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Technopreneurship Intention: A Study of Economic Education Study Program Students Influenced by Entrepreneurial Learning

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ABSTRAK

Tingkat pengangguran kalangan terdidik di Indonesia semakin meningkat setiap tahun sebagaimana catatan Badan Pusat Statistik dari tahun 2016 hingga 2020 sebesar 7,35%. Meningkatnya jumlah pengangguran di kalangan terdidik didukung oleh fakta bahwa sebagian besar lulusan perguruan tinggi lebih memilih menjadi pencari kerja daripada pencipta lapangan kerja. Hal ini menunjukkan bahwa intensi berwirausaha mahasiswa masih rendah, sehingga diperlukan pembelajaran kewirausahaan untuk menumbuhkan intensi technopreneurship. Penelitian ini bertujuan untuk menganalisis pengaruh pembelajaran kewirausahaan terhadap intensi technopreneurship mahasiswa. Ini adalah survei penjelasan yang dilakukan dengan menggunakan kuesioner untuk mengumpulkan data diikuti dengan pengujian hipotesis dan analisis data melalui teknik regresi. Populasinya sebanyak 112 siswa dan digunakan sampel jenuh. Hasil penelitian menunjukkan bahwa secara keseluruhan pembelajaran kewirausahaan siswa efektif dan aktivitas bisnis siswa berbasis teknologi tergolong tinggi. Selain itu, variabel pembelajaran kewirausahaan ditemukan mempengaruhi aktivitas bisnis siswa berbasis teknologi. Hal ini mengimplikasikan perlunya peningkatan pembelajaran kewirausahaan dengan berpartisipasi secara mendalam dalam industri, mengenali peluang melalui partisipasi budaya, dan menerapkan teori praktis tindakan kewirausahaan untuk meningkatkan intensi technopreneurship mahasiswa.

ABSTRACT

The unemployment rate among educated people in Indonesia is increasing every year as the Central Statistics Agency noted that from 2016 to 2020 it was 7.35%. The increasing number of unemployed among the educated is supported by the fact that most university graduates prefer to be job seekers rather than job creators. This shows that the entrepreneurial intention of students is still low, so entrepreneurship learning is needed to grow technopreneurship intentions. This study aims to analyze the effect of entrepreneurial learning on students' technopreneurship intention. This is an explanatory survey conducted using questionnaires to collect data followed by testing of hypothesis and analyzing the data through the regression technique. The population involved 112 students and a saturated sample was used. The results showed that the overall student entrepreneurial learning is effective and student technology-based business activities are high. Moreover, the entrepreneurial learning variable was found to affect students' technology-based business activities. This implies it is necessary to increase entrepreneurial learning by participating deeply in industry, recognizing opportunities through cultural participation, and applying the practical theory of entrepreneurial action to increase the technopreneurship intention of students.

1. INTRODUCTION

Unemployment is a complex problem in developing countries and one of the reasons for its high rate in Indonesia is due to the perception that it is easier to find work in the formal or non-formal sector as an employee than to create a job (Khraief et al., 2020; Fakih et al., 2020). It is important to note that it is not limited to only those with low education but is also observed to be prevalent among those with higher education. This is indicated by the difficulties experienced by university and college graduates in securing

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a job in the public and private sectors due to the current turbulent economic environment (Deuchar & Dyson, 2020; Nwajiuba et al., 2020). The visible problem is that there is a high level of unemployment among the educated and this is associated with the fact that most college graduates prefer to be job seekers than job creators (Bod'a & Považanová, 2021; Chakraborty et al., 2021).

This is probably due to the current learning system implemented in different universities which focuses on achieving a fast-graduation system and *cum laude* grades without any training on ensuring the students have the mindset to create jobs. This simply reflects the low entrepreneurial intention of students in the country. The lack of appropriate solutions to address this problem implies several college graduates will remain job seekers instead of becoming job creators due to the fact that they are mostly oriented toward finding work and have to wait long before they can get one, thereby, increasing unemployment rate (Hartono, 2021; Dvouletý et al., 2021; Rahman et al., 2020). This is expected to have a further economic impact by making it difficult for the country to have a competitive advantage due to the low application of technology which is causing a reduction in national productivity (Widarni & Bawono, 2021; Haseeb et al., 2020; Wang et al., 2020). The idea of entrepreneurial intention has been successfully conceptualized with the Theory of Entrepreneurial Event (TEE). Theory of Planned Behavior (TPB), and Entrepreneurial Intention Based Models (Hou et al., 2019; Purwati et al., 2021). It is a manifestation of expression from the soul of an individual based on the desire to start improving one's economy (Liu et al., 2019; Ozaralli & Rivenburgh, 2016; Saeed et al., 2015). Individuals with entrepreneurial intentions usually acquire skills such as critical thinking, effective communication, and good decision-making (Hussain et al., 2021; Jing, 2022; Maheshwari, 2021).

The development being experienced in the business world is associated with innovations in technology and science and this indicates that developed and developing countries need to have the capability to cope with the rapid industrial development in this current open era (Idris et al., 2020; Qi et al., 2021; van Gelderen et al., 2008). This is more important in this era of technological globalization which is providing crowded opportunities to learn technopreneurial programs (Paramasivan & Muthusamy, 2016; Pedrini, Langella, & Molteni, 2017). Meanwhile, technopreneurship is considered important from a social development perspective due to its ability to increase competitiveness, economic growth, and social interest (Priya, 2016; Soomro & Shah, 2021). This makes it pertinent to understand the existence of technopreneurs, technopreneurship, and entrepreneurial intentions among students. Technopreneurship is considered a way of life required to overcome the global prevalence of unemployment among graduates (Boldureanu et al., 2020; Nabi et al., 2018) by ensuring they become technopreneurs. This is mainly due to the ability of technopreneurship intention to create a state of mind that directs and guides individual actions toward the development and application of new technology business concepts. Moreover, the business intention is a commitment to engage in a new business as a form of behavior and it is important to note that the main capital to starting the business is creativity (Bujor & Avasilcai, 2016; Demirtas & Akdogan, 2014; Irene, 2019). This is further confirmed by a previous finding that a high level of technopreneurship intention usually promotes individuals to become technopreneurs.

This indicates Indonesia needs to continue improving technopreneurship intention considering its benefits to the development of large and sophisticated industries as well as individuals considered to be economically weak, and this shows it has the ability to ensure sustainable development. Entrepreneurial intentions are influenced by internal, external, and contextual factors (Karimi et al., 2017; Wibowo & Sulartopo, 2022). These internal factors originating from within can be in the form of character, nature, personality traits (self-efficacy), risk-taking, need for achievement, attitudes towards entrepreneurship, behavioral control, and socio-demographic factors while the external ones from the outside include the elements from the surrounding environment and contextual conditions (Hoque et al., 2017; Rosique-Blasco et al., 2017). Several studies have been conducted on technopreneurship intention with a focus on entrepreneurial self-efficacy, technopreneurial learning on technopreneurial intention, competencies of technology entrepreneur, technology entrepreneurship capabilities, knowledge-sharing capabilities on technopreneurship intention, self-employment efficacy, entrepreneurial intention on entrepreneurial learning behavior, and entrepreneurial learning on technopreneurship intention (Chun-Mei et al., 2011; Petti & Zhang, 2011; Salhieh & Al-Abdallat, 2021). Technopreneurship is often the jargon normally used to represent the combination of technology with entrepreneurial skills and this means a technopreneur is an entrepreneur that is applying technology for entrepreneurial purposes. This is the reason this present study aims to determine the effect of entrepreneurial learning on technopreneurship intention. Entrepreneurial Intention-based is a model designed to detect factors influencing entrepreneurial intentions using an educational approach. The model was developed based on the Theory of Entrepreneurial Event (TEE), and the Theory of Planned Behavior (TPB) (Ajzen, 1991; Shapero & Sokol, 1982). It is focused on the intention of an individual to become an entrepreneur based on certain influential factors such as personal attitude, perceived social norms, and perceived feasibility of self-

efficacy which are also affected by the individual's entrepreneurship knowledge. It is important to note that entrepreneurial knowledge significantly influences decisions in business creation. Moreover, previous study showed that more knowledge about entrepreneurship normally contributes to the increase in entrepreneurial intentions with a subsequent effect on the emergence of positive attitudes and more realistic perception of entrepreneurship with further enhances the self-confidence that an individual is worthy and capable of becoming an entrepreneur (Roxas et al., 2008). Another dimension of intention is based on (1) desires driving an individual to start a business, (2) preferences of having an independent business, (3) plans and hopes to start a business in the future, and (4) behavioral expectancies involving the review of entrepreneurship possibility followed by the plan to start a business venture (Hou et al., 2019; van Gelderen et al., 2008; Wrobel, 2018).

This means entrepreneurial learning is a process of acquiring knowledge, skills, and sustainable entrepreneurial attitudes to create and manage an effective technopreneurship business. Previous studies showed that contextual factors such as educational programs can increase entrepreneurial intentions as well as entrepreneurs (Petkova, 2009; Salhieh & Al-Abdallat, 2021). Moreover, the entrepreneurial learning model shows the effect of contextual learning on a person's personality. It has also been reported that entrepreneurial learning is influenced by the personal life and family experiences, education, professional career, and social relationships of an individual. This simply indicates the effect of the components of personal and social formation on the learning capacity and knowledge acquired (Harrison & Leitch, 2005; Mehlhorn et al., 2017). This, therefore, led to the formulation of the hypothesis that entrepreneurial learning has an effect on technopreneurship intention. Various data show that the increasing number of unemployed among the educated is supported by the fact that most university graduates prefer to be job seekers rather than job creators. This shows that the entrepreneurial intention of students is still low. While various theories and previous research say that entrepreneurship learning is needed to grow technopreneurship intentions. So, this study aims to analyze the effect of entrepreneurial learning on students' technopreneurship intention.

2. METHOD

This is a descriptive verificative study conducted through an explanatory survey with data collected by distributing questionnaires to Economic Education Study Program students in Teacher Training and Educational College (STKIP) PGRI, Jombang. Moreover, the technopreneurship intention was measured using the indicators which include desires, preferences, plans, and behavior expectations (van Gelderen et al., 2008). Meanwhile, entrepreneurial learning is measured includes learning through immersion in the industry, recognition of opportunities through cultural participation, and practical theory of entrepreneurial action Harrison & Leitch (2005). The population includes 112 students Economic Education Study Program, PGRI College of Teacher Training and Education (STKIP), Jombang, Indonesia. A saturated sample that involved the entire population was used and this indicates a total of 79 female and 33 male students participated in the study. The students were chosen based on the good achievement in entrepeneur course. The instrument that was used was open questionnaire. The data were analyzed using a 5-point Likert scale scoring system which ranged from strongly disagree to strongly agree to obtain interval data. Meanwhile, the factors influencing technopreneurship intention were determined using a regression model in the form of the equation. Data were further analyzed using linear regression in SPSS 25 to determine the level of influence the entrepreneurial learning had on the students' technopreneurship intention.

3. RESULT AND DISCUSSION

Result

The variables used in this study are entrepreneurial learning and technopreneurship intention and the results are described based on the score calculated from the response each respondent provided. The questionnaire used has 20 statement items and the results obtained are presented in Table 1.

Table 1. General Description of the Effect of Entrepreneurial Learning on the Technopreneurship Intention

Variable	Mean	Category
Entrepreneurial Learning		
Learning through immersion within the industry	3.87	Effective
Opportunity recognition through cultural participation	3.65	Effective
Practical theories of entrepreneurial action	4.14	Effective
Mean	3.91	Effective

Variable	Mean	Category
Technopreneurship Intention		
Preference	4.03	High
Plan	3.92	High
Desire	3.62	High
Behavior expectation	4.11	High
Mean	3.96	High

Base on Table 1, it was discovered that entrepreneurial learning is in the effective category while technopreneurship intention is in the high category and this means the students are experiencing effective entrepreneurial learning, thereby, leading to a high level of technopreneurship intention. Then the result of coefficient is show in Table 2.

Table 2. Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.537	2.888		2.610	0.010
	Entrepreneurial Learning	0.820	0.074	0.728	11.135	0.000

Base on Tables 2 used to formulate the linear regression equation model Y = 7,537+ 0,820X1 + e. It can be interpreted that the (1) constant of 7.537 implies the technopreneurship intention when there is no change in the entrepreneurial learning and (2) the regression coefficient is 0.820 in the positive direction, thereby, indicating every value added to the entrepreneurial learning is expected to cause a 0.820 increase in the technopreneurship intention. Model Summary is show in Table 3.

Table 3. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.728	0.530	0.526	1.69686

Base on Table 3 shows the coefficient of determination (R-Square) was 0.530 and this denotes entrepreneurial learning influenced the technopreneurship intention by 53% while the remaining 47% are due to other variables not explained in this model. Moreover, the hypothesis was tested using F-test ANOVA and the calculated F-value was found to be 123.982, thereby, showing that F count (123.982) > F table (1.655) at a significance value of 0.000 < 0.05 value. This infers entrepreneurial learning has a positive and significant effect on technopreneurship intention.

Discussion

Entrepreneurial learning is positively related to technopreneurship intention and this indicates a higher level of entrepreneurial learning is expected to significantly increase the technopreneurship intention of the students (Paray & Kumar, 2020; Othman & Othman, 2019). It is important to note that entrepreneurial learning provides a mix of experiential learning, skills development, and, most importantly, a mindset change (Bell & Bell, 2020; Ramsgaard & Christensen, 2018; Rodriguez & Lieber, 2020). This shows the acquisition of more entrepreneurial knowledge has the ability to change the mindset of students towards having the intention to become technopreneurs. These are in line with previous research that contextual factors such as educational programs can increase entrepreneurial and entrepreneurial intentions (Salhieh & Al-Abdallat, 2021). Moreover, entrepreneurial learning has been reported to have a positive relationship with technopreneurship intention due to its ability to mediate the relationship between entrepreneurial self-efficacy and technopreneurship intention as state by previous study (Hoque et al., 2017).

Entrepreneurial learning was based on the ability to learn through experience, taking advantage of opportunities by creating and sharing in social and cultural contexts, and understanding the practical theory associated with entrepreneurial action. This is in line with the opinion of that this concept is an experiential process that allows technopreneurs to develop knowledge through different learning abilities

such as experiencing, reflecting, thinking, and acting (Deaton, 2015; Petkova, 2009). Deaton's social learning theory is also based on the assumption of triadic reciprocal interaction that learning is a process of changing behavior to produce a good personality. This denotes it is possible to conclude that human behavior is the result of continuous reciprocal interactions between certain internal and external factors. Contextual learning is related to the development of students' abilities through entrepreneurial experiences obtained both personally and from others (Barba-Sánchez & Atienza-Sahuquillo, 2018; Gatti et al., 2019; Johannisson, 2018). It is also possible for the students to create business opportunities by exploring opportunities associated with the social and cultural aspects without compromising the context (Griffin & Coelhoso, 2019; Martins et al., 2019). Moreover, understanding the practical theory of entrepreneurship is related to the education obtained such as participation in entrepreneurship courses (Ahmed et al., 2020; Jena, 2020; Nowiński et al., 2019). It was summarily observed that entrepreneurship learning is effective in increasing students' technopreneurship intention.

It is important to reiterate that contextual learning occurs when individuals report and compare experiences, create and share in social and cultural contexts, as well as in their network of relationships (Brieger & De Clercq, 2019; Hlady-Rispal & Servantie, 2018). These social relationships as well as several situations and contexts allow individuals to learn and develop opportunities for recognition skills. This interactive exchange of ideas and goals with others is referred to as a negotiated enterprise which is normally implemented in the context of engaging in a business with a customer, supplier, investor, employee, or partner. These dimensions are divided into structure and practice, shared meaning, changing roles over time, and insertion in a network of external relationships (Mehlhorn et al., 2017; Mokodenseho & Puspitaningrum, 2022). Previous studies on technopreneurial self-efficacy encouraged individuals to seek the knowledge needed to achieve their goals and this is considered important to influence technopreneurial learning outcomes (Hoque et al., 2017; Koe et al., 2021). This, therefore, infers technopreneurial learning assists people to have a better understanding of technopreneurship and is also considered very important to increase technopreneurial self-efficacy and competence, thereby, strengthening the intention (Kakava & Fields, 2017; Liu et al., 2019; Suleiman, 2021). It was discovered from the results that the students have a high technopreneurship intention and this means their desire to become technopreneurs has become stronger through their participation in entrepreneurship classes. As previously stated, there is a need to have the ability to combine entrepreneurial knowledge with technology to become a technopreneur (Blanka et al., 2019; Wardana et al., 2020). Furthermore, technopreneurship requires having other advantages besides technology and this can be achieved through creativity and innovation to support the development of business units. This simply indicates that the basic requirement for entrepreneurship is being creative and innovative and these can be applied appropriately through technology to develop the technopreneurship spirit. The implications of this study provide an overview related to Technopreneurship Intention. This research will be very useful for educators as a reference in supporting modern learning in the 21st century learning. The limitation of this research lies in the very limited research subject which only involved Economic Education Study Program Students at one tertiary institution. Therefore, it is hoped that future research will be able to further deepen and broaden the scope of research related to Technopreneurship Intention.

4. CONCLUSION

Student entrepreneurial learning was found to be in the effective category while technopreneurship intention is in the high category. It was also discovered that entrepreneurial learning has a positive and significant effect on technopreneurship intention, which means the hypothesis was proven to be true. This shows that having a high level of entrepreneurial learning can increase students' technopreneurship intention. Further research is expected to focus more on issues affecting entrepreneurial learning and student technopreneurship intentions.

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