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The Effect of Culinary Skills Program and Supervisor Role on Entrepreneurial Spirit: The Mediating Role of Entrepreneurial Motivation at MAN Luwu Timur, Indonesia

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Abstract

Entrepreneurship education in Indonesian madrasahs is increasingly delivered through vocational skills programs, yet it remains unclear how such programs turn technical competence into entrepreneurial character. This study examines the effect of a culinary skills program and the supervisor role on students' entrepreneurial spirit, with entrepreneurial motivation as a mediating variable, at Madrasah Aliyah Negeri (MAN) Luwu Timur, Indonesia. A quantitative, causal-associative design was employed. Data were collected from 120 respondents, comprising 72 active students and 48 alumni of the culinary skills program selected through purposive sampling, using a five-point Likert-scale questionnaire, and were analyzed with Partial Least Squares Structural Equation Modeling (PLS-SEM). The results show that the culinary skills program has no significant direct effect on entrepreneurial spirit (β = 0.169; p = 0.084), whereas the supervisor role has a significant direct effect (β = 0.244; p = 0.008). Both the culinary skills program (β = 0.338; p < 0.001) and the supervisor role (β = 0.271; p = 0.007) significantly increase entrepreneurial motivation, which in turn significantly affects entrepreneurial spirit (β = 0.304; p < 0.001). Entrepreneurial motivation fully mediates the effect of the culinary skills program (indirect effect = 0.103; p = 0.012) and partially mediates the effect of the supervisor role (indirect effect = 0.082; p = 0.037). These findings indicate that technical skills foster entrepreneurial spirit only when they first strengthen motivation, while supervisors exert a dual influence, both directly and through motivation. Madrasahs should integrate skills training with deliberate motivation-building strategies and invest in the capacity of program supervisors.

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Keywords: Culinary skills program, entrepreneurial motivation, entrepreneurial spirit, supervisor role, PLS-SEM.

INTRODUCTION

Entrepreneurship education has long been positioned as part of Indonesia's human resource development strategy. The government formally launched the National Movement to Promote and Cultivate Entrepreneurship through Presidential Instruction No. 4 of 1995, which targeted young people and school students, including by embedding entrepreneurial messages in the formal school curriculum (Republic of Indonesia, 1995). This policy direction continues in the *Kurikulum Merdeka*, which makes entrepreneurship one of the themes of the Pancasila Student Profile Strengthening Project at the senior secondary level, with the aim of developing students' creativity and entrepreneurial culture in connection with the local economy (Badan Standar, Kurikulum, dan Asesmen Pendidikan, 2024). Fostering entrepreneurial spirit in schools, including madrasahs, is therefore not an optional extracurricular activity but part of the mandate of national education policy.

Within the Ministry of Religious Affairs, this mandate has been translated into vocational skills programs at Islamic senior high schools (*madrasah aliyah*), known as the *MA Plus Keterampilan* or vocational madrasah model. The model combines the madrasah curriculum with regularly scheduled skills classes supported by a vocational team, skills teachers, and partnerships with businesses (Mustabsyiroh et al., 2023). At MAN 5 Jombang, for example, the program adds six skills lessons per week in culinary arts, fashion, and furniture design, culminating in an exhibition of student work, with teacher competence, facilities, and students' intrinsic motivation as the main supporting factors (Nasichah & Umam, 2026). MAN Luwu Timur in South Sulawesi is one of the madrasahs that has developed a culinary skills program as a strategy to produce graduates who are independent and economically productive, in line with the madrasah's character of integrating spiritual, intellectual, and life-skill development.

The culinary field is a particularly relevant setting for studying how skills become entrepreneurship. Culinary is the largest subsector of Indonesia's creative economy, contributing around 41.0 percent of creative-economy gross domestic product (Choirul, 2026), so culinary skills have the widest market opportunity to be developed into businesses. Culinary ventures also require relatively little capital, can use local raw materials, and serve everyday needs, which makes them realistic for students to start even while still at school. In the madrasah context, culinary training carries a strong *sharia* dimension because food products must be *ḥalāl* and *ṭayyib* (Q.S. Al-Baqarah [2]: 168; Kementerian Agama RI, 2019) and are regulated by Law No. 33 of 2014 on Halal Product Assurance (Republic of Indonesia, 2014), so culinary learning also serves as a vehicle

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for instilling honesty, cleanliness, and *ḥalāl* values in business. Empirically, entrepreneurship education affects culinary students' foodpreneurial intention through attitude, subjective norms, and perceived behavioral control (Mahfud et al., 2025), while their entrepreneurial interest is shaped mainly by intrinsic factors and motivation (Aisy et al., 2025; Nabilah et al., 2026).

Participation in the culinary skills program at MAN Luwu Timur has, however, declined over the last three academic years, from 27 students in 2023/2024 to 18 students in 2024/2025 and 17 students in 2025/2026, with female students forming the majority of participants (75.8 percent). This trend makes it important to assess whether, and how, the program actually fosters students' entrepreneurial spirit so that it remains relevant and attractive.

The success of a skills program is inseparable from the role of its supervisor, the skills teacher or mentor who guides students throughout the program. Indonesian law defines teachers as professional educators whose duties include educating, teaching, guiding, directing, training, and evaluating students (Republic of Indonesia, 2005), and talent-development activities outside regular lessons are carried out under the guidance and supervision of the school (Ministry of Education and Culture, 2014). In a skills program, the supervisor acts as a motivator who builds students' confidence to start a business, a facilitator who provides tools, materials, and market access, and a mentor who accompanies students in developing products and evaluating their ventures. In Islamic education, this role corresponds to the position of the teacher as *murabbī* and as a role model (*uswah ḥasanah*), as exemplified by the Prophet Muhammad (Q.S. Al-Aḥzāb [33]: 21). Recent studies confirm the importance of teacher and school support but report mixed results. School support has the largest direct effect on vocational students' entrepreneurial intention (Rosniawati & Yunizar, 2025), and teacher support affects entrepreneurial intention both directly and through industrial work practice (Azizah et al., 2026). In contrast, a study of junior high school students found that teacher support had no direct effect on entrepreneurial intention and mattered only through opportunity recognition (Surya et al., 2026). These differences indicate that the mechanism through which supervisors shape students' entrepreneurial spirit needs further testing, particularly in madrasahs, where teacher–student relationships have a distinctive character.

Even when a skills program runs well and supervisors fulfil their duties, not all students show strong entrepreneurial potential. Entrepreneurial motivation is expected to be the internal factor that bridges skills and the actualization of entrepreneurial spirit. McClelland (1961) places the need for achievement at the core of entrepreneurial behavior, while self-determination theory explains that intrinsic motivation grows when the environment satisfies the needs for autonomy, competence, and relatedness (Ryan & Deci, 2000). Motivation has been shown to mediate the effect of entrepreneurship

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education on entrepreneurial interest and intention, even when the direct effect is not significant (Humiroh et al., 2026; Tumbelaka & Wijaya, 2025), but other research finds that motivation does not mediate the effect of entrepreneurship education on entrepreneurial intention (Andrianto & Widjaja, 2025). This inconsistency reinforces the need to test entrepreneurial motivation as a mediating variable.

From the perspective of Islamic economics, entrepreneurship is part of the effort to seek the bounty of Allah commanded in Q.S. Al-Jumu'ah [62]: 10, and the Prophet stated that no one eats better food than that earned by the work of one's own hands (al-Bukhārī, n.d., No. 2072). Fostering entrepreneurial spirit in madrasahs is also structurally relevant for the Tana Luwu region. Research in Luwu Regency shows that local economic transformation, digitalization, and Islamic financial inclusion contribute to poverty reduction (Ernawati et al., 2026), and a study of young Muslim Generation Z entrepreneurs in Palopo shows that Islamic financial literacy and self-efficacy shape an ethical habitus in business (Karina et al., 2025). Preparing madrasah graduates who are economically independent through skills and entrepreneurial spirit is therefore consistent with the objective of Islamic economics to protect and develop wealth lawfully (*ḥifẓ al-māl*).

Most studies on entrepreneurship education still focus on vocational high school (SMK) and university students. Research in Islamic educational institutions is growing, for example on the role of *pesantren* in encouraging students' entrepreneurial interest (Husaini et al., 2023) and on the development of entrepreneurial spirit among *santri* (Amiruddin, 2025), but quantitative studies that simultaneously examine a culinary skills program, the supervisor role, and entrepreneurial motivation as a mediator among *madrasah aliyah* students remain scarce. This study addresses that gap and makes four contributions. First, it moves the analysis from general secondary and vocational schools to a religious-based madrasah. Second, it treats a culinary skills program as a form of contextual, practice-based entrepreneurship education. Third, it models the supervisor role as a distinct exogenous construct rather than as a component of school support. Fourth, by placing entrepreneurial motivation as a mediator in a PLS-SEM model, it distinguishes the mechanism through which a structured program operates from that of personal mentoring. Accordingly, the study aims to analyze the direct effects of the culinary skills program and the supervisor role on entrepreneurial spirit and entrepreneurial motivation, the effect of entrepreneurial motivation on entrepreneurial spirit, and the mediating role of entrepreneurial motivation among students and alumni of MAN Luwu Timur.

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LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Theoretical Foundation

The research model rests on four complementary theories. Kolb's (1984) experiential learning theory views learning as a cycle of concrete experience, reflective observation, abstract conceptualization, and active experimentation. In a culinary program, students gain concrete experience through cooking practice, reflect on the results through evaluation, form concepts about product quality and business, and apply them to the next product; this cycle is expected to build not only technical competence but also confidence and the drive to start a business. McClelland's (1961) need-for-achievement theory explains why the desire to excel drives entrepreneurial behavior and holds that this need can be cultivated through education and training. Self-determination theory (Deci & Ryan, 1985; Ryan & Deci, 2000) explains that a supportive learning environment, including teachers, fosters intrinsic motivation by satisfying the needs for autonomy, competence, and relatedness. Finally, Bandura's (1977) social learning theory states that individuals learn by observing and imitating models, so a supervisor's own entrepreneurial conduct can be emulated by students. These theories are complemented by an Islamic economic perspective that views business as a lawful effort (*ikhtiār*) to seek the bounty of Allah, carried out with honesty, trustworthiness, and diligence (*itqān*).

Culinary Skills Program

In this study, the culinary skills program is defined as practical training in food processing and presentation provided to students, encompassing mastery of material, cooking practice, facilities, evaluation of practice results, and relevance to the world of work and business. In madrasahs, skills programs grew out of the life-skills concept integrated into *madrasah aliyah* learning and were formalized through Decree of the Director General of Islamic Education No. 1023 of 2016, which sets out 21 skill areas including culinary arts (Andhika & Munadi, 2022). Recent studies show that practice-based culinary learning improves students' technical competence and creativity. Project-based learning integrated with STEM produced higher creativity among culinary students in continental cuisine processing than regular project-based learning (Setyobudi, 2025), and fruit and vegetable carving practice fostered original, technical, aesthetic, and symbolic creativity (Arianesia et al., 2026). With respect to entrepreneurship, teaching factory learning increases entrepreneurial interest through learning motivation and creativity (Susiani et al., 2024), entrepreneurship education and the teaching factory model jointly increase vocational students' entrepreneurial readiness (Hasanah et al., 2023), and project-based learning significantly improves culinary students' learning outcomes in creative products and entrepreneurship (Amalia et al., 2026). Industrial work practice, learning facilities, and partnerships with industry further strengthen work

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readiness, confidence, discipline, and adaptability (Kurnia et al., 2026; Roxymawati et al., 2026). The construct is measured by six indicators: (1) relevance of the material to the world of work, (2) frequency of skills practice, (3) availability of practice facilities, (4) competence of the instructor or supervisor, (5) system for evaluating practice results, and (6) relevance of the skills to independent business.

Supervisor Role

The supervisor role refers to the mentoring activities carried out by teachers or supervisors to nurture, motivate, guide, and direct students in developing entrepreneurial abilities. In practice, it comprises three main functions: motivator, facilitator, and mentor. As motivators, creative and inspiring teachers play an important role in shaping vocational students' entrepreneurial intention (Sebayang et al., 2023), and academic support from educators increases entrepreneurial interest through entrepreneurial motivation (Revinzky et al., 2025). As facilitators, teachers provide practice tools, access to resources, and school business units for marketing practice, whereas limited production facilities hinder students' interest (As-saif, 2024). As mentors, directive coaching helps early-stage entrepreneurs find business solutions and build management competence (Cronje et al., 2025). In Islamic educational institutions, involvement in *pesantren* business units, the example of leaders, and guidance from mentors shape students who are independent, responsible, and committed to Islamic business ethics (Mutaqin & Khadavi, 2026), and *pesantren* support affects students' entrepreneurial interest both directly and through entrepreneurial characteristics (Husaini et al., 2023). In the Islamic tradition, the educator is at once *murabbī* (one who nurtures potential), *mu'allim* (one who teaches knowledge), *mursyid* (one who guides direction and morals), and *mu'addib* (one who instills proper conduct) (al-Attas, 1980). The importance of mentoring is also evident in the productive *zakat* program in Palopo, where capital and equipment assistance accompanied by mentoring increased beneficiaries' capital, production capacity, and income, while weak marketing and business management skills remained the main obstacle (R. D. Saputra et al., 2026). The construct is measured by five indicators: (1) motivating students to become entrepreneurs, (2) being an entrepreneurial role model, (3) guiding students' business activities, (4) assisting product development, and (5) providing access to promotion or markets.

Entrepreneurial Motivation

Entrepreneurial motivation is the internal drive that leads students to be interested and engaged in entrepreneurial activities, whether because of needs, aspirations, or environmental factors. It encompasses the desire for economic independence, the courage to take risks, enthusiasm for learning entrepreneurship, the aspiration to become

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an entrepreneur, the need for achievement, and the influence of the surrounding environment. The need for achievement positively affects students' entrepreneurial intention through entrepreneurial attitude (Dzomonda & Neneh, 2023) and, together with risk-taking propensity, significantly affects university students' entrepreneurial intention (Octaviani et al., 2023; Steenkamp et al., 2024). Among vocational students, independence and creativity each significantly affect entrepreneurial interest (Lestari et al., 2025). Based on self-determination theory, students with a highly intrinsic motivational profile show the greatest interest in learning entrepreneurship and the strongest intention to become entrepreneurs (Lu et al., 2023). From an Islamic perspective, motivation originates in intention (*niyyah*), and the goal of entrepreneurship is not merely material profit but *falāḥ* (success in this world and the hereafter) and blessing (*barakah*) in business (Alwi et al., 2023). Islamic entrepreneurial motivation has been shown to mediate the effect of religiosity on Islamic entrepreneurial intention (Khoiriyah & Ridlwan, 2025), and among students of Islamic universities, motivation and entrepreneurial knowledge determine entrepreneurial intention more strongly than attitude and religiosity (Daffa et al., 2025). The construct is measured by six indicators: (1) desire for economic independence, (2) courage to take risks, (3) enthusiasm for learning entrepreneurship, (4) aspiration to become an entrepreneur, (5) need for achievement, and (6) influence of the surrounding environment.

Entrepreneurial Spirit

The concept of entrepreneurship has evolved from Cantillon's (1755) risk-bearing trader and Schumpeter's (1934) innovator who creates new combinations to Drucker's (1985) view that entrepreneurship is a discipline that can be learned and managed systematically. The latter view underpins the inclusion of entrepreneurship in education. In this study, entrepreneurial spirit is defined as the entrepreneurial attitude and character that students display in the form of creativity, initiative, courage to try new ventures, independence, responsibility, and perseverance in managing a business. The concept is broader than entrepreneurial intention because it describes not only the intention to start a business but also the character needed to run and sustain it; measures of entrepreneurial spirit among vocational students, for example, include self-confidence, task and result orientation, risk-taking, future orientation, and creativity and innovation (H. Saputra et al., 2026). Creativity is the competence most strongly associated with entrepreneurial intention (Martínez-Martínez et al., 2025), and entrepreneurship education increases innovation capability, which in turn mediates intention formation (Elvianny et al., 2025). Proactive personality increases self-efficacy and entrepreneurial intention among Islamic university students (Gultom et al., 2023), and grit, particularly perseverance of effort, predicts entrepreneurial intention (Alsaidi et al., 2025; Zhang &

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Chen, 2024). Among *santri*, motivation, self-efficacy, personal experience, family support, *pesantren* entrepreneurship education, and organizational experience jointly affect entrepreneurial spirit (Amiruddin, 2025). In Islam, the Prophet Muhammad, who traded as far as Syria and was known as *al-Amīn*, is the primary model of entrepreneurial spirit, from which four characteristics of the Muslim entrepreneur are derived: *ṣiddīq* (honest), *amānah* (trustworthy), *faṭānah* (intelligent), and *tablīgh* (communicative) (Hidayat & Tidjani, 2024). Productive work is positioned as a moral responsibility rather than merely a means of meeting material needs (Abdullah & Kamal, 2013), and religiosity helps restrain consumptive behavior, a precondition for capital accumulation and economic independence (Mujahidin et al., 2024). The construct is measured by six indicators: (1) creativity in making products, (2) courage to try new ventures, (3) initiative to start a business, (4) responsibility for tasks or business, (5) independence at work, and (6) perseverance in facing obstacles.

Hypotheses Development

Practice-based and project-based learning increases students' creativity and entrepreneurial readiness (Hasanah et al., 2023; Setyobudi, 2025), suggesting that the culinary skills program directly shapes entrepreneurial spirit. The same program is also expected to raise entrepreneurial motivation because teaching factory learning increases entrepreneurial interest through learning motivation and creativity (Susiani et al., 2024), and, in Kolb's (1984) terms, repeated concrete experience builds the sense of competence that fuels motivation.

Supervisor support is expected to affect entrepreneurial spirit directly because school and teacher support directly affect students' entrepreneurial intention (Azizah et al., 2026; Rosniawati & Yunizar, 2025) and because, following Bandura (1977), students emulate the entrepreneurial behavior modeled by their supervisors. The supervisor role is also expected to raise entrepreneurial motivation, since educator support increases entrepreneurial interest through motivation (Revinzky et al., 2025) and satisfies the needs for competence, autonomy, and relatedness described by self-determination theory (Ryan & Deci, 2000).

Finally, entrepreneurial motivation is expected both to affect entrepreneurial spirit and to link the culinary program and the supervisor role to entrepreneurial spirit. Motivation mediates the effect of entrepreneurship education on entrepreneurial interest (Humiroh et al., 2026; Tumbelaka & Wijaya, 2025), and Islamic entrepreneurial motivation mediates the effect of religiosity on Islamic entrepreneurial intention (Khoiriyah & Ridlwan, 2025). The following hypotheses are therefore proposed, and the research model is shown in Figure 1.

H1: The culinary skills program has a significant effect on entrepreneurial spirit.

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H2: The supervisor role has a significant effect on entrepreneurial spirit.
H3: The culinary skills program has a significant effect on entrepreneurial motivation.
H4: The supervisor role has a significant effect on entrepreneurial motivation.
H5: Entrepreneurial motivation has a significant effect on entrepreneurial spirit.
H6: Entrepreneurial motivation mediates the effect of the culinary skills program on entrepreneurial spirit.
H7: Entrepreneurial motivation mediates the effect of the supervisor role on entrepreneurial spirit.

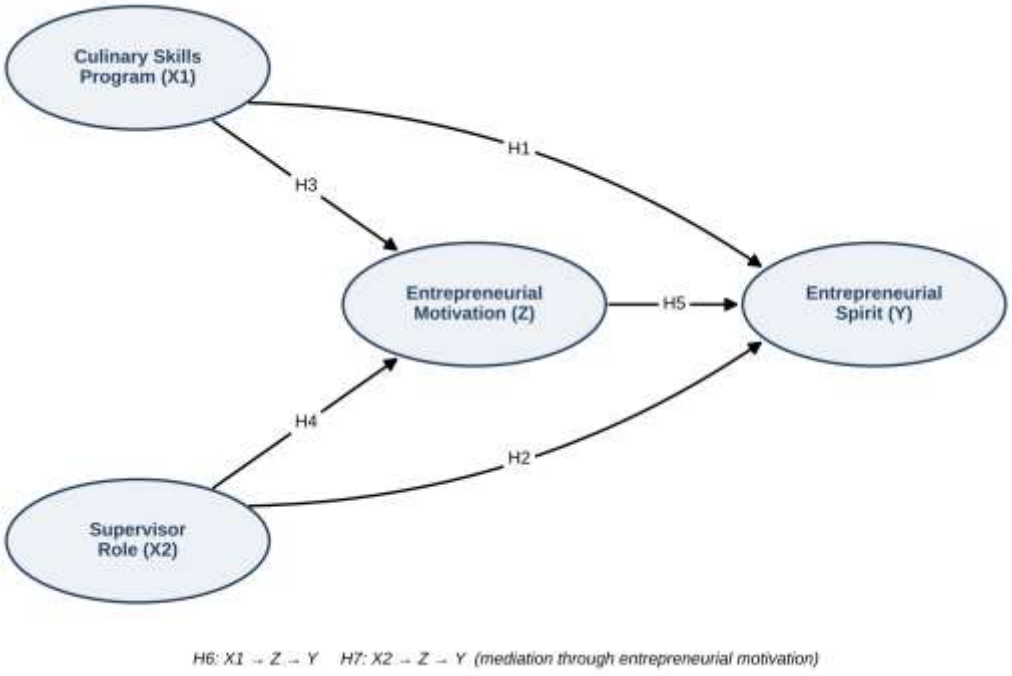


Figure 1: Research Model

RESEARCH METHOD

Research Design

This study used a quantitative approach with a causal-associative design to examine the direct and indirect relationships among the culinary skills program (X1), the supervisor role (X2), entrepreneurial motivation (Z), and entrepreneurial spirit (Y). PLS-SEM was chosen because it can estimate measurement and structural relationships simultaneously and is well suited to explanatory and predictive research in education (Ghasemy et al., 2020; Hair & Alamer, 2022), and because mediation analysis in PLS-SEM allows direct and indirect effects to be tested together (Nitzl et al., 2016).

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Population and Sample

The population comprised all students who had participated in the culinary skills program at MAN Luwu Timur since 2020, including active students and alumni. Involving graduates alongside current participants is common in evaluating vocational programs because their feedback indicates how well a program prepares participants for work and business (Schomburg, 2016). Respondents were selected through purposive sampling (Etikan et al., 2016) using two criteria: (1) being an active student or alumnus who had participated in the culinary skills program at MAN Luwu Timur, and (2) being willing to complete the questionnaire in full. This yielded 120 respondents, consisting of 72 active students and 48 alumni. Because random selection was not feasible, a non-probability sample was used (Creswell & Creswell, 2018), and generalization of the results is limited to respondents with similar characteristics. Sample adequacy was assessed with two methods. Under the ten-times rule, the minimum sample is ten times the largest number of structural paths pointing at a construct (Hair et al., 2022); entrepreneurial spirit receives three paths, so the minimum is 30. Under the more accurate inverse square root method (Kock & Hadaya, 2018), $n > (2.486 / |p_{min}|)^2$; assuming a minimum path coefficient of 0.25 at the 5 percent significance level, the minimum sample is approximately 99. The sample of 120 therefore satisfies both criteria.

Data Collection and Measurement

Data were collected with a closed questionnaire developed from the operational indicators of each construct (Table 1). All 23 items were rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree); five response categories on agree–disagree scales produce better data quality than seven or eleven categories (Revilla et al., 2014). The questionnaire was distributed in mixed mode: online via Google Forms to reach alumni and students who were not on campus, and face to face to reach active students, particularly those with limited access to technology. Online surveys are fast and efficient but are vulnerable to under-coverage and self-selection (Bethlehem, 2010; Evans & Mathur, 2005), and web surveys yield response rates about 12 percentage points lower than other modes (Daikeler et al., 2020); combining modes reduces coverage error and increases response rates (de Leeuw, 2005).

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Table 1: Constructs, Operational Definitions, and Indicators

Construct	Operational definition	Indicators (code)
Culinary skills program (X1)	Practical training in food processing and presentation, covering mastery of material, cooking practice, facilities, evaluation, and relevance to work and business	PTB1 Relevance of material to the world of work PTB2 Frequency of skills practice PTB3 Availability of practice facilities PTB4 Competence of instructor/supervisor PTB5 System for evaluating practice results PTB6 Relevance of skills to independent business
Supervisor role (X2)	Mentoring by teachers or supervisors to nurture, motivate, guide, and direct students in developing entrepreneurial abilities	PP1 Motivating students to become entrepreneurs PP2 Being an entrepreneurial role model PP3 Guiding students' business activities PP4 Assisting product development PP5 Providing access to promotion/markets
Entrepreneurial motivation (Z)	Internal drive that leads students to be interested and engaged in entrepreneurial activities, arising from needs, aspirations, or the environment	MB1 Desire for economic independence MB2 Courage to take risks MB3 Enthusiasm for learning entrepreneurship MB4 Aspiration to become an entrepreneur MB5 Need for achievement MB6 Influence of the surrounding environment
Entrepreneurial spirit (Y)	Entrepreneurial attitude and character shown in creativity, initiative, courage, independence, responsibility, and perseverance in managing a business	JE1 Creativity in making products JE2 Courage to try new ventures JE3 Initiative to start a business JE4 Responsibility for tasks/business JE5 Independence at work JE6 Perseverance in facing obstacles

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Data Analysis

The analysis followed the two-stage PLS-SEM procedure (Hair et al., 2019, 2022). The measurement model was evaluated through outer loadings (≥ 0.70 ideal; items between 0.40 and 0.70 retained if construct reliability and validity were met), Cronbach's alpha and composite reliability (≥ 0.70), average variance extracted (AVE ≥ 0.50), and discriminant validity using the Fornell–Larcker criterion (Fornell & Larcker, 1981) and the heterotrait–monotrait ratio (HTMT < 0.90), which detects discriminant validity problems more reliably (Henseler et al., 2015). The structural model was evaluated through collinearity (VIF < 5), the coefficient of determination (R^2), effect size (f^2; 0.02, 0.15, and 0.35 for small, medium, and large effects; Cohen, 1988), and predictive relevance (Q^2 > 0) obtained through blindfolding. Path coefficients and indirect effects were tested with bootstrapping using 2,000 subsamples; a path was considered significant when t ≥ 1.96 or p ≤ 0.05, and an indirect effect was considered significant when its 95 percent bootstrap confidence interval did not include zero (Nitzl et al., 2016; Streukens & Leroi-Werelds, 2016).

RESULTS

Respondent Profile and Descriptive Statistics

Table 2 summarizes the respondents' characteristics. Active students accounted for 60.0 percent and alumni for 40.0 percent of the sample, and female respondents (59.2 percent) outnumbered male respondents (40.8 percent). Ages ranged from 15 to 26 years, reflecting the combination of active students and alumni. Notably, 47 respondents (39.2 percent) were running or had started a culinary venture, a proportion that was similar among alumni (43.8 percent) and active students (36.1 percent), indicating that the entrepreneurial drive begins to emerge before students graduate. Most respondents (86.7 percent) joined the program between 2024 and 2026, so the data reflect the program as it is currently implemented.

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Table 2: Respondent Characteristics (n = 120)

	Category	n	%
Gender	Female	71	59.2
	Male	49	40.8
Status	Active student	72	60.0
	Alumnus	48	40.0
Age (years)	15–16	36	30.0
	17–18	36	30.0
	19–20	9	7.5
	21–26	39	32.5
Culinary venture experience	Running or has started a venture	47	39.2
	Never started a venture	73	60.8
Year joined the program	2022	7	5.8
	2023	9	7.5
	2024	27	22.5
	2025	60	50.0
	2026	17	14.2

All four constructs fell in the high category on the five-point interval scale (3.41–4.20): the culinary skills program (M = 3.738; SD = 0.515), entrepreneurial motivation (M = 3.721; SD = 0.481), the supervisor role (M = 3.688; SD = 0.594), and entrepreneurial spirit (M = 3.685; SD = 0.497). The fact that entrepreneurial spirit had the lowest mean while the program had the highest suggests a gap between the technical skills students have acquired and their actualization as entrepreneurial character. At the item level, no respondent chose "strongly disagree" for any item, and most responses were concentrated on "neutral" and "agree". The highest-rated items were need for achievement (MB5; M = 3.91) and providing access to promotion or markets (PP5; M = 3.88), whereas the lowest-rated items were enthusiasm for learning entrepreneurship (MB3; M = 3.55) and assisting product development (PP4; M = 3.58).

Measurement Model

In the initial estimation, item MB2 (courage to take risks) had a loading of 0.459, below the 0.50 threshold, and item JE6 (perseverance in facing obstacles), with a loading of 0.578, pulled the AVE of entrepreneurial spirit below 0.50. Both items were removed through item purification (Hair et al., 2022), leaving 21 indicators in the final model. As shown in Table 3, the remaining loadings ranged from 0.609 to 0.855. Cronbach's alpha

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(0.752–0.838) and composite reliability (0.834–0.885) exceeded 0.70 for all constructs, and all AVE values exceeded 0.50 (0.501–0.608), although those of entrepreneurial motivation (0.501) and entrepreneurial spirit (0.505) lay just above the threshold, which is common for multidimensional psychological constructs. The highest loading was for PP1 (motivating students to become entrepreneurs; 0.855), consistent with evidence that inspiring teachers drive students' entrepreneurial intention (Sebayang et al., 2023).

Construct	Indicator	Loading	α	CR	AVE
Culinary skills program (X1)	PTB1 Relevance of material to work	0.770	0.810	0.863	0.513
	PTB2 Frequency of practice	0.733			
	PTB3 Practice facilities	0.754			
	PTB4 Instructor competence	0.726			
	PTB5 Evaluation system	0.609			
	PTB6 Relevance to independent business	0.692			
Supervisor role (X2)	PP1 Motivating students	0.855	0.838	0.885	0.608
	PP2 Entrepreneurial role model	0.783			
	PP3 Guiding business activities	0.804			
	PP4 Assisting product development	0.763			
	PP5 Access to promotion/markets	0.683			
Entrepreneurial motivation (Z)	MB1 Economic independence	0.715	0.752	0.834	0.501
	MB3 Enthusiasm for learning	0.737			
	MB4 Aspiration to be an entrepreneur	0.683			
	MB5 Need for achievement	0.680			
	MB6 Surrounding environment	0.721			
Entrepreneurial spirit (Y)	JE1 Creativity in making products	0.721	0.754	0.836	0.505

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Construct	Indicator	Loading	α	CR	AVE
	JE2 Courage to try new ventures	0.652			
	JE3 Initiative to start a business	0.740			
	JE4 Responsibility	0.686			
	JE5 Independence at work	0.749			

Table 3: Outer Loadings, Reliability, and Convergent Validity of the Final Model

Note. Items MB2 (courage to take risks) and JE6 (perseverance in facing obstacles) were removed because of low loadings and/or their effect on AVE. α = Cronbach's alpha; CR = composite reliability; AVE = average variance extracted.

Discriminant validity was established (Table 4). The square root of each construct's AVE (0.708–0.780) exceeded its correlations with the other constructs, satisfying the Fornell–Larcker criterion, and all HTMT values (0.574–0.693) were below the conservative 0.85 threshold. The highest HTMT value was between entrepreneurial motivation and entrepreneurial spirit (0.659), which is theoretically understandable given the conceptual proximity between motivation as an internal drive and entrepreneurial spirit as its actualization.

Table 4: Discriminant Validity (Fornell–Larcker Criterion and HTMT)

Construct	X1	X2	Z	Y
Culinary skills program (X1)	**0.716**	*0.693*	*0.623*	*0.574*
Supervisor role (X2)	0.579	**0.780**	*0.574*	*0.598*
Entrepreneurial motivation (Z)	0.496	0.467	**0.708**	*0.659*
Entrepreneurial spirit (Y)	0.461	0.484	0.502	**0.711**

Note. Bold diagonal values are the square roots of AVE; values below the diagonal are inter-construct correlations; values above the diagonal (in italics) are HTMT ratios.

Structural Model

VIF values ranged from 1.418 to 1.667, well below 5 and even below the stricter 3.3 threshold, so collinearity did not bias the estimates, even though the culinary program and the supervisor role were moderately correlated (r = 0.579). The culinary program and the supervisor role together explained 29.5 percent of the variance in entrepreneurial motivation (R^2 = 0.295), and the three predictors together explained 34.8 percent of the

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variance in entrepreneurial spirit (R^2 = 0.348); using Chin's (1998) benchmarks of 0.19, 0.33, and 0.67, these values are weak-to-moderate and moderate, respectively. All five paths had small effect sizes (f^2 = 0.026–0.108), with the largest contributions from the culinary program to motivation (0.108) and from motivation to entrepreneurial spirit (0.100), and the smallest from the culinary program directly to entrepreneurial spirit (0.026). Q^2 values of 0.207 for entrepreneurial motivation and 0.167 for entrepreneurial spirit were above zero, indicating predictive relevance (Hair et al., 2019). The structural model statistics are reported in Table 5.

Table 5: Structural Model Assessment

Endogenous construct	R^2	Q^2	Predictor	f^2	VIF
Entrepreneurial motivation (Z)	0.295	0.207	Culinary skills program (X1)	0.108	1.505
			Supervisor role (X2)	0.069	1.505
Entrepreneurial spirit (Y)	0.348	0.167	Culinary skills program (X1)	0.026	1.667
			Supervisor role (X2)	0.057	1.609
			Entrepreneurial motivation (Z)	0.100	1.418

Note. f^2 thresholds of 0.02, 0.15, and 0.35 indicate small, medium, and large effects (Cohen, 1988).

Hypothesis Testing

Table 6 and Figure 2 present the bootstrapping results. Four of the five direct paths were significant. The culinary skills program had no significant direct effect on entrepreneurial spirit (β = 0.169; t = 1.728; p = 0.084), so H1 was rejected. The supervisor role had a significant direct effect on entrepreneurial spirit (β = 0.244; t = 2.642; p = 0.008), supporting H2. The culinary program (β = 0.338; t = 3.762; p < 0.001) and the supervisor role (β = 0.271; t = 2.692; p = 0.007) both significantly affected entrepreneurial motivation, supporting H3 and H4; the effect of the culinary program on motivation was the strongest path in the model. Entrepreneurial motivation significantly affected entrepreneurial spirit (β = 0.304; t = 3.889; p < 0.001), supporting H5. Both indirect effects were significant because their 95 percent confidence intervals excluded zero. Entrepreneurial motivation mediated the effect of the culinary program on entrepreneurial spirit (indirect effect = 0.103; t = 2.514; p = 0.012; 95% CI [0.041, 0.199]); because the direct effect was not significant, this is full mediation, supporting H6. Entrepreneurial motivation also mediated the effect of the supervisor role (indirect effect = 0.082; t =

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2.088; p = 0.037; 95% CI [0.019, 0.170]); because the direct effect remained significant, this is partial mediation, supporting H7.

Table 6: Results of Hypothesis Testing (Bootstrapping, 2,000 Subsamples)

H	Path	β	t	p	95% CI	Decision
H1	CSP → ES	0.169	1.728	0.084	–	Rejected
H2	SR → ES	0.244	2.642	0.008	–	Supported
H3	CSP → EM	0.338	3.762	< 0.001	–	Supported
H4	SR → EM	0.271	2.692	0.007	–	Supported
H5	EM → ES	0.304	3.889	< 0.001	–	Supported
H6	CSP → EM → ES	0.103	2.514	0.012	[0.041, 0.199]	Supported (full mediation)
H7	SR → EM → ES	0.082	2.088	0.037	[0.019, 0.170]	Supported (partial mediation)

Note. CSP = culinary skills program; SR = supervisor role; EM = entrepreneurial motivation; ES = entrepreneurial spirit. Significant at α = 0.05 when t ≥ 1.96 or p ≤ 0.05.

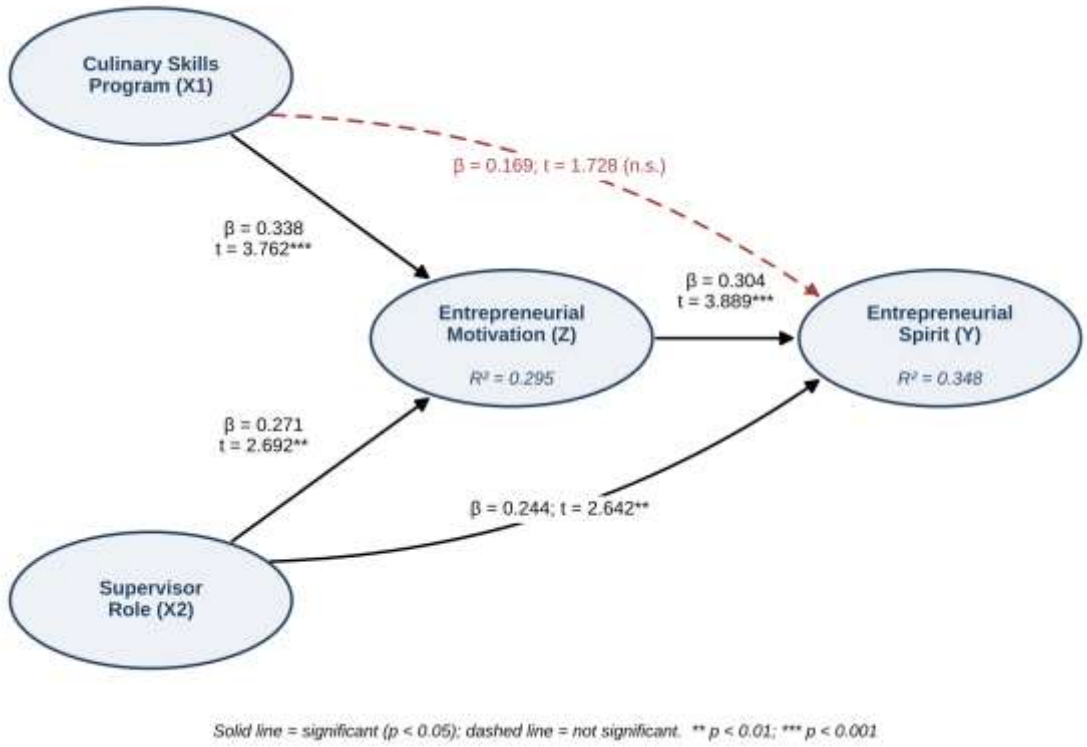


Figure 2: Structural Model Results (Bootstrapping, n = 120)

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DISCUSSION

The Culinary Skills Program and Entrepreneurial Spirit

The rejection of H1 appears at first to contradict studies showing that practice-based culinary training fosters creativity and entrepreneurial readiness (Hasanah et al., 2023; Setyobudi, 2025). On closer inspection, however, the finding refines rather than contradicts that literature. Studies that report a direct effect of skills programs on entrepreneurial outcomes generally do not include motivation as an explicit mediator (Hasanah et al., 2023; Susiani et al., 2024), so their "direct" effects may absorb an indirect effect that actually passes through motivation. When motivation is modeled explicitly, as in this study, the direct effect of the program becomes non-significant, while its effect on motivation is the strongest path in the model. Technical mastery, kitchen facilities, instructor competence, and a sound evaluation system thus do not automatically form entrepreneurial character unless they first awaken students' internal drive. This pattern is consistent with Kolb's (1984) cycle, in which concrete experience must pass through reflection and conceptualization before it is internalized as a lasting change in attitude. The result should nonetheless be interpreted with caution: with 120 respondents, the inverse square root method implies that only path coefficients of about 0.23 or larger can be reliably detected at the 5 percent level ($2.486/\sqrt{120} \approx 0.227$), so a small direct effect of 0.169 may exist but remain undetected.

The Supervisor Role and Entrepreneurial Spirit

In contrast, the supervisor role had a significant direct effect on entrepreneurial spirit, supporting evidence that creative and inspiring teachers shape students' intention to enter business (Sebayang et al., 2023) and that school support, including teacher support, has the largest direct effect on vocational students' entrepreneurial intention (Rosniawati & Yunizar, 2025). The direct nature of this effect is conceptually plausible: personal interaction, role modeling, and immediate feedback can build students' courage and initiative relatively quickly, without the longer process of motivational internalization that a technical, structured program requires, as Bandura's (1977) social learning theory predicts. Similar processes are found in *pesantren*, where the example of leaders and the guidance of mentors in business units produce independent students who dare to start ventures (Mutaqin & Khadavi, 2026). Compared with a structured, mass-delivered program, the supervisor therefore has a distinctive dual capacity: shaping character directly through personal interaction and, at the same time, nurturing motivation.

The Culinary Skills Program, the Supervisor Role, and Entrepreneurial Motivation

Both exogenous variables significantly increased entrepreneurial motivation, with the culinary program having a somewhat stronger effect than the supervisor role. This is

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consistent with findings that teaching factory learning raises entrepreneurial interest through learning motivation and creativity and that project-based learning improves culinary students' learning outcomes in entrepreneurship (Amalia et al., 2026; Susiani et al., 2024). The contrast between the strong effect of the program on motivation and its non-significant direct effect on entrepreneurial spirit indicates that hands-on cooking experience first builds confidence and interest in the culinary business before developing into fuller entrepreneurial character. The effect of the supervisor role on motivation supports the view that the sustainability of students' entrepreneurial activities depends on supervisors' ability to provide facilities, learning media, and market access (As-saif, 2024). It also mirrors evidence from the productive *zakat* program in Palopo, where assistance combined with mentoring increased beneficiaries' production capacity and income, while weak marketing and management skills were the main obstacle (R. D. Saputra et al., 2026). Together, the two predictors explained 29.5 percent of the variance in motivation, indicating that both program-related and personal mentoring factors matter, but that other influences, such as family economic background, parental entrepreneurial experience, or social media exposure, remain outside the model.

Entrepreneurial Motivation and Entrepreneurial Spirit

The significant effect of entrepreneurial motivation on entrepreneurial spirit confirms the central premise of the model that motivation is the key psychological variable linking educational interventions to entrepreneurial character. The result is consistent with evidence that the need for achievement positively affects entrepreneurial intention (Dzomonda & Neneh, 2023) and that need for achievement, self-esteem, and risk-taking propensity jointly shape entrepreneurial intention (Steenkamp et al., 2024), supporting the relevance of McClelland's (1961) theory in the madrasah context. The high score of the need-for-achievement item (MB5) reinforces this interpretation. The finding also accords with self-determination theory, which holds that autonomous motivation drives volitional action, including the decision to become an entrepreneur (Ryan & Deci, 2000), and with evidence that independence promotes entrepreneurial interest among vocational students (Lestari et al., 2025). Motivation is therefore not a passive conduit but an active predictor of entrepreneurial spirit in its own right.

The Mediating Role of Entrepreneurial Motivation

The most important theoretical contribution of this study is the difference in mediation type between the two exogenous variables. Motivation fully mediates the effect of the culinary skills program, meaning that the program shapes entrepreneurial spirit only through strengthening motivation; without that internal drive, exposure to a vocational curriculum is less effective in forming entrepreneurial character. This is in line

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with studies in which motivation mediates the effect of entrepreneurship education on entrepreneurial interest and intention (Humiroh et al., 2026; Tumbelaka & Wijaya, 2025) and in which educators' academic support raises entrepreneurial interest through motivation (Revinzky et al., 2025). By contrast, motivation only partially mediates the effect of the supervisor role, which influences entrepreneurial spirit both directly, through role modeling and practical guidance, and indirectly, through motivation. This dual pattern resembles findings that school support has both a direct and an indirect effect on vocational students' entrepreneurial intention (Rosniawati & Yunizar, 2025), that teacher support operates directly and indirectly among vocational students in Semarang (Azizah et al., 2026), and that *pesantren* support affects *santri*'s entrepreneurial interest directly and through entrepreneurial characteristics (Husaini et al., 2023). The results thus show that not all antecedents of entrepreneurial spirit operate through the same mechanism: some, such as a structured skills program, are purely indirect, while others, such as personal mentoring, are dual. This nuance helps reconcile the inconsistent mediation findings reported in earlier studies (Andrianto & Widjaja, 2025; Tumbelaka & Wijaya, 2025), since whether motivation mediates may depend on the type of intervention examined.

Practical Implications

Several implications follow for madrasahs and policymakers. First, MAN Luwu Timur should not rely on improving the technical quality of the culinary program alone, such as adding practice hours or kitchen equipment, but should design parallel interventions that deliberately strengthen motivation, for example post-practice reflection sessions, internal culinary competitions, product exhibitions, internships in partner culinary businesses, and sharing sessions with alumni who have become entrepreneurs. Second, because supervisors exert a dual influence, investment in supervisor capacity is likely to be more efficient than investment in the program alone; training should cover not only culinary techniques but also interpersonal skills, entrepreneurial role modeling, and constructive feedback, with particular attention to product-development assistance (PP4), the lowest-rated supervisor indicator. Third, the relatively low score for enthusiasm for learning entrepreneurship (MB3) suggests a need to sustain students' independent learning beyond structured practice sessions. Fourth, the Ministry of Religious Affairs could incorporate motivation-building components formally into skills-based entrepreneurship curricula rather than focusing solely on technical competence standards, in keeping with the Islamic ideals of *itqān*, honesty, and trustworthiness in business.

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CONCLUSION

This study examined how a culinary skills program and the supervisor role shape the entrepreneurial spirit of madrasah students, with entrepreneurial motivation as a mediator. Six of the seven hypotheses were supported. The culinary skills program did not directly affect entrepreneurial spirit, but it was the strongest predictor of entrepreneurial motivation, and its effect on entrepreneurial spirit was fully mediated by motivation. The supervisor role affected entrepreneurial spirit both directly and indirectly through motivation, indicating partial mediation, and entrepreneurial motivation was a strong, independent predictor of entrepreneurial spirit. Technical skills thus foster entrepreneurial spirit only when they first strengthen students' motivation, whereas supervisors play a dual role as both direct shapers of character and builders of motivation. Madrasahs should therefore integrate skills training with deliberate motivation-building strategies and treat supervisors as a strategic asset.

The study has several limitations that point to directions for future research. Two indicators (MB2 and JE6) were removed, which slightly narrowed the measurement of motivation and entrepreneurial spirit; their wording should be refined. The explained variance in motivation was modest, so future models should include variables such as family support, household economic conditions, and social media exposure. The cross-sectional design cannot establish causality definitively, and longitudinal or tracer studies following alumni's entrepreneurial careers are recommended. Bootstrapping used 2,000 subsamples, fewer than the 5,000 or more commonly recommended (Hair et al., 2022). Finally, purposive sampling at a single madrasah limits generalizability, and the religious character of madrasah education may not be representative of general vocational schools. Future studies should therefore use probability sampling across multiple madrasahs with larger samples.

REFERENCES

Abdullah, M. R., & Kamal, F. (2013). *Pengantar Islamic economics: Mengenal konsep dan praktek ekonomi Islam* [Introduction to Islamic economics: Understanding the concepts and practice of Islamic economics]. Lumbung Informasi Pendidikan.

Aisy, R., Novalia, R. J., & Prahagia, Y. (2025). Analisis faktor-faktor yang mempengaruhi minat berwirausaha di bidang jasa boga pada siswa kelas XI jurusan tata boga SMK Negeri 6 Bungo [Factors affecting entrepreneurial interest in catering among grade XI culinary students at SMK Negeri 6 Bungo]. *Jurnal Pendidikan Vokasi dan Seni, 4*(1), 46–57. https://doi.org/10.52060/jpvs.v4i1.3634

Alsaidi, F., Aldhafri, S. S., Alkharusi, H., Alrajhi, M. N., Alhadabi, A., AlBarashdi, H. S., & Al-Harthy, I. (2025). Predicting entrepreneurial intention: The impact of career expectations and grit among university students at Sultan Qaboos University.

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International Journal for Research in Education, 49(1), 226–252. https://doi.org/10.36771/ijre.49.1.25-pp-226-252

Alwi, M., Abdullah, M. R., Muhajirin, & Busrah. (2023). The concept of blessing in the Islamic business ethics paradigm. *LAA MAISYIR: Jurnal Ekonomi Islam, 10*(2), 257–273. https://doi.org/10.24252/lamaisyir.v10i2.39056

Amalia, F. D., Gusnita, W., Kasmita, & Andriani, C. (2026). Efektivitas model project based learning terhadap hasil belajar produk kreatif dan kewirausahaan siswa kelas XI kuliner SMKN 9 Padang [The effectiveness of project-based learning on creative products and entrepreneurship learning outcomes of grade XI culinary students at SMKN 9 Padang]. *EduTech: Jurnal Teknologi Pendidikan, 25*(3), 2675–2688. https://doi.org/10.17509/e.v25i3.104879

Amiruddin. (2025). Analisis pengembangan jiwa kewirausahaan di kalangan santri pondok pesantren [Analysis of entrepreneurial spirit development among Islamic boarding school students]. *JEKPEND: Jurnal Ekonomi dan Pendidikan, 8*(2), 91–101. https://doi.org/10.26858/jekpend.v8i2.78632

Andhika, M., & Munadi, S. (2022). An evaluation of the vocational skill learning program at Madrasah Aliyah Negeri of Yogyakarta Special Region. *Jurnal Penelitian dan Evaluasi Pendidikan, 26*(1), 72–86. https://doi.org/10.21831/pep.v26i1.48707

Andrianto, H., & Widjaja, O. H. (2025). Pengaruh pendidikan kewirausahaan, dan efikasi diri terhadap intensi berwirausaha dengan motivasi berwirausaha sebagai variabel mediasi [The effect of entrepreneurship education and self-efficacy on entrepreneurial intention with entrepreneurial motivation as a mediating variable]. *EduInovasi: Journal of Basic Educational Studies, 5*(3), 1636–1645. https://doi.org/10.47467/edu.v5i3.10869

Arianesia, H., Nurjanah, N., & Yoto, Y. (2026). Enhancing vocational students' creativity through letter mold-assisted fruits and vegetables carving practice: A qualitative case study in Indonesian culinary education. *Sosioedukasi: Jurnal Ilmiah Ilmu Pendidikan dan Sosial, 15*(3), 791–802. https://doi.org/10.36526/sosioedukasi.v15i3.9062

As-saif, M. R. (2024). Peran mata pelajaran kewirausahaan terhadap tumbuhnya minat berwirausaha siswa SMAN 16 Bandung [The role of the entrepreneurship subject in fostering entrepreneurial interest among students of SMAN 16 Bandung]. *Leader: Jurnal Manajemen Pendidikan Islam, 2*(2), 239–248. https://doi.org/10.32939/ljmpi.v2i2.4080

al-Attas, S. M. N. (1980). *The concept of education in Islam*. ABIM.

Azizah, E. R., Rusdarti, & Mahmud, A. (2026). The mediating role of industrial work practice on the influence of self-efficacy and teacher support on entrepreneurial

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intentions at vocational high schools in Semarang City. *Journal of Economic Education, 15*(1). https://doi.org/10.15294/jeec.v15i1.38641

Badan Standar, Kurikulum, dan Asesmen Pendidikan. (2024). *Panduan pengembangan projek penguatan profil pelajar Pancasila* [Guidelines for developing the Pancasila Student Profile Strengthening Project] (Rev. ed.). Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi.

Bandura, A. (1977). *Social learning theory*. Prentice-Hall.

Bethlehem, J. (2010). Selection bias in web surveys. *International Statistical Review, 78*(2), 161–188. https://doi.org/10.1111/j.1751-5823.2010.00112.x

al-Bukhārī, M. I. (n.d.). *Ṣaḥīḥ al-Bukhārī*. https://sunnah.com/bukhari

Cantillon, R. (1755). *Essai sur la nature du commerce en général* [Essay on the nature of trade in general]. Fletcher Gyles.

Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), *Modern methods for business research* (pp. 295–336). Lawrence Erlbaum Associates.

Choirul, D. (2026, July 16). Kuliner jadi penyumbang terbesar PDB ekonomi kreatif, Kemenekraf dorong hilirisasi produk lokal [Culinary becomes the largest contributor to creative-economy GDP; Ministry of Creative Economy pushes downstreaming of local products]. *Jawa Pos*. https://jawapos.com/bisnis/2607160209/kuliner-jadi-penyumbang-terbesar-pdb-ekonomi-kreatif-kemenekraf-dorong-hilirisasi-produk-lokal

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.

Cronje, J. P., Terblanche, N., & Theron-Wepener, M. (2025). Coaching and mentoring to foster self-efficacy for early-stage survival-driven entrepreneurs. *South African Journal of Business Management, 56*(1), a4884. https://doi.org/10.4102/sajbm.v56i1.4884

Daffa, H., Virgiawan, R., & Mohamad, R. D. (2025). Identifying key determinants of entrepreneurial intention: Integrating TPB and religiosity among Islamic university students in Yogyakarta. *Al-Tijary, 10*(2), 123–144. https://doi.org/10.21093/at.v10i2.10481

Daikeler, J., Bošnjak, M., & Lozar Manfreda, K. (2020). Web versus other survey modes: An updated and extended meta-analysis comparing response rates. *Journal of Survey Statistics and Methodology, 8*(3), 513–539. https://doi.org/10.1093/jssam/smz008

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de Leeuw, E. D. (2005). To mix or not to mix data collection modes in surveys. *Journal of Official Statistics, 21*(2), 233–255.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum Press.

Drucker, P. F. (1985). *Innovation and entrepreneurship: Practice and principles*. Harper & Row.

Dzomonda, O., & Neneh, B. N. (2023). How attitude, need for achievement and self control personality shape entrepreneurial intention in students. *South African Journal of Economic and Management Sciences, 26*(1). https://doi.org/10.4102/sajems.v26i1.4927

Elvianny, R. W., Narmaditya, B. S., & Wang, F. (2025). Promoting innovation capability through entrepreneurship education: Pathways to entrepreneurial intention formation. *JPBM (Jurnal Pendidikan Bisnis dan Manajemen), 11*(3), 251–265. https://doi.org/10.17977/um003v11i32025p251

Ernawati, E., Abdullah, M. R., & Ishak, I. (2026). Local economic transformation, digitalization, and poverty reduction: The moderating role of Islamic financial inclusion in Luwu Regency. *Journal of Islamic Economics Lariba, 12*(1), 751–782. https://doi.org/10.20885/jielariba.vol12.iss1.art27

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics, 5*(1), 1–4. https://doi.org/10.11648/j.ajtas.20160501.11

Evans, J. R., & Mathur, A. (2005). The value of online surveys. *Internet Research, 15*(2), 195–219. https://doi.org/10.1108/10662240510590360

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50.

Ghasemy, M., Teeroovengadum, V., Becker, J.-M., & Ringle, C. M. (2020). This fast car can move faster: A review of PLS-SEM application in higher education research. *Higher Education, 80*, 1121–1152. https://doi.org/10.1007/s10734-020-00534-1

Gultom, D. K., Arif, M., Yusnandar, W., & Radiman. (2023). Student entrepreneurial intention based on proactive personality, self-efficacy, and anticipatory entrepreneurial cognitions. *International Journal of Business Economics (IJBE), 4*(2), 65–78. https://doi.org/10.30596/ijbe.v4i2.13755

Hair, J. F., & Alamer, A. (2022). Partial least squares structural equation modeling (PLS-SEM) in second language and education research: Guidelines using an applied example. *Research Methods in Applied Linguistics, 1*(3), 100027. https://doi.org/10.1016/j.rmal.2022.100027

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Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). SAGE Publications.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review, 31*(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203

Hasanah, M. N., Sojanah, J., & Santoso, B. (2023). Pengaruh pendidikan kewirausahaan dan model pembelajaran teaching factory terhadap kesiapan berwirausaha siswa di SMK [The effect of entrepreneurship education and the teaching factory learning model on vocational students' entrepreneurial readiness]. *Jurnal Pendidikan Ekonomi Undiksha, 15*(1), 21–27. https://doi.org/10.23887/jjpe.v15i1.61567

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science, 43*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Hidayat, H., & Tidjani, A. F. (2024). Prinsip karakteristik hadits dalam enterpreneurship [Principles of hadith characteristics in entrepreneurship]. *PILAR, 15*(2), 138–145. https://journal.unismuh.ac.id/index.php/pilar/article/view/16650

Humiroh, S., Panduwinata, L. F., Rachman, F., Azmi, I. A. G., & Resmawa, I. N. (2026). Family support and entrepreneurship education as drivers of entrepreneurial intention: The mediating role of motivation. *Journal of Office Administration Education (JPAP), 14*(2), 900–914. https://doi.org/10.26740/jpap.v14n1.p900-914

Husaini, F., Timorani, J. N., & Barokah, A. (2023). Peran pesantren dalam mendorong minat berwirausaha di kalangan santri [The role of Islamic boarding schools in encouraging entrepreneurial interest among students]. *Krigan: Journal of Management and Sharia Business, 1*(1), 1–14. https://doi.org/10.30983/krigan.v1i1.6526

Karina, M., Abdullah, M. R., Ishak, I., & Chen, M. (2025). Ethical entrepreneurship among Muslim Gen-Z in Indonesia: Islamic financial literacy, self-efficacy, and ethical habitus among Muslim Gen-Z entrepreneurs in Palopo. *Jurnal Indo-Islamika, 15*(2), 418–432.

Kementerian Agama RI. (2019). *Al-Qur'an dan terjemahannya* [The Qur'an and its translation] (2019 refined ed.). Lajnah Pentashihan Mushaf Al-Qur'an.

Khoiriyah, E. Z., & Ridlwan, A. A. (2025). Religiosity and Islamic entrepreneurial intention: The mediating role of Islamic entrepreneurial motivation in Muslim students. *Review of Islamic Economics and Finance, 8*(1), 73–90. https://doi.org/10.17509/rief.v8i1.78868

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Kock, N., & Hadaya, P. (2018). Minimum sample size estimation in PLS-SEM: The inverse square root and gamma-exponential methods. *Information Systems Journal, 28*(1), 227–261. https://doi.org/10.1111/isj.12131

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice-Hall.

Kurnia, R., Chyntia, C., Qomariyah, S., Salsabila, S., & Tresnawati, E. (2026). Implementasi career readiness approach untuk meningkatkan kompetensi lulusan program kejuruan tataboga di SMK Negeri 3 Kota Sukabumi [Implementing a career readiness approach to improve the competence of culinary program graduates at SMK Negeri 3 Sukabumi]. *RIGGS: Journal of Artificial Intelligence and Digital Business, 4*(4), 13491–13497. https://doi.org/10.31004/riggs.v4i4.5709

Lestari, I., Haratua, C. S., & Syahid. (2025). Pengaruh kreativitas dan kemandirian terhadap minat berwirausaha (Survey pada siswa SMK swasta di Jakarta Timur) [The effect of creativity and independence on entrepreneurial interest: A survey of private vocational students in East Jakarta]. *Herodotus: Jurnal Pendidikan IPS, 8*(3), 337–346. https://doi.org/10.30998/herodotus.v8i3.28367

Lu, I. R. R., Kwan, E., Heslop, L. A., Brouard, F., & Isabelle, D. A. (2023). Entrepreneurial motivation in university business students: A latent profile analysis based on self-determination theory. *Entrepreneurship Research Journal, 13*(2), 345–380. https://doi.org/10.1515/erj-2020-0449

Mahfud, T., Kusuma, B. J., Channa, K., & Dang, V. H. (2025). Entrepreneurship education impact on entrepreneurial intention: Theory of planned behaviour approach. *Journal of Education and Learning (EduLearn), 19*(4), 2097–2106. https://doi.org/10.11591/edulearn.v19i4.21247

Martínez-Martínez, S. L., Ventura, R., & Santos Jaén, J. M. (2025). Creativity vs grit: Key competences to understand entrepreneurial intention. *The International Journal of Management Education, 23*(2), 101143. https://doi.org/10.1016/j.ijme.2025.101143

McClelland, D. C. (1961). *The achieving society*. D. Van Nostrand.

Ministry of Education and Culture. (2014). *Peraturan Menteri Pendidikan dan Kebudayaan Nomor 62 Tahun 2014 tentang kegiatan ekstrakurikuler pada pendidikan dasar dan pendidikan menengah* [Regulation of the Minister of Education and Culture No. 62 of 2014 on extracurricular activities in primary and secondary education].

Mujahidin, Rahmadani, N., & Putri, Q. A. R. (2024). Analysis of the influence of religiosity values in reducing consumptive behavior in Indonesian Muslim consumers. *Amwaluna: Jurnal Ekonomi dan Keuangan Syariah, 8*(2), 253–274.

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Mustabsyiroh, N., Sumarsono, R. B., Imron, A., & Juharyanto. (2023). Peningkatan kualitas madrasah yang berfokus pada penguatan program vokasi [Improving madrasah quality with a focus on strengthening vocational programs]. *JAMP: Jurnal Administrasi dan Manajemen Pendidikan, 6*(3), 228–246. https://doi.org/10.17977/um027v6i32023p228

Mutaqin, M. T. I., & Khadavi, M. J. (2026). Integrasi pembelajaran pesantren dalam membentuk santri interpreneurship [Integrating Islamic boarding school learning in shaping entrepreneurial students]. *Paedagogie, 21*(1), 879–892. https://doi.org/10.31603/paedagogie.v21i1.16126

Nabilah, H., Pangesthi, L. T., Purwidiani, N., & Lukitasari, F. (2026). Faktor-faktor yang mempengaruhi minat berwirausaha pada siswa SMK (Studi kasus di SMK Negeri 1 Pogalan Trenggalek) [Factors affecting entrepreneurial interest among vocational students: A case study at SMK Negeri 1 Pogalan Trenggalek]. *Pendas: Jurnal Ilmiah Pendidikan Dasar, 11*(3), 220–235. https://journal.unpas.ac.id/index.php/pendas/article/view/58437

Nasichah, C., & Umam, K. (2026). Implementasi kurikulum madrasah aliyah plus keterampilan dalam upaya pengembangan hard skills siswa di MAN 5 Jombang [Implementing the madrasah aliyah plus skills curriculum to develop students' hard skills at MAN 5 Jombang]. *Pendas: Jurnal Ilmiah Pendidikan Dasar, 11*(2), 311–322. https://journal.unpas.ac.id/index.php/pendas/article/view/50686

Nitzl, C., Roldán, J. L., & Cepeda-Carrión, G. (2016). Mediation analysis in partial least squares path modeling: Helping researchers discuss more sophisticated models. *Industrial Management & Data Systems, 116*(9), 1849–1864. https://doi.org/10.1108/IMDS-07-2015-0302

Octaviani, A., Yohana, C., & Pratama, A. (2023). Pengaruh kecenderungan mengambil risiko, kebutuhan akan prestasi dan efikasi diri terhadap intensi berwirausaha mahasiswa di Jabodetabek [The effect of risk-taking propensity, need for achievement, and self-efficacy on entrepreneurial intention of university students in Jabodetabek]. *Jurnal Bisnis, Manajemen, dan Keuangan, 4*(1), 160–176. https://doi.org/10.21009/jbmk.0401.12

Republic of Indonesia. (1995). *Instruksi Presiden Nomor 4 Tahun 1995 tentang gerakan nasional memasyarakatkan dan membudayakan kewirausahaan* [Presidential Instruction No. 4 of 1995 on the national movement to promote and cultivate entrepreneurship]. https://peraturan.go.id/id/inpres-no-4-tahun-1995

Republic of Indonesia. (2005). *Undang-Undang Nomor 14 Tahun 2005 tentang guru dan dosen* [Law No. 14 of 2005 on teachers and lecturers].

Republic of Indonesia. (2014). *Undang-Undang Nomor 33 Tahun 2014 tentang jaminan produk halal* [Law No. 33 of 2014 on halal product assurance].

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Revilla, M. A., Saris, W. E., & Krosnick, J. A. (2014). Choosing the number of categories in agree–disagree scales. *Sociological Methods & Research, 43*(1), 73–97. https://doi.org/10.1177/0049124113509605

Revinzky, M. A., Ihsan, M. C., Rejito, C., Hasan, Z. I., & Akbar, A. (2025). Entrepreneurship education and academic support: Understanding their impact on entrepreneurial motivation and interest. *IJOBER, 3*(1), 14–26. https://doi.org/10.62794/ijober.v3i1.6656

Rosniawati, D., & Yunizar. (2025). Modeling entrepreneurial intentions among vocational high school students: The roles of education, family, and school support. *Journal of Educational Management and Instruction, 5*(1), 100–116. https://doi.org/10.22515/jemin.v5i1.11152

Roxymawati, A. A., Indriayu, M., & Wardani, D. K. (2026). Pengaruh praktik kerja industri dan fasilitas belajar terhadap kesiapan kerja peserta didik di SMK Kabupaten Sukoharjo [The effect of industrial work practice and learning facilities on students' work readiness at vocational schools in Sukoharjo Regency]. *Jurnal Pendidikan Ekonomi (JURKAMI), 11*(1). https://doi.org/10.31932/jpe.v11i1.5782

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68–78. https://doi.org/10.1037/0003-066X.55.1.68

Saputra, H., Rahayu, V. P., Permatasari, I., & Ruspian. (2026). Pembelajaran kewirausahaan untuk menumbuhkan jiwa berwirausaha siswa SMK Negeri 19 Samarinda [Entrepreneurship learning to foster the entrepreneurial spirit of students at SMK Negeri 19 Samarinda]. *Jurnal Pendidikan Ekonomi (JUPE), 14*(3), 273–285. https://doi.org/10.26740/jupe.v14n3.p273-285

Saputra, R. D., Fasiha, & Mujahidin. (2026). Pemberdayaan ekonomi mustahik melalui pendayagunaan zakat pada program BAZNAS di Kota Palopo [Economic empowerment of zakat recipients through zakat utilization in the BAZNAS program in Palopo]. *Journal of Management Accounting, Tax and Production (MANTAP), 4*(2), 315–318. https://doi.org/10.57235/mantap.v4i2.9170

Schomburg, H. (2016). *Carrying out tracer studies: Guide to anticipating and matching skills and jobs* (Vol. 6). ETF, Cedefop, & ILO.

Schumpeter, J. A. (1934). *The theory of economic development* (R. Opie, Trans.). Harvard University Press.

Sebayang, K. D. A., Wibowo, A., Shafiai, M. H. M., & Kardoyo, K. (2023). Entrepreneurship education and students entrepreneurial intention: Does teacher creativity really matter? *JPBM (Jurnal Pendidikan Bisnis dan Manajemen), 9*(1), 61–71. https://doi.org/10.17977/um003v9i12023p061

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Setyobudi, A. (2025). Comparing PJBL and PJBL-STEM models in enhancing students' creativity in continental cuisine processing at the vocational education level. *Pedagogia: Jurnal Ilmu Pendidikan, 23*(2), 257–268. https://doi.org/10.17509/pdgia.v23i2.80716

Steenkamp, A., Meyer, N., & Bevan-Dye, A. L. (2024). Self-esteem, need for achievement, risk-taking propensity and consequent entrepreneurial intentions. *Southern African Journal of Entrepreneurship and Small Business Management, 16*(1). https://doi.org/10.4102/sajesbm.v16i1.753

Streukens, S., & Leroi-Werelds, S. (2016). Bootstrapping and PLS-SEM: A step-by-step guide to get more out of your bootstrap results. *European Management Journal, 34*(6), 618–632. https://doi.org/10.1016/j.emj.2016.06.003

Surya, A. D., Armiati, & Hidayat, M. T. (2026). The role of opportunity recognition in mediating the effects of self-efficacy and teacher support on junior high school students' entrepreneurial intentions. *Jurnal Pemberdayaan Masyarakat, 5*(2). https://garuda.kemdiktisaintek.go.id/documents/detail/6253058

Susiani, I., Soeryanto, S., Buditjahjanto, I. G. P. A., & Anifah, L. (2024). The influence of learning motivation and student creativity on entrepreneurial interest in teaching factory. *Jurnal Kependidikan: Penelitian Inovasi Pembelajaran, 8*(1), 83–95. https://doi.org/10.21831/jk.v8i1.71880

Tumbelaka, W. S., & Wijaya, A. (2025). Pendidikan kewirausahaan dan efikasi diri terhadap minat berwirausaha: Motivasi sebagai variabel mediasi [Entrepreneurship education and self-efficacy on entrepreneurial interest: Motivation as a mediating variable]. *Jurnal Manajerial dan Kewirausahaan, 7*(1), 301–309. https://doi.org/10.24912/jmk.v7i1.33008

Zhang, H., & Chen, H. (2024). Entrepreneurship education and entrepreneurial intention among tourism and hotel management students: The mediating role of entrepreneurial self-efficacy and the moderating role of grit. *SAGE Open, 14*. https://doi.org/10.1177/21582440241249119

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