

Entrepreneurial Competence in Vocational Fashion Education: A Comparative Study of Alumni Across Educational Levels in West Sumatra from a Values-Based Islamic Perspective

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ABSTRACT

This study investigates entrepreneurial competence among vocational fashion education alumni and examines the role of Islamic values in strengthening such competence across educational levels. Using a convergent mixed-methods design, data were collected from 90 alumni entrepreneurs in West Sumatra (30 from vocational secondary schools, 30 diploma, and 30 bachelor graduates) through questionnaires and semi-structured interviews. Quantitative data were analyzed using descriptive statistics and one-way ANOVA, while qualitative data were examined through thematic analysis. The findings reveal that overall entrepreneurial competence is high across groups, with significant differences based on educational level ($F(2,87) = 9.53, p < .001$). Bachelor's degree graduates demonstrate stronger strategic competencies, particularly in networking, management, and opportunity recognition, whereas vocational secondary graduates show comparable strengths in persistence and production skills. Qualitative results indicate that Islamic values—such as honesty (*sidq*), trustworthiness (*amānah*), perseverance (*istiqāmah*), and sincerity (*ikhlas*)—serve as internal mechanisms that reinforce ethical behavior, motivation, and business sustainability. The study concludes that entrepreneurial competence is both developmentally structured and value-reinforced, highlighting the importance of vertically aligned, experience-based, and values-integrated curricula. However, the study is limited by its regional scope and cross-sectional design. Future research should expand to broader contexts and explore longitudinal and sector-specific applications of values-based entrepreneurship education.

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1. INTRODUCTION

Entrepreneurial competence has emerged as a central outcome of vocational education in response to ongoing global economic transformation, labor-market uncertainty, and the increasing demand for self-employment, particularly in creative industries. Contemporary vocational education and training (VET) systems are no longer limited to preparing graduates with technical expertise; rather, they are expected to cultivate a broader set of competencies that enable individuals to identify opportunities, innovate, and sustain entrepreneurial ventures in dynamic and competitive environments (McGrath & Yamada, 2023; Stadler et al., 2022). In this context, entrepreneurial competence is widely recognized as a critical dimension of human capital development that contributes not only to individual employability but also to economic resilience and sustainable growth.

Within the creative economy, the fashion industry represents a highly dynamic and competitive sector that requires the integration of multiple competencies, including creativity, technical production skills, business management, and market responsiveness. Fashion entrepreneurship is inherently complex, as it involves not only the creation of aesthetic and functional products but also strategic decision-making, branding, networking, and adaptation to rapidly changing consumer preferences (Wahyuningsih et al., 2024). As such, vocational fashion education occupies a strategic position in equipping graduates with both technical and entrepreneurial capabilities, enabling them to transition from skilled workers to independent entrepreneurs who can generate employment and contribute to local and national economies.

In Indonesia, entrepreneurship education has been formally embedded within vocational education policies as part of broader efforts to strengthen the creative economy and address graduate unemployment (Huang et al., 2021). Vocational fashion programs, ranging from secondary vocational schools (SMK) to diploma and bachelor-level education, have played a significant role in fostering entrepreneurial activities across regions. West Sumatra provides a particularly relevant context for examining this phenomenon, given its rich cultural heritage, strong tradition of textile craftsmanship, and growing market for modest and culturally inspired fashion. In this region, vocational fashion education graduates actively engage in entrepreneurial activities; however, their levels of competence, business sustainability, and strategic capacity appear to vary across educational pathways.

Although previous studies have consistently demonstrated the positive relationship between vocational education and entrepreneurial competence development (He et al., 2019; Stadler et al., 2022), important gaps remain in the literature. First, there is limited empirical evidence comparing entrepreneurial competence across different educational levels within the same vocational field, particularly in fashion education. Most existing studies tend to treat vocational education as a homogeneous system, overlooking the possibility that different educational pathways may produce distinct competence profiles. This limitation constrains a more nuanced understanding of how entrepreneurial competencies—such as networking, opportunity recognition, managerial capability, and persistence—develop progressively across educational levels.

Second, prior research has largely focused on general entrepreneurial outcomes without adequately examining the multidimensional nature of entrepreneurial competence. As a result, the specific mechanisms through which educational experiences shape different competence dimensions remain underexplored. This gap is particularly relevant for curriculum development, as the absence of detailed comparative evidence makes it difficult for educators and policymakers to design vertically aligned entrepreneurship education that supports systematic competence progression from secondary to higher education levels (Harun et al., 2023).

Third, and more importantly, the role of moral and ethical dimensions in entrepreneurial competence development has received limited attention, especially within the context of vocational education. In predominantly Muslim societies such as West Sumatra, entrepreneurship is not solely viewed as an economic activity but also as a practice embedded in moral responsibility, integrity, and social accountability. Islamic values—including honesty (*sidq*), trustworthiness (*amānah*), perseverance

(*istiqāmah*), and sincerity (*ikhhlās*)—are widely regarded as foundational principles that guide ethical business conduct and long-term sustainability (Maulana, 2019). However, empirical research examining how these values are internalized, operationalized, and integrated with entrepreneurial competencies across different educational levels remains scarce.

Addressing these gaps requires a more integrated analytical approach that considers both the structural dimension of education (i.e., differences across educational levels) and the cultural-ethical dimension of entrepreneurship (i.e., value internalization). Such an approach is particularly important for vocational education, where learning is inherently practice-oriented and closely linked to real-world contexts. Understanding how competencies and values interact can provide deeper insights into how entrepreneurial capacity is not only developed but also sustained in practice.

Based on these considerations, this study aims to examine entrepreneurial competence among vocational fashion education alumni in West Sumatra from a comparative and values-based perspective. Specifically, the study seeks to: (1) identify the dominant dimensions of entrepreneurial competence developed through vocational fashion education; (2) compare the levels of entrepreneurial competence among alumni from secondary vocational schools (SMK), diploma programs, and bachelor programs; and (3) analyze the role of Islamic values in reinforcing entrepreneurial competence and supporting business sustainability.

By addressing these objectives, this study makes several contributions to the field of vocational and entrepreneurship education. Empirically, it provides comparative evidence on how entrepreneurial competence varies across educational levels within a specific vocational domain. Conceptually, it advances the understanding of entrepreneurial competence by incorporating ethical and value-based dimensions as integral components rather than peripheral factors. Practically, the findings offer implications for curriculum design, particularly in supporting vertically aligned entrepreneurship education that integrates experiential learning with ethical value formation. Ultimately, this study contributes to the development of vocational education models that aim not only to produce competent entrepreneurs but also to foster ethical, resilient, and socially responsible business actors.

2. METHODS

2.1 Research Design

This study employed a convergent mixed-methods design, in which quantitative and qualitative data were collected in parallel, analyzed separately, and subsequently integrated to provide a comprehensive understanding of entrepreneurial competence among vocational fashion education alumni. The quantitative component adopted a descriptive-comparative approach to examine differences across educational levels, while the qualitative component aimed to explore how competencies and Islamic values are enacted in entrepreneurial practice. Integration was conducted at the interpretation stage to enable triangulation and meta-inference.

2.2 Population and Sampling

The target population consisted of vocational fashion education graduates in West Sumatra who had operated fashion-related businesses for at least two years. A purposive sampling technique was employed to ensure participants met both educational and entrepreneurial criteria. The final sample included 90 alumni, distributed equally across three educational levels: vocational secondary school (SMK; $n = 30$), diploma ($n = 30$), and bachelor's degree ($n = 30$). This balanced sampling design enabled valid comparative statistical analysis.

2.3 Instrumentation and Validation

Quantitative data were collected using a structured questionnaire adapted from established entrepreneurial competence frameworks (Chen & He, 2023; Bonfanti et al., 2024). The instrument

consisted of 25 items across five dimensions: (1) creativity and innovation, (2) opportunity recognition, (3) business and managerial skills, (4) communication and networking, and (5) commitment and resilience. Responses were measured using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree).

Content validity was established through expert judgment involving three specialists in vocational education and entrepreneurship. Revisions were made to improve clarity and construct alignment. Reliability analysis yielded a Cronbach's alpha of 0.87, indicating high internal consistency.

2.4 Data Collection

Data were collected between March and May 2025 through a combination of online and face-to-face surveys. To complement the quantitative findings, semi-structured interviews were conducted with 10 purposively selected participants representing different educational levels. The interviews explored entrepreneurial experiences, competence development, and the role of Islamic values in business practices.

2.5 Data Analysis

Quantitative data were analyzed using descriptive statistics (mean and standard deviation) and one-way ANOVA to examine differences across educational levels. Prior to analysis, assumptions of normality and homogeneity of variance were tested and met. Post-hoc comparisons were conducted using the Least Significant Difference (LSD) test. In addition, effect size (partial eta squared, η^2) was calculated to assess the magnitude of differences.

Qualitative data were analyzed using thematic analysis following Braun and Clarke's procedures: familiarization, coding, theme development, and interpretation. To enhance credibility, coding was conducted iteratively and supported by representative quotations.

2.6 Integration of Data

Integration of quantitative and qualitative findings was performed using a side-by-side comparison approach. Quantitative results identified patterns of competence differences, while qualitative findings were used to explain and contextualize these patterns, particularly in relation to the internalization of Islamic values.

2.7 Ethical Considerations

Ethical approval was obtained from the Research Ethics Committee of the Faculty of Engineering, Padang State University. All participants provided informed consent. Confidentiality and anonymity were strictly maintained.

3. FINDINGS AND DISCUSSION

3.1 Findings

The study involved 90 alumni entrepreneurs across three educational levels. Overall, respondents demonstrated a high level of entrepreneurial competence ($M = 4.23$, $SD = 0.21$). Table 1 presents the mean scores and ANOVA results across competence dimensions.

Table 1. Comparison of Entrepreneurial Competence Across Educational Levels

Competence Dimension	SMK Mean (SD)	Diploma Mean (SD)	Bachelor Mean (SD)	F (2,87)	p-value	η^2
Technical Skills	4.18 (0.41)	4.23 (0.37)	4.31 (0.35)	1.24	.296	.03
Creativity & Innovation	3.92 (0.46)	4.06 (0.39)	4.28 (0.33)	4.37	.016*	.09
Networking	3.64 (0.49)	3.98 (0.45)	4.32 (0.40)	8.91	.001**	.17
Management Skills	3.71 (0.47)	4.10 (0.41)	4.28 (0.36)	7.24	.002**	.14
Opportunity Recognition	3.66 (0.44)	3.84 (0.39)	4.19 (0.38)	6.57	.003**	.13
Persistence	4.18 (0.43)	4.09 (0.40)	4.24 (0.36)	0.82	.446	.02
Overall Competence	3.88 (0.38)	4.05 (0.33)	4.27 (0.29)	9.53	<.001	.18

- $p < .05$, ** $p < .01$, ns = not significant

The ANOVA results indicate statistically significant differences in overall entrepreneurial competence across educational levels, $F(2,87) = 9.53$, $p < .001$, with a large effect size ($\eta^2 = .18$). Post-hoc analysis revealed that bachelor's degree graduates significantly outperformed both SMK and diploma graduates.

The largest differences were observed in networking and management competencies, with moderate to large effect sizes ($\eta^2 = .14-.17$), indicating meaningful practical differences. In contrast, no significant differences were found in technical skills and persistence, suggesting that these competencies are developed consistently across educational pathways.

Thematic analysis generated three main themes:

1. Strategic Competence Development through Higher Education
Bachelor's degree graduates emphasized exposure to industry networks, project-based learning, and market analysis. These experiences supported the development of opportunity recognition and strategic thinking.
2. Persistence as a Value-Driven Competence
Across all groups, persistence was strongly associated with Islamic values such as *istiqāmah*. Participants described perseverance not merely as a skill, but as a moral obligation.
"When business slows down, I remain istiqāmah because this is also an amānah."
3. Islamic Values as Reinforcing Mechanisms
Values such as *ṣidq* (honesty) and *amānah* (trustworthiness) were consistently linked to customer trust and business sustainability. These values did not replace entrepreneurial skills but strengthened their application in practice.

The integration of quantitative and qualitative findings indicates that educational level shapes the type of entrepreneurial competence, while Islamic values influence the quality and sustainability of its application. Higher education enhances strategic competencies, whereas value internalization reinforces ethical behavior, persistence, and trust-building across all groups.

3.2 Discussion

This study provides important insights into how entrepreneurial competence in vocational fashion education is not uniformly developed, but rather differentiated across educational levels and reinforced by value-based mechanisms. The findings contribute to the growing body of literature on vocational

entrepreneurship education by integrating competence progression and ethical-value dimensions within a single analytical framework.

First, the results confirm that higher education plays a critical role in developing strategic entrepreneurial competencies, particularly in networking, opportunity recognition, and managerial capability. This aligns with human capital theory and prior studies suggesting that advanced education enhances cognitive complexity, market awareness, and access to professional networks (Stadler et al., 2022; McGrath & Yamada, 2023). However, this study extends existing knowledge by demonstrating that these competencies are not merely outcomes of formal instruction, but are shaped through structured experiential learning environments, such as project-based learning, industry collaboration, and exposure to real market dynamics. This reinforces the argument that entrepreneurship education in higher vocational contexts should move beyond classroom-based instruction toward authentic learning ecosystems.

Second, the findings reveal that persistence and resilience are not significantly differentiated by educational level, indicating that these competencies may be less dependent on formal education and more closely linked to experiential and socio-cultural factors. This challenges dominant assumptions in entrepreneurship education that higher education universally enhances all dimensions of entrepreneurial competence. Instead, the results suggest a more nuanced model in which operational and character-based competencies are cultivated earlier through practice-oriented vocational training, while strategic competencies develop progressively through advanced education.

A key theoretical contribution of this study lies in the integration of Islamic values as a reinforcing mechanism within entrepreneurial competence development. Unlike prior research that treats ethics as an external or supplementary component, this study demonstrates that values such as *amānah* (trustworthiness), *ṣidq* (honesty), *istiqāmah* (perseverance), and *ikhhlās* (sincerity) function as internal regulatory systems that shape how competencies are enacted in practice. These values enhance trust-building, sustain motivation under uncertainty, and support long-term business relationships, particularly in culturally embedded sectors such as modest fashion.

Importantly, the findings suggest that values do not operate independently of competence, but rather interact with and stabilize entrepreneurial behavior. This supports an integrative perspective in vocational and Islamic education, where knowledge (*‘ilm*), practice (*‘amal*), and ethics (*akhlāq*) form a unified system. From a theoretical standpoint, this extends entrepreneurship education literature by introducing a values-embedded competence model, in which ethical orientation is not an outcome but a constitutive element of entrepreneurial capability.

Furthermore, the study contributes to the concept of vertical curriculum alignment in vocational education. The observed differences across SMK, diploma, and bachelor levels indicate that entrepreneurial competence develops progressively along educational pathways. This progression suggests the need for a developmental curriculum model, where learning outcomes are scaffolded from technical and persistence-based competencies at lower levels to strategic and reflective competencies at higher levels. Such alignment is critical to avoid fragmentation in vocational education systems and to ensure continuity in competence development.

From a practical perspective, these findings imply that vocational fashion education programs should integrate three key elements: (1) experiential learning opportunities to enhance strategic competence, (2) structured industry engagement to support networking and market exposure, and (3) systematic integration of ethical values within curriculum and pedagogy. This combination is essential to produce entrepreneurs who are not only technically and strategically competent but also ethically grounded and socially responsible.

Finally, while this study offers important contributions, it is limited by its regional focus and sample size. Future research should examine the generalizability of the values-embedded competence model across different cultural and vocational contexts, as well as explore its relevance in emerging domains such as digital entrepreneurship and sustainable fashion.

In summary, this study advances the discourse on vocational entrepreneurship education by demonstrating that entrepreneurial competence is both developmentally structured and value-reinforced, highlighting the need for integrated educational approaches that combine skills, experience, and ethical foundations.

4. CONCLUSION

This study demonstrates that entrepreneurial competence among vocational fashion education alumni is progressively shaped by educational level, with higher education contributing more strongly to strategic competencies such as networking, management, and opportunity recognition, while vocational secondary education plays a significant role in fostering persistence and production-oriented skills; importantly, the findings also reveal that Islamic values—such as *amānah*, *ṣidq*, *istiqāmah*, and *ikhhlāṣ*—function as reinforcing mechanisms that enhance ethical behavior, trust, and long-term business sustainability when integrated with professional competencies. However, this study is limited by its regional focus on West Sumatra, relatively small sample size, and reliance on cross-sectional data, which may constrain the generalizability and causal interpretation of the findings. Therefore, future research is recommended to expand the scope across different regions and vocational fields, employ longitudinal or mixed longitudinal designs to examine competence development over time, and further investigate the applicability of values-based entrepreneurship models in emerging contexts such as digital and sustainable fashion industries.

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