Analyzing of IDUKA as Partner to Improve the Quality of Graduates

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Abstract: This article aims to analyze of *Industri Dunia Usaha Dan Dunia Kerja* (IDUKA) as partner to improve the quality of Graduates at Vocational High School PGRI 3 Malang. The aim of building a partnership between IDUKA with schools is to guide knowledgeable students into the industrial realm of IDUKA which is in line with the student's major. This research uses qualitative research methods with the research design used in this research is a case study which aims to describe IDUKA's search as a partner to improve the quality of graduates at SMK PGRI 3 Malang. Data was obtained through observation, interviews and documentation. The data analysis technique is carried out in several steps, namely: data condensation, data presentation and drawing conclusions/verification. The results showed that the IDUKA search process was carried out by the Industrial Cooperation Division by submitting field work practice proposals, the school also attended activities at job fairs that followed the principles of link and match, the quality and quantity obtained by schools and industry in the world of business and work (IDUKA) is in accordance with what is expected and needed by partners.

Keywords: Education Partnership, Graduate Quality, IDUKA

A. Introduction

According to Sunarto and Supriadi, quoted by Asri, explaining that vocational schools (SMK) are different from general schools (SMA), Vocational High Schools prioritize skill competencies (Pendidikan Vokasi et al., 2019; Suharno et al., 2020; T. Wang, 2018; Yadav et al., 2017), that must be obtained by every student who is directly related to IDUKA. With this, the curriculum that runs in Vocational Schools cannot stand alone but rather adapts to the conditions and developments of IDUKA. According to some scholars, Vocational High School (SMK) is education that prepares students to be ready to work (Mukhadis et al., 2018; Soenarto et al., 2017), this is in accordance with Law no. 20 of 2003 article 15 concerning the National Education System (Triyono, 2015). In line with (Hanushek et al., 2017) opinion, Vocational High Schools are also expected to be able to produce good human resources who are ready for the world of work. Vocational education not only prepares a person with various skills to be able to work, but directs the individual to the level and type of skills needed while the person is working (Tsuneyoshi, 2017).

The success of a Vocational High School can be seen from its alumni who are able to be absorbed into the world of work or can progress to college. The success of a school does not come by itself, but the school must make a holistic effort to prepare each student (Camara et al., 2015; L. H. Wang et al., 2016; Zhang et al., 2017).Vocational High Schools (SMK), have a close relationship with the competencies that are currently needed by the business industry and world of work (IDUKA). The hope is that after graduating from vocational school, students can become competent in each field, apart from that they can fill job vacancies that are needed by every industry in the business world and world of work (IDUKA).

The search for industry in the world of business and work (IDUKA) carried out by the school is an effort to establish interactions aimed at honing students' skills after gaining knowledge from school. This also agrees with Wayong in his research, that partnerships between educational institutions and the business/industry world are the main key to success in Vocational Schools, where education is designed, implemented and evaluated together, so that the relevance of graduate competencies to the demands of the job market increases (Braun & Brachem, 2015; Gawrycka et al., 2020; Monteiro et al., 2016; Pang et al., 2019). Schools also need to carry out partnership management with industry, the business world and the world of work as a form of management that is interrelated with the two institutions, to carry out education and training that require each other, and are mutually beneficial in implementing the planned partnership program.

Collaborative management between schools, industry, the world of business and the world of work (IDUKA) is a medium for establishing interactions that are pursued by schools, this aims to overcome problems in improving the quality of education (Green & Johnson, 2015; Kononowicz et al., 2019; Zohriah et al., 2023), the quality of graduates and is in line with the goal of national education, namely to make the nation's life intelligent (Abad-Segura et al., 2020; Le et al., 2018; Saharso & Fadilah, 2024; Zagalsky et al., 2015). The aim of the school's management collaboration with IDUKA is to speed up the adjustment time for graduates in entering the world of work and ultimately to improve the quality of graduates and gain work experience that can master standardized productive skill competencies, can internalize attitudes, and be able to understand the values and culture of a deeply oriented industry. quality, economic values, and fostering an entrepreneurial spirit that can form a critical, productive and competitive work ethic.

According to Benítez-Ávila and Berbegal-Mirabent, the term partnership is used to indicate a relationship agreement between two or more parties to achieve common goals (Benítez-Ávila et al., 2018; Berbegal-Mirabent et al., 2015). Meanwhile, the partnership cooperation (*collaboration partnership*), in simple terms, is a cooperative bond between individuals and organizations so that it can produce mutual benefits. To increase relevance in order to meet the needs of the world of work, it is necessary to build a partnership cooperation model (*partnership*), with this it will be profitable

between industry and schools and can share responsibility and also potential (*resources*) from each of the two sides.

Vocational High Schools (SMK) not only equip students with skill competencies so they can be ready to work at IDUKA, but the relevance between SMK and IDUKA is also useful for creating quality graduates that can suit IDUKA's needs. This is also in accordance with the policies made by the government regarding*link and match* IDUKA, so you understand what IDUKA needs. In line with Kuswana's opinion, the output from Vocational High Schools (SMK) must be skilled so that they will be ready to work straight away (Wowo Sunaryo Kuswana, 2013).

Vocational High Schools (SMK) not only provide skills competency education, which prepares students to work in the business world and work industry (IDUKA), but also ensure harmony between SMK and IDUKA in order to produce high quality graduates who meet IDUKA's demands. This is in line with government policy regarding *link and match* IDUKA, allows both parties to have a clear understanding of IDUKA requirements. Therefore, it is very effective for Vocational Schools to establish partnerships with IDUKA, with the aim of improving the quality of their graduates.

Previous research that is relevant to this research, conducted by Bambang Ixtiarto and Budi Sutrisno, stated that partnership management at SMK Muhammadiyah 2 Wuryantoro was carried out to manage the school's potential in supporting collaboration with Du/Di: a) Formation of committees/division of working groups (Working Group) which handles the implementation of collaboration with Du/Di, b) The school is proactive in establishing communication with Du/Di in promoting the existence of the school, c) The school submits a proposal offer to industry related to school collaboration which includes (curriculum synchronization, industrial work practice activities, placement of graduates, OJT teacher), d) Utilizing Du/Di's specific roles as guest teachers, industrial visits, e) Du/Di working together is outlined in the form of a cooperation text or MoU

It can be concluded from the above research that this can be achieved if educational institutions and the business/industry world work together, where educational institutions equip students with theoretical knowledge, while the business/industry world equips them with practical knowledge through training experience in actual work practices. In this case, sharpening and clarity in making the Cooperation text or *memorandum of understanding* (MoU) between schools and Du/Di requires understanding and commonality of opinion to improve quality human resources.

Furthermore, other research stated that there was a program *link and match* very helpful in establishing vocational school collaboration with DUDI with various approaches such as competency based training (CBT) and strategies such as the MoU program for the business world and the industrial world (DUDI), curriculum alignment, industrial work practices (PRAKERIN), and skills competency tests (UKK)

(Anriani & Gholobi, 2024; Hastini Ratna Dewi et al., 2023). So that link and match will be effective and beneficial for both parties.

In this research, the Vocational School continues to try to find strategies for the program *link and match* realized, as in the first example, through a social approach (Tamrin et al., 2018). The social approach is an approach based on public interests and needs (Subkhan, 2023). The main emphasis is on educational goals and equal distribution of education. as information on one type of program at the Model Vocational School is arranged to be in line with what is needed by students as well as the diversity of public needs and the world of work in its various divisions and sections (Supriyadi et al., 2022). The second approach is human resources which emphasizes the employment approach. This tends to lead to DUDI's need for qualifications that are in line with efforts to meet the needs of its workforce

Private vocational schools usually look for IDUKA as a potential partner, compared to public vocational schools, it is the partners who come to them. This finding is in line with research conducted by Fadilla Weka Yuningsih, which shows that private vocational schools are more proactive in looking for partners as a means of improving and growing the school's reputation. On the other hand, people often assume that state vocational schools have comprehensive facilities and infrastructure, as well as highly competent educational staff.

SMK PGRI 3 Malang is one of the largest private vocational schools in Malang City with the number of students reaching 2,398 students. Apart from that, it is also one of the Center of Excellence (PK) Vocational Schools in Malang City which has collaborated with many companies operating in the fields of automotive, machining, information technology and electricity and electronics.

SMK PGRI 3 Malang also has a partnership relationship with the business and work industry (IDUKA) with the aim of providing experience in the world of work to students so that the form of partnership is mutually beneficial for both parties. Apart from that, the school is an assisted, referral and revitalization school. So, it becomes an attraction for researchers to find out and analyze further regarding the search for IDUKA as a partner to improve the quality of graduates at SMK PGRI 3 Malang.

Therefore, research is looking for IDUKA as a work partner to improve the quality of graduates. This aims to provide information regarding the collaboration carried out by the school in searching for IDUKA as a partner. This is of course to improve the quality of graduates for students. Based on the description above, researchers will conduct research on how the process of SMK PGRI 3 Malang is in searching for IDUKA as a partner to improve the quality of graduates and how the quantity and quality of partners' contributions are in improving the quality of graduates.

B. Methods

This research uses a qualitative research approach. As stated by (Thambinathan & Kinsella, 2021) research methodology is "a research procedure that produces descriptive data through written documentation of individuals or their spoken words and their observable behavior". The researcher deliberately chose this qualitative research approach with the aim of gaining a comprehensive understanding of IDUKA's search as a partner to improve the quality of graduates at SMK PGRI 3 Malang. Researchers use this approach to describe their findings carefully and systematically, which are presented in the form of descriptive text. The research design used in this research is a case study, with this the researchers focused their efforts on a single phenomenon in a particular location, namely the search for IDUKA as a partner to improve the quality of graduates at SMK PGRI 3 Malang. This investigation was carried out at SMK PGRI 3 Malang, which is located on Jalan Raya Tlogomas IX/09 Malang.

The presence of researchers as the main research instrument and data collector, as well as observers. In searching for information to obtain valid data and information, researchers must often go to the field to collect data. According to Ulfatin, "in qualitative research, it is humans who act as the main instrument or data collection tool, generally the researcher himself acts as the key instrument" (Ulfatin, 2013). The presence of a researcher is absolutely necessary in the field or research location to obtain the expected data and the presence of this researcher will not reduce credibility, so that the data obtained can be compiled into a report that can be accounted for.

The data used in this research comes from the Industrial Cooperation (BKI) team. The methodology used for data collection in this investigation includes observation, indepth interviews, and documentation. The data analysis process requires the implementation of three different stages, (a) data condensation (*data condensation*), b) data presentation (*data displays*) and c) drawing conclusions/verification (*conclusion drawing/verification*). The subsequent results of the data analysis are checked for validity by selecting strict evaluation targets to ensure their validity, achieved through extending observations, increasing persistence, and triangulation (data triangulation and method triangulation). The data collection process in this research took place through a series of stages, namely the preparation stage, implementation stage and reporting stage.

C. Results and Discussion

Processing *Industri Dunia Usaha Dan Dunia Kerja* (IDUKA) as a Work Partner in improving the students graduates quality

According to Indriaturrahmi & Sudiyanto, the establishment of the Vocational School will run effectively and efficiently if it is accompanied by good cooperation with

IDUKA. With this, it is also hoped that Vocational High Schools will continue to get closer to IDUKA. This closeness starts from planning to the process of implementing education in vocational schools, which must be in line with what IDUKA requires, starting with the curriculum implemented in schools and during recruitment. With this, it can be concluded that one of the factors that can determine the success of a Vocational High School is a cooperation or partnership program between the Vocational School and IDUKA as the provider of employment opportunities for Vocational School graduates.

The researcher's conclusion from the results of interviews conducted by BKI staff (Industrial Work Sector) is that, SMK PGRI 3 Malang has a cooperative relationship with partners who have signed the MoU totaling 266 work partners, in this case the IDUKA that joins cannot focus on just one department but rather has many branches in other departments. In the process of searching for IDUKA for SMK PGRI 3 Malang, the school submitted a field work practice (PKL) proposal. If students have been accepted to do practical work (PKL) then the school sends a proposal to recruit students to work at IDUKA. Apart from the two stages above carried out by SMK PGRI 3 Malang, they also attended activities at *job fair* to establish contact with existing companies job fair. The search for IDUKA as a partner to improve the quality of graduates at SMK PGRI 3 Malang was carried out by the Industrial Cooperation Division (BKI), with the authorization of the school principal. BKI will assign students to appropriate positions based on their respective departments or majors. This placement process takes time for several reasons. First, students are prohibited from seeking field work placements (PKL) independently. Second, BKI must reassess the industrial capacity of the business world and the world of work (IDUKA). Third, the industrial needs of the business world and world of work (IDUKA) always follow annual changes. When these needs shift, BKI must consult with guardian teachers to determine appropriate placement for students. This results in inefficiencies in the process of aligning students with industries in the business and work world (IDUKA).

The implementation of the PKL program is included in vocational education activities, this activity is carried out by schools with IDUKA. In this way, students can apply the theories obtained in class, which aims to provide experience and provisions for students in facing the world of work. The PKL program is a learning program carried out directly within IDUKA. While carrying out PKL or internship with IDUKA, students will receive guidance and training according to their competencies, so that after completing the internship or PKL, the school hopes that each student will be skilled, experienced, and can experience the real world of work. In order for it to run well, there needs to be a supervising teacher who can directly control IDUKA activities.

The researcher's conclusion from interviews with BKI staff is that during practical field work (PKL), a supervising teacher is assigned responsibility for monitoring their progress and identifying any challenges they may face while at IDUKA. To document

their daily activities, students are required to fill out a daily journal, which functions as a means of validation for the supervising teacher during the monitoring process. Losing this journal leaves the student without supporting documents to present to the supervising teacher. Apart from that, supervising teachers also collect evaluations from IDUKA on the performance of students involved in practical field work (PKL) and submit them to BKI as part of the monthly report. Delays in submitting monitoring results by the supervising teacher will definitely result in the monthly report being submitted late. Finally, the assessment and evaluation stage are carried out to determine the student's suitability for graduation after completing practical field work (PKL).

Apart from the above, students can also benefit from the achievements and encounters obtained during activities outside of school. Learners have the capacity to adapt and reflect on their understanding in academic and real-life contexts (Defi et al., 2024; Ennouamani et al., 2020; Fitria, 2022; Lin & Nguyen, 2021). This conclusion is in line with Edi Azwar's theory. As regulated in Law of the Republic of Indonesia Number 20 of 2003 concerning the National Education System, Article 42, it is mandatory for every educator to have certain competencies related to learning theory and practice.

According to experts, a partnership shows a relationship between two or more entities with the aim of pursuing profits (Díaz-Perdomo et al., 2021), where one entity is in a subordinate position, but forms a bond that positions both parties on the basis of a mutually accepted cooperative commitment to achieve the goal (Doherty et al., 2014; Samii et al., 2002). In line with Siswanto's opinion, that partnership (*partnership*) is an agreement made between SMK and IDUKA to achieve mutually expected goals (Romi Siswanto, 2019).

The aim of the collaboration or cooperation between SMK and IDUKA lies in improving the quality of vocational school education so that it is in line with the expectations of educational institutions and industry, as well as growing students or graduates who have competitive talents and life skills. IDUKA, functioning as a user, simultaneously produces a skilled workforce, thereby producing individuals endowed with professional competence and skills. In the realm of educational institutions, teachers provide basic general and vocational learning, while IDUKA provides practical exposure, thus allowing us to stay informed about technological advances at IDUKA.

In this context, as stated by Rukmana, the concept of partnership includes various interpretations, which can be defined as: (a) cooperation, namely the degree of effort of one party to fulfill the wishes of another party; (b) consistency relates to the extent to which a party exerts effort to fulfill its own aspirations; (c) collaboration denotes a situation in which each party seeks to fully satisfy the interests of all parties involved; (d) compromise refers to a situation where each party is willing to make sacrifices to achieve a sharing of burdens and benefits.

With this, the importance of partners as a means of strengthening quality improvement may be reduced because the training of students, educated by partners based on their needs in the field, will undoubtedly result in enormous benefits for students, schools and IDUKA itself. The partnership between SMK and IDUKA is not just "existing" cooperation between schools and the business and work industry (IDUKA), but rather students can be directed optimally according to the demands of the labor market. On the other hand, partners in the business and work industry (IDUKA) will also reap benefits, because the workforce they employ will work skillfully and professionally in accordance with the partner's requirements.

The Quality of Partner Contributions in Improving the Quality of Students Graduates

Research findings show that the business and work industry (IDUKA) of SMK PGRI 3 Malang, has exerted maximum effort in developing strategies for school-industry collaboration initiatives. The main aim of this partnership is to improve the prospects of students in their respective fields. In this context, schools take a comprehensive role in promoting the growth and development of their students. As a result, the school successfully contributes to the efforts of IDUKA, which is actively involved in providing practical training opportunities to learners and serves as a place for internships to equip students for their future endeavors in the business and professional fields. The school has established various forms of collaboration with industry in the world of business and the world of work. This includes aligning curricula, implementing internship programs (Prakerin), coordinating training initiatives, and facilitating the distribution of graduates. The collaborative efforts undertaken by this school are very important and serve as the focal point of the Industrial Cooperation Field (BKI), the aim of this effort is to guide well-rounded participants towards industrial domains that align with their specific knowledge and skills.

The results of this study coincide with the proposition proposed by Abuzar H, which states that cooperation between vocational schools (SMK) and the business world and work industry (IDUKA) through *link and match* relationships and partnerships can prove beneficial for the following reasons: a) Students can witness firsthand the role of technology in the world of business and work, thereby eliminating the discomfort of engaging with technological processes in the real world of business and work. b) Vocational school education participants are motivated to improve their skills and abilities, because these students can experience it directly. c) The quality of vocational school graduates can be improved, because industry demands discipline for sustainable survival. For example, signs of declining quality in schools can be observed through commitment to punctuality and learning, work ethic, competitiveness, and performance culture. d) Designing a competency-based curriculum is a task made easier by its ability to directly meet the industrial demands of the business world, as well as the world of work. e) As a result, the labor recruitment

process becomes easier, because *stakeholders'* Vocational schools can support extraordinary students and propose students who have achievements to join the workforce (H. Abuzar, 2011).

When building partnerships, an important and non-negotiable principle lies in the mutual trust that exists between the parties involved, be it intuition or partner institutions. In connection with this, Nana Rukmana provides three basic principles that must be remembered by every member of the partnership, including: (a) principles *equity* (equality), emphasizing that any organization or institution willing to engage in partnership must consider themselves equal in pursuing common goals. This indicates that neither party holds a superior or inferior position; rather, everyone is equally responsible for achieving collective goals; (b) the principle of Openness Organizations or institutions involved in partnerships demonstrate a willingness to embrace the imperfections and vulnerabilities of each member, as well as the diverse resources they have. All this knowledge must be shared with other members. Openness is a fundamental aspect from the start of a partnership to the completion of the effort. By being open to each other, mutual complementarity and mutual assistance between groups (partners) can develop; (c) Principle of Mutual Benefit Organizations or institutions entering into a partnership obtain benefits from the partnership that have been determined in accordance with the contributions made by each party involved. When activities or work are carried out collectively, it becomes efficient and effective.

These three principles play an important role in shaping the quantity and quality of partner contributions. The contribution of work partners given to SMK PGRI 3 Malang, on average, is the industry partners who provide practical tools for the teaching process. Apart from that, the school also provides and ensures the quality of competent students who are in line with the expectations of work partners.

Apart from that, in order to encourage the development of extraordinary human resources to push Indonesia forward, it is very important to build concrete quantities and strong cooperation between various parties. This direction comes from the Directorate General of Vocational Education and is implemented through the ongoing pursuit of the program "*link and match*" by the Ministry of Education. Consistency and hard work are needed from the fields of education, industry and the world of work. Ultimately, graduates from the world of education will be equipped to adapt to the demands of the industrial workforce and workforce (IDUKA).

As educational institutions, vocational schools play an important role in producing graduates who have skills, experience, attitudes and values that comply with national and global standards. It is very important to continue to improve the quality of vocational schools. One way to achieve this is by providing educational facilities and infrastructure, especially practical tools that meet IDUKA's needs.

In this case, improving the quality and performance of Vocational Schools to become centers of excellence in line with IDUKA requirements is paramount. This can be achieved through collaborative curriculum development with IDUKA, which can incorporate PBET in the form of Project Based Learning (*Project Based Learning*) or Industry Based Learning (through Industrial Work Practices). In addition, the following initiatives can be included: (a) increasing the percentage of certified teachers recognized by IDUKA; (b) develop joint fieldwork practices with IDUKA; (c) building infrastructure facilities that meet the needs of the IDUKA Creative Economy sector; (d) ensure that at least 70% of graduates are employed by IDUKA within one year of graduation.

In the case of SMK PGRI 3 Malang, the PKL program was developed in collaboration with IDUKA, following the principles *link and match*, so that the quality of graduates meets industry demands. The goal is to ensure that at least 70% of graduates find work. Next, the trainer development program *center of excellence* implemented for schools in the surrounding area. A comprehensive plan for the development and sustainability of the center of excellence was also drawn up.

Expected outcomes include improving the quality of graduates prepared for employment and entrepreneurship, based on respective skills programs. To achieve this, the curriculum was aligned and Field Work Practices were optimized through collaboration with IDUKA. This collaboration functions as a bridge between the business world and the world of work (IDUKA) at SMK PGRI 3 Malang. This approach increases graduates' chances of being accepted in the business and industrial sectors. In addition, Vocational Schools have the opportunity to establish partnerships with the business and industrial sectors, enabling them to contribute to curriculum development, learning implementation and practical training.

Based on this, the program *link and power* It is very beneficial for improving vocational schools and provides prospects for the business and industrial sectors to set work standards in the educational process in vocational schools. Thus, the number and caliber of cooperation or collaboration between schools and industry in the world of business and work (IDUKA) is very important for the purpose of increasing the excellence of graduates.

This is in accordance with the idea of Graduate Quality used in carrying out this research, referring to the principles of Hanson & Owen, which explain that in the context of graduate quality, quality can be differentiated into three aspects, namely attitude, knowledge and talent (Hanapi & Nordin, 2014). Other researchers revealed that progress in the quality of education is inseparable from efforts to improve the quality of graduates, which in turn has an impact on graduate standards (Bikse et al., 2013; Støren & Aamodt, 2010). Striving to improve the quality of education cannot meet projected goals without starting with improving the quality of students and graduates.

From the research findings conducted by Sri Utami, it has been explained that in order for partnerships to be built optimally, the management of partnerships (collaboration) with the business world and the world of work in Industrial Work Practices (Prakerin) must comply with the procedures determined to equip students with professional skills. which is in line with the requirements of national labor standards Schools (SMK) have attempted to increase the school's partnership (collaboration) with the business industry and world of work by involving all components related to the learning process, both within the school and related non-school entities, and by distributing and assigning workforce in accordance with their respective fields. This ensures that the quality and quantity achieved by the school and its partners corresponds to the anticipated results for both parties.

D. Conclusion

Based on the results of the research and discussion of the search for IDUKA as a partner to improve the quality of graduates at SMK PGRI 3 Malang, it can be concluded that the search process for IDUKA at SMK PGRI 3 Malang is supervised by the Industrial Cooperation Section (BKI) by actively visiting schools. *Job fair* to establish contact with the industry, the second stage sends a proposal to do PKL (field work practice), the third stage sends a proposal for the recruitment of students to work in the business world industry and the world of work (IDUKA). The quantity and quality between the school and the work partner is the center of excellence between the two, where the school provides students who are ready to work in their field and the partner provides a container to.

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References

- Abad-Segura, E., González-Zamar, M. D., Infante-Moro, J. C., & García, G. R. (2020). Sustainable Management of Digital Transformation in Higher Education: Global Research Trends. *Sustainability* 2020, Vol. 12, Page 2107, 12(5), 2107. https://doi.org/10.3390/SU12052107
- Anriani, N., & Gholobi, M. I. (2024). Developing an Instrument to Measure the Effectiveness of the Link and Match Learning and the Availability of the Practical Laboratory Facilities on the Quality of Vocational School Graduates. *Jurnal Pendidikan Indonesia Gemilang*, 4(1), 1–7. https://doi.org/10.53889/JPIG.V4I1.311
- Benítez-Ávila, C., Hartmann, A., Dewulf, G., & Henseler, J. (2018). Interplay of relational and contractual governance in public-private partnerships: The mediating role of relational norms, trust and partners' contribution. *International*

Journal of Project Management, 36(3), 429–443. https://doi.org/10.1016/J.IJPROMAN.2017.12.005

- Berbegal-Mirabent, J., Sánchez García, J. L., & Ribeiro-Soriano, D. E. (2015). University-industry partnerships for the provision of R&D services. *Journal of Business Research*, 68(7), 1407–1413. https://doi.org/10.1016/J.JBUSRES.2015.01.023
- Bikse, V., Rivža, B., & Brence, I. (2013). Competitiveness and quality of higher education: Graduates' evaluation. *Journal of Teacher Education for Sustainability*, 15(2), 52–66. https://doi.org/10.2478/JTES-2013-0011
- Braun, E. M. P., & Brachem, J. C. (2015). Requirements Higher Education Graduates Meet on the Labor Market. *Peabody Journal of Education*, 90(4), 574–595. https://doi.org/10.1080/0161956X.2015.1068086
- Camara, W. E., O'Connor, R. E., Mattern, K. E., & Hanson, M. A. E. (2015). Beyond Academics: A Holistic Framework for Enhancing Education and Workplace Success. ACT Research Report Series. 2015 (4). *ACT*, *Inc.*, 2015(4).
- Defi, W. F., Febrina, W., Rifma, R., Jasrial, J., & Syahril, S. (2024). The Influence of The Constructivism Learning Model on The Quality of Learning in Panyabungan District State Elementary School. *JMKSP (Jurnal Manajemen, Kepemimpinan, Dan Supervisi Pendidikan)*, 9(1), 426–439. https://doi.org/10.31851/JMKSP.V9I1.13839
- Díaz-Perdomo, Y., Álvarez-González, L. I., & Sanzo-Pérez, M. J. (2021). A Way to Boost the Impact of Business on 2030 United Nations Sustainable Development Goals: Co-creation With Non-profits for Social Innovation. *Frontiers in Psychology*, 12, 719907. https://doi.org/10.3389/FPSYG.2021.719907/BIBTEX
- Doherty, B., Haugh, H., & Lyon, F. (2014). Social Enterprises as Hybrid Organizations: A Review and Research Agenda. *International Journal of Management Reviews*, 16(4), 417–436. https://doi.org/10.1111/IJMR.12028
- Ennouamani, S., Mahani, Z., & Akharraz, L. (2020). A context-aware mobile learning system for adapting learning content and format of presentation: design, validation and evaluation. *Education and Information Technologies*, 25(5), 3919– 3955. https://doi.org/10.1007/S10639-020-10149-9/METRICS
- Fitria, N. (2022). The Effect of Lecturers Pedagogic Competency on Accountability of Management Islamic Religious Higher Education. Bulletin of Science Education, 2(1), 18–26. https://doi.org/10.51278/BSE.V2I1.295
- Gawrycka, M., Kujawska, J., & Tomczak, M. T. (2020). Competencies of graduates as future labour market participants-preliminary study. *Economic Research Ekonomska Istraživanja*, 33(1), 1095–1107. https://doi.org/10.1080/1331677X.2019.1631200
- Green, B. N., & Johnson, C. D. (2015). Interprofessional collaboration in research, education, and clinical practice: working together for a better future. *Journal of Chiropractic Education*, 29(1), 1–10. https://doi.org/10.7899/JCE-14-36
- Hanapi, Z., & Nordin, M. S. (2014). Unemployment among Malaysia Graduates: Graduates' Attributes, Lecturers' Competency and Quality of Education. *Procedia*- Social and Behavioral Sciences, 112, 1056–1063. https://doi.org/10.1016/J.SBSPRO.2014.01.1269

- Hanushek, E. A., Schwerdt, G., Woessmann, L., & Zhang, L. (2017). General Education, Vocational Education, and Labor-Market Outcomes over the Lifecycle. *Journal of Human Resources*, 52(1), 48–87. https://doi.org/10.3368/JHR.52.1.0415-7074R
- Hastini Ratna Dewi, Djoko Kustono, & Isnandar, D. N. (2023). Establishing Link And Match Programs To Increase Graduates' Competencies Of Vocational High School Center Of Excellent. *Journal of Namibian Studies : History Politics Culture*, 37, 534–551. https://doi.org/10.59670/JNS.V37I.5005
- Kononowicz, A. A., Woodham, L. A., Edelbring, S., Stathakarou, N., Davies, D., Saxena, N., Car, L. T., Carlstedt-Duke, J., Car, J., & Zary, N. (2019). Virtual Patient Simulations in Health Professions Education: Systematic Review and Meta-Analysis by the Digital Health Education Collaboration. J Med Internet Res 2019;21(7):E14676 Https://Www.Jmir.Org/2019/7/E14676, 21(7), e14676. https://doi.org/10.2196/14676
- Le, H., Janssen, J., & Wubbels, T. (2018). Collaborative learning practices: teacher and student perceived obstacles to effective student collaboration. *Cambridge Journal of Education*, 48(1), 103–122. https://doi.org/10.1080/0305764X.2016.1259389
- Lin, Y., & Nguyen, H. (2021). International Students' Perspectives on e-Learning During COVID-19 in Higher Education in Australia: A Study of an Asian Student. *Electronic Journal of E-Learning*, 19(4), pp241-251. https://doi.org/10.34190/EJEL.19.4.2349
- Monteiro, S., Almeida, L., & Aracil, A. G. (2016). Graduates' perceptions of competencies and preparation for labour market transition: The effect of gender and work experience during higher education. *Higher Education, Skills and Work-Based Learning*, 6(2), 208–220. https://doi.org/10.1108/HESWBL-09-2015-0048/FULL/XML
- Mukhadis, A., Rahma Putra, A. B. N., Nidhom, A. M., Dardiri, A., & Suswanto, H. (2018). The Relevance of Vocational High School Program With Regional Potency Priority in Indonesia. *Journal of Physics: Conference Series*, 1028(1), 012079. https://doi.org/10.1088/1742-6596/1028/1/012079
- Pang, E., Wong, M., Leung, C. H., & Coombes, J. (2019). Competencies for fresh graduates' success at work: Perspectives of employers. *Industry and Higher Education*, 33(1), 55-65. https://doi.org/10.1177/0950422218792333/ASSET/IMAGES/LARGE/10.1177 _0950422218792333-FIG1.JPEG
- Pendidikan Vokasi, J., Yogie Hermanto, F., Hidayati Mar, B., & Sholikah, atus. (2019). The need of practical teaching in vocational high school of Automation and Office Management Program. *Jurnal Pendidikan Vokasi*, 9(3), 238–248. https://doi.org/10.21831/JPV.V9I3.26734
- Saharso, S., & Fadilah, M. F. (2024). The Influence of Transformational Leadership Style, Work Environment, Job Satisfaction and Work Discipline on Employee Performance. *JMKSP (Jurnal Manajemen, Kepemimpinan, Dan Supervisi Pendidikan)*, 9(1), 1–14. https://doi.org/10.31851/JMKSP.V9I1.13760
- Samii, R., Van Wassenhove, L. N., & Bhattacharya, S. (2002). An Innovative Public-

Private Partnership: New Approach to Development. *World Development*, 30(6), 991–1008. https://doi.org/10.1016/S0305-750X(02)00015-3

- Soenarto, S., Amin, M. M., & Kumaidi, K. (2017). An evaluation of vocational high schools in Indonesia: A comparison between four-year and three-year programs. *REID* (*Research and Evaluation in Education*), 3(2), 106–113. https://doi.org/10.21831/REID.V3I2.17077
- Støren, L. A., & Aamodt, P. O. (2010). The Quality of Higher Education and Employability of Graduates. *Quality in Higher Education*, 16(3), 297–313. https://doi.org/10.1080/13538322.2010.506726
- Subkhan, E. (2023). Vocationalizing Education: The Dangers of Link-And-Match Paradigm for the Students' Future. *Education in the Asia-Pacific Region*, 70, 77–97. https://doi.org/10.1007/978-981-99-1878-2_5/COVER
- Suharno, Pambudi, N. A., & Harjanto, B. (2020). Vocational education in Indonesia: History, development, opportunities, and challenges. *Children and Youth Services Review*, 115, 105092. https://doi.org/10.1016/J.CHILDYOUTH.2020.105092
- Supriyadi, A., Rusmawati, R. D., & Hartono. (2022). Implementation of Link and Match Program Development through Online Practice Handbook. *Technium Social Sciences Journal*, 32. https://heinonline.org/HOL/Page?handle=hein.journals/techssj32&id=95&di v=&collection=
- Tamrin, A. G., Slamet, S., & Soenarto, S. (2018). The link and match of the demand and supply for productive vocational school teachers with regard to spectrum of vocational skills in the perspective of education decentralization. *Jurnal Pendidikan Vokasi*, 8(1), 40–52. https://doi.org/10.21831/JPV.V8I1.15135
- Thambinathan, V., & Kinsella, E. A. (2021). Decolonizing Methodologies in QualitativeResearch:CreatingSpacesfor*Https://Doi.Org/10.1177/16094069211014766*,20.https://doi.org/10.1177/16094069211014766
- Triyono, M. B. (2015). The Indicators of Instructional Design for E- learning in Indonesian Vocational High Schools. *Procedia - Social and Behavioral Sciences*, 204, 54–61. https://doi.org/10.1016/J.SBSPRO.2015.08.109
- Tsuneyoshi, R. (2017). Globalization and Japanese "exceptionalism" in Education: Insiders' views into a changing system. *Globalization and Japanese "Exceptionalism" in Education: Insiders' Views into a Changing System*, 1–215. https://doi.org/10.4324/9781315690278
- Wang, L. H., Gurr, D., & Drysdale, L. (2016). Successful school leadership: case studies of four Singapore primary schools. *Journal of Educational Administration*, 54(3), 270–287. https://doi.org/10.1108/JEA-03-2015-0022/FULL/XML
- Wang, T. (2018). School leadership and professional learning community: case study of two senior high schools in Northeast China. Global Perspectives on Developing Professional Learning Communities, 10–24. https://doi.org/10.4324/9781351206198-2
- Yadav, A., Good, J., Voogt, J., & Fisser, P. (2017). Computational thinking as an emerging competence domain. *Technical and Vocational Education and Training*, 23,

1051-1067. https://doi.org/10.1007/978-3-319-41713-4_49/COVER

- Zagalsky, A., Feliciano, J., Storey, M. A., Zhao, Y., & Wang, W. (2015). The emergence of GitHub as a collaborative platform for education. CSCW 2015 - Proceedings of the 2015 ACM International Conference on Computer-Supported Cooperative Work and Social Computing, 1906–1917. https://doi.org/10.1145/2675133.2675284
- Zhang, X., Gossett, C., Simpson, J., & Davis, R. (2017). Advising Students for Success in Higher Education: An All-Out Effort. *Https://Doi.Org/10.1177/1521025116689097*, 21(1), 53–77. https://doi.org/10.1177/1521025116689097
- Zohriah, A., Bachtiar, M., Fauzi, A., Rohmatika, R. V., & Lestari, P. (2023). Improving the Professionalism and Performance of Education Personnel through Compensation Management. *Jurnal Iqra': Kajian Ilmu Pendidikan*, 8(2), 256–280. https://doi.org/10.25217/JI.V8I2.3060