

## EFFECTIVENESS OF THE INDEPENDENT ENTREPRENEURSHIP PROGRAM ON IMPROVING STUDENTS' MINDSET, SOFT SKILLS, AND HARD SKILLS

Ulil Amri<sup>1\*</sup>, Jasri<sup>2</sup>, Roslinda<sup>3</sup>, Rafiqa Hatharita<sup>4</sup>

<sup>1,2,3</sup> Universitas Muhammadiyah Makassar, Indonesia

email: [ulilamri@unismuh.ac.id](mailto:ulilamri@unismuh.ac.id)<sup>1</sup>, [jasri@unismuh.ac.id](mailto:jasri@unismuh.ac.id)<sup>2</sup>, [roslinda22@gmail.com](mailto:roslinda22@gmail.com)<sup>3</sup>,

[rafiqa.hastharita@unm.ac.id](mailto:rafiqa.hastharita@unm.ac.id)<sup>4</sup>

Received April 13, 2026; Received in revised form April 16, 2026; Accepted April 17, 2026

### ABSTRACT

The implementation of entrepreneurship programs in higher education is increasingly important as universities are expected to produce graduates who are not only academically competent but also adaptive, innovative, and capable of creating business opportunities. However, the effectiveness of the Independent Entrepreneurship Program in improving students' entrepreneurial competencies has not been widely evaluated at the institutional level. This study aimed to examine the effectiveness of the Independent Entrepreneurship Program in improving students' entrepreneurial mindset, soft skills, and hard skills at Universitas Muhammadiyah Makassar. A quantitative approach was employed using linear regression analysis involving 90 students who participated in the program. The results showed that the Independent Entrepreneurship Program had a significant effect on entrepreneurial mindset (regression coefficient = 0.669;  $p = 0.000$ ), soft skills (regression coefficient = 0.632;  $p = 0.000$ ), and hard skills (regression coefficient = 0.770;  $p = 0.000$ ). These findings indicate that students' direct involvement in entrepreneurial activities contributes positively to the development of entrepreneurial attitudes, interpersonal and managerial abilities, and technical business skills. This study contributes to the literature on entrepreneurship education by providing empirical evidence that experiential learning-based entrepreneurship programs can strengthen multidimensional entrepreneurial competence in higher education. Practically, the findings offer recommendations for universities to improve the design and implementation of entrepreneurship programs that are more relevant to students' future career and business challenges.

**Keywords:** entrepreneurship; hard skill; independent entrepreneurs; mindset; soft skills

### ABSTRAK

Pelaksanaan program kewirausahaan di perguruan tinggi menjadi semakin penting karena perguruan tinggi dituntut menghasilkan lulusan yang tidak hanya unggul secara akademik, tetapi juga adaptif, inovatif, dan mampu menciptakan peluang usaha. Namun demikian, efektivitas Program Wirausaha Merdeka dalam meningkatkan kompetensi kewirausahaan mahasiswa masih belum banyak dievaluasi pada tingkat institusi. Penelitian ini bertujuan untuk menganalisis efektivitas Program Wirausaha Merdeka dalam meningkatkan entrepreneurial mindset, soft skills, dan hard skills mahasiswa Universitas Muhammadiyah Makassar. Penelitian ini menggunakan pendekatan kuantitatif dengan analisis regresi linier terhadap 90 mahasiswa peserta program. Hasil penelitian menunjukkan bahwa Program Wirausaha Merdeka berpengaruh signifikan terhadap entrepreneurial mindset (koefisien regresi = 0,669;  $p = 0,000$ ), soft skills (koefisien regresi = 0,632;  $p = 0,000$ ), dan hard skills (koefisien regresi = 0,770;  $p = 0,000$ ). Temuan ini menunjukkan bahwa keterlibatan langsung mahasiswa dalam aktivitas kewirausahaan berkontribusi positif terhadap pengembangan pola pikir kewirausahaan, kemampuan interpersonal dan manajerial, serta keterampilan teknis bisnis. Penelitian ini berkontribusi pada pengembangan kajian pendidikan kewirausahaan dengan menghadirkan bukti empiris bahwa program kewirausahaan berbasis experiential learning mampu memperkuat kompetensi kewirausahaan multidimensi di perguruan tinggi. Secara praktis, hasil penelitian ini dapat



*menjadi dasar bagi perguruan tinggi dalam menyempurnakan desain dan implementasi program kewirausahaan yang lebih relevan dengan tantangan karier dan dunia usaha masa depan.*

**Kata Kunci:** *hard skill; kewirausahaan; mindset; soft skill; wirausaha merdeka*

## INTRODUCTION

Entrepreneurship education has become one of the strategic priorities in higher education because universities are increasingly expected to produce graduates who are not only strong in theoretical knowledge, but also adaptive, innovative, and capable of creating economic opportunities in uncertain and competitive environments. In this context, entrepreneurship education is no longer viewed merely as an additional course, but as an important pedagogical mechanism for shaping entrepreneurial mindset, career readiness, and long-term employability (Rakhimova et al., 2025; Rodrigues, 2023; Rodriguez & Lieber, 2020; Shrivastav & Rao, 2025). Studies from different settings also show that entrepreneurship education is associated with stronger entrepreneurial intention, more positive opportunity recognition, and greater readiness to act in dynamic labor markets (Cui & Gu, 2024; Nayak et al., 2024; Oulhou & Ibourk, 2023).

A central issue in the current literature is that the effectiveness of entrepreneurship education depends not only on curriculum content, but also on the pedagogical model used to engage students. Research increasingly indicates that experiential, reflective, challenge-based, and active learning approaches are more effective than purely lecture-based approaches for nurturing entrepreneurial development (Cui et al., 2021; Kozlinska et al., 2023; Mawson et al., 2023; Tan et al., 2024). This tendency is reinforced by more recent studies showing that entrepreneurship programs become more meaningful when they incorporate digital tools, reflective practice, authentic assessment, or structured innovation-oriented tasks that move students from passive learning to entrepreneurial action (Ahmed et al., 2025; Hmama, 2025; Rahmi et al., 2025; Yousefi et al., 2026).

Within higher education systems, entrepreneurship programs are also expected to strengthen multidimensional student competence. Existing evidence suggests that such programs can contribute to entrepreneurial mindset, behavioral intention, self-efficacy, creativity, opportunity alertness, and broader competence development across disciplinary backgrounds (Beregal-Mirabent et al., 2024; Cui & Bell, 2022; Jung & Lee, 2020; Lee & Jung, 2021; Pratomo & Wardani, 2021). This is particularly relevant for contemporary universities, where entrepreneurship education is increasingly being integrated beyond business schools into engineering, STEM, and interdisciplinary learning environments (Beregal-Mirabent et al., 2024; Mapanga & Faleni, 2025; Paiva et al., 2024). Such evidence confirms that entrepreneurship education is not only about fostering start-up creation, but also about building entrepreneurial competence as a transferable graduate capability.

In the Indonesian context, the Merdeka Belajar–Kampus Merdeka policy encourages universities to adopt more flexible and practice-oriented learning models. One important initiative under this policy is the Independent Entrepreneurship Program (Wirausaha Merdeka), which is designed to provide students with direct entrepreneurial exposure through training, mentoring, business incubation, and practical business engagement. The logic behind this program is consistent with current international evidence showing that work placements, technology-enabled learning, coaching, mentorship, and practice-based course design can strengthen students' aspirations, competence, and entrepreneurial readiness (Botha & Amaral, 2025; Keoy et al., 2023; Reesha et al., 2026; Wijaya et al., 2025). Thus, the program has strong conceptual relevance as an experiential learning model within higher education.

Despite that relevance, an important academic and practical question remains: to what extent is the Independent Entrepreneurship Program actually effective in improving students' entrepreneurial competencies? This question remains important because the literature also shows that program success cannot simply be assumed from program existence alone. Some studies report that entrepreneurship education improves mindset and behavioral orientation only when learning design, pedagogy, institutional climate, and student engagement are aligned (Ashari et al., 2022; Kozlinska et al., 2023; Ly-Baro et al., 2025). Other studies emphasize that course structure,



mentorship, gamification, design thinking, and reflective experiences can shape outcomes differently depending on how students participate in the learning process (Pratomo & Wardani, 2021; Reesha et al., 2026; Yousefi et al., 2026).

Several gaps in the literature justify the present study. First, many previous studies focus on entrepreneurial intention or entrepreneurial mindset, but fewer examine entrepreneurial mindset, soft skills, and hard skills simultaneously within one empirical model (Cui et al., 2021; Oulhou & Ibourk, 2023; Pasic et al., 2025). Second, while the international literature on entrepreneurship pedagogy is growing, institutional-level evidence from Indonesian universities is still limited, particularly for programs explicitly positioned under the Merdeka Belajar framework. Third, reviews and conceptual studies suggest that entrepreneurship education should be assessed more comprehensively through competence development rather than intention alone (Rakhimova et al., 2025; Rodrigues, 2023; Shrivastav & Rao, 2025). These gaps show the need for a more focused empirical evaluation of how an independent entrepreneurship program influences multiple dimensions of student entrepreneurial development. Based on these gaps, this study not only examines the effect of the program empirically, but also compares its findings with the main patterns identified in the state of the art discussed above.

## METHOD RESEARCH

This study employed a quantitative approach with an *ex post facto* correlational design to examine the effectiveness of the Independent Entrepreneurship Program in improving students' entrepreneurial competencies. The study focused on identifying the effect of participation in the Independent Entrepreneurship Program on three dependent variables, namely entrepreneurial mindset, soft skills, and hard skills. A quantitative design was selected because the study aimed to measure the magnitude and significance of the relationship between variables based on numerical data obtained from student responses. The research was conducted at Universitas Muhammadiyah Makassar, Indonesia, involving students who participated in the Independent Entrepreneurship Program (Wirausaha Merdeka). Data collection was carried out during the implementation and post-participation evaluation period of the program in the 2024 academic year.

The population of this study consisted of 597 students of Universitas Muhammadiyah Makassar who participated in the Independent Entrepreneurship Program. From this population, 90 students were selected as the research sample using proportionate stratified random sampling. This technique was chosen to ensure that each subgroup of participants had proportional representation in the sample and to reduce sampling bias. The determination of the sample size considered the feasibility of data collection, proportional representation of the population, and the minimum requirements for regression-based statistical analysis. Thus, the sample was considered adequate to represent the characteristics of program participants and to support inferential analysis.

The material examined in this study covered four main variables. The independent variable was the Independent Entrepreneurship Program, operationally defined as students' participation in entrepreneurship learning activities provided through the Wirausaha Merdeka program. The dependent variables consisted of: (1) entrepreneurial mindset, referring to students' ways of thinking related to opportunity recognition, innovation, initiative, and willingness to face business risks; (2) soft skills, including business communication, teamwork, financial management, and business plan preparation; and (3) hard skills, including technical entrepreneurial abilities such as market analysis, digital marketing, production or operational management, and the use of business-supporting technology.

Data were collected using a structured questionnaire distributed online through Google Forms. The questionnaire employed a Likert scale with five response categories ranging from strongly disagree to strongly agree. Each variable was translated into several measurable indicators based on the conceptual framework of entrepreneurship education and the objectives of the Independent Entrepreneurship Program. The entrepreneurial mindset instrument included indicators such as innovation, self-confidence, initiative, and risk-taking orientation. The soft skills instrument covered communication skills, collaboration, financial management, and business planning. Meanwhile, the hard skills instrument included indicators related to technical business



competence, especially those associated with operational practices and the use of digital tools in entrepreneurship.

Before the questionnaire was administered to the research sample, the instrument was subjected to validity and reliability testing through an initial trial. Validity testing was conducted to determine whether each questionnaire item appropriately measured the intended construct, while reliability testing was carried out to assess the internal consistency of the instrument. The statistical testing of the instrument was performed using SPSS version 29. Only valid and reliable items were retained and used in the final data collection process. This procedure was necessary to ensure that the data generated from the instrument were accurate, consistent, and suitable for further statistical analysis.

The data collection procedure was carried out in several stages. First, the researcher identified students who had participated in the Independent Entrepreneurship Program. Second, the questionnaire instrument was developed based on the study variables and indicators. Third, the instrument was tested for validity and reliability. Fourth, the validated questionnaire was distributed to the selected respondents through an online platform. Fifth, the completed responses were compiled, coded, and prepared for statistical analysis. These stages were designed to ensure that the research process was systematic and that the data obtained were relevant to the objectives of the study.

Data analysis was conducted using descriptive and inferential statistics with the help of SPSS version 29. Descriptive statistics were used to describe the general tendency of respondents' answers for each variable. Inferential analysis was then performed using simple linear regression to test the effect of the Independent Entrepreneurship Program on each dependent variable: entrepreneurial mindset, soft skills, and hard skills. Regression analysis was selected because the study aimed to determine whether the program significantly influenced each dimension of students' entrepreneurial competence.

Prior to hypothesis testing, classical assumption tests were performed to ensure the suitability of the regression model. These included tests of normality, heteroscedasticity, autocorrelation, and multicollinearity. The purpose of these tests was to confirm that the data met the assumptions required for regression analysis and that the estimated model produced valid statistical conclusions. The results of the regression analysis were interpreted based on the regression coefficients, t-test values, F-test values, and significance levels. Through these procedures, the study was able to evaluate the effectiveness of the Independent Entrepreneurship Program in improving students' entrepreneurial mindset, soft skills, and hard skills in a measurable and systematic way.

## **RESULTS AND DISCUSSION**

This section presents the findings on the effect of the Independent Entrepreneurship Program on three main dimensions of students' entrepreneurial competence, namely entrepreneurial mindset, soft skills, and hard skills. The analysis was conducted using simple linear regression to examine whether participation in the program significantly influenced each dependent variable. In presenting the findings, the results are not merely described statistically, but are also interpreted substantively to explain what the numbers mean in the context of entrepreneurship education at Universitas Muhammadiyah Makassar.

### *Effect of the Independent Entrepreneurship Program on Entrepreneurial Mindset*

Based on Table 1 and Table 2, the regression analysis shows that the Independent Entrepreneurship Program has a significant effect on students' entrepreneurial mindset. The regression coefficient for the program variable is 0.669 with a significance value of 0.000, indicating a positive and statistically significant relationship. In addition, the F-value of 35.884 confirms that the regression model is feasible for explaining the relationship between the program and entrepreneurial mindset.



Table 1. Regression Results of the Independent Entrepreneurship Program on Entrepreneurial Mindset

Variable	B	Std. Error	Beta	t	Sig.
Constant	6.939	2.381	-	2.914	0.006
Independent Entrepreneurship Program	0.669	0.112	0.707	5.990	0.000

Table 2. ANOVA Summary

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	161.686	1	161.686	35.884	0.000
Residual	162.209	89	4.506	-	-
Total	323.895	90	-	-	-

Based on the Table 1 and Table 2, the findings indicate that greater student involvement in the Independent Entrepreneurship Program tends to be followed by a stronger entrepreneurial mindset. In substantive terms, this means that the program does not only function as an academic activity, but also as a learning space that encourages students to think more proactively, creatively, and courageously in identifying and responding to business opportunities. The positive coefficient suggests that the program contributes to shaping students' perspectives toward entrepreneurship as something achievable and worth pursuing.

This result can be logically explained through the experiential nature of the program. Students who participate in real or practice-based entrepreneurial activities are more likely to face authentic challenges, uncertainty, and decision-making situations. Such experiences train them to move from passive learners to active problem-solvers. In this process, entrepreneurial mindset develops because students are not only told what entrepreneurship is, but they directly experience how ideas are tested, how risks are managed, and how opportunities are created. In this study, that tendency can be seen in the significant positive coefficient for entrepreneurial mindset, which indicates that participation in the program is followed by a stronger entrepreneurial orientation among students.

This finding is in line with Cui et al. (2021), who showed that entrepreneurship education can shape students' entrepreneurial mindset, and with Rodriguez & Lieber (2020), who emphasized the relationship between entrepreneurship education, entrepreneurial mindset, and career readiness. It is also consistent with more recent work suggesting that entrepreneurial mindset grows more strongly when students encounter reflective and action-oriented learning conditions Rahmi et al. (2025). In the context of this study, the Independent Entrepreneurship Program appears to create such a condition by placing students in practical business situations. Therefore, the finding strengthens the view that mindset development is not produced only by conceptual instruction, but by repeated exposure to entrepreneurial action.

#### *Effect of the Independent Entrepreneurship Program on Soft Skills*

Based on Table 3, the regression results show that the Independent Entrepreneurship Program also has a significant effect on students' soft skills. The regression coefficient is 0.632 with a significance value of 0.000, indicating that participation in the program positively contributes to the improvement of students' soft skills. The F-value of 28.598 further confirms that the model is statistically significant.



Table 3. Regression Results of the Independent Entrepreneurship Program on Soft Skills

Variable	B	Std. Error	Beta	t	Sig.
Constant	5.997	2.522	-	2.378	0.023
Independent Entrepreneurship Program	0.632	0.118	0.665	5.348	0.000

Table 4. ANOVA Summary

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	144.567	1	144.567	28.598	0.000
Residual	181.986	89	5.055	-	-
Total	326.553	90	-	-	-

Based Table 3 and Table 4. the result means that the program plays a meaningful role in improving interpersonal and managerial capacities such as communication, teamwork, financial management, and business planning. This is important because success in entrepreneurship is not determined only by technical knowledge, but also by one's ability to collaborate, negotiate, communicate ideas, and manage responsibilities effectively. The positive coefficient indicates that students who are more engaged in program activities tend to report better soft skill development.

A logical explanation for this finding lies in the collaborative and project-based nature of the Independent Entrepreneurship Program. During the program, students are not working in isolation. They are typically required to interact with mentors, peers, and business environments, which naturally pushes them to develop communication skills, responsibility, adaptability, and teamwork. When students prepare business plans, discuss market strategies, and divide roles in entrepreneurial projects, they are simultaneously practicing soft skills that are essential for business success. Thus, the improvement in soft skills is not incidental, but a direct consequence of how the program is designed and implemented.

This finding is in line with Harianti et al. (2020), who argued that entrepreneurship education contributes to competence and motivation development among students. It also supports the view of Almeida & Devedzic (2022), who highlighted the relevance of soft skills for entrepreneurial performance, and Fioravanti et al. (2022), who showed that active and simulation-based learning can foster communication and negotiation skills. In this sense, the present study confirms that entrepreneurship programs in higher education do not merely transfer knowledge, but also shape the social and managerial capacities that students need in real-world business settings.

The key finding in this part is that the Independent Entrepreneurship Program significantly strengthens students' soft skills as an important component of entrepreneurial competence. Its practical advantage is that it prepares students not only to launch ideas but also to communicate and execute them effectively with others. Nevertheless, this study has not yet separated which specific soft skill dimension improved the most, whether communication, teamwork, leadership, or financial management. This becomes an important point for future research.

#### *Effect of the Independent Entrepreneurship Program on Hard Skills*

Based on Table 5. the regression analysis indicates that the Independent Entrepreneurship Program has a significant effect on students' hard skills. The regression coefficient is 0.770 with a significance value of 0.000, while the F-value of 28.006 confirms the significance of the regression model. These results show that participation in the program has a strong positive relationship with the development of students' technical entrepreneurial skills.



Table 5. Regression Results of the Independent Entrepreneurship Program on Hard Skills

Variable	B	Std. Error	Beta	t	Sig.
Constant	2.611	3.105	-	0.841	0.406
Independent Entrepreneurship Program	0.770	0.146	0.661	5.292	0.000

Table 6. ANOVA Summary

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	214.550	1	214.550	28.006	0.000
Residual	275.792	89	7.661	-	-
Total	490.342	90	-	-	-

Based on Table 5 and Table 6, the meaning of this result is that the program contributes substantially to the strengthening of technical entrepreneurial abilities, such as market analysis, digital marketing, operational planning, and the use of technology in business activities. Among the three dimensions examined, the coefficient for hard skills is the highest, which may indicate that the program is particularly effective in providing practice-based technical competence. In other words, students seem to gain the strongest benefit from the concrete, operational, and hands-on aspects of the program.

This finding is understandable because the Independent Entrepreneurship Program exposes students to practical tasks that require technical execution rather than theoretical understanding alone. When students are involved in creating products, promoting them digitally, analyzing markets, or managing operational processes, they build technical competence through direct application. Compared with conventional entrepreneurship lectures, this model offers a richer opportunity for students to learn by doing. As a result, hard skills improve because students repeatedly engage in technical business processes in ways that are relevant to actual entrepreneurial practice.

This result supports the argument made by Jasri et al. (2022) regarding the importance of digital and practical business competence in today's entrepreneurial environment. It is also consistent with Xu (2024), who found that experiential learning-based entrepreneurship education has a stronger impact on technical skill development than traditional theory-oriented approaches. The present study adds empirical support from the context of Universitas Muhammadiyah Makassar and indicates that students benefit substantially from direct technical engagement in entrepreneurial activities.

The main finding in this dimension is that the Independent Entrepreneurship Program is particularly strong in strengthening students' practical entrepreneurial skills. This is a major advantage because technical competence is one of the most visible outcomes needed for business readiness. However, the study does not yet differentiate whether students' hard skills improved more in digital marketing, operational management, or business analysis, which limits the depth of interpretation. Even so, the result clearly shows that the program has a strong contribution to students' technical preparedness.

#### *General Discussion and Implications of the Findings*

Overall, the results show that the Independent Entrepreneurship Program contributes positively to the development of students' entrepreneurial mindset, soft skills, and hard skills. This means that the program does not only influence one aspect of student competence, but works across several important dimensions at once. For entrepreneurship education, this is an important point. Entrepreneurial competence is not formed only through knowledge transfer. It develops when students learn how to think entrepreneurially, interact effectively with others, and carry out technical business tasks in real situations.



If the three findings are read together, a clearer picture emerges. The program seems to work because it combines experience, collaboration, and technical execution in one learning process. Students are not merely introduced to entrepreneurship through lectures. They are asked to think, act, interact, test ideas, and adjust to challenges. This combination is likely what makes the program effective across several dimensions at once. The findings therefore support experiential learning perspectives reported in previous studies on entrepreneurship pedagogy and competence development (Kozlinska et al., 2023; Rahmi et al., 2025; Tan et al., 2024). More specifically, the present study is in line with Cui et al. (2021), Oulhou & Ibourk (2023) and Rodrigues (2023), which all indicate that entrepreneurship education can strengthen important dimensions of entrepreneurial development. However, this study also extends those findings by showing that, in this program context, the strongest effect appears in hard skills, followed by entrepreneurial mindset and soft skills. This means that the contribution of the program is not distributed evenly across all competence domains. Instead, it appears to be strongest in the practical and operational aspects of student development. That pattern is one of the main findings of this study.

This difference across dimensions is meaningful. It suggests that the program is particularly effective in generating outcomes that are closely tied to direct practice. Students appear to benefit most from tasks that require visible performance, technical problem-solving, and operational engagement. Meanwhile, mindset and soft skills also improve, but these domains may require more gradual reinforcement over time because they are shaped not only by task repetition, but also by reflection, confidence-building, and sustained social interaction. Therefore, the findings of this study should be read not only as evidence of program effectiveness, but also as a picture of where the strongest developmental leverage of the program currently lies.

The study also contributes to the wider literature by showing that a university-based entrepreneurship program within the Merdeka Belajar framework can be assessed in multidimensional terms. This is relevant because recent literature increasingly encourages entrepreneurship education researchers to move beyond narrow intention-based measures and toward competence-based evaluation frameworks (Rakhimova et al., 2025; Shrivastav & Rao, 2025). In this respect, the present study strengthens the argument that entrepreneurial education outcomes should be evaluated across mindset, interpersonal capacity, and technical competence rather than through a single outcome indicator.

From a theoretical perspective, the findings reinforce the idea that experiential learning has multidimensional consequences. It does not only help students acquire knowledge; it also shapes how they interpret opportunities, respond to uncertainty, coordinate with others, and execute practical tasks. In that sense, the Independent Entrepreneurship Program reflects a learning process in which knowledge, action, and reflection interact with one another. This is why the effects appear across multiple variables rather than in only one dimension.

Practically, the findings imply that universities should design entrepreneurship programs as serious pedagogical interventions rather than supplementary activities. Programs are likely to become more effective when they include experiential tasks, coaching, reflective learning, digital tools, teamwork, and opportunities for authentic problem-solving. This implication is supported by previous work on work placements, reflective learning, interdisciplinary entrepreneurship education, and practice-based course design (Botha & Amaral, 2025; Mapanga & Faleni, 2025; Tan et al., 2024). For Universitas Muhammadiyah Makassar, the findings suggest that the Independent Entrepreneurship Program can continue to be strengthened by integrating mentoring quality, structured feedback, and digital-business exposure more systematically. In practical terms, the study contributes evidence that entrepreneurship programs at the university level can shape not only student interest, but also observable competence development across mindset, interpersonal capacity, and technical readiness.

The study also has several strengths that should be acknowledged. First, it evaluates the program through three dimensions of entrepreneurial competence, making the analysis more comprehensive than research that focuses only on intention or motivation. Second, it provides institutional evidence from Universitas Muhammadiyah Makassar, which is useful because evaluation of the Independent Entrepreneurship Program at the university level is still limited. Third,



the study uses quantitative testing to support its claims, so the conclusions are not based only on descriptive impressions of program success.

At the same time, several limitations remain. This study was conducted in one university only and used self-report questionnaire data, so the findings cannot yet explain in full detail how students experienced the learning process or why some students may have benefited more strongly than others. Self-reported improvement does not always fully capture actual performance in practice. In addition, the model does not include other factors that may shape entrepreneurial development, such as prior entrepreneurial exposure, family background, mentoring intensity, or duration of participation in the program.

These limitations open important directions for future research. Future studies may combine quantitative and qualitative approaches, examine mentoring quality, compare different program designs, and explore how entrepreneurship education affects students across diverse disciplines and gender contexts, as suggested in recent studies on interdisciplinary, women-focused, and non-business entrepreneurship education (Ahmed et al., 2025; Mapanga & Faleni, 2025; Paiva et al., 2024). With that broader approach, future work would be able to explain not only whether the program is effective, but also why certain dimensions become stronger than others and how the program can be improved more strategically.

## CONCLUSION AND SUGGESTIONS

This study concludes that the Independent Entrepreneurship Program has a significant positive effect on improving students' entrepreneurial competence at Universitas Muhammadiyah Makassar, particularly in strengthening entrepreneurial mindset, soft skills, and hard skills. The strongest effect was found in hard skills, followed by entrepreneurial mindset and soft skills, indicating that the program is highly relevant in preparing students for real business practice. Through experiential learning, mentoring, collaboration, and direct business engagement, the program helps students develop a proactive mindset, managerial and interpersonal abilities, and practical technical skills. Therefore, the program should be considered a strategic model in higher education for developing measurable and applicable entrepreneurial capacity, while also supporting the theoretical view that experiential learning is effective in entrepreneurship education.

However, this study is limited to one university and focuses only on three variables, so its findings cannot yet be generalized broadly to all institutional contexts. For this reason, future research is recommended to involve a wider range of universities, include additional variables such as entrepreneurial motivation, business resilience, and long-term business outcomes, and apply qualitative or mixed methods approaches to explore more deeply how and why entrepreneurship programs influence student development.

## ACKNOWLEDGEMENT

This research was supported by the Higher Education Research and Development Council (Diktilitbang) of PP Muhammadiyah and Muhammadiyah Makassar University. We would like to thank all those who have been involved in this research, especially Diktilitbang PP Muhammadiyah and the Institute for Research, Development, and Community Service (LP3M) Universitas Muhammadiyah Makassar for the opportunity given in carrying out this research.

## REFERENCE

Ahmed, F., Lo, Y. T., & Chen, S. (2025). Developing Entrepreneurial Mindset Among Non-Business Majors Through Experiential Learning and AI Tools. *Proceedings of the European Conference on Knowledge Management, ECKM*, 1, 1–7. <https://doi.org/10.34190/eckm.26.1.3762>



- Almeida, F., & Devedzic, V. (2022). The Relevance of Soft Skills for Entrepreneurs. *Journal of East European Management Studies*, 27(1), 157–172. <https://doi.org/10.5771/0949-6181-2022-1-157>
- Ashari, H., Abbas, I., Abdul-talib, A.-N., & Mohd Zamani, S. N. (2022). Entrepreneurship and Sustainable Development Goals: A Multigroup Analysis of the Moderating Effects of Entrepreneurship Education on Entrepreneurial Intention. *Sustainability (Switzerland)*, 14(1). <https://doi.org/10.3390/su14010431>
- Berbegal-Mirabent, J., Gil-Doménech, D., & Manresa, A. (2024). Boosting entrepreneurial competences beyond business and management-related disciplines. The case of engineering programs. *Education and Training*, 66(1), 107–126. <https://doi.org/10.1108/ET-11-2022-0439>
- Botha, C., & Amaral, D. T. (2025). Integrating work placements into entrepreneurial education: A student perspective. *Southern African Journal of Entrepreneurship and Small Business Management*, 17(1), 1–11. <https://doi.org/10.4102/sajesbm.v17i1.1021>
- Cui, J., & Bell, R. (2022). Behavioural entrepreneurial mindset: How entrepreneurial education activity impacts entrepreneurial intention and behaviour. *International Journal of Management Education*, 20(2). <https://doi.org/10.1016/j.ijme.2022.100639>
- Cui, J., & Gu, L. (2024). The effect of entrepreneurial education on career choice intentions of college students: a social cognitive career theory approach. *Education and Training*, 66(8), 1031–1054. <https://doi.org/10.1108/ET-01-2024-0036>
- Cui, J., Sun, J., & Bell, R. (2021). The impact of entrepreneurship education on the entrepreneurial mindset of college students in China: The mediating role of inspiration and the role of educational attributes. *The International Journal of Management Education*, 19(1), 100296. <https://doi.org/10.1016/j.ijme.2019.04.001>
- Fioravanti, M. L., De Oliveira Sestito, C. D., De Deus, W. S., Scatalon, L. P., & Barbosa, E. F. (2022). Role-Playing Games for Fostering Communication and Negotiation Skills. *IEEE Transactions on Education*, 65(3), 384–393. <https://doi.org/10.1109/TE.2021.3117898>
- Harianti, A., Malinda, M., Nur, N., Suwarno, H. L., Margaretha, Y., & Kambuno, D. (2020). Peran Pendidikan Kewirausahaan Dalam Meningkatkan Motivasi, Kompetensi Dan Menumbuhkan Minat Mahasiswa. *Jurnal Bisnis Dan Kewirausahaan*, 16(3), 214–220. <https://doi.org/10.31940/jbk.v16i3.2194>
- Hmama, Z. (2025). Assessment as pedagogy: empowering entrepreneurial skill development through a multi-assessment model. *Entrepreneurship Education*, 8(4), 461–495. <https://doi.org/10.1007/s41959-025-00161-w>
- Jasri, Arfan, N., Hasanuddin, & Hasan, H. A. (2022). Penerapan Digital Marketing dalam Upaya Peningkatan Pendapatan Usaha Mirko Kecil dan Menengah. *Iltizam Journal of Shariah Economic Research*, 6(2), 212–224. <https://doi.org/10.30631/iltizam.v6i2.1452>
- Jung, E., & Lee, Y. (2020). College students' entrepreneurial mindset: Educational experiences override gender and major. *Sustainability (Switzerland)*, 12(19). <https://doi.org/10.3390/su12198272>
- Keoy, K. H., Thong, C. L., Cherukuri, A. K., Koh, Y. J., Chit, S. M., Lee, L., Genaro, J., & Kwek, C. L. (2023). An Investigation on the Impact of Technological Enablement on the Success of Entrepreneurial Adoption Among Higher Education Students: A Comparative Study. *Journal of Information and Knowledge Management*, 22(1). <https://doi.org/10.1142/S0219649222500605>
- Kozlinska, I., Rebmann, A., & Mets, T. (2023). Entrepreneurial competencies and employment status of business graduates: the role of experiential entrepreneurship pedagogy. *Journal of Small*

- Business and Entrepreneurship*, 35(5), 724–761.  
<https://doi.org/10.1080/08276331.2020.1821159>
- Lee, A., & Jung, E. (2021). The mediating role of entrepreneurial mindset between intolerance of uncertainty and career adaptability. *Sustainability (Switzerland)*, 13(13).  
<https://doi.org/10.3390/su13137099>
- Ly-Baro, F., York, J. M., & Ihasz, O. (2025). Seeking for effectiveness of sustainability entrepreneurial education programs: A multiple case analysis. *Journal of the International Council for Small Business*, 6(2), 297–310. <https://doi.org/10.1080/26437015.2024.2406918>
- Mapanga, A., & Faleni, N. (2025). Integrating entrepreneurship education into STEM curricula in global South higher education institutions. *Discover Education*, 4(1).  
<https://doi.org/10.1007/s44217-025-00798-8>
- Mawson, S., Casulli, L., & Simmons, E. L. (2023). A Competence Development Approach for Entrepreneurial Mindset in Entrepreneurship Education. *Entrepreneurship Education and Pedagogy*, 6(3), 481–501. <https://doi.org/10.1177/25151274221143146>
- Nayak, P. M., Gil, M. T., Joshi, H., & Sreedharan, V. R. (2024). Cultivating entrepreneurial spirits: unveiling the impact of education on entrepreneurial intentions among Asian students. *Cogent Business and Management*, 11(1). <https://doi.org/10.1080/23311975.2024.2354847>
- Oulhou, H., & Ibourk, A. (2023). Perceived effectiveness of entrepreneurship education, entrepreneurial mindset, entrepreneurial self-efficacy and entrepreneurial intention among Moroccan university students: A correlational study. *Social Sciences and Humanities Open*, 8(1).  
<https://doi.org/10.1016/j.ssaho.2023.100719>
- Paiva, T., Felgueira, T., Alves, C., Gomes, N., Salgado, S., & Salaberri, M. (2024). An education model to empower women in tech entrepreneurship. *Frontiers in Education*, 9.  
<https://doi.org/10.3389/educ.2024.1474584>
- Pasic, M., Jovanovski, B., Ferizbegovic, F., & Pasic, M. (2025). Machine learning analysis of the impact of entrepreneurial mindset dimensions on entrepreneurial intentions of students in EU member countries and an EU candidate country: comparative study. *Frontiers in Education*, 10.  
<https://doi.org/10.3389/educ.2025.1489724>
- Pratomo, L. C., & Wardani, D. K. (2021). The effectiveness of design thinking in improving student creativity skills and entrepreneurial alertness. *International Journal of Instruction*, 14(4), 695–712. <https://doi.org/10.29333/iji.2021.14440a>
- Rahmi, E., Darmansyah, D., Yulastri, A., & Handrianto, C. (2025). Bridging Entrepreneurship Education and Digital Transformation: A Novel Experiential Learning Model for Entrepreneurial Mindset Development. *International Journal of Learning, Teaching and Educational Research*, 24(4), 640–660. <https://doi.org/10.26803/ijlter.24.4.29>
- Rakhimova, Z., Topildiev, B. R., Nazarov, S. N., Kadirova, M. X., Sobirova, N. M., Rustamova, M. M., & Nusratova, K. C. (2025). Fostering Entrepreneurial Competencies in Higher Education: Trends, Challenges, Legal Issues and Impacts on Student Success. *Qubahan Academic Journal*, 5(3), 114–142. <https://doi.org/10.48161/qaj.v5n3a1712>
- Reesha, A., Moosa, D., Shina, A., Sinaau, A., Hassan, Z., & Solih, M. (2026). Course design, mentorship, skills, and students' entrepreneurial aspirations: evidence from Maldives HEIs. *Cogent Education*, 13(1). <https://doi.org/10.1080/2331186X.2026.2641366>
- Rodrigues, A. L. (2023). Entrepreneurship Education Pedagogical Approaches in Higher Education. *Education Sciences*, 13(9). <https://doi.org/10.3390/educsci13090940>
- Rodriguez, S., & Lieber, H. (2020). Relationship Between Entrepreneurship Education, Entrepreneurial Mindset, and Career Readiness in Secondary Students. *Journal of Experiential Education*, 43(3), 277–298. <https://doi.org/10.1177/1053825920919462>



- Shrivastav, S., & Rao, P. V. M. (2025). Defining, cultivating, and assessing entrepreneurial mindset in higher education: a systematic review and future research directions. *European Journal of Engineering Education*, 1–34. <https://doi.org/10.1080/03043797.2025.2490551>
- Tan, Y. Y., Tok, L., Lam, L., Lam, C., Koh, A., & Seng, E. (2024). Enhancing entrepreneurial competencies through experiential and reflective learning: a comparative study of the BETA module at Singapore polytechnic. *Entrepreneurship Education*, 7(4), 387–416. <https://doi.org/10.1007/s41959-024-00132-7>
- Wijaya, R., Mustakim, S. S., & Sutadji, E. (2025). The Impact of Business Coaching on the Entrepreneurial Competencies of Vocational Students in Higher Education. *Journal of Institutional Research South East Asia*, 23(2), 91–108. <https://www.scopus.com/pages/publications/105010775797?origin=resultlist>
- Xu, C. (2024). Construction and Implementation of Innovation and Entrepreneurship Education System in Higher Vocational Colleges in the New Era Based on VAR Modeling. *Applied Mathematics and Nonlinear Sciences*, 9(1). <https://doi.org/10.2478/amns-2024-0631>
- Yousefi, M., Zhang, J., Mullick, J., & Jiang, Z. (2026). Play to plan: Integrating gamification into the entrepreneurship curriculum to predict and enhance students' intentions. *Curriculum Journal*. <https://doi.org/10.1002/curj.70042>

