au*. World Bank. <https://www.voced.edu.au/content/ngv%3A36073>