



Management of Vocational Professional Certification Institution Program in Improving the Quality of School Graduates

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ABSTRACT

The success of vocational professional certification institutions has a significant influence on the quality of graduates, answering the need for competent human resources in a competitive world of work. Although vocational professional certification is increasingly emphasised, studies that systematically explore the planning, implementation, and evaluation processes within professional certification institutions to improve the quality of graduates are still minimal. This study aims to analyze and interpret the planning, implementation, and evaluation processes of vocational professional certification programs in improving the quality of graduates. This study uses a descriptive qualitative approach. Data were collected through observation, interviews, and documentation at State Vocational High School 1 Sangatta Utara involving six informants. The research findings show that the planning stage is carried out through systematic mechanisms such as program submission, coordination, stakeholder involvement, program support, and budgeting. Implementation includes cooperation, regular meetings, training, and preparation of activity schedules, which include registration, filling out forms, preparing documents, and assessments, signing integrity facts, and communication. Evaluation is carried out through assessment of implementation results, competency evaluation, clustering, occupational adjustment, key indicator analysis, participant competency percentage, adjustment of Certification Learning Plans, and evaluation of management resources. The results of this study support the results of the study by Evans, C., & Mendez Acosta, M. which states that the implementation of good management functions, such as planning, coordination, and evaluation, can increase the effectiveness of education and training programs.

Keywords: Professional Certification, Program Management, Graduate Quality

1. Introduction

Education and training are the main pillars in preparing individuals to face the demands of an increasingly complex and dynamic world of work (Bühler et al., 2022; García-Pérez et al., 2021). In the context of vocational high schools, professional certification institutions play a crucial role in ensuring that graduates have the qualifications and competencies required by the industry. Program management of professional certification institutions is an important focus to ensure the effectiveness of the education and assessment process (Jääskä & Aaltonen, 2022; Thornhill-Miller et al., 2023). The importance of graduate quality is becoming increasingly prominent in the era of globalization and intense competition. Professional certification institutions act as guardians of quality standards and the relevance of competencies required by the labour market (Lohberger & Braun, 2022). Program management in professional certification institutions has direct implications for improving the quality of graduates (Afzal & Crawford, 2022).

The dynamics of change in various employment sectors require professional certification institutions to continue to adapt and develop relevant and innovative programs. The role of program management is key in identifying labour market needs, designing responsive curricula, and evaluating and improving the effectiveness of the certification process. However, the problem is that the management of professional certification institutions for Vocational High School students is in the aspects of curriculum, training, and integration with the world of work (Sauli et al., 2021; Muchira et al., 2023). There are common problems found in vocational professional certification institutions, namely: limited financial resources and instructors (Kovalchuk et al., 2022), limited industry involvement (Tortorella et al., 2021), incompatibility of the curriculum with industry needs (Rosina et al., 2021), skills gaps, lack of student awareness, to changes in technology and industrial developments (Adepoju & Aigbavboa, 2021; Singh Dubey et al., 2022).

Responding to the above problems requires collaboration between educational institutions, industry, and government to create a learning environment that is supportive and relevant to the needs of the job market. Some efforts that can be made related to the above problems include: increasing financial resources and instructors (Mullens & Hoffman, 2023), Strengthening industry involvement (Ahmed et al., 2022), compiling a curriculum with industry needs, improving student skills, increasing student awareness and interest (Martinez, 2022; Rohm et al., 2021), and responding quickly to changes that occur (Schakel & Wolbers, 2021). Therefore, these solutions require collaboration between educational institutions, industry, and government. Alignment and commitment from all parties can improve the quality of professional certification programs for vocational high school students and ensure that graduates are ready to face the challenges of the world of work.

The vocational professional certification institution program has many significant interests and benefits, for students, educational institutions, industry, and the economy as a whole. The existence of a vocational professional certification institution program for vocational high school students will ensure that vocational high school graduates will have skills and knowledge that are in accordance with market needs. Vocational professional certification institutions also contribute to creating a quality and ready-to-use workforce, reducing the skills gap between graduates and industry needs. Overall, the vocational professional certification institution program plays a crucial role in aligning the world of education with the needs of industry, thus creating a ready-to-use workforce that is able to compete in a dynamic job market.

Research on professional institutions as a forum or control for the competence of vocational school graduates is an interesting issue to continue to be studied in order to obtain updates in efforts to develop vocational schools. One of the studies that became a literature review in this study is a study conducted by (Marsono et al., 2024) where the results of the study showed that partnership management was carried out through four management functions and had been running well, but in the planning process, it had not involved internal and external parties in conducting the analysis. Another study was conducted (Gati & Kulcsár, 2021; Zhang et al., 2023) and the results of the study showed that professional certification can help vocational school graduates in supporting their careers so that they can compete in the world of work. The next study was a study conducted by (Kooli & Abadli, 2022) where efforts to improve the quality of vocational school graduates were carried out through quality management with the stages of plan, do, check, and action. Planning is carried out through the preparation of a Medium-Term Work Plan, implemented through programs that have been prepared in schools, and supervision is carried out through strict supervision in order to achieve the quality that has been set.

The literature that has been described above shows that everything is towards improving the quality, quality, and competence of vocational high school graduates, but through different programs. There are quality management programs, partnerships with the industrial world, and standardization program management on competence. This means that based on the literature study, the researcher has not found a specific study on the management of professional certification institution programs in improving vocational high school graduates. All studies in the literature review are more on the implementation of professional certification, while this study focuses more on the management of its professional certification institution. Thus, according to the researcher's observations and surveys, further research is needed on the management of professional certification institution programs that are more specific regarding improving the quality of graduates in vocational high schools. The management of professional certification institutions is what is new in this study.

This study aims to investigate and analyze how the planning of the vocational professional certification institution program, the implementation of the vocational professional certification institution program, and the evaluation of the vocational professional certification institution program improve the quality of graduates of State Vocational High School 1 North Sangatta. This study is expected to contribute to a better understanding of the management of the professional certification institution program in producing quality graduates. By understanding the role and challenges of the management of the professional certification institution program, it is hoped that the results of this study can provide practical guidance for policymakers, educational institutions, and other related parties to improve the quality of graduates and answer contemporary challenges in the world of education and workforce.

2. Method

The method used in this study is a qualitative research method with a descriptive type. This approach focuses on the collection and analysis of data in the form of text, images, sound, or other non-numerical materials, to explore a deep understanding of the context, meaning, and complexity of the phenomenon being studied. This research was conducted at one of the favourite vocational high schools in East Kutai, namely State Vocational High School 1 North Sangatta. This school has expertise programs in Accounting, Office Administration, Marketing, Fashion Design, Computer Network Engineering, and Multimedia. The informants in this study numbered 6 people consisting of 1 Head of the Professional Certification Institute Program, 1 Head of Quality Management, 1 Deputy Head of Public Relations, 1 Deputy Head of Administration, and 2 Supervisors / Assessors.

The data collection techniques used were Observation, Interviews, and Documentation. The researcher directly observed the management of the professional certification institution program implemented at State Vocational High School 1 North Sangatta related to the planning of the professional certification institution program, the implementation of the professional certification institution program, and the evaluation of the professional certification institution program in improving the quality of State Vocational High School graduates. Likewise with documentation, the researcher did it together with observation. Where the target of the documentation is related to documents on the planning, implementation, and evaluation of the vocational professional certification institution program. The researcher conducted interviews by first creating an interview instrument, then conducting interviews with the Deputy Head of Public Relations, Deputy Head of Administration, Head of the Professional Certification Institution Program, and related parties at State Vocational High School 1 North Sangatta. Interviews can be conducted by going directly to the field, face-to-face, or via WhatsApp as additional reference material.

3. Result and Discussion

Professional Certification Institution Program Planning in Improving Graduate Quality

Professional certification institution program planning in improving graduate quality involves a series of strategic steps and decisions designed to ensure that the program is relevant, effective, and able to meet the demands of the labour market (Poláková et al., 2023). In program planning, an analysis of industry needs and trends is carried out to understand the types of skills and knowledge needed by the labour market. In addition, communication can be carried out with industry representatives, professional associations, or other related parties to obtain input and in-depth understanding. In addition to industry needs, professional certification institutions can also design a curriculum that includes the skills, knowledge, and competencies desired by the

industry, so that the curriculum can periodically accommodate changes in technology, labour market demands, and industrial developments (Law, 2022). With mature and well-planned professional certification institution program planning, it will help improve the quality of graduates, contribute to their success in the world of work, and ensure the relevance of the program to industry needs.

The findings of the study on the management planning of the professional certification institution program indicate that the management planning of the professional certification institution program implemented at State Vocational High School 1, North Sangatta, namely: submitting to the principal, after being approved, the principal accommodates by supporting the program, then budgeted in the Work Plan and Budget, then the plans submitted can be implemented well (Interview with Deputy Head of Public Relations & Head of Financial Administration). Next, the program management planning is implemented in a structured manner by involving related parties (Observation 1). Other findings in the planning process indicate that the management of the professional certification institution program is carried out through direct action (Documentation 1). The parties involved in the planning process of the professional certification institution are the principal, school treasurer, and the P1 Professional Certification Institution Team including the Head of the P1 Professional Certification Institution, Financial Administration Division, Quality Management Division, Certification Division and certified assessors.

Based on the research findings above and other research phenomena, it shows that the planning of the professional certification institution program management by submitting a submission to the principal, after being approved by the principal, it is then accommodated by supporting the program, then it will be budgeted in the Work Plan and Budget, and the plans submitted can be implemented well. The planning process that has been carried out in the professional certification program at State Vocational High School 1 North Sangatta is not much different from the planning process that has been carried out at Vocational High Schools in Bandung City, as the results of the study (Widayati et al., 2021; Roeser et al., 2022) which explains that planning is carried out through program preparation, identifying targets, containing the objectives to be achieved, and appointing human resources as the person in charge of each program item.

The form of planning that has been carried out at State Vocational High School 1 North Sangatta shows that there are several similarities and differences in planning. Different in technical planning but the same in the substance of the planning carried out. This is by research (T R Fahsul Falah, 2021; Kusnanto et al., 2023) on standardization from the Ministry of Home Affairs, namely preparing technical policies, standardization plans, and developing curriculum and education personnel. This is also supported by the results of research (Nasir, 2021)

Thus, the planning of the professional certification institution program management implemented in State Vocational High School 1 North Sangatta is carried out through a systematic mechanism through submitting program planning, coordinating related planning, accommodating program support, and budgeting, so that planning can be implemented according to the planned schedule. Furthermore, the planning of the professional certification institution program management at State Vocational High School 1 North Sangatta is also carried out through the involvement of related parties, resulting in mature and collaborative planning so that what has been planned can be implemented effectively and efficiently. With planning that is carried out properly, it will produce quality program implementation.

Implementation of the Professional Certification Institution Program in Improving Graduate Quality

The implementation of the professional certification institution program in improving graduate quality involves a series of steps and activities aimed at implementing the designed program plan (Swuste et al., 2021; Kobets et al., 2021). Key aspects in the implementation of the professional certification institution program include student recruitment, student orientation, curriculum implementation, use of effective methods, development of practical skills, mentoring and guidance, assessment and evaluation, collaboration with industry, facilities and resources, monitoring, student empowerment for certification, to empowerment of Alumni careers (Daryono et al., 2023; Daryono et al., 2023; Hariyanto et al., 2022). The implementation process explained above shows a detailed and ideal process from recruitment to monitoring alumni careers. This can be a reference for schools in making plans for implementing professional certification.

This study tends to the core process of program implementation as the findings of the study on the implementation of the management of the professional certification institution program show that the implementation of the management of the professional certification institution program applied at State Vocational High School 1 North Sangatta is: first the registration stage, second given a form, third completing supporting files. Furthermore, a self-assessment will be carried out using Form AP 02 where students fill in their competencies "whether they are competent or not", after that the Assessor from the Professional Certification Institution Team will be carried out, before carrying out supervision all Assessors sign a statement of identity facts so as not to take sides with students (Interview with the Head of the Professional Certification Institution P1).

Other findings are: based on the applicable Standard Operating Procedure, through the Implementation of Competency Certification Test activities, the planning of Standard Operating Procedures is adjusted to the Competency Test Material, then conducting training by working on the Competency Test Material, and adjusted based on the schedule determined by the P1 Professional Certification Institute. Efforts that can be made to support the implementation of the P1 Professional Certification Institute program include; first communication, then cooperation between the P1 Professional Certification Institute and the Kutai Timur Professional Certification Institute by holding regular agenda meetings between the Kutai Timur Regency-level Professional Certification Institute (Interview with Head of Quality Management).

Based on the research findings above and other research phenomena, it shows that the implementation of the professional certification institution program management applied at State Vocational High School 1 North Sangatta is: first, the registration stage, second, the form is given, third, completing supporting files, this is by the implementation mechanism for other professional certification institutions as stated by (Susanto, 2024; Melnyk et al., 2021). Furthermore, a self-assessment will be carried out using Form AP 02 where students fill in their competencies "whether they are competent or not", after

which the Assessor from the Professional Certification Institute Team will be carried out, before carrying out supervision, all Assessors sign a statement of identity facts so as not to take sides with students. This shows that the assessor's bias must be considered because it will affect the results of the certification test. Referring to the research results (Matthews & and Dobbins, 2021; Wenghofer et al., 2021; Azmy & Setiari, 2023) the professional certification institution should carry out development by increasing the number of assessors and improving the quality of assessors.

The form of implementation that has been carried out at State Vocational High School 1 North Sangatta shows new variations in the implementation of professional certification institutions because the study (Hassel & Cedergren, 2021; Chen & Gong, 2025) stated that implementation can be carried out through several stages such as pre-assessment and assessment, and refers to the planned program. Furthermore, the implementation process is also supported by the results of research (Chen & Gong, 2025; Kaewunruen et al., 2024) which states that the implementation of professional certification, must be by the certified field, and meetings are held involving stakeholders, question makers, and reporting.

Thus, the implementation of the professional certification program at State Vocational High School 1 North Sangatta has been carried out well with the stages of registration, filling out forms, completing supporting files, conducting assessments, and signing integrity facts. Regarding the management of the program, State Vocational High School 1 North Sangatta carries out communication, cooperation, regular meetings periodically, training, and organizing activity schedules. By implementing all these aspects effectively, the professional certification institution can achieve the goal of improving the quality of graduates and producing a workforce that is ready to use and in accordance with industry needs.

Professional Certification Institution Program Evaluation in Improving Graduate Quality

Professional certification institution program evaluation is a systematic process for collecting data, analyzing information, and making assessments of the effectiveness, efficiency, relevance, and impact of the program in the context of its objectives to improve graduate quality (Logachev et al., 2021; Maiya & Aithal, 2023). This evaluation involves a series of steps designed to provide insight into the extent to which the program meets its objectives and provides the desired benefits. Important aspects of professional certification institution program evaluation include: determining evaluation objectives, identifying performance indicators, collecting data, analyzing data, assessing the process, evaluating certification achievements, evaluating industry involvement, career impact, evaluating instructor involvement and support, analyzing costs and benefits, and providing suggestions and recommendations (Thornhill-Miller et al., 2023; Melnyk et al., 2021).

Clear evaluation objectives, including expected success parameters and desired graduate quality criteria. As well as measurable performance indicators to assess the achievement of program objectives, such as graduation rates, job placement rates, or graduate career sustainability. Ultimately, the institution can evaluate the impact of the program on graduate career development and productivity in the industry, including whether the skills acquired have proven useful in their jobs. The results of the evaluation will then provide a basis for compiling suggestions and recommendations for program improvement, including changes that need to be made to improve graduate quality.

The research findings on the evaluation of the management of the professional certification institution program show that the evaluation of the management of the professional certification institution program implemented at State Vocational High School 1 North Sangatta is: by looking at the results of its implementation, especially whether or not students are competent. From the previous evaluation, clusters were then carried out, but after being re-evaluated it turned out to be better when using occupations because several competencies were combined into one which is now being implemented (Interview with Head of Certification). Another finding is that the key indicator in evaluating the Professional Certification Institution program is looking at the percentage of the number of students who are competent with students who are not yet competent and adjusting to the applicable Certification Learning Plan (Documentation 2). Changes in student competency can be seen based on the number of cluster repetitions they do, so from the repetition of the cluster, it can be concluded that the competency possessed is not yet satisfactory, and in-depth skill training is needed (Interview with Assessor).

Based on the research findings above, show that the evaluation of the management of the professional certification institution program can be done by looking at the percentage of the number of students who are competent and students who are still not competent, through the number of cluster repetitions, so that in-depth skill training is needed. The results of the study regarding the program evaluation conducted by (Basuki et al., 2021) show that the implementation of the professional certification program evaluation is carried out through registration, pre-assessment, assessment and reporting. These results are in line with the evaluation conducted at State Vocational High School 1 North Sangatta. Furthermore, if we refer to the research results (Indarthy et al., 2025; Widayanto et al., 2021) it was found that the professional certification program evaluation process was carried out through CIPPO, namely context, input, process, product, and outcome. If explored further, the process has been running even though in practice it has different implementation standards.

Thus, the implementation of the evaluation of the professional certification program at State Vocational High School 1 North Sangatta has gone well. The evaluation process is through the evaluation of implementation results, competency evaluation, conducting clusters, conducting occupations, viewing key indicators, percentage of participant competencies, adjusting the Certification Learning Plan, and evaluating the management resources. Through careful and continuous evaluation, professional certification institutions can ensure that their programs remain relevant, effective, and able to produce graduates who are ready to contribute to the world of work.

4. Conclusion

The research conducted at State Vocational High School 1 North Sangatta resulted in the conclusion that the planning of the vocational professional certification institution program had been carried out well through a systematic mechanism with stages of submitting program planning, coordinating

planning, involving related parties, accommodating program support, and budgeting. The implementation of the vocational professional certification program was carried out through cooperation, regular meetings, training, and organizing activity schedules. Other stages were also carried out, namely: through registration, filling out forms, completing supporting files, conducting assessments, and signing integrity facts, and communication. The program evaluation was carried out through an evaluation of implementation results, competency evaluation, conducting clusters, conducting occupations, viewing key indicators, percentage of participant competencies, adjusting the Certification Learning Plan, and evaluating its management resources.

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