



RESEARCH ARTICLE

Revealing Digital Literacy of Young Entrepreneurial Intentions: A Case of University Students in Indonesia

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ARTICLE INFO	ABSTRACT
Received: Oct 10, 2024 Accepted: Nov 19, 2024	Entrepreneurial intentions in Indonesia still need to improve literacy and education, causing the younger generation to have a low awareness of entrepreneurship. Meanwhile, in the younger generation, digital literacy is very highly developed. This study wants to further examine the factors of formal and nonformal education with digital literacy as a moderation that can influence a person's intention to become an entrepreneur and its impact on actual entrepreneurial actions. Explanatory research studies the relationship between two or more variables and then seeks to explain the occurring phenomena. The population of this study was students of Budi Luhur University, and the number of respondents amounted to 380. Data was collected using an online questionnaire, distributed through an email list of Budi Luhur University students—quantitative Data Analysis, with path analysis model using SmartPLS software version 4. The results showed that formal education and nonformal education can affect entrepreneurial intentions, and entrepreneurial intentions can influence a person to become a real entrepreneur. Technology is expected to make it easier for students to find creative things, and their digital literacy can modify the information into an intention that can grow one's entrepreneurial character, especially for young entrepreneurs.
<p>Keywords</p> <p>Digital Literacy Intentions Entrepreneur Education Moderating</p>	
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INTRODUCTION

One of the best ways to support economic growth and generate jobs is through entrepreneurship. The low proportion of entrepreneurs impacts limited employment opportunities, which affects high unemployment. This is in line with the current condition of Indonesia, where the proportion of entrepreneurs is still low, and the unemployment rate is relatively high. Jakarta is one of Indonesia's cities with the highest unemployment rate, with 410,585 people (BPS, 2022). Entrepreneurship is an intense action and emotion that uses energy and time to identify oneself (Setyawati et al., 2023). According to Suryani & Chaniago (2023), how individuals form the intention or determination to engage in entrepreneurial activities is influenced by several factors, ranging from personality characteristics to environmental factors, such as social support. Entrepreneurial intention in general has been identified as an entrepreneurial goal or aspiration as a growth trajectory, namely the desire to follow a business (Abrar ul Haq et al., 2021). If the economy cannot provide adequate employment opportunities for young people, then it needs to provide entrepreneurship training to create jobs and support growth (Eusepi et al., 2008; Willis et al., 2020). One of the best ways to create jobs and support growth at a time when the economy is unable to provide adequate employment for the younger generation is to provide entrepreneurship education (Girindiawati et al., 2022). Entrepreneurship as economic growth, through entrepreneurship will encourage the economic growth of a region because by becoming an entrepreneur has many opportunities to reap many benefits, but entrepreneurs also need to pay attention to several stages in starting a business so that the company can run smoothly (Ahmad et al., 2022; Almodóvar-González et al., 2020; Bartoš et al., 2015a). If you look closely at the number of unemployed based on the highest level of education

completed, it can be seen that universities are a reasonably high contributor to the number of unemployed, the number of unemployed with Diploma and Bachelor education levels reached 1,064,481 people or 11.70% of the total unemployment in Indonesia (BPS, 2022b).

Of the several efforts that can be made to change the mindset and mindset of students, including the millennial generation, is to increase the spirit of entrepreneurship in the younger generation, which begins with fostering a sense of interest in entrepreneurship (Roshchupkina et al., 2023; Vidayana et al., 2020). Entrepreneurs are considered pioneers of innovative ideas and business models that make significant contributions to society and the creative contribution of young entrepreneurs can have a positive impact on overall economic growth (Akhter et al., 2022; Olugbola, 2017). To achieve the status of a successful entrepreneur, the individual must constantly develop their entrepreneurial abilities and skills (Kholis & Ali Arifin, 2023).

The role of high schools or universities is needed to grow new entrepreneurs, with this expected to be the main contributor to the country's economy by becoming a generator of innovations to give birth to new entrepreneurs (Budiman & Syafrony, 2023; Siampa Mario et al., 2020). Universities and colleges play an essential role in providing students a positive attitude towards entrepreneurial practices. To improve entrepreneurial skills, hands-on learning experiences, internships, and real-world projects are required (Hoang et al., 2021; Maula et al., 2023). According to (Aujirapongpan et al., 2020; Sariwulan et al., 2020) Efforts to foster the spirit of young entrepreneurs by organizing intensive training on digital literacy, giving young entrepreneurs the skills needed to optimize technology in running their businesses. Government support includes incentives or subsidy programs for digital literacy training and small business development. Digital literacy, on the other hand, is defined as the ability to use information, collaborate in teamwork, develop social and information awareness, understand electronic security, and incorporate communication in a digital environment (Akhter et al., 2022; Choudhary & Bansal, 2022; Hapsoro et al., 2022; Iskandar et al., 2022). With digital solid literacy, individuals can collaborate, communicate, provide support, and express themselves intelligently through various digital platforms (Audrin & Audrin, 2022; Ip, 2024; Wardana et al., 2023)

THEORETICAL FRAMEWORK

Actual entrepreneurship

Running entrepreneurship is an activity that requires costs and is unpredictable. When someone sees an opportunity in a business venture and doubts their ability to take advantage of it, it is certain that the business can only last for a while (Williams & J. Nadin, 2014). McMullen and Shepherd said that business barriers will arise due to uncertainty that will make it difficult for entrepreneurs to distinguish between opportunities and needs, what to do, and the positive impact of the chosen action must be greater than the risks that might arise (Emami & Dimov, 2017). Before making risky decisions, entrepreneurs should be prepared to consider alternative possibilities as anticipatory steps. This approach reflects a predictive aspect of planned behavior that entrepreneurs need to achieve the desired outcomes (Yasmeen & Introduction, 2013).

Although several studies have proven the mechanism of knowledge through the contribution of intention to running entrepreneurial opportunities (Emami & Dimov, 2017). other research states that self-efficacy, environment, and education can influence someone in carrying out their entrepreneurship (Girindiawati et al., 2022; Setyawati et al., 2023). This research focuses on how a person can carry out his entrepreneurship with the intention that it is based on formal and nonformal education mediated by the digital literacy of university students in Jakarta.

Formal and non-formal education

Education plays a role in shaping entrepreneurial character, which has just been discussed. Several studies state that entrepreneurship education, starting from formal and nonformal education, affects the intention to become an entrepreneur rather than being a breadwinner by working in a company or government (Bartoš et al., 2015). Several previous studies have found that entrepreneurship

education can positively influence the success of company performance which can be related to past experiences that are in line with formal entrepreneurial education (Laing et al., 2022). The results of other studies state that competitive advantage in the market can be realized through business knowledge and entrepreneurship education (Chen, 2006). can differentiate his business from similar competitors by offering various types of creative products that can be unique and can affect the success of work. This can be owned by an educated entrepreneur (Virglerova et al., 2017).

Digital literacy

Literacy ability is very influential in obtaining information related to efforts to compete. One of the literacy skills that students must have is digital literacy (Oktaviani, 2024b). Digital literacy is the ability to understand, use, and seek information from various digital sources properly, correctly, and wisely, and it is one of the skills that students must have (Reddy et al., 2023). The development of digital literacy is used as a medium to keep students from negative effects of digital media and to increase their ability to think critically to participate in digital media (Nikou et al., 2022). One indicator of the success of digital literacy is awareness of using the internet positively and intelligently. Student digital literacy competence supports learning and developing student creativity (Alt & Raichel, 2020).

Intention entrepreneur

Entrepreneurial intention has generally been identified as the goal or aspiration of entrepreneurs as a growth trajectory, namely the desire to follow a business. Business growth is amply confessional as an option, especially when entrepreneurs have doubts and choose not to grow. Many businesses need to reach significant accretion, the only reason the entrepreneur does not intend to reach significant business growth (Choi & Chang, 2020). Given the importance of entrepreneurial intention in the chase of accretion is an intentional individual resolve and contingent on the opportunity and perceived skills and willingness of the entrepreneur to do to be able to (Nurlaela & Sujono, 2021), (Baluku et al., 2021). Describes entrepreneurial intention as a coalition of what the entrepreneur wants and what the entrepreneur's resources, critical skills, and available opportunities may provide (Oktaviani, 2024a). At the same time, previous research proves the truth that entrepreneurs are determined to develop their businesses to become bigger and achieve substantial growth.

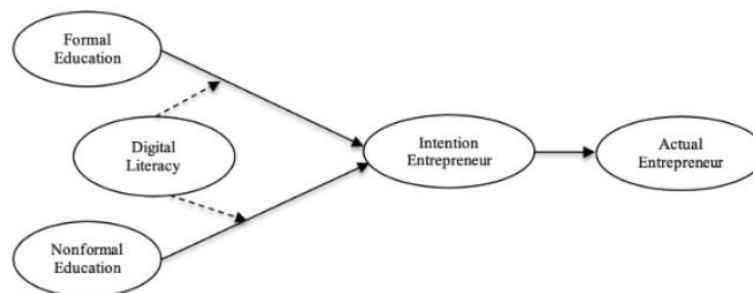


Figure 1: Research framework

This hypothesis is developed by explaining the relationships between variables, either from previous research or from logical reasoning, resulting in research hypotheses. Based on the framework presented above, the author formulates the hypotheses.

Education that is regular, structured, and adheres strictly to specific criteria takes place in schools (Păduraru, 2013). In this case, formal education refers to entrepreneurship education received by students in school, which may influence their intention to pursue entrepreneurship (Buckingham, 2007; Tokila & Tervo, 2011).

H₁: Formal education influences entrepreneurial intention.

Nonformal education is community-oriented, flexible, life skills-based, and accessible to all societal levels (Wang & Si, 2024). As a learning resource for the community, nonformal education should

support the realization and management of programs, serving as a foundation for future program development that can influence an individual's entrepreneurial intention (Bartoš et al., 2015).

H₂: Non-formal education influences entrepreneurial intention.

Digital literacy is an effort to prepare individuals to navigate a broader world critically (Nikou & Aavakare, 2021). This may influence an individual's progress in formal education, where knowledge can be acquired effectively through appropriate internet use, potentially fostering entrepreneurial intentions (Jang et al., 2021; Oseghale, 2023).

H₃: Digital literacy moderates the impact of formal education on entrepreneurial intention.

A society where individuals can process information critically, understand communicated messages, and communicate effectively as media consumers require strong digital information management skills (Buchan et al., 2024). These skills may contribute to the nonformal education gained from one's environment, fostering entrepreneurial intentions.

H₄: Digital literacy moderates the impact of non-formal education on entrepreneurial intention.

Digital literacy, as the skill to create, share, and take advantage of emerging opportunities, involves knowing when and how to access information technology tools to achieve specific goals (Suyanto et al., 2023). One's ability to use digital literacy effectively can build confidence in successfully managing an entrepreneurial venture.

H₅: Entrepreneurial intention influences actual entrepreneurship.

METHODS

Traditionally, theory and study in entrepreneurship are built using quantitative analysis; some may need to be more competent to grab the real-time interactions of awareness sharing and other issues relevant to successful entrepreneurship. This study uses the path analysis model and using SmartPLS version 4 software. The population of this research was students of Budi Luhur University, who distributed questionnaires online to test the path analysis model. The sampling technique uses snowball sampling, which is a sampling technique that can take place continuously until researchers have enough data to analyze to draw conclusive results that can help researchers make the right decisions. This research was conducted by distributing questionnaires online to Budi Luhur University students. Table 1 shows the number of respondents in the study, which amounted to 380 students and can be identified by gender and faculty.

Table 1: Respondent's identity

		number	Percentage
Gender	Female	217	57%
	Male	163	43%
Faculty	Economics and Business	125	33%
	Information Technology	92	24%
	Communication and Creative Design	95	25%
	Social and Politics	68	18%

RESULTS

Outer models test

Table 2. Results of the validity test showed that the actual variables of actual entrepreneur, intention, digital literacy, formal education, and nonformal education, all of the indicators produce an outer loading value of > 0.7 , which means it has high validity.

Table 2: Loading factor

Outer Loading	Act Entre	Information
Z1	0.848	Valid
Z2	0.867	Valid
Z3	0.813	Valid
Y1	0.859	Valid
Y2	0.884	Valid
Y3	0.843	Valid
M1	0.871	Valid
M2	0.845	Valid
M3	0.849	Valid
M4	0.795	Valid
X1_1	0.816	Valid
X1_2	0.798	Valid
X1_3	0.784	Valid
X1_4	0.814	Valid
X1_5	0.718	Valid
X2_1	0.833	Valid
X2_2	0.828	Valid
X2_3	0.818	Valid
X2_4	0.893	Valid

Table 3 shows that actual entrepreneur, intention, digital literacy, formal education, and nonformal education each have an AVE value of 0.710, 0.706, 0.619, 0.711, and 0.744. Hence, the AVE coefficient value > 0.5 proves that all variables meet the evaluation requirements.

Table 3: Average variance extracted

Variables	AVE	Information
Actual Entrepreneur	0.710	Valid.
Intention	0.706	Valid.
Digital Literacy	0.619	Valid.
Formal Education	0.711	Valid.
Nonformal education	0.744	Valid.
Intention	0.706	Valid.

Table 4 shows the feasibility of the Fornell-Larcker evaluation model through the AVE values for all variables having a value greater than the correlation between constructs in the model.

Table 4: Fornell-larcker

	Actual Entrepreneur	Digital Literacy	Formal Education	Nonformal education	Intention
Actual Entrepreneur	0.843				
Digital Literacy	0.314	0.840			
Formal Education	0.575	0.737	0.787		
Nonformal education	0.542	0.377	0.455	0.843	
Intention	0.829	0.297	0.592	0.501	0.862

Based on Table 5, it can be explained that actual entrepreneur, intention, digital literacy, formal education, and nonformal education each have a value of 0.880, 0.906, 0.890, 0.908, 0.897 so that the CR > 0.8 proves that all variables meet the evaluation requirements have a high level of reliability.

Table 5: Composite reliability

Variable	Composite Reliability	Information
Actual Entrepreneur	0.880	Reliable
Intention	0.906	Reliable
Digital Literacy	0.890	Reliable
Formal Education	0.908	Reliable
Nonformal education	0.897	Reliable

Inner models test

Based on Table 6, intention, digital literacy, formal education, and nonformal education significantly influence actual entrepreneurs, namely 0.862. For any changes in the variable intention, digital literacy, formal education, and nonformal education, the actual entrepreneur will also experience a change of 86.2%. Meanwhile, formal and nonformal education moderately affects intention, equal to 0.449. If there are any changes in formal and nonformal education variables, the intention will also change by 44.9%.

Table 6: R square

R	R Square
Actual Entrepreneur	0.862
Intention	0.449

Hypothesis test

The results of the hypothesis testing using testing criteria show that the statistical T value must be greater than the T table, namely 1.985, and the P values must be less than 0.05. All variables can affect exogenous latent variables, while digital literacy as a moderation cannot show its ability to moderate endogenous variables, namely formal education and informal education for students at Budi Luhur University, Jakarta.

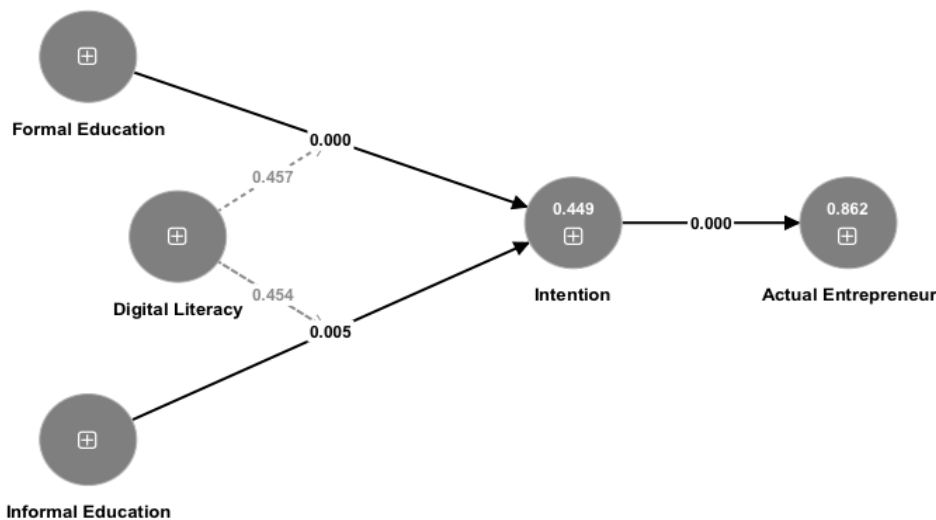


Figure 2: Research result

Table 7: Hypothesis testing

Variables	T Statistics	P Values
Formal Education -> Intention	4,800	0.000
Nonformal Education -> Intention	2,815	0.005
Digital Literacy X Formal Education -> Intention	0.743	0.457
Digital Literacy X Nonformal Education -> Intention	0.750	0.454
Intention -> Actual Entrepreneur	66,353	0.000

Based on Table 7, here is a discussion regarding the hypothesis testing results on the relationships between formal education, nonformal education, intention, and actual entrepreneurial behavior, as well as the moderating effect of digital literacy:

Effect of formal education on intention

The statistical analysis supports the hypothesis that formal education significantly impacts intention, as evidenced by the P-value of 0.000. This P-value is below the commonly accepted significance level ($\alpha = 0.05$), indicating a statistically significant relationship between formal education and intention. In other words, formal education plays a crucial role in influencing an individual's intention. This finding aligns with existing literature that suggests formal educational programs provide individuals with knowledge, skills, and confidence, which are essential factors that shape one's intention, particularly in entrepreneurial contexts.

Effect of non-formal education on intention

Similarly, the analysis shows that nonformal education also significantly impacts intention, supported by a P-value of 0.005. This value, which is lower than the significance threshold of 0.05, confirms that nonformal education significantly influences intention. Nonformal education, which includes workshops, seminars, training sessions, and other informal learning experiences, offers practical knowledge and hands-on skills that may not be covered in formal education settings. These programs are often more flexible and targeted, enabling individuals to gain specific competencies that align with their entrepreneurial goals. As such, nonformal education contributes positively to enhancing intention.

Effect of intention on actual entrepreneurial behavior

The analysis further indicates that intention significantly impacts actual entrepreneurial behavior, with a P-value of 0.000. This highly significant result demonstrates that intention is a crucial predictor of entrepreneurial actions. As theorized in behavioral models like the Theory of Planned Behavior (TPB), intention is a central factor that translates one's mindset and motivation into actual behavior. In this context, individuals with solid entrepreneurial intentions are more likely to engage in entrepreneurial activities, indicating that a well-developed intention can lead to successful entrepreneurial outcomes.

Moderating effect of digital literacy on the relationship between formal and nonformal education and intention

Despite the significant direct effects observed, the study reveals that digital literacy does not moderate the relationship between formal education and intention, nor between nonformal education and intention. This indicates that regardless of the level of digital literacy, the impact of both formal and nonformal education on intention remains consistent.

The lack of a moderating effect of digital literacy suggests that while digital skills are essential in modern education and entrepreneurship, they may not enhance or diminish the influence of educational background on forming entrepreneurial intentions. This could be because digital literacy, while valuable, might not be directly related to the knowledge and skills obtained through educational programs that specifically shape entrepreneurial intentions. Alternatively, it may be that digital literacy functions more as an independent or complementary skill that aids in the actual entrepreneurial process rather than influencing the initial formation of intention.

DISCUSSION

Formal education influences entrepreneurial intentions.

Formal education has an influence on entrepreneurial intentions. This is because the formal education obtained by students at the University can increase entrepreneurial intentions (Maheshwari et al., 2023). In this case, the lecturer plays a vital role in directing and motivating students to form characters that can foster intentions, which has been proven true at Budi Luhur

University. Formal education provided by universities can shape students' character to create creativity, seek business opportunities, have a responsible leadership spirit, and dare to take risks by considering the possibilities that arise from the decisions made. This reflects an intelligent and educated entrepreneur (Wardana et al., 2020).

Nonformal education has an effect on entrepreneurial intentions.

Nonformal education influences entrepreneurial intentions. This is because the nonformal education that students receive has a good impact. Environmental and family factors support students to have intelligent, creative, and innovative characters to foster independent personalities and increase students' intentions to become entrepreneurs (Dubey & Sahu, 2022). Students can participate in training or seminars outside of university activities to expand their insights about entrepreneurship. Students take advantage of existing facilities and assess the material they receive to foster entrepreneurial intentions.

Digital literacy can moderate the effect of formal education on entrepreneurial intentions

Digital literacy cannot moderate the effect of formal education on entrepreneurial intentions. This proves that the younger generation, who are used to using technology, does not show this as a motivation to foster entrepreneurial intentions in the formal education they receive when studying at the University. Digital literacy used in formal education is only used by students as a medium of information and communication to complete assignments given in formal education.

Digital literacy can moderate the effect of nonformal education on entrepreneurial intentions

Digital literacy cannot moderate the effect of nonformal education on entrepreneurial intentions. One of the factors in digital literacy is that knowledge assembly needs to be utilized more optimally (Naveed & Ahmad, 2020). Students have yet to be able to collect, evaluate, and process information into a creative idea that can motivate someone to develop the intention to become a beginner. Students also have yet to evaluate content, namely the ability to think and assess what is found on the web and identify it. Technology is expected to make it easier for students to find creative things, and their digital literacy can modify this information into an intention that can foster one's entrepreneurial character.

An entrepreneur's intention affects the intentions that influence actual entrepreneurs. This proves that students who already have the intention will carry out entrepreneurship in earnest. The reasons that can form student intentions start from the desire to earn an independent income, social reasons to be recognized, and to prove one's ability to be productive. Students will feel happy with world entrepreneurs, interested in developing a business, and feel they must be involved.

CONCLUSION

The results show that university students can cultivate entrepreneurial intentions through formal education and informal education, which they get from both the university environment and the community and family environment. Meanwhile, digital literacy owned by the younger generation cannot play an important role in fostering entrepreneurial intentions. The results also prove students with entrepreneurial intentions can become actual entrepreneurs in earnest. Universities have an essential role in forming students' entrepreneurial intentions through curricula that support the development of entrepreneurial skills, practical training, and mentorship support. Involvement in extracurricular activities, seminars, and entrepreneurial communities outside the classroom can enrich students' experiences and help them build valuable networks. Even though digital literacy skills are essential in the digital era, other factors influence entrepreneurial intentions besides digital literacy skills. This capability is a supporting tool in running a business and increasing operational efficiency.

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