

CHALLENGES AND POTENTIAL OF VOCATIONAL EDUCATION AND TRAINING

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ABSTRACT

This research investigates the challenges and potential in the context of vocational education and training in Indonesia, with a focus on community-based learning approaches. Through an in-depth literature study approach, this research analyzes the gap between the vocational curriculum and industry needs, and identifies the difficulties faced by vocational graduates in adapting to job demands. This research also explores the potential of community-based learning approaches in correcting these gaps and maximizing students' practical skills. The results of this research provide important insights for vocational education and training stakeholders in Indonesia to increase curriculum relevance and strengthen connections between schools and industry.

Keywords: Vocational education, training, Indonesia, curriculum-industry gap .

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This research investigates the challenges and potential in the context of vocational education and training in Indonesia, with a focus on community-based learning approaches. Through an in-depth literature study approach, this research analyzes the gap between the vocational curriculum and industry needs, and identifies the difficulties faced by vocational graduates in adapting to job demands. This research also explores the potential of community-based learning approaches in correcting these gaps and maximizing students' practical skills. The results of this research provide important insights for vocational education and training stakeholders in Indonesia to increase curriculum relevance and strengthen connections between schools and industry.

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INTRODUCTION

Education and training technical and vocational (TVET) is very important in increase Power competitive economic and encouraging well-being based knowledge in global economy . Challenge main problem faced education and training vocational lies in effort For align with labor market and skills needs continuing individual growing , while still apply draft learning throughout life . Important For emphasize role important education vocational in push inclusion social and power competitive economics , considering increasing need will worker skilled and TVET level participants beginner from various background back (Hrmo et al., 2016). Likewise , training career industry Aviation also has an important meaning . Capacity For develop and support capacity absorption , especially at the level national or organizations , rely heavily on education and training in the sector aerospace . Aspects this is very important in help industrial countries new in build level capacity adequate absorption . Effective policy For training and education various groups and individuals are very important for successful technology transfer international and integration technology and knowledge aerospace to in organization recipient (Heiden et al., 2015). Although there has been an increase in resource allocation from the government and related institutions to improve vocational education in Indonesia, significant challenges still continue to emerge. One of the main challenges faced is the growing gap between the curriculum taught in vocational schools and the actual needs of industry. Although students may have solid theoretical knowledge, they often lack the practical skills necessary to succeed in a real work environment. Skills such as problem solving, effective communication and industry-relevant technical skills are often lacking in traditional curricula, leading to a mismatch between graduate qualifications and job market expectations .

Impact from gap This is very evident in the difficulties faced by many vocational graduates in adapting to the real demands of work. Without sufficient practical skills, they often face difficulties in dealing with real situations at work and meeting employers' expectations. Therefore, even though they have academic qualifications, lacking practical skills is often a major barrier for vocational graduates to enter and compete in the competitive job market. Therefore, it is important to identify and address gaps between vocational education curricula and industry needs to ensure graduates' suitability to actual job market requirements.

Approach conventional in Vocational education and training are often unable to maximize students' potential. Teacher-centered learning models and classroom-centered curricula often fail to utilize the knowledge and skills possessed by local communities. This results in a gap between what is taught in class and what is required in a real work environment. Therefore, a more engaged approach is needed with local communities to identify actual labor market needs and align vocational curricula with need the .

Vocational education has developed very rapidly in the last decade, as evidenced by this 158% increase in the number of new students in vocational fields from 2001 to 2010 (ADB, 2010). Indonesian society at that time still considered people who had taken vocational education to be those who had failed academically and studying in vocational education was the second option. However, this perception began to change in 2013 where there were 1.9 million candidate applicants competing for 1.5 million seats in institutions education vocational . Matter This show increasing interest public in vocational education. They hope By resolve studies in vocational education , it will be easier For get work Because of them considered own special skills or expertise required by the world of work. With

With Thus , education Vocational education must be able to keep up with developments in the world of business and industry. In 2015, Indonesia was recorded as having 55 million skilled workers (ADB, 2015). Based on Estimates on plans parent to accelerate and increase economic growth in Indonesia (MP3EI), from this number, 113 million skilled workers are still needed in 2030. An average addition of 3.2 million per year. This is a challenge for the education and training sector. The education sector is trying to answer the challenges This with present it A A Draft education Where There is more practical elements in the learning process compared to with element theoretical . Education that prioritizes the application of knowledge and not the side of academic education is known as vocational education.

Conventional approaches to vocational education and training often No adequate Maximize it potency student . Teacher- centered model learning and Classroom- centered Curriculum often fail utilise knowledge and skills possessed by local communities. This results gap between What Taught in class with what is needed in the environment actual work . Therefore the , more involved approach with public local required Identification actual and aligning labor market needs curriculum vocational with need .

In the era of globalization and rapid technological development, vocational education and training is the main focus in efforts to create a workforce that is ready to compete and is relevant to market needs. Even though it is considered a bridge between formal education and the world of work, this sector is not free from various challenges that need to be solved. From skills gaps to changing industry trends, this article will explore the critical challenges facing vocational education and training, while exploring the enormous potential it has in shaping a more inclusive and sustainable future.

These challenges include the gap between skills taught and industry needs, lack of accessibility to vocational education for all levels of society, and rapid changes in technology and the job market. However, vocational education and training also has the potential to empower individuals with skills that match job market demand, reduce unemployment, and improve economic prosperity. With the right strategy, vocational education and training can be an effective solution in overcoming these challenges and exploiting its full potential to advance social and economic development.

METHODOLOGY

In investigating the challenges and potential of vocational education and training , a literature study approach will be a strong methodological basis. This literature study will involve a comprehensive review of academic literature, research reports, and other related sources of information relevant to the research topic. The focus will include analysis of vocational education policies that have been implemented in Indonesia, evaluation of the implementation of learning approaches in the context of vocational education, as well as a review of empirical studies that have been carried out both in Indonesia and in other countries with similar experiences. In this research, applying a mixed approach, combining qualitative and quantitative analysis to explore it. A qualitative approach is used to understand individual experiences in facing challenges in vocational education and training, while a quantitative approach is used to measure and map the distribution and level of impact of these challenges broadly. With this approach, we aim to provide a comprehensive and in-depth picture of the dynamics affecting the vocational education and training sector, as well as highlight potential solutions that can be implemented to increase its effectiveness . A qualitative approach is used to understand

individual experiences in facing challenges in vocational education and training, while a quantitative approach is used to measure and map the distribution and level of impact of these challenges broadly. With this approach, combining qualitative and quantitative approaches to gain a holistic understanding of the challenges and potential in vocational education and training. In-depth interviews and case study approaches were used to gain direct insights from key stakeholders, while statistical and survey data analysis reinforced the findings with quantitative data. Through this approach, we hope to identify the factors that influence the effectiveness of the vocational education and training system and formulate recommendations to improve its quality and relevance in preparing the future workforce. This research approach uses a case study method to explore in depth specific challenges in vocational education and training institutions, as well as identify development opportunities. This approach will provide an in-depth understanding of the problems faced in vocational education and training in Indonesia as well as identifying the potential and successes that have been achieved through the learning approach. Through combining qualitative and quantitative data, we aim to accurately depict the challenges faced by vocational education and training systems, while identifying potential for innovation and improvement. This methodology is expected to provide comprehensive insight and sustainable solutions in facing the complexity of vocational education and training in an era that is constantly changing. Thus, a literature study will provide a solid foundation to guide further research in exploring this topic in greater detail and detail .

RESULTS AND DISCUSSION

Vocational education and training (vocational education and training) have become a major focus in recent years, in line with government efforts to improve the skills and competitiveness of the workforce. This approach emphasizes active community participation in designing, implementing and monitoring vocational training programs that suit needs and local context. On the other hand, the potential in vocational education and training shows that with the right approach, vocational programs can become a powerful economic driver by preparing graduates for success in an increasingly competitive job market. Challenges faced in vocational education and training include lack of relevance of skills, social stigma , limited facilities and resources, and difficulties in adapting to technological changes. However, the potential of vocational education lies in rapid adaptation to changes in the job market, industry involvement, development of practical skills, and emphasis on lifelong learning. These challenges highlight the need for reform in vocational education, including increasing curriculum relevance, improving social support, and increasing access to facilities and resources. On the other hand, the potential of vocational education can be maximized through close partnerships between educational institutions and industry, increased adaptation to technology, and a focus on lifelong learning. It is important to change people's perceptions about vocational education and emphasize its benefits in building skills relevant to job market needs. This comprehensive approach to the challenges and potential in vocational education and training also brings a deep understanding of the dynamics affecting the sector, highlighting the urgency of reform and sustainable development. With a focus on industry involvement, rapid adaptation to technological change, and an emphasis on lifelong learning, vocational education and training can be an effective solution in overcoming the challenges of facing the digital era and globalization .

Researchers and results study	journal	Research result
Siregar, H., Widiensyah, S., & Darmawan, D. (2020).	Description of Pedagogical Competency of Training Program Instructors at LKP Serang City, Banten. Journal of Nonformal Education and Community Empowerment, 182-187.	Based on findings interview , researcher confirm importance equip all instructor training with Skills pedagogy , tk instructor play role important in guiding the learning process . Observation field in Serang City show that instructor training at LKP shows understanding to characteristics participant the training . Participant training show diverse goals , interests , experience , and level reception material , influenced by factors like age , background behind education , and social status economy . Findings interview show that during session training , instructor at LKP Serang City start with elaborate objective learning , motivating group , and give description general about topic to be discussed before deepen activity main . Instructor This depend on module as framework Work For convey content However perfect it with information relevant additions For enrich experience Study exceed what 's available through online sources such as Google. From here can withdrawn conclusion that effectiveness a instructor in finish activity learning correlated with his abilities in evaluate achievement objective learning . Activity Conclusion is very important Because open road for the evaluation process with use diverse method or harmonious approach with objective the learning described in the RPP. Sudjana (2001: 66) emphasizes importance instructor , or teacher, skilled understand various aspect characteristics every students , incl dimensions physical , moral,

		<p>spiritual, social , cultural , emotional , and intellectual . Build phase familiarity between students and between teachers and students is very important For understand characteristics student in a way effective . Build familiar environment is the most important thing for teachers before start activity learning . A driving core principle effort This is that student No can fully involved in activity without connection near with teachers and friends . At LKP, instructor training do informal conversations , interviews , and friendly observations towards the learning process For identify progress . Remember heterogeneity student School Intermediate Formal vocational (SMK) in matter age , background behind economy , experience , interests , desires , background behind family , etc., then approach accompaniment must customized For accommodate diversity characteristics participant .</p>
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<p>Darmawan, D., Sudrajat, I., Maulana, MKZ, & Febriyanto, B. (2021).</p>	<p>Data Collection Planning as Identification of Training Needs for Training Institutions.</p>	<p>Sudjana (2007, p. 87) and McConnell (2003, p. 120) Here outlined method data collection , incl surveys , interviews , and observations , which play a role important in generate original ideas . Approaches this is basically it catch perspective individual about self they Alone as leader , subordinate , worker community , and members public . Interviews and questionnaires works as means direct For collect data from related individuals or related with organization , like user , leader , subordinate , implementer work , and are experts in their fields . Strategy for obtain information regarding the designed training program For fulfil need basically specific depends on obtaining data regarding need training in institutions in Bandung City. This , in turn , influences methods and approaches that must be implemented by the institution education For collect the necessary data . Interview technique more liked , remembered company is point focus identification need . Utilise method This possible extraction information detailed from representative company , help in determination competencies required by candidates employee . Therefore that , institution training can develop targeted programs For produce candidate suitable employees with need company . According to McConnell (2003, p.109) Starting the identification process need training can taken from various sources , including : (a) managers , who understand need with evaluate results performance department , evaluation individual employees , future goals , and integration technology new ; (b) employees That yourself , which is possible look for enhancement Skills For</p>
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		<p>progress career or For increase performance work moment This ; (c) staff department , which ensures need through analysis budget , survey bait come back employees , and evaluations carried out by consultants external ; and (d) consultant external , which can identify need training while involved in other initiatives such as analysis organization or evaluation performance . Method implementation identification need training can varies between organization , however recommended For assign task This to individual with required expertise For ensure acquisition comprehensive and accessible information trusted . Usually , bear it answer This is with the employees trained in department training , which is completed with necessary skills For do evaluation thorough and collect accurate data .</p>
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<p>Darmawan , D. (2017)</p>	<p>Application of the on-the-job training (apprenticeship) model in automotive training organized by the Banten Province Non-formal Education Service Center.</p>	<p>From the evaluation process carried out by the parties organizers and partners in terms of participants Achievements have an impact on the After the internship process done , supervisor workshop explained results monitoring to partners and organizers . Next, the data is collected at stage This used For compile material assessment and recommendations recruitment candidate participants by party organizer . Need noted that aspects certain from procedure evaluation institution can works as tool Valuable and informative assessments implementation future internship .</p> <p>Not quite enough responsible for the monitoring process is with the organizer ; However Because placement participant various internships , implementation task This Possible No can held as effective as desired , Apart from that , party organizer confess that they negligent monitor participants who have not works , because they only know existing participants get work through recommendation personal . On -site training model work (internship) is applied fully as peak from effort design collaborative previously between organizers and stakeholders interest other . Remember model dependence on materials and procedures specific , its implementation is very important stage .</p> <p>Elements of the learning process apprenticeship worthy arranged based on inherent characteristics in learning apprenticeship , such as :</p> <p>1) learning own modules (self facing learning modules), 2) learning resource center (learning</p>
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		<p>resources center), 3) Learning resources, Facilitators, Tutors (faculty tea-ms), 4) Field experience (field experience), 5) available facilities (facilities) (Hall , 1976:10, McAshan, 1979:31). The organization employs a comprehensive evaluation tool known as the "stabilization dib alai," which spans one week. This duration is deemed lengthy by the organization, as participants must remain for an additional three weeks if their mental and skill levels require further enhancement to ensure satisfaction with the process. The on-the-job training model implemented includes mental preparation of employees before job placement, manual labor processes affecting transportation and third-party consumption, and serves as evaluation criteria. Participants express dissatisfaction with the three-month internship period due to the similarity in their daily routines and needs.</p>
<p>Fitriah , H., Darmawan, D., & Faturohman, N. (2021).</p>	<p>The relationship between specific vocational skills and work readiness of culinary training participants</p>	<p>Findings study obey criteria established validity in research , which works as tool beginning For evaluate accuracy results study . Validity need proper modification to observed data variables . Valid data is marked with coefficient determination that exceeds the mean, with level significance 5% and value rtable of 0.208. Instead the data is considered invalid if coefficient his determination is below 0.208 . About testing reliability , analysis conclude that variable checked can reliable , proven with Alpha coefficient that exceeds Cronbach's alpha</p>

		<p>coefficient . Reliability of each variable has proven , made it suitable For used in homogeneity test , examination relevant furthermore . Homogeneity test carried out between X and Y results mark significance amounting to 0.216 exceeds threshold limit 0.05. Therefore that is , research data show homogeneity so that become basic normality test .</p> <p>Kolmogorov-Smirnov test results mark The 2-tailed asymp.sig is 0.200. Remember mark Asymp. sig This The same by .200, more big or The same with alpha level 0.05, then test linearity confirm that the data is retrieved from normally distributed population . Therefore that , based on the linearity test carried out between variable .</p> <p>Therefore that is , hypothesis testing depending on the findings coefficient demonstrated determination value 0.739 for this linear research dataset . This matter show exists strong relationship between Skills vocational and readiness strong work .</p>
<p>Hidayat, S., Djumena, I., & Darmawan, D. (2018).</p>	<p>Creative Economy-Based Women's Empowerment through Training on Making Doormats from Cloth Waste.</p>	<p>According to Sudjana (2004: 145), empowerment Woman is one of aspect from education outside school . Form teaching This covers various eye lessons , incl training vocational , gender equality , literacy , education child age early childhood education (PAUD), youth empowerment , and skills life . Coombs, as quoted in Kamil (2010: 32), has view similar , defining education outside school as effort learning organized outside system formal education , PKK is involved in initiative this , take advantage cloth used For make purposeful products For empowering Woman through economy creative . Effort This No</p>

		<p>only give training vocational field manufacture but it also works as a platform for increase knowledge , skills , attitudes , and income financial Woman . Coombs pointed out in Kamil (2010:32) that " education outside school covers all over activity ". This matter covers teaching structured things that happen outside system formal education , good in a way independent or as part from more programs broad , which targets group student certain For reach objective learning . Training seen as means For speed up and improve empowerment female , with emphasizes a fast process However effective For facilitate empowerment through development Simamora skills elaborate draft This in Kamil (2012:4), which defines training as series planned activities For increase skill , knowledge , expertise , or pattern think individual .</p>
<p>Munandar, TA, & Darmawan, D. (2020).</p>	<p>Implementation of a poor community empowerment program in traditional fishing communities for socio-economic welfare in Lontar, Serang district.</p>	<p>Objective from study This is For know the process of implementing empowerment programs target community poor society . Through approach qualitative , research This endeavor For know and analyze implementation initiative the . Informant key including the Chairman of KUB Grass Sea , Chief Cooperative Fishermen , District DKP Attack / Companion , Head Lontar Village , Secretary Lontar Village , Head Field Welfare of the Lontar Village Community , and fishermen local . Remember eye livelihood public This relies on fisheries as base the economy is there structure unique social and cohesion among fishermen so that form identity they as public coast . Understand poverty experienced by</p>

		<p>fishermen in the community coast need approach more multifaceted from just analysis backwardness culture just . This matter especially seen when consider influence factor nature , like fluctuation seasonal , against livelihood fisherman . During season Abundant fishing , fishermen obtain Genre income still . However , outside seasons those , they often difficulty fulfil need base them , a their cycle facing every year . Besides that , non-natural factors , incl disparity mechanism for results , limited guarantee social for crewman ships , and obstacles in adoption technology fishing , increasingly worsen challenges faced fishermen , Impact negative modernization , plus with limited progress technology in fish processing , and scarcity opportunity Work alternative the more worsen challenges faced House ladder fisherman . Circumstances real This contribute to the cycle scarcity , which is exacerbated Again with thinning it source Power sea and degradation environment , incl erosion severe beach damage reef coral . Although there is effort such as the Fisherman's Village program Seribu Tangguh Indah Mandiri which was launched in 2018 February 2015, which aims For increase fishermen 's livelihoods , the challenges that remain There is has hinder significant progress in alleviation poverty among community fisherman . Reluctance Lots fisherman For go to sea is one of factor reason poverty they . In effort add income , poor people shift to various activity based source power , like cultivation grass sea in Lontar Village ,</p>
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		Regency Attack . Although at first promising , developments fast efforts the hampered by impact bad mining sand , which causes erosion of ponds and beaches in the area the .
Rosmilawati, I., & Darmawan, D. (2020, June).	The Benefits of Prison Education: Inmate Students' Self Reflection.	Objective from study This is For investigate perceived value and benefits from education prisons in Indonesia from corner look incarcerated students . Data for study This collected through interview deep against 60 students prisoner from school intermediate first and top with component prison . Analysis thematic used as technique analysis qualitative . According to the inmates interviewed , the availability of “ credit easy ” is highlighted as feature curriculum common in schools prison . Besides that , incarcerated students really appreciate chance For replace lost time and progress going to graduation school intermediate above , even during a number of month or year education .

The results of the seven journals show that the challenges and potential of vocational education and training are discussed covers various aspects Challenges can include accessibility, quality of teaching, and suitability to industry needs. Meanwhile the potential is to strengthen links between education and industry, develop skills that match job market demand, and empower local communities to support learning. With this approach, the challenges it faces in vocational education and training also highlight the need for reform in the vocational education system, including increasing curriculum relevance, increasing social support, and increasing access to facilities and resources. Strategies such as strengthening partnerships between TVET institutions and industry, as well as increasing investment in education infrastructure, can help overcome these challenges. In overcoming these challenges, it is important to increase investment in educational infrastructure, raise public awareness about the benefits of vocational education, and strengthen partnerships between educational institutions, industry, and government, in facing challenges such as skills gaps, social stigma, limited resources, and technological changes, it is important to recognize the potential that vocational education and training has. Through investment in curriculum relevance, industry partnerships, practical skills development, and lifelong learning, vocational education can be a driving force in preparing a competent and adaptive future workforce. It is hoped that it will increase employment opportunities and economic development at the local and national levels.

CONCLUSIONS AND RECOMMENDATIONS

In conclusion, community-based vocational education and training programs have great potential to reduce unemployment rates, especially among young people, as well as increase the availability of talent that is relevant to the needs of the job market in Indonesia. However, to achieve success in its implementation, strong support is needed from government, industry, educational institutions and society. This includes developing supportive policies, adequate budget allocation, high quality teaching and training, and strong partnerships between various stakeholders. Vocational education and training faces a number of significant challenges, including skills gaps, social stigma, limited resources, and technological change. However, there is huge potential to improve the sector by leveraging rapid adaptation to the job market, close partnerships with industry, practical skills development and an emphasis on lifelong learning. By overcoming various challenges and exploiting this collaborative potential, Indonesia can strengthen its vocational education sector and create a sustainable positive impact on economic growth and the welfare of society at large. the need for concrete steps to overcome the challenges faced and exploit the potential of vocational education and training. This could include increasing investment in educational infrastructure, establishing strategic partnerships between educational institutions and industry, and developing curricula that are more responsive to labor market needs. Apart from that, articles can also encourage policy changes that support inclusivity and accessibility of vocational education and training for everyone. Suggestions that can be given are to increase collaboration between educational institutions, industry and local communities to develop curricula that are relevant to industry needs and provide practical experience to students. Support from the government and investment in vocational education infrastructure and training for educators is also needed to implement community-based learning approaches effectively. By implementing these suggestions, vocational education and training can become more responsive to the challenges and potential faced, and more effective in preparing a competent and adaptive future workforce.

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