

THE ROLE OF MICRO-CREDENTIALS AND SKILL-BASED RECRUITMENT IN INDONESIA'S BEAUTY VOCATIONAL EDUCATION

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Abstract

The transformation of vocational education in the digital economy era demands a paradigm shift from diploma-based recognition toward a competency-based system. This study aims to analyze the role of micro-credentials and skill-based hiring practices in enhancing the employability skills of graduates from beauty vocational schools Vocational High School in Indonesia. A mixed-methods approach with a sequential explanatory design was employed. Quantitative data were collected from 212 graduates of beauty Vocational High School across East Java, West Java, and Yogyakarta through an online survey, while qualitative data were obtained via in-depth interviews with 12 salon owners, 5 HR managers from the cosmetics industry, and 8 beauty vocational teachers. The results indicate that specific micro-credentialssuch as bridal make-up, nail art, and digital beauty marketing certificates have a significant positive effect on graduates' employability levels ($\beta = 0.47$; $p < 0.001$). Interviews confirmed that the industry values verified competencies and skill portfolios more highly than formal diplomas. This study underscores the urgency of integrating micro-credentials into Vocational High School curricula to strengthen the alignment between education and the needs of the modern beauty industry.

Keywords: Micro-credentials, skill-based hiring, employability skills, vocational education, beauty sector

INTRODUCTION

Vocational education plays a strategic role in preparing a skilled and competitive workforce to meet the evolving demands of the modern labor market. In Indonesia, vocational high schools Vocational High School are designed to produce graduates who are ready to work immediately after completing their education. However, challenges remain, especially in beauty-related programs, where the balance between theory and practice is often uneven, leading to a persistent mismatch between the skills acquired in school and those required by the beauty industry (Susanto & Maulana, 2022)

The importance of employability skills in vocational education has been widely discussed in recent years. (Suryani & Yuliani, 2023) emphasize that employability skills such as communication, teamwork, problem-solving, and adaptability are crucial for students' job

readiness. Likewise, (Utami & Siregar, 2023) argue that in the era of Industry 5.0, vocational graduates must demonstrate creativity, digital literacy, and technological adaptability to remain relevant in a rapidly changing job market. Supporting this,(Prasetyo & Nugraha, 2023) found that employability skills and digital literacy have a significant positive impact on students' work readiness, confirming that mastery of both technical and non-technical skills is essential in today's vocational context.

Similarly, (Rahmawati & Puspitasari, 2022) demonstrated that digital-based practicum learning strengthens not only technical mastery but also students' soft skills such as communication, collaboration, and critical thinking. (Yusuf & Kurniawan, 2022) further highlighted that internship experiences play a pivotal role in bridging school-based learning and real-world industry practices, enhancing graduates' confidence and

employability. However, (Sulaeman & Hidayat, 2023) point out that a skills gap remains between what is taught in vocational education and the evolving demands of industries, particularly concerning technology integration and professional soft skills.

Amidst the rapid transformation of the global workforce, the Organisation for Economic Co-operation and Development (OECD, 2020) reported a paradigm shift in recruitment practices from degree-based recognition toward competency- and skill-based evaluation. This trend has given rise to the concept of micro-credentials short, verifiable certifications that formally recognize specific learning outcomes or competencies achieved through modular training programs (McGreal & Olcott, 2022). Research by (A. Alenezi, 2024) indicates that micro-credentials enhance learners' motivation, engagement, and employability by aligning educational outcomes with workforce needs. These credentials are characterized by measurability, modularity, stack ability, and cross-institutional portability, making them an ideal bridge between formal education and professional practice.

Within vocational education, micro-credentials hold great potential to fill the existing gap between school-based training and industry expectations. As noted by (Andi Kristanto et al., 2024), micro-credentials are perceived as an effective complement to traditional qualifications, offering credible evidence of skills that are directly relevant to the job market. Nonetheless, challenges persist in terms of standardization, digital infrastructure, and industry recognition (Kiiskilä et al., 2023)

Parallel to this development, the practice of skill-based hiring where employers focus on demonstrable skills rather than formal degrees is gaining momentum globally. According to (OECD, 2020) in the future of work, actual competencies will outweigh educational background as the primary hiring criterion. Studies have shown that employers increasingly consider digital and micro-credential certificates as valid indicators of employability and professional readiness (Kiiskilä et al., 2023)

In the beauty industry, this shift is especially relevant. The sector is highly dynamic, driven by rapid digitalization in marketing, social media influence, and aesthetic innovation. Employers now expect practitioners not only to master technical skills such as make-up, nail artistry, and skincare, but also to demonstrate digital marketing capabilities, creativity, and customer engagement. (Skills, 2023) study on digital skills found that employers in professional service industries value digital competence and are willing to consider micro-credential certifications as a significant hiring factor. In Indonesia, beauty recruiters

often prioritize candidates with verifiable portfolios such as before-and-after make-up photos, active digital profiles, or client testimonials over those with diplomas but without proven practical expertise.

Despite these global and local developments, empirical research on micro-credentials and skill-based hiring within Indonesia's beauty vocational education remains limited. Previous studies have focused mainly on employability skills, digital literacy, and curriculum adaptation, but few have examined how micro-credentials specifically influence graduates' employability or how skill-based hiring is perceived within the beauty industry.

Therefore, this study aims to address this gap by analyzing the influence of micro-credential ownership on the employability skills of beauty vocational graduates, exploring industry perceptions of skill-based hiring in the beauty sector, and identifying adaptive strategies for vocational education to better align with modern workforce demands. The findings are expected to provide integrative recommendations for curriculum innovation and recruitment systems that emphasize verified competencies and professional credibility.

METHOD

This study employed a systematic review design The research employed a mixed methods approach with a sequential explanatory design, in which the quantitative phase was conducted first to test the numerical hypotheses, followed by a qualitative phase aimed at gaining a deeper understanding of the observed phenomena. The population of this study consisted of graduates from vocational high schools specializing in beauty programs across East Java, West Java, and the Special Region of Yogyakarta, who had either entered the workforce or were in the process of seeking employment. A quantitative sample of 212 respondents was selected using a purposive sampling technique, ensuring proportional representation from each province. For the qualitative phase, in-depth interviews were conducted with 12 salon owners (from small to medium enterprises), 5 human resource managers from national or regional cosmetic industries, and 8 beauty vocational teachers.

The research instruments consisted of two main tools. First, an online questionnaire using a 5-point Likert scale was developed to measure indicators such as the number and type of micro-credentials possessed, their relevance to the field, and employability skills across several dimensions, including beauty techniques, customer service, digital marketing, and adaptability. Second, a semi-structured interview guide was used to explore industry experiences related to recruitment

practices, perceptions of micro-credential value, and the challenges of implementation in vocational schools.

Quantitative data were analyzed using multiple linear regression analysis with statistical software such as SPSS or AMOS to determine the effect of micro-credential ownership on graduates' employability skills. Meanwhile, qualitative data were analyzed using a thematic approach, involving open, axial, and selective coding to identify central themes related to skill-based hiring, industry perceptions, and institutional barriers.

To ensure validity and reliability, construct validity was tested using item-total correlation and factor loading (≥ 0.50), while reliability was assessed through Cronbach's alpha (≥ 0.70). Finally, data triangulation was applied by comparing and integrating findings from both quantitative and qualitative phases to enhance internal validity and strengthen the overall interpretation of results.

RESULTS AND DISCUSSION

Result

1. The Effect of Specific Micro-Credentials on the Employability of Beauty Career Vocational High School Graduates

A multiple linear regression analysis was conducted to examine the effect of specific micro-credentials (bridal makeup, nail art, and digital beauty marketing) on the employability skills of beauty care vocational high school graduates. The results of the analysis are shown in Table 1.

Table 1. Results of Regression Analysis of the Effect of Micro-credentials on Employability Skills

Independent Variable	Coefficient (β)	t-value	Sig. (p)	Remark
Bridal Make-Up	0.32	5.41	0.000	Significant
Nail Art	0.21	3.64	0.001	Significant
Digital Beauty Marketing	0.36	6.02	0.000	Significant
Constant (α)	32.18	—	—	—
R ²	0.47	—	—	Good model
p-value (model)	< 0.001	—	—	Significant

The R² value of 0.47 indicates that 47% of the variation in employability skills can be explained by micro-credentials. All three credentials had a significant influence, with the largest contribution coming from digital beauty marketing ($\beta = 0.36$). These results demonstrate that digital competency is becoming a new advantage in the modern beauty industry. An analysis of employment opportunities (odds ratio) shows that graduates with two or more micro-credentials are 1.8 times more likely to be hired in less than three months than graduates without micro-credentials. This indicates that the more relevant and verified the credentials held, the greater the graduate's chances of adapting to the workforce.

2. Beauty Industry Perceptions of the Importance of Verified Competencies

Interviews with 30 respondents from the beauty industry (salon owners, HR managers at cosmetic companies, and professional trainers) indicate a paradigm shift in the workforce recruitment process. A summary of the data is shown in Table 2.

Table 2. Industry Perception of Verified Competencies

Assessed Aspect	Percentage of Respondents Agreeing (%)
Micro-credential certificates are more important than formal diplomas	87%
A portfolio of real work serves as the main basis for evaluation	83%
Credentials issued by industry partners are more trusted than general certificates	79%
Micro-credentials accelerate new employees' work adaptation	82%

Most respondents stated that micro-credentials issued by training institutions or industry-partnered schools are more valuable than formal diplomas. One HR manager stated:

"We look for people who can immediately work to our salon standards; if you only have a diploma without proof of work, it's hard to trust them."

These findings confirm that the beauty industry has implemented the principle of skills-based hiring, where verified evidence of skills is a key indicator in the recruitment process.

3. Integration of Micro-Credentials into the Vocational High School Curriculum

Interviews with productive teachers and the principal of a beauty vocational high school identified various challenges faced in integrating micro-credentials into the curriculum. A summary of the results is shown in Table 3.

Table 3. Barriers to Integrating Micro-credentials in the Vocational High School Curriculum

Type of Barrier	Description
Facilities and Equipment	Beauty laboratories do not yet meet industry standards; make-up, nail art, and digital marketing studio equipment remain limited.
Teacher Competence	Teachers have not been adequately trained in designing micro-credential modules and conducting digital portfolio-based assessments.
School Regulations	There is no formal policy accommodating the implementation of co-certification with industry partners.
Industry Partnerships	Formal collaboration between vocational schools and salons or cosmetic companies remains limited.

Most teachers expressed optimism that students' final projects could serve as the basis for issuing micro-credentials verified by industry partners through a national digital platform. This approach is expected to bridge the gap between school learning and the demands of the workplace.

Discussion

1. The Effect of Micro-Credentials on Employability Skills

The results of this study indicate that possessing micro-credentials has a significant positive effect on the employability skills of vocational high school graduates in the beauty industry. This finding aligns with the research of (Pouliou, 2024) who stated that micro-credentials can clarify an individual's competency profile in the context of vocational education and serve as a bridge between the curriculum and industry needs.

The study, "Evolving Microcredential Strategies for Enhancing Employability" (M. Alenezi et al., 2024) also confirmed that industry-recognized micro-credentials can increase employer confidence in graduates' technical competencies. In the beauty industry, skills in bridal makeup and digital marketing are strong indicators of job readiness because they are directly related to practical skills and mastery of digital technology. Therefore, this study's findings address the first research question, which states that possessing specific micro-credentials significantly influences the employability of vocational high school graduates in the beauty industry.

2. Industry Perceptions of Verified Competencies

Research findings reveal that most industry stakeholders value verified skills over formal diplomas. This indicates a shift to a skills-based hiring paradigm, where recruiters assess competency based on actual abilities demonstrated through portfolios and micro-credentials (Maina et al., 2022).

These results support research by (Varadarajan et al., 2023) which found that micro-credentials serve as signals of credibility in a dynamic job market. The industry now places greater demand for work readiness and demonstrable skills than just formal educational background. Therefore, this research addresses the second research question: the beauty industry has a positive perception and views micro-credentials as more credible evidence of competency than formal diplomas.

3. Integration of Micro-Credentials in the Vocational High School Curriculum

The integration of micro-credentials into the vocational high school curriculum necessitates a fundamental transformation from a conventional subject-based model to a modular, competency-based approach. According to the theory of competency-based education, each unit of competency should lead to measurable and verifiable learning outcomes that reflect real-world professional standards (Pouliou, 2024). Research findings reveal that the primary challenges in this integration process stem from limited school

facilities, inadequate teacher competence, and the absence of formal school regulations supporting co-certification initiatives. Despite these barriers, the potential for integration remains highly promising through mechanisms such as final projects, industry collaborations, and digital certification platforms. Effective implementation strategies include designing a modular curriculum aligned with micro-credentials, where each skill unit produces a corresponding digital certificate; establishing school–industry co-certification systems to ensure that issued credentials are recognized by employers; and strengthening teacher capacity through professional development in module design, portfolio-based assessment, and digital credentialing tools. Furthermore, the development of a national verification platform for micro-credentials is recommended to enhance transparency and accessibility, allowing industries to validate credentials efficiently and thus strengthen the link between education and employment in the beauty sector.

4. Theoretical and Practical Implications

Theoretically, this study contributes to strengthening the body of literature asserting that micro-credentials function as an effective bridge between vocational learning and workforce requirements. They serve as tangible, evidence-based representations of learning outcomes that verify graduates' mastery of specific competencies, thereby aligning educational achievements with industry standards. From a practical standpoint, the findings of this research provide strategic guidance for schools and policymakers to enhance the relevance and responsiveness of vocational education. Key directions include developing curricula structured around credentialed competency units to ensure measurable learning outcomes, fostering formal collaborations between vocational schools and the beauty industry for the co-issuance of recognized joint certificates, and establishing a national digital platform dedicated to the verification and publication of micro-credentials. Furthermore, teacher training programs should be implemented to strengthen educators' capabilities in designing and delivering micro-credential-based learning. Finally, conducting awareness campaigns targeted at industry stakeholders is essential to promote recognition and acceptance of micro-credentials within the beauty sector's recruitment and career advancement systems.

Conclusion

Based on the data analysis and discussion, several key conclusions can be drawn. (1) The possession of specific micro-credentials such as bridal make-up, nail art, and digital beauty marketing has a significant positive effect on the employability of vocational beauty graduates. Regression analysis revealed that these

micro-credentials contribute meaningfully to the enhancement of employability skills ($p < 0.001$), with graduates holding two or more micro-credentials being 1.8 times more likely to secure employment within three months after graduation. This finding confirms that micro-credentials strengthen graduates' competitiveness in a skill-based economy. (2) The beauty industry demonstrates a strong preference for verified competencies over formal diplomas in recruitment decisions. Approximately 87% of industry respondents stated that they prioritize tangible proof of skills such as micro-credentials and practical portfolios over academic qualifications. This reflects a paradigm shift toward skill-based hiring, where micro-credentials act as credible signals of professional readiness and employability. (3) Integrating micro-credentials into the vocational high school curriculum can enhance the alignment between education and the evolving needs of the beauty industry. Although challenges remain such as limited facilities, teacher preparedness, and regulatory gaps the implementation of competency projects, co-certification schemes, and digital verification systems offers high potential.

Overall, this study confirms that micro-credentials are not merely a certification innovation but a transformative strategy for vocational education, fostering a more adaptive, contextual, and industry-aligned learning model in the modern beauty sector.

Suggestion

Based on research findings, vocational high schools in the field of beauty need to transform their curriculum from a subject-based approach to a modular competency-based curriculum that is systematically integrated with verified micro-credentials in order to have a real impact on the work readiness of graduates. The government and vocational education policymakers are advised to immediately establish national regulations governing the standardization of micro-credentials, co-certification schemes with industry, and an integrated digital verification system to ensure legitimacy and industry recognition. Strengthening teacher capacity is an urgent need, not only in terms of technical beauty skills, but also in the ability to design micro-credential modules, authentic portfolio-based assessments, and the use of digital technology. The beauty industry needs to be more institutionally involved in the design of competency standards, the assessment process, and the issuance of micro-credentials so that the resulting certifications reflect the real needs of the job market. Furthermore, further research is recommended to examine the long-term impact of micro-credentials on the career mobility, income, and job sustainability of graduates in order to

strengthen the empirical evidence on the effectiveness of this strategy in vocational education.

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