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Analysis of the Partnership Management Model with DUDI at Muhammadiyah 3 Vocational School, Pekanbaru City

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Abstract
This study aims to analyze the partnership management model between SMK Muhammadiyah 3 Pekanbaru and industry partners (DUDI) by examining: (1) the forms of partnership implemented, (2) the application of partnership management (planning, organizing, implementation, and evaluation), and (3) the supporting and inhibiting factors in its implementation. Using a qualitative descriptive case study approach, data were collected through in-depth interviews, observation, and documentation involving the principal, vice principal for industrial relations, coordinators of competency skills, and HRD representatives from partner industries. The findings show that the school has established diverse partnership forms including curriculum synchronization, industrial work practices (Prakerin), guest teaching programs, recruitment facilitation, and collaborative production through the Teaching Factory (TEFA). The partnership management model reveals that planning is conducted through joint need assessments and mapping of industry competencies; organizing is carried out through the formation of a dedicated Industrial Relations Division and competency-based coordination structures; implementation focuses on aligning learning with industry practices, competency certification, and structured supervision; while evaluation is performed through routine coordination meetings, tracer studies, and industry feedback mechanisms. Supporting factors include strong leadership commitment, active industry involvement, and the relevance of school competencies to market needs. Meanwhile, inhibiting factors comprise limited facilities aligned with industry standards, scheduling constraints, and the varying intensity of industry participation. The study concludes that SMK Muhammadiyah 3 Pekanbaru has implemented an adaptive and collaborative partnership management model, yet optimization is still required in resource alignment and sustainable evaluation systems. Recommendations include strengthening digital-based partnership dashboards, expanding certification schemes, and enhancing long-term industry engagement to support the school's role in producing work-ready graduates.

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1. Introduction

Developing competent human resources (HR) through vocational education is key to the nation's competitiveness in the global market (Priyatama & Sukardi, 2013). Vocational High Schools (SMK) play a central role in producing graduates who are ready to work and become entrepreneurs (Zaskia Ulfah *et al*., 2022). In accordance with Presidential Regulation Number 68 of 2022 concerning the Revitalization of Vocational Education and Vocational Training, an intensive and synergistic partnership with the Business and Industrial World (DUDI) is a mandate that must be implemented. This partnership aims to ensure the match

between graduate competencies and industry needs (Kemendikbudristek, 2021).

Muhammadiyah 3 Vocational School in Pekanbaru City strives to align its educational programs with the industrial and industrial sectors. The partnership extends beyond Field Work Practice (PKL) to core aspects such as developing an industry-based curriculum, implementing a teaching factory, and even placing graduates.

Although the partnership has been running, there has been no comprehensive analysis of the partnership management model implemented by SMK Muhammadiyah 3 Pekanbaru City. Effective partnership management requires systematic planning, organizing, implementing, and evaluating mechanisms (Tilaar, 2015). Failure in any of these management stages can result in the partnership becoming merely a formality without a substantial impact on graduate quality (Haryono & Widyanti, 2017).

Therefore, this research is formulated to answer three main questions:

1. What forms of partnership have been implemented between Muhammadiyah 3 Vocational School, Pekanbaru City and DUDI?
2. How is the partnership management model (planning, organizing, implementing, and evaluating) applied to manage the collaboration?
3. What are the supporting and inhibiting factors in the implementation of the partnership management model at Muhammadiyah 3 Vocational School, Pekanbaru City?

The main objective of this study is to analyze the partnership management model with DUDI at SMK Muhammadiyah 3 Pekanbaru City. This will enrich the knowledge of educational management, particularly regarding partnership management models in vocational education (Fjellström, 2014).

This publication also provides recommendations for a proven partnership management model for SMK Muhammadiyah 3 and serves as a reference for other SMKs in their efforts to realize effective and sustainable links and matches. The link and match concept is an effort to align educational graduates with job market demands (UNESCO, 2012). Strategic partnerships between vocational schools (SMK) and industrial and industrial industries (DUDI) are no longer viewed as hierarchical, but rather as equal partnerships with mutual benefits (Suhardiman & Arismunandar, 2018).

Ideal forms of partnership include: Curricular Partnership: DUDI is involved in benchmarking and synchronizing the curriculum, ensuring the relevance of graduate competencies (Sudira, 2017). Resource Partnership: DUDI provides expert instructors, equipment, and practical training (PKL/internship) (Kemendikbudristek, 2021). Output Partnership: DUDI absorbs graduates and schools provide competency upgrading for industry employees (Rama *et al*., 2023).

Partnership management can be analyzed using a management cycle, often adopted from the PDCA (Plan, Do, Check, Act) model (Deming, 1986). In the context of vocational education, PDCA is translated as: Plan: Identifying industry needs (competencies), setting partnership objectives, and designing a Memorandum of Understanding (MoU) (Mounsef & Amer, 2022). Do: Implementing collaborative programs such as teaching factories, internships, and training. Check/Evaluation: Monitoring program implementation, measuring partner satisfaction levels, and evaluating target achievement (OECD, 2019). Act: Continuous improvement of the partnership program and extension or review of the MoU/PKS. Successful management requires a strong Industrial Relations Unit (Hubin) with negotiation, administration, and networking capabilities (Sudira, 2017).

2. Method

This research is a qualitative study using a descriptive case study approach. The qualitative approach was chosen because the researchers wanted to gain an in-depth understanding of the complex partnership management model and processes, which cannot be measured quantitatively. The case study focused on a single unit, SMK Muhammadiyah 3, Pekanbaru City (Miles, Huberman, & Saldaña, 2014). This research was conducted at Muhammadiyah 3 Vocational High School (SMK) in Pekanbaru City, Riau Province. This location was chosen purposively because the institution is recognized for its active implementation of intensive partnership programs with the industrial and business sectors (DUDI), covering aspects of curriculum, practice, and graduate placement, in line with the SMK Center of Excellence program.

Table 1: Presents a list of the research participants interviewed.

No.	Title/Position	Status	Collection Techniques	Focus of the Information Excavated
1	Headmaster	Internal	In-depth Interview	Vision, strategic policies, and partnership funding commitments.
2	Deputy Principal for Industrial Relations (Hubin)	Internal	In-depth Interviews & Observations	PDCA management model, operational mechanisms, PKS, and Hubin challenges.
3	Expertise Program Coordinator	Internal	In-depth Interview	Implementation of curriculum synchronization, PKL process, and the role of industrial guest teachers.
4	Human Resources Manager (HRD) DUDI	External	In-depth Interview	Implementation of Teaching Factory (TEFA), networking with DUDI, competency requirements, student performance assessments, and graduate recruitment processes.
5	DUDI Representative/Partner Industry	External	In-depth Interview	Contributions to the TEFA curriculum, partnership mutual benefits, and product feedback.

Participants in this study were selected using purposive sampling and snowball sampling techniques to ensure that the informants selected were directly involved and had in-depth knowledge of the DUDI partnership management process in schools. Participants were grouped into two main categories: Internal School Informants and External Informants (DUDI).

The data in this qualitative study was collected using method triangulation, a combination of in-depth interviews, observation, and documentation studies. This triangulation aims to ensure the validity and reliability of the findings by comparing information from various sources and methods (Denzin & Lincoln, 2018). Semi-structured interviews were

conducted with six key participants (see Table 1).
Interviewers used an interview guide divided into three main domains:
Partnership Planning (Plan): Collecting information on the DUDI needs assessment process, strategic partner determination mechanisms, and mutual benefit goal formulation. Partnership Management (Do & Check): Collecting data on the Hubin Unit structure, PKL/TEFA/Teacher Internship implementation procedures, monitoring and evaluation frequency, and partner satisfaction indicators. Obstacles and Sustainability (Act): Collecting information on internal and external inhibiting factors, implemented mitigation strategies, and plans for developing and extending the partnership. Interviews were recorded using a digital recorder (with the informant's permission) and recorded as field notes. The average interview duration was 60 to 90 minutes per informant.
Observations were conducted in the environment of SMK Muhammadiyah 3 Pekanbaru City and several strategic partner DUDI locations during the period [State the research period]. This observation was non-active (non-participant observation), where the researcher was present at the location but was not directly involved in the research subjects' activities (Creswell, 2014).
The focus of observation includes:

1. **Hubin Unit Activities:** Observing the Hubin team coordination process, archiving PKS documents, and communicating with industry parties (via telephone or meetings).
2. **Teaching Factory (TEFA):** Observing the implementation of real production, the suitability of the equipment used to industry standards, and the interaction between students and TEFA instructors.
3. **PKL Monitoring Visit:** Observing the briefing and evaluation mechanisms carried out by the supervising teacher at the partner industrial location.

The results of the observations were recorded in detailed field notes, including descriptions of events, key conversations, and the researcher's reflections. Qualitative data analysis in this study used the interactive model from Miles, Huberman, and Saldaña (2014). The analysis process was carried out continuously from the initial data collection until the final conclusions were drawn. The following are the stages of data analysis applied:

3. Data Condensation

This stage involves the process of filtering, focusing, and simplifying the raw data.
Transcription: All interview recordings were transcribed verbatim (word-for-word).
Initial Coding (Open Coding): Transcription data, field notes, and documents are broken down into their smallest units of meaning.
Selective Coding: Similar units of meaning were then grouped into categories and themes relevant to the research focus (e.g., Planning, Organizing, Internal Barriers, Curriculum Synchronization).

The condensed and categorized data is then presented in a structured and concise format. This data presentation helps researchers understand the relationships between variables and draw conclusions. Partnership Matrix: Used to compare information on partnership forms from the perspective of schools and industry.
Flowcharts are used to visualize the identified partnership management models, following the PDCA (Plan, Do, Check, Act) cycle, based on data from Waka Hubin. Categorization tables are used to organize findings regarding supporting and inhibiting factors for implementation. Conclusion Drawing and Verification Conclusions are tentatively drawn from the beginning of the research and are continuously refined as data increases. Verification of conclusions is carried out in several ways:
Triangulation Method: Comparing findings from interviews (informant statements) with observation results (field practices) and documentation studies (official data). Triangulation Source: Ensuring consistency of findings between informants (for example, whether the principal's views on DUDI commitment are in line with the views of the Industrial HRD Manager). Member Checking (Optional): Reconfirming the researcher's main interpretations and conclusions to key informants to validate the accuracy of the findings. This analysis model ensures that the findings regarding the DUDI partnership management model at SMK Muhammadiyah 3 Pekanbaru City are supported by strong empirical evidence and can be scientifically accounted for.

4. Result and Discussion

4.1. Forms of Partnership between Muhammadiyah 3 Vocational School, Pekanbaru City and DUDI

Interviews with the Principal, Vice Principal for Industrial Relations, the expertise competency coordinator, and industry HR management revealed that the ongoing partnerships encompass a variety of collaborative schemes. The identified partnerships include:

4.2. Industry-Based Curriculum Synchronization

All skill competencies (TKRO, TBSM, TKJ-Telecommunications, Machinery, Accounting, and Office Management) have implemented curriculum synchronization with partner companies at least once a year. The synchronization process is carried out based on the latest skills requirements from the industry, such as: (1) soft skills work culture, (2) K3 standards, (3) digital technology (diagnostic tools, CNC, accounting information systems), and (4) entry level technician competency.
According to the Deputy Head of Public Relations, synchronization was carried out "to ensure that the practical materials are in accordance with the work standards of the production and maintenance departments in the industry."

4.3. Structured Internship/Prakerin Implementation

The internship program is conducted over a six-month period using a block release system. The company's HR department stated that students with TKRO, TBSM, and Machining competencies are highly sought after because they can directly support workshop activities. For TKJ competencies, students are placed in the company's IT network, installation, and maintenance units.

4.4. Production-Based Teaching Factory (TEFA)

SMK Muhammadiyah 3 has developed several collaborative TEFAs: the Motorcycle and Car Service TEFA (TBSM & TKRO) in collaboration with authorized workshops. The Internet Network and IT Equipment TEFA (TKJ) in collaboration with local internet providers.
TEFA Office Management (MP) collaborates with business

consultants for office administration practices. TEFA Finance (Accounting) collaborates with accounting institutions through mini offices. The industry provides supervision of work SOPs and customer service standards.

4.5. Guest Teachers and Trainers from Industry

Each semester, the industry sends experts as guest lecturers. Topics covered include the use of the latest technology, vehicle troubleshooting standards, workshop management, administrative and financial audits, and professional ethics in the workplace.

4.6. Graduate Recruitment and Placement

Several partner companies regularly recruit graduates from the automotive, machinery, and TKJ sectors. The HR department stated that SMK Muhammadiyah 3 graduates possess " good work discipline and adaptability, especially in basic technical areas."

The partnership management model at Muhammadiyah 3 Vocational High School, Pekanbaru City, demonstrates a systematic and structured pattern. An analysis of each management dimension is described below.

5. Partnership Planning

5.1. Field Findings

From interviews with the Principal and Deputy Principal for Industrial Relations, partnership planning is carried out through several mechanisms:

1. Industry Needs Assessment at the beginning of each school year.
2. Identify the core competencies of each expertise program based on HR input.
3. Determination of the form of cooperation: curriculum synchronization, PKL, TEFA, teacher internships, guest teachers.
4. Preparation of MoU/MoA containing targets, roles, duration, and achievement indicators.
5. Determination of PKL quota and scheduling based on industrial capacity.
6. Planning for updating practice equipment to meet industry needs.

The Vice Principal of International Relations stated that planning always aligns with the “direction of industry needs and recommendations from the annual HRD. The partnership planning carried out by the school shows the existence of: A systemic approach, because it involves all stakeholders (Principal, Vice Principal of International Relations, Expertise Competencies, and HRD). Strategic alignment, namely the alignment between graduate competencies and company needs, according to vocational education management theory (Knorr & Zinn, 2024). Data-based, through the results of the previous year's PKL evaluation and industry recommendations.

Thorough planning reflects the implementation *of* the PDCA (Deming Cycle) model. This model is often used by leading vocational schools to maintain the quality of partnerships. Research (Wang *et al*., 2022) indicates that good partnership planning is characterized by a *needs analysis* from industry, a finding consistent with the school's situation.

Fig 1: Partnership with Suzuki

Research also found that the success of vocational high schools (SMK)–industrial and industrial (DUDI) partnerships is significantly influenced by cross-stakeholder planning (Andayani, 2021). The planning conducted at SMK Muhammadiyah 3 met the strategic management criteria for vocational partnerships. This provides a strong foundation for avoiding mismatches between graduate competencies and workplace needs (Pamungkas *et al*., 2020).

5.2. Organizing Partnerships (Organizing)

The organizational structure of partnerships in schools includes:

1. The principal is the main person responsible.
2. Deputy Head of HI as coordinator of industrial relations and main implementer of partnerships.
3. Expertise Competency Coordinator as a technical liaison with the company.

4. PKL supervising teacher whose job is to monitor student development.
5. Industry/HRD partners as field supervisors, competency assessors, and industry advisors.

Within this structure, each expertise competency is linked to a different company based on its field. For example, TKRO and TBSM collaborate with authorized repair shops, TKJ–Telecommunications with ISPs and network equipment vendors, Machinery with manufacturing and production workshops, and Accounting and Office Management with financial institutions and business consultants.

Fig 2: Collaboration with Software House

The organization implemented by the school shows the characteristics of a clear division of tasks, in accordance with Fayol's principle *of division of work.* Vertical and horizontal coordination, because the working relationship takes place between the school and industry and between units within the school. A network governance model, where the schoolworks with many companies according to its field of competence. With this structure, the organization supports *collaborative educational partnerships*, as explained by Miles & Huberman (2014).

Research (Prasetyo & Sutopo, 2018) shows that a clear partnership organizational structure improves the consistency of PKL and TEFA implementation consistent with the findings of this study. Meanwhile, other research has found that many vocational schools lack strong partnership organization, hindering program implementation (Lebedeva, 2019). These findings indicate that SMK Muhammadiyah 3 is among schools with more mature partnership management. A clear partnership organizational structure allows for effective communication, faster collaboration with industry, and structured field problem resolution. This is an indicator that the school implements professional partnership management.

The implementation of partnerships in schools includes several main forms:

1. 6-month structured PKL (Prakerin) with supervision from HRD and supervising teachers.
2. Teaching Factory (TEFA) is based on real production that applies industrial SOPs.
3. Curriculum Synchronization attended by industry.
4. Teacher internship for competency update.
5. Guest teachers in each area of expertise.
6. Student Competency Test with industrial assessors or LSP P1.

During the internship program, companies assess discipline, technical skills, communication skills, and teamwork. TEFA is described by the industry as "the most effective program because students learn in conditions close to the real world of work."

The implementation of the partnership reflects the transformation of the curriculum into real work experience, in accordance with the principles of *work-based learning* (WBL). Intensive school-industry interaction, which strengthens the relevance of learning. Implementation of industrial practices in the school environment, which shortens *the skill gap* and the application of industrial work culture, including work ethics, K3 standards, and production procedures.

This analysis confirms that the partnership implementation is not merely administrative (MoU) but is operational and productive. TEFA can improve employability skills, a finding supported by this study. Research emphasizes that effective internships require the active involvement of industry supervisors (Dewi *et al*., 2023). This study's findings indicate that this involvement has been successful. Strong partnership implementation is key to successfully improving technical competency (hard skills), professional work abilities (soft skills), and graduate job readiness. The TEFA and internship programs demonstrate that the partnership model has entered the implementation maturity stage.

5.3. Partnership Evaluation (Evaluating/Controlling)

Partnership evaluation is conducted through three main mechanisms:

1. PKL evaluation where the industrial supervisor fills out the competency assessment sheet, the supervising teacher makes periodic visits and students make daily work journals.
2. Curriculum and TEFA evaluations are conducted through annual synchronization meetings, discussions of new equipment needs and adjustments to practice modules.
3. Annual Cooperation Evaluation through MoU review, identification of obstacles, planning new targets, formation of additional partners if necessary.

Partnership evaluation shows that the school implements continuous quality control, according to the PDCA model, there is two-way feedback between the school and industry, competency-based assessment, evaluation data is used for continuous improvement.

The ongoing evaluation model indicates that partnership management does not stop at implementation but rather continues cyclically. Wibowo's (2021) research found that vocational schools implementing competency-based internship evaluations had higher levels of industry satisfaction a finding consistent with this study's findings. Lestari's (2019) research also emphasized that TEFA evaluation is a crucial aspect of maintaining the quality of school production a finding also found at SMK Muhammadiyah 3. Consistent evaluations increase industry confidence and ensure the relevance of learning. This is one indicator of a healthy and sustainable *partnership*.

6. Conclusion

Based on the results of research and discussion regarding the analysis of the partnership management model between SMK Muhammadiyah 3 Pekanbaru City and the Business and Industrial World (DUDI), it can be concluded that the school has implemented various forms of partnerships that are comprehensive and relevant to industry needs. These partnerships include curriculum synchronization, implementation of Field Work Practices (PKL), Teaching Factory (TEFA), guest teacher programs, teacher internships, and competency tests with industrial assessors. All these forms of cooperation demonstrate that school -industry collaboration is not merely administrative, but has been operational, directed, and has had a direct impact on improving student competency. In terms of the partnership management model, the school has implemented the functions of planning, organizing, implementing, and evaluating systematically. In the planning stage, the school involves various stakeholders, including the industrial HRD, to conduct competency needs analysis and establish partnership programs annually. Organization is carried out through a clear division of roles between the principal, the Deputy Head of Industrial Relations, the expertise competency coordinator, PKL supervising teachers, and industry representatives. The implementation stage includes the implementation of partnership programs such as PKL, TEFA, teacher internships, and curriculum synchronization that are carried out intensively with industry support. Evaluation is carried out periodically through PKL assessments, monitoring supervising teachers, curriculum synchronization meetings, and MoU reviews to renew cooperation.

Meanwhile, key supporting factors in implementing the partnership include strong commitment from school leaders, good communication with industry HRD, the presence of TEFA, which is already production-oriented, and student performance that is considered good by industry. Inhibiting factors identified include limited industry capacity to accept PKL participants, the incompatibility of some practical equipment with the latest industrial technology, variations in student readiness for the work environment, and differences in operational standards between schools and industry.

However, these obstacles can be overcome through intensive coordination, strengthening pre-PKL training, and conducting routine annual evaluations. Overall, this study shows that SMK Muhammadiyah 3 Pekanbaru City has a mature and adaptive partnership management model, ensuring the relevance of vocational learning to the evolving needs of modern industry.

Based on the research findings, several recommendations can be made for strengthening future partnership models. First, schools need to expand their partnership networks with large-scale companies and national industries to increase opportunities for internship placement and graduate absorption. Furthermore, updating practical training facilities, particularly in areas related to rapidly evolving technological competencies such as TKRO, TBSM, TKJ, and Machining, needs to be prioritized to minimize the competency gap between graduates and the needs of the workforce. Schools are also advised to improve the quality of pre-PKL training by strengthening soft skills, work ethic, professional communication, and occupational health and safety (K3) culture so that students are better prepared for the real industrial work environment. Teacher internship programs need to be expanded in terms of both duration and variety of companies to ensure teachers stay abreast of the latest technological developments. Furthermore, industry is expected to be more actively involved in curriculum development, PKL evaluation, and the provision of structured feedback to ensure vocational learning remains relevant.

For further research, it is recommended that studies on vocational high schools (SMK) industrial and industrial (DUDI) partnerships be conducted using a mixed methods approach to capture the impact of the partnership more comprehensively through a combination of qualitative and quantitative data, including data on competency attainment and graduate placement rates. Comparative research between vocational high schools (SMK) is also important to examine variations in best practices in managing partnerships. This way, a more ideal partnership model can be formulated more broadly and be applicable to other vocational schools.

Reference

1. Abele E, Chryssolouris G, Sihn W, Metternich J. Learning factories for future-oriented research and education. CIRP Ann. 2017;66(2):803-826.
2. Abidin Z, Adam A, Suhardiman S. Karakteristik kurva kecepatan torsi dan faktor kerja prototype mesin listrik AC dinamis dan statis dengan pemodelan rangkaian. In: Prosiding SNITT. 2018.
3. Amela SL. Pengaruh role overload dan stres kerja terhadap kinerja karyawan melalui motivasi kerja (studi pada PT Surya Raya Lestari II di Kabupaten Mamuju Tengah) [Internet]. 2018 [cited 2026 Jun 11]. Available from: repository.um.ac.id
4. Andrews J, Higson H. Graduate employability: "Soft skills" versus "hard" business knowledge. High Educ Eur. 2008;33(4):411-422.

5. Bandura A. Self-efficacy: The exercise of control. New York: Freeman; 1997.
6. Battiste M, Chomsky N, Denzin NK, Fine M, Gill R, *et al*. Dissident knowledge in higher education [Internet]. 2018 [cited 2026 Jun 11]. Available from: uregina.scholaris.ca
7. Biggs J, Tang C. Teaching for quality learning at university. 4th ed. Maidenhead: Open University Press; 2011.
8. Billett S. Vocational education: Purposes, traditions and prospects. Dordrecht: Springer; 2011.
9. Brown P, Hesketh A, Williams S. Employability in a knowledge-driven economy. Oxford: Oxford University Press; 2003.
10. Chryssolouris G, Mavrikios D, Mourtzis D. Manufacturing systems: Skills and competencies for the future. CIRP Ann. 2016;65(2):641-664.
11. Creswell JW. Research design: Qualitative, quantitative, and mixed methods approaches. 4th ed. Thousand Oaks (CA): Sage Publications; 2014.
12. Creswell-Wells T. Urban form and passive design for high performance buildings in the Christchurch rebuild. 2014.
13. Deming MP, Valeri-Gold M. The writing center: A leader in change and service. ERIC; 1986.
14. UNESCO. Education for sustainable development at the United Nations Conference on Sustainable Development of Education. Paris: UNESCO; 2012.
15. UNESCO. Introduction to the special section: Education imperatives of education. Paris: UNESCO; 2012.
16. Eraut M. Informal learning in the workplace. Stud Contin Educ. 2004;26(2):247-273.
17. Fayolle A, Gailly B. The impact of entrepreneurship education on entrepreneurial attitudes and intention. J Small Bus Manag. 2015;53(1):75-93.
18. Gibb A. In pursuit of a new enterprise and entrepreneurship paradigm for learning. Int J Entrep Educ. 2002;1(3):233-269.
19. Gibb A. Entrepreneurship education: Towards a policy framework for the European Union. Paris: OECD Publishing; 2011.
20. Gibbs G. Learning by doing: A guide to teaching and learning methods. Oxford: Oxford Polytechnic; 1988.
21. Hadlock H, Wells S, Hall J. Teaching factory: A new approach to manufacturing education. J Manuf Syst. 2008;27(3):146-151.
22. International Labour Organization. Global employment trends for youth 2021: Technology and the future of jobs. Geneva: ILO; 2021.
23. Jackson D. Testing a model of undergraduate competence in employability skills. Educ Train. 2014;56(4):319-338.
24. Kementerian Pendidikan dan Kebudayaan RI. Revitalisasi sekolah menengah kejuruan untuk meningkatkan daya saing sumber daya manusia Indonesia. Jakarta: Kemendikbud; 2020.
25. Kolb DA. Experiential learning: Experience as the source of learning and development. Englewood Cliffs (NJ): Prentice Hall; 1984.
26. Kolb DA. Experiential learning: Experience as the source of learning and development. 2nd ed. Boston: Pearson Education; 2015.
27. Lackéus M. Entrepreneurship in education: What, why, when, how. Paris: OECD Publishing; 2015.
28. Marsick VJ, Watkins KE. Informal and incidental learning. New Dir Adult Contin Educ. 2001;89:25-34.
29. Miles MB, Huberman AM, Saldaña J. Qualitative data analysis: A methods sourcebook. 3rd ed. Thousand Oaks (CA): Sage Publications; 2014.
30. Miles MB, Huberman AM, Saldaña J. Qualitative data analysis: A methods sourcebook. 3rd ed. London: SAGE Publications Ltd; 2014.
31. Nabi G, Liñán F, Fayolle A, Krueger N, Walmsley A. The impact of entrepreneurship education in higher education: A systematic review and research agenda. Acad Manag Learn Educ. 2017;16(2):277-299.
32. Neck HM, Greene PG. Entrepreneurship education: Known worlds and new frontiers. J Small Bus Manag. 2011;49(1):55-70.
33. Organisation for Economic Co-operation and Development. Vocational education and training in Indonesia: Strengthening the system. Paris: OECD Publishing; 2019.
34. Organisation for Economic Co-operation and Development. Vocational education and training in Indonesia: Strengthening system responsiveness. Paris: OECD Publishing; 2020.
35. Okoye KR, Arrona-Palacios A, Camacho-Zuñiga C, Hammoutene M. Impact of industry-based learning on students' employability skills. Educ Sci. 2020;10(11):1-15.
36. Patton MQ. Qualitative research & evaluation methods. 4th ed. Thousand Oaks (CA): Sage Publications; 2015.
37. Pavlova M. Technology and vocational education for sustainable development: Empowering individuals for the future. Dordrecht: Springer; 2009.
38. Rae D. Universities and enterprise education: Responding to the challenges of the new era. Educ Train. 2010;52(8-9):588-599.
39. Raelin JA. Work-based learning: Bridging knowledge and action in the workplace. San Francisco (CA): Jossey-Bass; 2008.
40. Rentzos L, Doukas M, Mavrikios D, Mourtzis D, Chryssolouris G. Integrating manufacturing education with industrial practice using the teaching factory paradigm. Procedia CIRP. 2014;17:189-194.
41. Smith E. School–industry collaboration in vocational education and training. J Vocat Educ Train. 2013;65(4):505-521.
42. Sudira P. TVET abad XXI: Filosofi, teori, konsep, dan strategi pembelajaran vokasional. Yogyakarta: UNY Press; 2016.
43. Tilaar ALF. Efektivitas pembelajaran kontekstual dalam mengajarkan matematika. Formatif J Ilm Pendidikan MIPA. 2015.
44. Tomlinson M. Forms of graduate capital and employability. Educ Train. 2017;59(4):338-352.
45. UNESCO. Strategy for technical and vocational education and training (TVET) 2016–2021. Paris: UNESCO Publishing; 2016.
46. UNESCO. Reimagining our futures together: A new social contract for education. Paris: UNESCO Publishing; 2021.
47. UNESCO-UNEVOC. TVET systems and the future of work. Bonn: UNESCO-UNEVOC International Centre; 2020.
48. Wibowo P, Fatichah C. An in-depth performance analysis of the oversampling techniques for high-class imbalanced dataset. Register J Ilm Teknol Sist Inf. 2021.

49. Widyanti DV, Haryono AT. Pengaruh kredibilitas perbankan dan kualitas pelayanan terhadap minat untuk menggunakan jasa perbankan. 2016.
50. World Bank. The Indonesia skills report: Trends in skills demand, gaps, and supply in Indonesia. Washington (DC): World Bank; 2020.
51. Yorke M. Employability in higher education: What it is, what it is not. York: Higher Education Academy; 2006.
52. Zhang T, Duysters G, Cloodt M. The role of entrepreneurship education in shaping entrepreneurial intentions. Technovation. 2014;34(4):254-264.

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