Efforts to Increase Student Entrepreneurial Intentions Through the Project-Based Learning Learning Model

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Article Info

Article History
Received: May 2023
Revised: May 2023
Published: June 2023

Keywords:
Project Based Learning, Entrepreneurial Intention

Doi:
http://dx.doi.org/10.23960/E3J/v6i1.8-14

Abstract

Knowledge of student entrepreneurship intentions is a fundamental impetus that is very important in understanding entrepreneurship in tertiary institutions. This study aims to determine the effectiveness of the project-based learning model in increasing student entrepreneurial intentions in economics and digital business learning. This research is quantitative research with an experimental research design. The sample in this study was 80 students. This study uses actual experiments because, in this design, the researcher can control all external variables that affect the course of the investigation. Data collection in this study used instruments in the form of questionnaires and documentation developed according to indicators and based on relevant theories. The results showed that the significance value of the t-test was 0.000. The significance value is less than 0.05, which means that H1 is accepted, and the tcount value is 5.801> ttable, which is 1.985. This shows that there are significant differences in the entrepreneurial intentions of the experimental class as the class that uses the project-based learning model and the control class that uses the conventional model. Thus, implementing the project-based learning model in the experimental class significantly differs. This means that applying the project-based learning model in digital economics and business learning effectively increases student entrepreneurial intentions. ttable, which is equal to 1.985. This shows significant differences in the entrepreneurial intentions of the experimental class as the class that uses the project-based learning model and the control class that uses the conventional model. Thus, implementing the project-based learning model in the experimental class significantly differs. This means that applying the project-based learning model in digital economics and business learning effectively increases student entrepreneurial intentions. ttable, which is equal to 1.985. This shows that there are significant differences in the entrepreneurial intentions of the experimental class as the class that uses the project-based learning model and the control class that uses the conventional model. Thus, implementing the project-based learning model in the experimental class significantly differs. This means that applying the project-based learning model in digital economics and business learning effectively increases student entrepreneurial intentions.

INTRODUCTION

Competition in business is getting bigger in various countries, including Indonesia. The opening of the free market raises concerns in developing countries, especially regarding the quality of human resources. For decades, Indonesia has continued to strive to increase its quality and highly competitive human resources. One of them is the role of universities in providing a place for students to have an entrepreneurial spirit. College graduates have tried to increase their understanding of the entrepreneurial process (Galanakis & Giourka, 2017; Hueso et al., 2021). Entrepreneurship plays an essential role in society's economic and social development (Bazan et al., 2020). The efforts of higher education institutions to increase understanding of entrepreneurial intentions are intensifying.

Entrepreneurial intention is the primary driver in predicting behaviour in creating new jobs or businesses (Kautonen et al., 2015).

Entrepreneurial intention is a mental orientation such as desire, desire and hopes to influence entrepreneurial choices (Jena, 2020). Knowledge of students' entrepreneurial intentions is fundamental to understanding entrepreneurship in tertiary institutions. College students often do not see entrepreneurship as viable, distancing themselves from entrepreneurship as a career. So, universities are expected to play an essential role in an ecosystem that encourages entrepreneurship and encourages students to make it a viable career alternative (Tomy & Pardede, 2020). Entrepreneurial intentions can be grown through each individual's personality (Şahin et al., 2019).

The rapid development of digital technology makes entrepreneurship opportunities more open. Universities should utilize this opportunity to foster an entrepreneurial spirit among students. Digital transformation is not only about technology and strategy but also about people and their mindset to accept and embrace digital change (Ziadlou, 2021). The use of digital technology is one of the leading indicators of entrepreneurial success. Changes resulting from accelerating rates of innovation and technology adoption and performance gains from exploiting technology trends such as robotic process automation (RPA), social media, mobile, analytics, cloud computing, and internet of things (SMACIT) significantly impact processes, products, and service,(Orji, 2019). The competitiveness of the business structure is shaped by the use of digital technology, implementation of information management systems, and re-engineering and transformation of existing business processes into new digital business models (Strutynska et al., 2019). All organizations, including business or entrepreneurial activities, are increasingly facing technology penetration in all aspects of their organization, including structure, infrastructure, operations, processes, finance, and marketing (Schwarzmüller et al., 2018).

Through entrepreneurship education, students can get to know entrepreneurship more deeply. Entrepreneurship education is defined as all education and training activities (educational and non-educational systems) that try to develop participants' entrepreneurial intentions or factors that influence intentions, such as knowledge, desire, and business feasibility (Li & Wu, 2019). Efforts that can be made to increase student entrepreneurial literacy can be through the learning process. One of the lessons that can support entrepreneurship in higher education is economics and digital business. Economics and digital business is a course that examines economic and business developments in the digital era, responding to complex problems ranging from rapid changes in the economic environment, technological developments, and the development of new business models to the development of digital products.

Digital economics and business learning can be used as a tool to change students' views on participating in entrepreneurship. Digital entrepreneurship literacy is one of the efforts to provide innovation in entrepreneurship and business. Implementers of entrepreneurial and business activities can use digital technology as a business strategy in the technological era. This is a form of adaptation for entrepreneurs and businesses to survive. For this reason, it is necessary to have a learning model that can help students directly participate in becoming an entrepreneur.

The project-based learning model is a learning model that can be used to improve the student experience in completing a given project. The PjBL model aims to create compelling learning opportunities where students can work collaboratively in groups to answer prompting questions, solve problems, or overcome challenges to create a final product (Aldabbus, 2018). Project-based learning (PjBL) is a form of student-centred instruction that is based on three constructivist principles: learning is context-specific, learners are actively involved in the learning process, and they achieve their goals through social interaction and sharing of knowledge and understanding (Kokotsaki et al., 2016). Giving projects to students aims to educate students to become independent and collaborate to become entrepreneurs.

Based on the background above, this study aims to determine the effectiveness of the project-based learning model in increasing student entrepreneurial intentions in economics and digital business learning. This research also tests a student-centred learning model, namely project-based learning, as a reference model for lectures at Semarang State University.

METHODS

This research is quantitative research with an experimental research design. The experimental model is the only research method for testing hypotheses about causation. The stages for carrying out experimental research in this study can be detailed as follows: (1) Determine the research problem; (2) Formulate hypotheses; (3) Selecting experimental units and identifying research objects; (4) Determine the treatment to be carried out; (5) Determine the research design; (6) Conduct research; (7) Data analysis; and (8) Prepare research reports. The design used in this research is the proper experimental design. The type of true experimental research used was a pretest–posttest control group design.

RESULTS AND DISCUSSION

A. Results

This study aims to test the application of the model *project-based learning* to increase student entrepreneurial intentions. Statistical tests were carried out with the following results to find out students' initial abilities in entrepreneurship intentions.

Table 1. Group Statistics

Group Statistics					
	Group	N	Means	std. Deviation	std. Error Means
Results	Experiment	48	62.50	10,639	1,536
	Control	47	62,87	10.506	1,532

Source: Results of data processing in 2022

Table 1 shows that the mean or average value of the experimental class pretest is 62.50, and the mean or average value of the control class pretest is 62.87. This shows that the average values in the experimental and control classes are insignificant. This shows that the condition of students is relatively the same about entrepreneurial intentions. The following are test results that prove there is no significant difference.

Table 2. Test T-Test (Independent Samples Test) Pretest Class Experiment and Control

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Differences	std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Mark	Equal variances assumed	,017	,896	-,172	93	,864	-,372	2,170	-4,681	3,936
	Equal variances not assumed.			-,172	92,993	,864	-,372	2,169	-4,680	3,936

Source: Results of data processing in 2022

Based on Table 2. it can be seen that the significance value of the t-test is 0.864. The significance value is greater than the significance value of 0.05, which means that H0 is accepted and the tcount is 0.172 < ttable, which is 1,985. This shows that there is no significant difference between the entrepreneurial intentions of the experimental and control classes.

Furthermore, the following statistical test results were obtained based on the results of the posttest conducted in each class, namely the experimental class and the control class.

Table 3. Experimental Class and Control Class Posttest T-Test

Group Statistics					
	Class	N	Means	std. Deviation	std. Error Means
Mark	Experiment Class	48	78.15	7,732	1.116
	Control Class	47	69.45	6,846	,999

Source: Results of data processing in 2022

Table 5.5 shows that the mean or posttest average value of the experimental class is 78.15, and the mean or posttest average value of the control class is 69.45. This shows a difference in the average score in the experimental class using the project-based learning model of 78.15 and the control class of 69.45 using conventional models in economical and digital business learning activities. To find out whether there is a significant difference or not in the two classes, a statistical test is carried out using the independent sample test as follows.

Table 4. Test T-Test (Independent Samples Test) Posttest Experiment Class and Control Class

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Differences	std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Mark	Equal variances assumed	,269	,605	5,801	93	,000	8,699	1,499	5,721	11,677
	Equal variances not assumed.			5,809	92,078	,000	8,699	1,498	5,725	11,673

Source: Results of data processing in 2021

Based on Table 4. it can be seen that the significance value of the t-test is 0.000. The significance value is less than 0.05, which means that H1 is accepted, and the tcount value is 5.801> ttable, which is 1.985. This shows a significant difference in the entrepreneurial intentions of the experimental class as a class that uses the project-based learning model and the control class, which uses the conventional Engineman model. Thus, implementing the project-based learning model in the experimental class significantly differs. This means that applying the project-based learning model in digital economics and business learning effectively increases student entrepreneurial intentions.

B. Discussion

Entrepreneurial intention is a human attitude towards the consequences of consequential decisions and the desire for trust, self-efficacy, and the possibility of responding to opportunities (Anwar & Abdullah, 2021; Yi, 2021). Students who have high entrepreneurial intentions can easily become entrepreneurs. Colleges offer entrepreneurship curricula, and some have set up special departments to promote an entrepreneurial culture (Baharuddin & Ab Rahman, 2021; Mat et al., 2015). Implementing the entrepreneurship curriculum in tertiary institutions requires strategies and models in learning so that learning outcomes can be obtained optimally. The application of the project-based learning model is a learning model that strongly supports the creation of an understanding of student entrepreneurship material and active participation in learning. This is the background of this research being carried out as a test of the project-based learning model in increasing student entrepreneurial intentions.

In addition, based on the test results obtained, it is necessary to apply a project-based or project-based learning model in the learning process, especially in economics and digital business courses. The goal is that the application of this model can provide direct learning experiences where students are faced with projects to develop student creativity. The research (Sari & Angreni, 2018) stated that applying the project-based learning model increased student creativity in product processing. The application of project-based learning models in digital economics and business studies emphasizes that students develop creative patterns in entrepreneurship supported by advances in digital technology. Researchers applied a project-based learning model to the experimental class for four meetings or 12 credits to increase entrepreneurial intentions through digital economics and business learning. In addition, researchers also tested the control class using conventional methods as a comparison to the experimental class.

The development of digital technology in the world of entrepreneurship is a transformation that provides convenience in production, promotion and establishing connectivity. Digital business transformation is an ongoing process that aims to enhance a company's value proposition by triggering significant resource changes through a combination of digital technologies (Wielgos & Homburg, 2021). Digital economy and business models are developing, with many platforms emerging in this era, like Shoppe, Tokopedia, Bukalapak, and Lazada, which are marketplace platforms developing with technology. Using digital technology creates service systems using resources such as people, technology, organizations, and information to satisfy customer needs better (Akter et al., 2020).

Learning must be designed with multiliteracy pedagogical planning and have various competencies, including mastering ICT well to access information, communication, conveying information to the community, having good critical thinking skills, being able to turn problems into opportunities, having good problem-solving skills (Holloway & Gouthro, 2020; Yustina et al., 2020). To provide convenience in the process of learning digital economics and business, a learning model is needed that provides direct experience to students in learning. Project-based learning is a learning model that can provide a direct experience for students during the learning process.

Project-based learning also develops students' scientific process skills, enhancing their problem-solving skills and abilities by asking questions, debating ideas, and drawing conclusions (Mahasneh & Alwan, 2018). This is in line with research conducted by(Shin, 2018), which stated that project-based learning had a positive influence on students' motivation and was able to improve their collaboration skills as well. Furthermore, student responses in the survey conducted after the project indicated that students' perceptions of project-based learning were very positive. Based on previous research and the opinions of several experts above, this research shows positive and effective results, namely, the project-based learning model is used in the learning process, especially in increasing student entrepreneurial intentions.

CONCLUSION

Knowledge of student entrepreneurship intentions is a fundamental impetus that is very important in understanding entrepreneurship in tertiary institutions. This study aims to determine the effectiveness of the project-based learning model in increasing student entrepreneurial intentions in economics and digital business learning. Based on the results of the data analysis, it was found that the significance value of the t-test was 0.000. The significance value is less than 0.05, which means that H1 is accepted, and the tcount value is 5.801> ttable, which is 1.985. This shows significant differences in the entrepreneurial intentions of the experimental class as the class that uses the project-based learning model and the control class that uses the conventional model. Therefore, implementing the project-based learning model in the experimental class has a significant difference. This means that applying the project-based learning model in digital economics and business learning effectively increases student entrepreneurial intentions.

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