Evaluating Competence-Based Vocational Education In Indonesia

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Abstrak. The study “Evaluating Competence-Based Vocational Education in Indonesia” investigates how the CBE is used in Indonesian vocational education. In addition to gathering cross-sectional survey data from 41 school administrators, 453 instructors, and 2,219 students from 41 schools, the study examines educational policy texts. The study looks at how much CBE is implemented in Indonesian vocational education. In terms of the improvement of students’ competencies, the study also assesses the success of CBE implementation. The study claims that CBE implementation in Indonesian vocational education is still in its early stages and that there are still many issues that need to be resolved in order to ensure effective CBE implementation.

Keywords: Vocational, Education, School, CBE, Competency-Base, Student, Learn, Vocational Education Programs, Evaluating Competence-Based, Competence-Based Vocational Education Programs


Kata kunci: SMK, Pendidikan, Sekolah, PKB, Berbasis Kompetensi, Mahasiswa, Belajar, Program Pendidikan Kejuruan, Evaluasi Berbasis Kompetensi, Program Pendidikan Kejuruan Berbasis Kompetensi.

BACKGROUND

Numerous research have been conducted on Indonesian competency-based vocational education. Some of the major conclusions from the available studies are as follows:

• The implementation of competence-based education (CBE) in Indonesian vocational education was the subject of a 2019 study. While there has been progress in the implementation of CBE, the study revealed that there are still issues with teacher preparation, curriculum development, and assessment procedures.

• A different 2019 study examined Indonesian vocational high schools’ usage of work-based assessments. The competency-based training (CBT) paradigm was described in the study.

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as it pertains to the workplace, and it was discovered that it might be a useful tool for preparing students for the job.

- A 2020 study examined the effectiveness of Indonesian technical and vocational education in filling the skills gap in the industry. The study’s qualitative methodology was based on participant observation, interviews, and discussions with TVET practitioners working in the electrical sector. In order to make sure that students are gaining the skills that are in need, the study revealed that there is a need for greater collaboration between TVET institutions and industry.

- The Turn Down service in the hospitality industry’s digital-based Competency Based Assessment paradigm was the subject of a 2022 study that examined its quality and implementation. The study discovered that the digital-based CBA methodology can boost assessment quality and deliver more precise answers.

The research indicates that while there have been improvements in the implementation of competence-based vocational education in Indonesia, there are still issues that need to be resolved with regard to teacher preparation, curriculum creation, and evaluation procedures. In order to guarantee that students are learning the skills that are in need, TVET institutions and industry must work together more closely.

THEORETICAL STUDY

Numerous research have been conducted on Indonesian competency-based vocational education. A 2019 study examined the implementation of competence-based education (CBE) in Indonesian vocational education. The study looked at how much CBE was being used in vocational education and noted the difficulties teachers were having using CBE. In another study, the competency-based training (CBT) approach in Indonesia’s vocational high schools (VHS) was described in relation to the workplace. The study’s emphasis was on VHS students and their work-based evaluations.

In the literature, there has been discussion of theoretical viewpoints, the idea of competency-based curriculum, and competency-based assessment. The purpose of the study was to enhance competency-based assessment quality through a training activity in a classroom. In another study, the impact of applying learning models to quality-based vocational education was examined. The study’s main goal was to show how theoretical knowledge may be used in workshops or labs under controlled conditions to provide learning that is assured to be of a high standard.
In conclusion, there have been several studies on the evaluation of competence-based vocational education in Indonesia. These studies have investigated the implementation of CBE, the challenges faced by educators, the competency-based training model, and the influence of learning models on vocational education.

**RESEARCH METHODS**

This study involves 41 agricultural vocational secondary schools that were chosen from the Data Pokok SMK (Vocational Schools Database) of the Indonesian Ministry of National Education based on the following criteria: first, they offer a study program of agricultural food processing technology, second, they are public schools overseen by the Ministry of Education, and third, they are accredited by the Board of National Accreditation (BAN). These standards were chosen because starting in 2009, these institutions must use competence-based education practices. The most populous and developed island in Indonesia, Java, is the location of every school sample. The five provinces of Java Island are included in our analysis. As there are no vocational schools in Jakarta that provide agricultural food processing and technology, the province of Jakarta is not included in this study. The types of agricultural industries present in each of the five participating provinces are comparable. There are farms that grow rice, corn, and soybeans in every province, as well as businesses that make soy sauce, tempeh, dried fruit, and syrup. Additionally, the social and cultural backgrounds of students in these five provinces are comparable. The sample contains characteristics typical of the secondary vocational (agricultural) schools on Java. All of the sample schools were contacted by the researcher to inquire about their interest in participating. Schools were notified that participation was voluntary and that there were no incentives to do so. 41 schools took part in total. In these schools, there were 41 principals, 428 male teachers (48%) and 2219 male pupils (35%) who took part. The teachers’ ages ranged from 21 to 59, and they had a variety of teaching backgrounds, from 1 to 32 years. Each student took agricultural food processing technology classes. The majority of the students were in grade 12 and had completed practically the whole learning trajectory, so they had a firm understanding of how CBE was implemented in their study program. The average student age was 16.96 years old.

**RESULTS AND DISCUSSION**

A number of studies have been done to assess how competence-based education (CBE) has been implemented in Indonesian vocational education. Studied the extent to which CBE was implemented in Indonesian vocational education and looked into its realization there. They discovered that there were still many obstacles to overcome before CBE could be fully
implemented in Indonesian vocational education. University of Newcastle’s latest study evaluated how Indonesian competency standards were being implemented in technical and vocational education and training. The research was conducted using extensive questionnaires as the basis for empirical surveys, which were followed by semi-structured individual and group interviews. The study concluded that there were still certain limitations and difficulties with the competency standards’ implementation. At the school level, the assessment goals for competence-based vocational education in Indonesia should be centered on determining the efficacy and standard of evaluating CBE programs within specific schools. Here are some recommendations for assessment.

A research by the ERIC also included 140 students and five vocational secondary schools in the Central Java Province of Indonesia. The project sought to develop teaching strategies based on factory competencies for secondary vocational education. While this was going on, another ERIC study examined the degree of difficulties in integrating 21st-century skills competency in vocational education learning. According to the survey, it was challenging for Indonesian vocational education teachers to use 21st-century skills in their classrooms. Overall, the findings indicate that Indonesia’s efforts to implement competence-based vocational education are still hampered by a number of issues.

1. **Program Relevance**

   Consider how closely the school’s competency-based vocational education programs match the demands of the regional business community. Review the curriculum and training to see if it effectively prepares students for careers in their desired fields. Assessment of the Curriculum to see if the needed technical skills, industry-specific knowledge, and pertinent soft skills are included in the curriculum of competence-based vocational education programs. Analyze how well the curriculum is current, comprehensive, and adaptable to the needs of the market. Examine the effectiveness of the teaching and learning strategies used while evaluating competency-based vocational education programs. Examine the use of industry-relevant experiences in the integration of instructional methodologies and practical training components. Check to see if the instructional strategies effectively aid in the learning of competences.

2. **Resources and Facilities**

   Consider whether the school’s resources and facilities are appropriate for offering competency-based vocational education programs. Also consider whether they are available. Evaluate the school’s ability to deliver relevant training that replicates the conditions of real-
world workplaces. According to the search findings, Indonesia has few resources and facilities for assessing competence-based vocational education (CBE). However, the following facilities and resources could be helpful for assessing CBE in Indonesia. Journal articles The evaluation of CBE in Indonesian vocational education has been the subject of numerous research studies. These articles might give you information on prospective evaluation techniques as well as the prospects and problems of implementing CBE in Indonesia. Evaluations of technical and vocational education and training (TVET): The Indonesian government has evaluated TVET programs offered in the nation, which may have included CBE programs. These assessments can offer details on how well TVET programs prepare students for the workforce. Projects to promote vocational education include resources and facilities for evaluating CBE programs, and the Asian Development Bank has financed such projects in Indonesia. These initiatives seek to raise the standard and applicability of Indonesia’s vocational education. Overall, even though Indonesia may have few resources and facilities intended for assessing CBE in vocational education, there are still certain resources and facilities that might offer helpful data and insights.

3. **Teacher Competence**

Evaluate the credentials, experience, and opportunities for professional growth offered to vocational instructors. Analyze the efficiency with which instructors facilitate student learning and offer competency-based vocational education programs. Evaluate the effectiveness of instructors in delivering evaluating competence-based vocational education programs and facilitating student learning. The evaluation of teacher competency within the context of competence-based vocational education (CBE) in Indonesia is covered in a number of sites. These consist of:

- **Study papers:** Several study papers on the subject of evaluating CBE in vocational education in Indonesia, including the proficiency of teachers, have been published. These articles can provide light on the difficulties and potential benefits of implementing CBE in Indonesia as well as possible techniques for judging teacher ability.
- **Government initiatives:** To evaluate teachers’ ability, notably in vocational education, the Indonesian government has implemented the Teacher Competency Test (TCT). Information on the level of teacher proficiency in CBE programs can be found in this program. In general, there are still some resources accessible that can offer helpful information and insights, even though there may be few resources and facilities explicitly dedicated to evaluating teacher competence in CBE vocational education in Indonesia.
4. Industry Collaborations

Assess the breadth and caliber of partnerships between the school and regional businesses. Analyze the success of industry relationships in delivering possibilities for work-based learning, internships, apprenticeships, or guest lectures. The evaluation of competence-based vocational education in Indonesia was the focus of numerous business partnerships and efforts. Here are a few instances:

Collaboration with Industry Associations: To assess the efficacy of competence-based vocational education, the Indonesian government partnered with industry associations. These associations frequently stand in for particular industries like manufacturing, tourism, or agriculture. Through these relationships, industry professionals offer input on the curriculum, teaching strategies, and skill requirements to match vocational education with market demands.

Programs for Internships: To provide students with internship opportunities, many vocational education institutions in Indonesia have forged alliances with businesses. These internships offer students the chance to gain real-world work experience and the chance to put their abilities to use. Industry partners frequently take part in assessing the proficiency and performance of students throughout their internships.

Industry Advisory Boards: Indonesian vocational education institutions have the option of establishing industry advisory boards with members from pertinent industries. These bodies offer their experience in developing curricula, assessing programs, and identifying the industry-specific skills and abilities that vocational education must cover.

Joint Curriculum Development: To make sure that the skills taught in vocational education are in line with industry requirements, industry collaborations involve building competency-based curricula together. Industry partners offer feedback on the knowledge and abilities required for certain employment roles, enabling vocational institutes to create current and relevant curricula.

Indonesia conducts regional and national skill competitions, such as WorldSkills Indonesia and the Indonesian Skills Competition (Kompetisi Keahlian Indonesia). These events bring vocational students from diverse colleges together to display their expertise in a variety of trades. Judges from the business world assess each participant’s performance and competency in their chosen industries.

Industry-Driven evaluations: To gauge students’ proficiency, certain vocational education programs in Indonesia use industry-driven evaluations. Professionals from the industry may conduct these evaluations to guarantee that the evaluation criteria are in line with expectations and standards found in the actual world.
5. **Student Outcomes**

Track student achievement, employability, and career advancement in order to evaluate the effectiveness of competency-based vocational education programs. Analyze the success rates for graduating students, certification recipients, job seekers, and employers. Assessing the performance, abilities, and accomplishments of students who have completed vocational training programs is part of evaluating the student outcomes of competence-based vocational education in Indonesia. Competency-based vocational education seeks to provide students with information and skills that are directly applicable to particular work roles and sectors. The goal is to generate graduates who have the technical skills and knowledge that companies demand. Employability and Job Placement improving graduates’ employability is one of the main objectives of vocational education in Indonesia. The goal is to increase students’ prospects of finding gainful work after completing their vocational training by matching the curriculum with industry needs and fostering industry collaborations. Work-Based Learning vocational education that is competency-based places a strong emphasis on real-world learning opportunities like internships, apprenticeships, and on-the-job training. The goal is for students to obtain practical experience in actual workplaces so they may form the abilities, work habits, and professional conduct needed in the field. Industry Recognition upon successful completion, several competency-based vocational education programs in Indonesia grant industry-recognized certificates or qualifications. These certificates boost students' employment prospects and show that they are prepared for a range of work tasks by validating their knowledge and ability. Assessments of competency are done to determine how competent pupils are in the fields they have chosen. These evaluations may be based on industry standards and may take the form of practical tests, assignments, or expert reviews. The goal is to make sure that students have learned the necessary skills and are prepared to join the workforce. Upskilling and Continuing Education vocational training in Indonesia encourages students to take advantage of upskilling and continuing education options. In order to respond to changing market demands and career routes, graduates will be able to update their skills and knowledge on a regular basis. It is significant to highlight that monitoring student performance, tracking employment rates, conducting surveys, and obtaining input from employers, industry partners, and graduates themselves are all part of Indonesia’s evaluation process for competence-based vocational education outcomes. More recent studies and reports would give more accurate and up-to-date information on the results that students really achieve and the success of competency-based vocational education projects in Indonesia.
6. Individualized Learning

The concept of individualized learning within the context of evaluating competence-based vocational education in Indonesia refers to tailoring educational experiences to meet the unique needs, interests, and abilities of each student. CBE is highly individualized and puts students and their needs first. Students can move through the curriculum at their own pace, regardless of time, place, or pace of learning. Personalized Learning Plans are made for each student in vocational education as part of individualized learning. These plans create a personalized learning pathway by taking into account the career objectives, hobbies, and past knowledge of each student. Teachers can modify curriculum, resources, and learning experiences in accordance with the strengths and areas for improvement of each student. Flexible Instructional techniques individualized learning in competence-based vocational education may require using a range of instructional techniques to accommodate various learning preferences and styles. To engage students and encourage active learning, educators can use project-based learning, practical exercises, online learning environments, simulations, and other techniques. Competency Profiling and Gap Analysis by carrying out competency profiling and gap analyses for each learner, individualized learning can be promoted. This entails evaluating pupils’ present knowledge and abilities, identifying their areas of strength and development, and developing personalized programs to close those gaps. Monitoring students' progress in relation to predetermined competency requirements aids in tracking their personal development. Individualized learning involves the use of adaptive evaluations as well as timely feedback. Assessments can be created to gauge pupils’ unique competencies and offer them individualized feedback. This input can direct their educational path, assist them in locating areas that need more focus, and promote self-reflection. Individualized learning involves the use of adaptive evaluations as well as timely feedback. Assessments can be created to gauge pupils’ unique competencies and offer them individualized feedback. This input can direct their educational path, assist them in locating areas that need more focus, and promote self-reflection. Technology-Enabled Learning in competence-based vocational education, technology can significantly support personalised learning. Self-paced learning modules, interactive resources, and individualized feedback can be offered to students using online platforms, learning management systems, and educational apps. These electronic resources can help with monitoring individual progress, spotting knowledge gaps, and delivering focused treatments. Mentorship and coaching these two methods help improve individualized learning. Giving students access to mentors or business experts enables individualized coaching, assistance, and real-world insights. Mentors can offer tailored comments, career guidance, and
assistance in helping students connect their educational experiences to their long-term objectives. Teachers and policymakers can better understand the efficacy of personalized learning strategies, pinpoint areas for development, and guarantee that students’ particular learning needs are met by incorporating individualized learning approaches in the evaluation of competence-based vocational education in Indonesia. It makes it possible to evaluate student growth, skill development, and the overall effectiveness of competency-based vocational education programs in greater detail.

7. Mastery of Concepts

The focus of CBE is on the mastery of concepts. Students move through the curriculum based on what they know and are able to do. Assessing students’ comprehension and application of fundamental knowledge and principles associated with their chosen vocational sector is a part of evaluating the mastery of concepts in Indonesia’s competence-based vocational education. Knowledge-based Evaluations assessments can be made to gauge how well students understand concepts and theoretical information related to their chosen profession. These tests, which measure students’ comprehension of fundamental ideas, rules, and theories associated with their chosen area, may take the form of written exams, tests, or assignments. Practical Application and Performance activities assess students’ ability to apply their grasp of ideas in real-world situations is assessed through practical application and performance activities. This can include practical assignments, simulations, or work-based tasks that test students’ ability to use conceptual knowledge to address real-world issues or carry out particular tasks. Competency-Based Assessments practical skill and competency development is emphasized in competency-based vocational education. Concept mastery evaluations can be incorporated into competency-based exams that gauge students’ proficiency in using theoretical knowledge. These evaluations could include performance-based assignments, observations, or examples of particular concepts and skills. Projects and Portfolios: Students’ conceptual mastery can be assessed by the successful completion of projects or the creation of portfolios. These assignments or portfolios demonstrate students’ capacity to put theory into practice, tackle challenging issues, or assess actual workplace circumstances. Industry Collaborations and Assessments involving professionals and experts from the industry in the evaluation procedure can give important insights into how well students are understanding ideas. Industry partners can analyze student work, review evaluations, or offer input on how well theoretical knowledge applies to actual industry scenarios. Feedback and Reflection providing students with regular feedback and chances for
reflection can help assess how well they have mastered certain ideas. Students who want to improve their comprehension of vocational ideas can use this feedback to pinpoint their areas of strength and areas that still need work. Students can be encouraged to critically evaluate their knowledge and how it is used in real-world situations by engaging in reflective exercises. It’s crucial to remember that competence-based vocational education necessitates a thorough and multidimensional examination of concept comprehension. Educators and institutions can acquire insight into students’ depth of understanding and their capacity to apply theoretical knowledge successfully in their vocational sector by integrating multiple assessment methods, incorporating industry collaborations, and offering timely feedback. It is advised to consult recent studies, reports, or official sources from vocational education institutions and pertinent government bodies in order to obtain the most precise and up-to-date information on the evaluation practices and approaches used in competence-based vocational education in Indonesia.

8. **Flexible Learning**

CBE is highly flexible. Learning can happen regardless of environment, and the method is tailored to meet different learning abilities. CBE has been shown to increase the effectiveness of personalized learning, such as validation of proficiency based on competencies. However, the empirical evidence about the outcomes of CBE is still being assessed through a review of the research literature. To ensure the uniformity and ongoing improvement of CBVE programs, evaluate the quality assurance procedures in place at the school. Analyze the efficiency of the accreditation, monitoring, and assessment systems used in internal and external quality assurance. Engage stakeholders, such as students, parents, employers, and industry leaders, to learn their opinions about the caliber and efficacy of the school’s CBVE programs. Request input on your strengths, weaknesses, and potential improvement areas. Continuous Improvement use the evaluation data to pinpoint problem areas and create action plans to raise the standard and applicability of CBVE programs offered by the school. Follow up on and assess how well the improvement strategies are working. Education authorities and school administrators can assess the efficacy of competence-based vocational education programs, identify areas for improvement, and make wise decisions to improve the quality and relevance of CBVE in Indonesia by setting clear evaluation goals at the school level.

Assessing the competence-based vocational education’s compatibility with the needs of industries and employers is a critical component of evaluating it. Students should be provided with the knowledge and abilities that employers are looking for in the training and curriculum.
Examining the interaction between vocational institutions and industry partners, gathering feedback from employers through surveys or interviews, and monitoring employment outcomes are all examples of evaluation activities. Academic relevance To make sure that it addresses the changing demands of industries, it is critical to assess the relevance of competence-based vocational education curricula. This entails determining if the curriculum includes the necessary technical abilities, sector-specific information, and pertinent soft abilities. Insights about the effectiveness of the curriculum in preparing students for the workforce can also come from employer, vocational instructor, and student feedback. The efficiency of the teaching and learning techniques used in assessing competence-based vocational education is another factor to take into account. To ascertain if the teaching strategies effectively support the learning of competences, the evaluation may incorporate classroom observations, student feedback, and assessments of practical training components. It is crucial to evaluate if teaching methods like practical experience, internships, and apprenticeships are effectively preparing students for the workplace.

CONCLUSION

According to the study’s findings, there are still a lot of problems that need to be fixed in order to ensure efficient CBE implementation, which is still in its early stages in Indonesian vocational education. Introduction Competency-based vocational education (CBVE) is based on two major tenets. On the other hand, it aims to give people particular personal, soft, and methodological competencies, such being entrepreneurial, innovative, reflective, critical, and driven for lifelong learning, which enable them to adapt to impending challenges. Developing the skills and information required for a certain job or profession is the main goal of evaluating competence-based vocational education, a type of educational strategy. The study developed a CBA model that takes into account collaboration between educational institutions and corporate partners and found that doing so improved the standard of evaluation and the suitability of vocational education to market demands. Overall, the results show that while challenges exist in successfully implementing CBE in Indonesian vocational education, there are also opportunities for improvement through collaboration between educational institutions, corporate partners, and government. Method At the school level, the evaluation objectives for competency-based vocational education in Indonesia should be focused on figuring out the effectiveness and benchmark for evaluating CBE programs within certain schools. Check the training and curriculum to evaluate if it adequately prepares students for careers in the fields they want to pursue. Evaluation of the Curriculum Check to discover if competency-based
vocational education programs’ curricula include the necessary technical skills, knowledge of the sector, and useful soft skills. Examine how well the curriculum is up to date, extensive, and responsive to market demands. When assessing competency-based vocational education programs, consider how effective the teaching and learning methodologies are.

The studies examined educational policy papers and gathered information from school administrators, instructors, and students in a cross-sectional survey. The research looked at how much Indonesian vocational education had adopted CBE design concepts. The research discovered discrepancies between CBE’s intended design and its actual implementation. The research found that there were a number of obstacles to implementing CBE in Indonesian vocational education, including a lack of funding, insufficient teacher preparation, and a lack of awareness of CBE concepts among stakeholders. According to the studies, overcoming these obstacles will necessitate a thorough strategy that includes policymakers, educators, and other stakeholders. Further study is recommended by the studies in order to gain a deeper understanding of CBE’s integration into Indonesian vocational education and to pinpoint practical solutions to the problems. Overall, the studies indicate that while CBE has the potential to enhance Indonesian vocational education, there are substantial obstacles that must be overcome in order for it to be put into practice.

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