

Application of Project-Base Learning in Entrepreneurship Education in Indonesia

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In the process of teaching entrepreneurship education, appropriate pedagogy is needed in realizing a curriculum that is contextual and relevant to the development of information technology and the need for the job market. This research aims to provide a comprehensive overview of entrepreneurship education with effective teaching methods by synthesizing existing research findings. This research method uses a systematic literature review approach to synthesize various academic database literature sourced from Scopus or Web of Science with keywords such as "entrepreneurship education" and "pedagogy", and interviews with teachers of entrepreneurship education courses in Indonesia. The results of the study show that the project-based learning method is very effective in the entrepreneurship education curriculum that follows the development of digital technology and the need for the job market.

INTRODUCTION

The development of the entrepreneurship education learning system has undergone various transformations in line with technological developments, curriculum changes, dynamic job market needs, and increasing interest in entrepreneurship, especially among the productive age population. (Welsh et al., 2016; Bakar et al., 2015). These developments show how entrepreneurship education continues to adapt to the changing times and the needs of the global society and ensure that every graduate in secondary education and college is ready to face real-world challenges and opportunities (Haqqi, 2023).

In developed countries such as the United States, the United Kingdom and Germany, entrepreneurship education has progressed so rapidly because it is supported by educational infrastructure, there is collaboration between schools and industry so that there are entrepreneurship programs that are integrated with business and management courses, access to capital and investment and accompanied by local government support. In addition, in universities, it must have incubators and accelerators that support the development of startups from the initial stage to expansion (Pittaway, 2021; Zhao-Xin, H.U.A.N.G., et al., 2016; Fuerlinger et al., 2015).

In developing countries, for example Indonesia, Bangladesh and Brazil have not fully developed entrepreneurship curricula that are more practical and applicable, especially in secondary and higher education institutions such as institutes, polytechnics and universities (Amalia & von Korflesch, 2021; Hasan et al., 2017; Stadler et al., 2022). Although there are several higher education institutions that have established cooperation with the private sector, especially partnerships with large companies and local startups to provide training and internships to students.

In Indonesia, based on the results of direct observation and observation by researchers in several universities, the majority of higher education institutions still use a conservative learning system or use an old curriculum in the learning process of entrepreneurship education, namely more using the theory and initiative of students to carry out entrepreneurial practices while cooperation between the private sector, especially large companies and local start-ups with universities high has not been done yet.

Overall, entrepreneurship education in developed countries is more structured with strong infrastructure support, while in developing countries, although the challenges are greater, there are many initiatives and potential to grow with the ever-increasing support from various sectors especially from governments.

The formulation of the problem in this paper is how to find a suitable learning method for entrepreneurship education to create an effective learning system that is in accordance with the needs of the job market in the era of digital transformation to create new entrepreneurs among productive young people, especially university alumni.

RESEARCH METHOD

This research is qualitative using a systematic literature review approach and interviews with teachers of entrepreneurship education courses in several universities in Indonesia who were used as respondents as sources of information in this study. This systematic literature review uses a structured methodology to systematically identify, select, and analyze relevant studies about the relationship between entrepreneurship education and pedagogy (Okoli & Schabram, 2012; Rauf et al., 2021; Rauf et al., 2024). A comprehensive search strategy was developed to identify relevant literature from academic databases, including quality journals indexed in Scopus or the Web of Science.

A systematic literature review is used to retrieve relevant articles published in peer-reviewed journals, published in the last five years. This limitation exists because research is dynamic and undergoing rapid change. The number of journals reviewed was 50 journals and produced 10 manuscript journals that are relevant to the idea of this paper with the keywords of entrepreneurship education and pedagogy (Sirelkhatim & Gangi, 2015). Using a systematic review approach of the literature in this paper, it aims to provide a comprehensive overview of entrepreneurship education through a pedagogy approach that offers insight into the mechanisms underlying this relationship for future research and practice input.

After reviewing a systematic review of the literature, the researcher conducted interviews with 10 teachers at different universities with different criteria for the lecturer to be a lecturer in entrepreneurship education courses. The essence of the question is the method of learning, and the curriculum used.

RESULTS AND DISCUSSION

The results and discussion of this systematic literature review provide a comprehensive synthesis of existing research on the relationship between entrepreneurship education and pedagogy. Findings are compiled and discussed according to key themes and patterns identified through the review process.

Classification of journals based on article title, author and year of publication, journal name, publisher

After selecting journals based on the theme of economic education (EE) and pedagogy as well as its indicators that are directly related to these themes, the author determines ten journals that represent the indexed journals in Scopus or the Web of Science. The ten journals related to the theme of entrepreneurship education and pedagogy, can be seen in the table 1.

Tabel 1. Journal identity analyzed

No	Article Title	Author and		Journal name	Publisher
		Publication year			
1.	Entrepreneurship Education Pedagogical Approaches in Higher Education (A1)	Rodrigues, (2023)		Education science	MDPI
2	A signature pedagogy for entrepreneurship education (A2)	Jones, (2019)		Journal of Small Business and Enterprise Development	Emerald Publishing Limited
3.	Action-embedded pedagogy in entrepreneurship education: an experimental enquiry (A3)	Mukesh et al., (2020)		Studies in Higher Education	Routledge
4.	Connecting the past with the present: the development of research on pedagogy in entrepreneurial education (A4)	Gabrielsson et al., (2020)		Education + Training	Emerald Publishing Limited
5.	Entrepreneurship education in Indonesian higher education: mapping literature from the Country's perspective (A5)	Amalia & von Korflesch, (2021)		Entrepreneurship Education	Springer
6.	Pedagogical Approaches to Responsible Entrepreneurship Education (A6)	Igwe et al., (2022)		Sustainability	MDPI
7.	Pedagogical invention in entrepreneurship education: Adopting a critical approach in the classroom (A7)	Verduijn & Berglund, (2020)		International Journal of Entrepreneurial Behaviour and Research	Emerald Publishing Limited
8.	Reinterpreting a signature pedagogy for entrepreneurship education (A8)	Ramsgaard & Blenker, (2022)		Journal of Small Business and Enterprise Development	Emerald Publishing Limited
9.	The promise of andragogy, heutagogy and academagogy to enterprise and entrepreneurship education pedagogy (A9)	Jones et al., (2019)		Education + Training	Emerald Publishing Limited
10.	Guiding the student entrepreneur – Considering the emergent adult within the pedagogy–andragogy continuum in entrepreneurship education (A10).	Hägg & Kurczewska, (2020)		Education + Training	Emerald Publishing Limited

Source: Author, 2025

The summary of the ten journals in Table 1 illustrates, in general, that pedagogy includes theories, methods, and practices in the educational process, especially how an educator conveys knowledge, skills,

and values to students. Aspects in Pedagogy include the purpose of education, the content or material taught, the teaching methods used, the relationship between teacher and student, and the evaluation of learning outcomes.

In implementing pedagogic aspects in entrepreneurship education, a teacher or lecturer with practical experience in the field of entrepreneurship is needed so that assistance is needed for students/students, especially work practices in the field (A5). The recommended instructional methods in Entrepreneurship education, using collaborative pedagogical models, namely problem-based learning, project-based learning, peer assessment, design thinking, formative feedback, service learning, and active methodologies that integrate digital technologies (A1).

Pedagogy development, especially for the field of Entrepreneurship Education as an innovative solution in the process of designing and delivering entrepreneurship education materials so that it has minimum standards for teaching entrepreneurship (A2)(A3). For this reason, it is necessary to have an action-learning pedagogy over the traditional classroom pedagogy that has been used in entrepreneurship education to overcome current challenges. Action Learning in Entrepreneurship Education will have significantly higher levels of entrepreneurial self-efficacy and entrepreneurial intent compared to those with traditional classroom pedagogy (control group) (A3). The involvement of students in the process of entrepreneurship education as joint learners, will arouse their curiosity to ask new questions thus building their own creativity and supporting them to build confidence to develop an alternative understanding of how entrepreneurship benefits them in the future (A7)

For this reason, the curriculum and pedagogy in entrepreneurship education must be coherent so that teachers not only teach the content, but also instill an understanding of entrepreneurship in the right way according to current needs, contextual, and awaken students' critical thinking, so that pedagogy reform is needed in entrepreneurship education by involving various disciplines that support the development of entrepreneurship education (A4)(A6)(A8)(A9)(A10) .

From the description of the results of the analysis of the systematic literature review approach, the main learning methods of entrepreneurship education are as follows:

- a. A teacher or lecturer with practical experience in the field of entrepreneurship is needed to assist students/students in making projects or assignments in the field.
- b. Problem-based learning,
- c. Have minimal standards in project achievement
- d. There is an evaluation
- e. Collaboration between students
- f. build confidence to develop alternative understandings
- g. It is in line with current needs.

Method of Project Based Learning in Entrepreneurship Education

From the results of the analysis of a systematic review of the literature based on the main learning methods carried out so far by previous researchers, the author offers an effective learning method to be used in teaching entrepreneurship education, namely the Project Based Learning learning method. The Project Based learning method is one of the student-centered learning approaches, where students are actively involved in the completion of a real or simulated project related to the real world. In the process, students conduct in-depth exploration, research, and problem solving to produce a product or solution that can be presented. In the implementation of the project, accompanied by lecturers who are experienced in the field of entrepreneurship.

According to Jones et al., (1997). Project-based learning (PBL) is a learning model that uses projects. A project is a task assigned by someone who leads a project to its members, to answer a challenging problem, decision-making, or investigative activity. PBL provides ample opportunities to

work independently over a long period of time and the results of the task result in a realistic product or presentation.

The use of Project Based Learning (PBL) has been tested in the United States and is used in response to the problem of high school students who are not engaged, uninterested in traditional courses, structures, and environments. By applying the PBL method, it shows that students' self-concept scores are higher in the posttest compared to the pretest. Another improvement was found in the Intellectual Status and School subscale for some of the children in the study (Fisher, 2010).

In Indonesia, the results of the researcher's interviews with teachers of the Entrepreneurship Education course, only a small number of public and private universities have implemented PBL. The lack of implementation of PBL in universities and private universities is due to the factors of lecturers and students themselves, especially universities located in districts (not in the center of the capital). From the search results on google scholar The Use of the PBL Method in Higher Education, especially in the field of Entrepreneurship Education in Indonesia, the author has not found a single application of PBL in the field of Entrepreneurship Education, except that in other fields the application of PBL has been carried out by many researchers.

The following are examples and steps in making Project Based Learning (PBL) based on the results of a systematic literature review analysis as follows: Project Theme: Creating Creative Business Products from Local Ingredients, Project Description: Students are required to design, produce, and market an entrepreneurial product based on local ingredients (e.g., snacks, handicrafts, or fashion products).

The Steps of Project Based Learning (PBL):

- a. Defining a Business Idea:
 - Groups of students brainstorming and market research.
 - Determining the products to be made based on local potential.
- b. Business Planning:
 - Crafting a simple business proposal (Business Model Canvas).
 - Calculate production costs, marketing strategies, and potential profits.
- c. Production Process:
 - Prototype a product.
 - Developing attractive and eco-friendly packaging.
- d. Marketing Strategy:
 - Create a social media account for promotions.
 - Selling online or offline (stands at schools/campuses).
- e. Presentation and Evaluation:
 - Presenting the process and results of the project in front of teachers/lecturers and friends.
 - Getting feedback and reflection for business improvement.

CONCLUSION

The Project Based Learning (PjBL) method is a learning approach that emphasizes the completion of projects as the core of the learning activity, encouraging students to collaborate in groups. It is oriented toward tangible outcomes or products that can be showcased, while also fostering the development of essential skills such as critical thinking, communication, collaboration, creativity, and digital literacy. In this method, the lecturer acts as a facilitator who guides students rather than serving as the sole source of information, thereby creating a more active, participatory, and contextual learning environment.

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