

EDUCATING FOR ENTERPRISE: HOW SCHOOLS FOSTER ENTREPRENEURIAL COMPETENCE

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ABSTRACT

Entrepreneurship education plays an important role in shaping entrepreneurial mindset and skills. This study reviews the literature to identify trends, learning methods, implementation challenges, and the role of digitalization in entrepreneurship education. The Systematic Literature Review (SLR) method was used by analyzing journals in the last 5–10 years. The results show that entrepreneurship education increases entrepreneurial interest, especially through increased self-efficacy. Experience-based methods, such as Value-Creation Pedagogy and Challenge-Based Learning, are more effective than conventional methods. However, challenges are still found in the curriculum, teacher competence, and ecosystem support. Digitalization through AI and e-learning has begun to be implemented, but its effectiveness still needs to be studied further. Further research is needed to evaluate the long-term impact of entrepreneurship education and the effectiveness of technology in learning.

Key words: Entrepreneurship Education; Entrepreneurial Interest; Learning Methods; Digitalization

INTRODUCTION

Entrepreneurship education has gained significant attention in academia and policy due to its role in fostering entrepreneurial mindsets and skills. It not only imparts theoretical knowledge but also shapes attitudes, behaviors, and entrepreneurial thinking (Raya Sulistyowati, 2021). In the face of global economic uncertainty and intense labor market competition, entrepreneurial skills are increasingly seen not just as an advantage but as a necessity for thriving in a dynamic economy (Tyra & Sarjono, 2020). The goal of entrepreneurship education is to cultivate creativity, innovation, and calculated risk-taking, enabling individuals to create jobs rather than merely seek employment (Hafid et al., 2025).

To enhance effectiveness, experiential learning approaches such as Value-Creation Pedagogy, Challenge-Based Learning, and Experiential Learning are increasingly favored over traditional theory-based methods, as they allow students to learn through real-world practice and develop problem-solving abilities (Lackéus, 2020). However, their implementation is hindered by inadequate curriculum design, insufficient teacher competence, and weak entrepreneurial ecosystem support within institutions (Iwu et al., 2021).

Widespread adoption of entrepreneurship education also faces systemic challenges. Many curricula remain oriented toward producing employees rather than entrepreneurs (Marliyah, 2024), resulting in graduates lacking essential business and financial literacy. Additionally, many educators lack firsthand business experience, limiting their capacity to deliver practical instruction (Guerrero et al., 2020).

Meanwhile, digitalization through e-learning, artificial intelligence (AI), and digital business simulations is creating new opportunities to expand access and improve learning, especially for students in remote areas (SECUNDO et al., 2021). Yet, empirical comparisons between digital and conventional methods remain scarce, highlighting a need for further research on technology integration in this field (Bell & Bell, 2023).

Based on this background, this literature review aims to identify key trends in entrepreneurship education research, learning methods used, implementation challenges, and the role of digitalization in entrepreneurship education. Through a systematic analysis of existing studies, this study also aims to find research gaps that can be used as a basis for further research in the field of entrepreneurship education.

METHODS

Contains This study uses the Systematic Literature Review (SLR) approach to analyze research that has been conducted in the field of entrepreneurship education. SLR is a method used to systematically identify, assess, and interpret existing research results, so that it can provide a comprehensive understanding of the development of a field of science.

In this review, literature sources are selected based on the following criteria:

Table 1. Literature Selection Criteria

Criteria	Description
1. Journal Source	Scientific journals indexed by Scopus and Sinta
2. Time Span	The last 5-10 years from the journal search date, namely March 1, 2025.
3. Relevance	The main topics are 1) the influence of entrepreneurship education on entrepreneurial interest, 2) entrepreneurship learning methods, 3) implementation challenges, and 4) digitalization in entrepreneurship education.

This review was conducted in several stages, namely:

Table 2. Literature Analysis Procedure

Phase	Step	Description
Identification	Step 1: Data Collection	Collecting journals from Scopus and Sinta databases using keywords such as "entrepreneurship education", "entrepreneurial intention", "entrepreneurial learning methods", and "digital entrepreneurship education".
	Step 2: Initial Selection	Conduct initial selection based on title, year of publication, and abstract to ensure suitability with research objectives.
Selection	Step 3: Initial Content Analysis	Read the entire contents of articles that pass the initial selection to evaluate the suitability of the topic, main findings, and research contributions to the field of entrepreneurship education.
	Step 4: Literature Screening	Exclude articles that do not match the topic with the research focus so that the analysis remains relevant and focused.
Categorization and Analysis	Step 5: Literature Classification	Grouping the selected literature into four main themes: a) The influence of entrepreneurship education on entrepreneurial interest b) Learning methods in entrepreneurship education c) Challenges in implementing entrepreneurship education d) The role of digitalization in entrepreneurship education.
	Step 6: Literature Analysis	Analyze each category to identify emerging research patterns, key findings, and research gaps that could become opportunities for further research.
Interpretation and Preparation of Conclusions	Step 7: Developing a Comprehensive Understanding	Using the results of the analysis to develop a broader understanding of research trends in entrepreneurship education.
	Step 8: Identify Research Gaps	Highlighting aspects of research that have not been widely studied and compiling recommendations for further research.

With this approach, this literature review is expected to provide broader insights into the development of entrepreneurship education and identify research opportunities that can be explored further.

RESULTS AND DISCUSSION

This literature review reveals that research in entrepreneurship education is divided into four main aspects: the influence of entrepreneurship education on entrepreneurial interest, entrepreneurship learning methods, implementation challenges, and digitalization in entrepreneurship education.

Table 3. Summary of Research Findings on Entrepreneurship Education

No	Research Focus	Key Findings	Reference
1	The influence of entrepreneurship education on entrepreneurial interest	Entrepreneurship education increases entrepreneurial interest by improving self-efficacy and business knowledge	Tyra & Sarjono (2020); Hafid et al. (2025); Sofiani & Subroto (2024); Falah & Marlana (2022); Mei et al. (2020); Shah et al. (2020)
2	Effectiveness of experiential learning methods	<i>Value-Creation Pedagogy, Challenge-Based Learning, and Experiential Learning</i> are more effective than traditional theory-based methods	Lackéus (2020); Bell & Bell (2020); Portuguese Castro & Gómez Zermeño (2020); Secundo et al. (2021); Sulistyowati et al. (2022); Iwu et al. (2019); Handayati et al. (2020)
3	Challenges in implementing entrepreneurship education	Curriculum is more oriented towards workforce creation than entrepreneurship; teacher competence is a major obstacle	Marliyah (2024); Iwu et al. (2019); Guerrero et al. (2020); Mukhtar et al. (2021); Prasetyo et al. (2021); Santoso et al. (2021)
4	Digitalization in entrepreneurship education	The use of AI, e-learning, and digital business simulations is starting to be implemented but still needs further study	Secundo et al. (2021); Bell & Bell (2023); Amalia et al. (2021); Lopes et al. (2025); Bazkiaei et al. (2020)

This section discusses the results of the literature review using the identification, evaluation, and interpretation approaches, as applied in the Systematic Literature Review (SLR) method. The purpose of this discussion is to understand the research patterns that have been carried out, explore the challenges and opportunities in entrepreneurship education, and identify research gaps that can be the basis for further research.

1. Identification

The results of the literature review show that research related to entrepreneurship education can be classified into four main themes: 1) The influence of entrepreneurship education on interest. 2) Learning methods in entrepreneurship education. 3) Challenges in implementing entrepreneurship education. 4) The role of digitalization in entrepreneurship education. This classification shows that entrepreneurship education continues to develop, but still faces various challenges in its implementation.

2. Evaluation

a. The Influence of Entrepreneurship Education on Entrepreneurial Interest

The results of the literature review show that entrepreneurship education has a strong relationship with increasing interest in entrepreneurship. Research from Tyra & Sarjono (2020), Hafid et al. (2025), and Mei et al. (2020) emphasized that entrepreneurship education increases self-efficacy, which ultimately strengthens an individual's intention to become an entrepreneur. However, an evaluation of the results of this study shows that most studies are cross-sectional, so they cannot explain the long-term impact of entrepreneurship education on entrepreneurial decisions after graduation. In addition, moderating factors such as family environment, work experience, or government policies have not been widely studied, even though these factors can affect the effectiveness of entrepreneurship education.

b. Learning Methods in Entrepreneurship Education

Evaluation of learning methods shows that an experiential approach is more effective than a traditional theory-based method. Studies by Lackéus (2020) and Portuguez Castro & Gómez Zermeño (2020) show that students are better able to internalize entrepreneurial skills when they are directly involved in real business projects. (Lackéus, 2020) (Portuguez Castro & Gómez Zermeño, 2020) However, there are several limitations in this study, such as the lack of studies comparing the effectiveness of various learning methods in the long term. The research conducted also still lacks discussion of the impact of experiential learning methods on certain industrial sectors, such as digital-based startups or social enterprises.

c. Challenges in Implementing Entrepreneurship Education

A literature review shows that the inflexible curriculum and limited teacher competency are the main obstacles in entrepreneurship education. Iwu et al. (2019) and Mukhtar et al. (2021) highlighted that many teachers still do not have direct business experience, making it difficult to teach applicable entrepreneurial skills. In addition, the study also found that there is still little research discussing strategies for improving teacher competency in entrepreneurship education. Limited access to entrepreneurial resources, such as business incubators and startup funding, is still an obstacle in many educational institutions.

d. Digitalization in Entrepreneurship Education

Technology is starting to play an important role in entrepreneurship education. Secundo et al. (2021) and Bell & Bell (2023) found that e-learning and AI-based business simulations can improve the accessibility of entrepreneurship education. However, an evaluation of the results of this study shows that there has been no research that specifically compares the effectiveness of digital technology with conventional learning methods in entrepreneurship education. The study also highlighted that access to technology is still uneven, especially for educational institutions in remote areas. This can be a challenge for further research.

3. Interpretation

Based on the evaluation results, several important findings can be interpreted that entrepreneurship education has a positive impact, but its effectiveness is still influenced by external factors. Therefore, further research needs to consider the role of social, economic, and policy factors in moderating the relationship between entrepreneurship education and entrepreneurial interest. Then regarding the experience-based learning method, it has proven to be more effective, but it has not been widely implemented. Therefore, efforts are needed to increase the effectiveness of entrepreneurship education through educational institutions. For example, developing a curriculum that is more applicable and based on direct experience. This literature review also looks at several challenges in the implementation of entrepreneurship education that indicate the need for reform in education policy. For example, the development of training programs for entrepreneurship teachers needs to be improved so that they have sufficient business experience to teach practical skills. The findings in the review regarding the impact of digitalization are that digitalization offers great potential opportunities, but there are still gaps in its implementation. Therefore, further research is needed to compare the effectiveness of digital and conventional learning in entrepreneurship education. Both the government and educational institutions must collaborate to ensure that technology in entrepreneurship education can be accessed equally. Based on the results of the literature review and evaluation of the research that has been carried out, it can be concluded that further research needs to be focused on more applicable entrepreneurship education implementation strategies, comparison of learning methods, and the long-term impact of entrepreneurship education on the success of graduate businesses.

CONCLUSION

Conclusions This literature review confirms that entrepreneurship education has a positive impact on entrepreneurial intentions, especially through increased self-efficacy, critical thinking skills, and business readiness. Various studies that have been reviewed show that individuals who receive entrepreneurship education tend to have higher intentions to become entrepreneurs than those who do not receive such training. However, the effectiveness of entrepreneurship education is highly dependent on the learning methods used, curriculum readiness, teacher competence, and support from the entrepreneurship ecosystem.

In terms of learning methods, research shows that experience-based methods are more effective than conventional theory-based methods. Value-Creation Pedagogy, Challenge-Based Learning, and Experiential Learning have been shown to be able to improve entrepreneurial understanding and skills in greater depth. However, the implementation of these methods still faces obstacles, such as limited resources, lack of collaboration with industry, and the readiness of educational institutions to implement an experience-based learning approach.

Another challenge in the implementation of entrepreneurship education is the curriculum that is not yet fully adaptive and the limited competence of teachers. Many educational institutions are still more oriented towards creating a workforce than creating entrepreneurs, so graduates often lack applicable business skills. In addition, the lack of direct business experience among teachers means that the learning methods used still tend to be based on theory, rather than real experience.

Digitalization in entrepreneurship education offers great opportunities, but its effectiveness compared to traditional methods still needs to be studied further. E-learning, artificial intelligence (AI), and digital business simulations have begun to be applied in entrepreneurship education, but there are still gaps in their implementation, especially related to accessibility for students in remote areas and the readiness of institutions to adopt this technology.

Based on the results of this literature review, there are several research gaps that can be explored further, including: 1) The long-term impact of entrepreneurship education on the success of graduates' businesses. 2) Comparison of the effectiveness of various entrepreneurship learning methods at various levels of education. 3) Strategies for improving teacher competence in teaching experience-based entrepreneurship. 4) Evaluation of the effectiveness of digital technology compared to conventional learning methods in entrepreneurship education. 5) How digitalization can help students in remote areas access entrepreneurship education more effectively.

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