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The Influence of Information Computer and Technology (ICT) Self-Efficacy and Entrepreneurial Learning on Technopreneurial Intention Among Engineering Students In Bandung City

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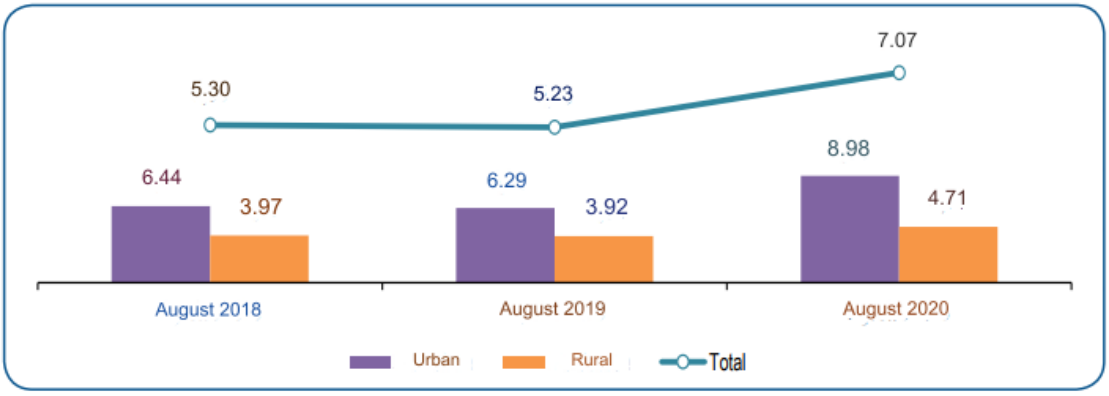
ABSTRACT: The technology industry in Indonesia has grown exponentially, with the emergence of new opportunities for entrepreneurship in technology called technopreneurship. MSMEs in Indonesia are seeking transformation to improve their performance by integrating the online world and industrial production processes. This study aims to understand the extent to which ICT self-efficacy and Entrepreneurship Learning influence the intention to engage in technopreneurship among engineering students in Bandung. This study used a cross-sectional method with a quantitative approach. The sample used was 382 people. Data analysis used Partial Least Square Structural Equation Model (PLS-SEM). The results revealed that ICT Self-efficacy has a positive and significant effect on Entrepreneurial Learning and Technopreneurship Intention among engineering students in Bandung. In addition, Entrepreneurial Learning also contributes positively and significantly to Technopreneurship Intention. These findings confirm the importance of ICT self-efficacy and entrepreneurship education in enhancing technopreneurial motivation. The results of this study are expected to be taken into consideration for universities in formulating the best formula to increase the desire for technopreneurship in their students.

Keywords: Entrepreneurial Learning, ICT, Self-Efficacy

INTRODUCTION

The COVID-19 pandemic has had a major impact on the global economy, causing a global recession and many job terminations carried out by business actors because they are forced to close their business outlets (Arianto, 2020). This triggered a contraction in Indonesia's economy in 2020 reaching -5.3% (Sasongko, 2020), and there was an increase in the unemployment rate in Indonesia. Based on data from the Central Statistics Agency (BPS) of Indonesia, there was an increase in the trend of the open unemployment rate (TPT) of 7.07%, of which the TPT increased by 1.84% compared to 2019. The following is open unemployment data according to BPS Indonesia in 2018-2020.



Description: Calculation using the 2015 SUPAS projection results weighting

Figure 1. Open Unemployment Rate (TPT) by District (percent).

Source : (Statistics, Official News of Statistics, 2020)

After the efforts of the Indonesia government in handling COVID-19, slowly the economy began to stabilize and the unemployment rate could be significantly reduced. This is supported by data from BPS Indonesia in 2023 which states that the TPT in 2023 is 5.32%, which means there is a decrease of 1.75% compared to 2020. The following is the TPT data for 2020-2023 published by BPS Indonesia.

Figure 2. Open Unemployment Rate 2020-2023

Source : (Statistics, Official News of Statistics, 2023)

The decrease in the Open Unemployment Rate (TPT) also occurred in the city of Bandung, as evidenced by data from the Bandung City BPS in 2023 as follows.

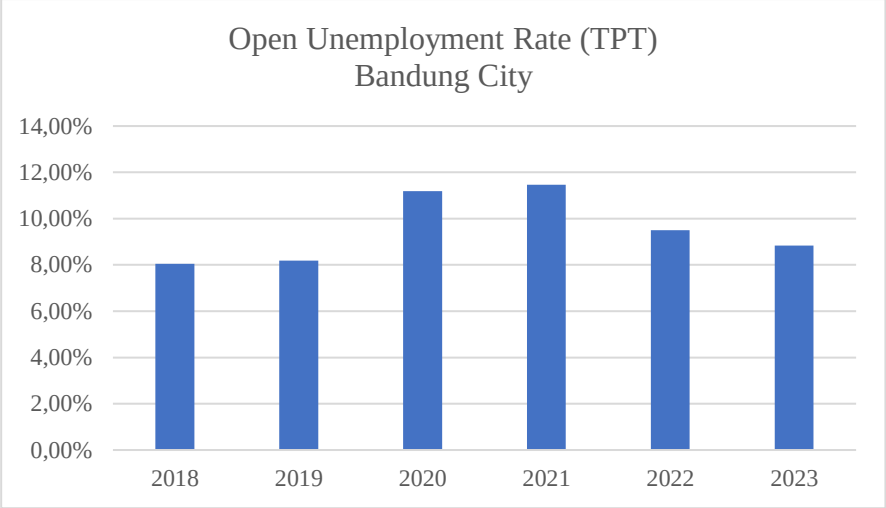


Figure 3. Bandung City Open Unemployment Rate (TPT) 2018-2023.
Source: processed data, 2023.

Based on Figure 3. It can be seen that in 2023 the TPT of Bandung City is 8.83%, which indicates that there is a decrease in TPT compared to the previous 3 years. However, when compared to the TPT of Bandung City before the COVID-19 pandemic in Indonesia, namely in 2018 and 2019, the TPT of Bandung City in 2023 is still higher. Therefore, efforts must continue to be made to suppress the unemployment rate in the city of Bandung in order to provide employment opportunities for the people of Bandung City. The following is statistical data from the number of people of the city of Bandung who are of productive age who are included in open unemployment according to the highest level of education.

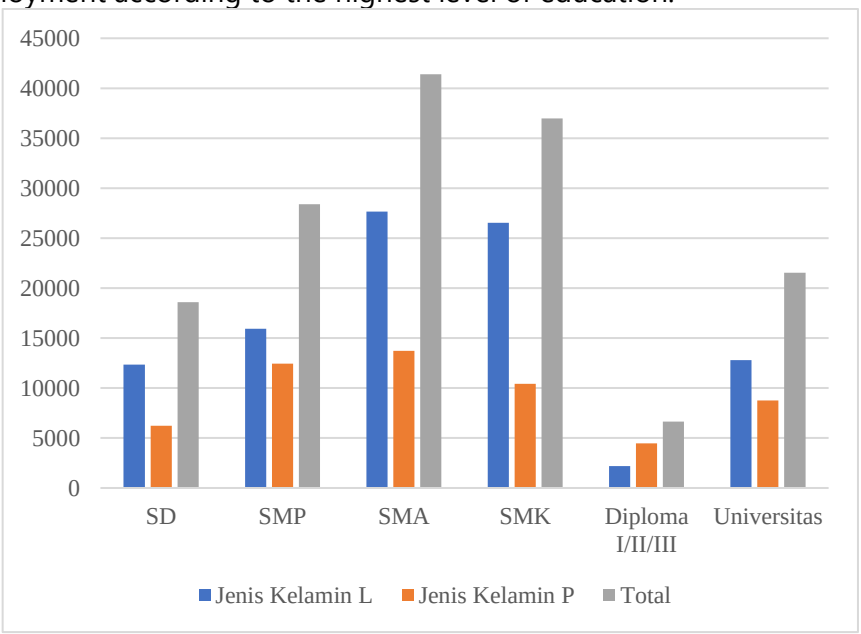


Figure 4. Number of Productive Age Population Included in Open Unemployment by Highest Education Level and Gender in the City of Bandung 2022

Source : (Budiyanto, 2023)

In Figure 4, it shows that the level of education that does not have a job based on the highest percentage is high school level graduates who reach 41,386 people or 27%, followed by vocational school graduates who reach 36,965 people or 24%, and then followed by the university level as many as 21,538 people or 14%. Basically, college graduates should be able

to help reduce the unemployment rate because they have been given a lot of knowledge. However, the unemployment rate for university graduates is still quite high, which is 14%.

Universities are the main place to produce new concepts, products, as well as procedures that are expected to help develop the economy (Indarto & Santoso, 2020). One of the efforts to minimize the unemployment rate is by entrepreneurship. Entrepreneurship plays a central role in determining people's wealth and spurring economic growth. Critical innovation is needed to optimize new opportunities, increase productivity, and create jobs. In addition, innovation is also the key to overcoming major challenges such as the UN's Sustainable Development Goals (SDGs) and unexpected economic impacts, such as the COVID-19 pandemic (Hill et al., 2023).

Entrepreneurship is in line with the government program, namely the 1000 technopreneur movement from the Ministry of Communication and Information. Technopreneur is an entrepreneurial activity that utilizes technology in the process of implementing its business. The 1000 technopreneur program is an idea and effort from the government to increase the interest in technopreneurhip and support the formation of new start-ups in the field of technology by gathering stakeholders to provide mentoring on various aspects of start-ups (Alahakoon & Somaratne, 2018).

In the program, the government targets universities as one of the targets for the implementation of this program (Fathonah, Machmud, & Suwatno, 2020). The university is considered a strategic place to conduct experiments in entrepreneurship and become an incubator for students who have an interest in entrepreneurship. This is in line with the research of Yordanova et al. (2020) which stated that the excellence of university research has a significant effect on the specialization of technopreneurship.

In 2020, there were around 64.2 million MSMEs in Indonesia, but only 17.1% of them were technologically literate. The digital literacy level of MSMEs in Indonesia is still quite low, and 81% of them have not been touched by digitalization, according to data released by the Ministry of Communication and Information Technology (Anatan & Nur, 2023). After the COVID-19 pandemic, Indonesia's economy began to slowly rise not without reason, this was due to the participation of MSMEs in the Gross Domestic Product (GDP) of 61.07% or Rp. 8,573.89 trillion. Small and medium enterprises (MSMEs) also have the ability to absorb up to 97 percent of the total number of workers in Indonesia and are able to accommodate up to 60.4 percent of total investment (Sulastri, Adam, Saftiana, Nailis, & Putri, 2022).

According to data from the Global Entrepreneurship Index, Indonesia is ranked 74th out of 137 countries with an entrepreneurship ratio of 3.47%. Indonesia's index value is equivalent to Viet Nam, a developing country in Southeast Asia (Prayetno & Siregar, 2023). This is due to the fact that MSMEs play a significant role in the nation's economic recovery. Currently, 64.2 million small and medium enterprises (MSMEs) account for 61% of Indonesia's GDP. MSMEs are also able to absorb 97% of the workforce, or around 119.6 million people (Limanseto, 2022).

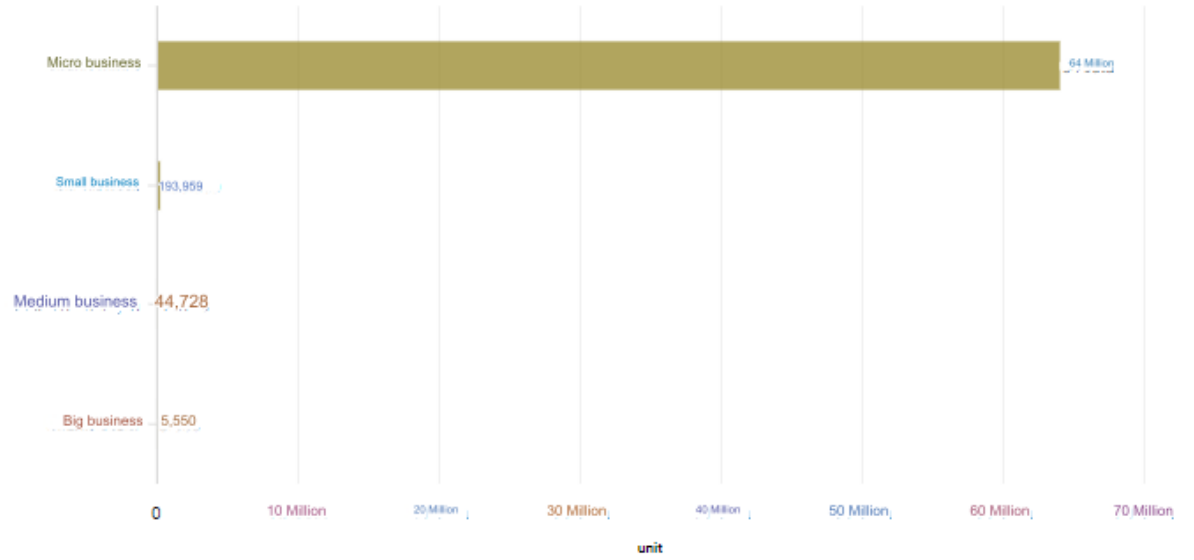


Figure 5. Number of Micro, Small, and Medium Enterprises/MSMEs in Indonesia Based on Their Class

Source : Databoks, 2021

In recent decades, the tech industry has grown exponentially. Many new opportunities have emerged for entrepreneurship in the field of technology called technopreneurship as a result of continuous new technological innovation and have created jobs through university-based technology entrepreneurship programs (Belmonte, Decapia Jr, Tu, Lavado, & Neil, 2022). In addition, many businesses are developing as a result of technological developments, such as industry 4.0 which is developing in Indonesia when seeking changes that lead to improvement by integrating the online world and industrial production lines, where the internet is the main support of all production processes (Pramesti, Fadlan, & Yasin, 2023). Technopreneurship activities can help reduce the unemployment rate, this is because this form of entrepreneurship can balance theory and practice in entrepreneurship for students.

Based on the above statement, it can be seen that universities have a role to create technopreneurs in Indonesia. In this case, non-business students have the opportunity to contribute more in entrepreneurship, especially engineering students. This is because students have a better understanding of technology so that they can apply themselves as technopreneurs.

According to Thomas Byers in Belmonte et al. (2022) one of the main areas of entrepreneurship in the ICT era is technopreneurship, which creates a competitive advantage in various companies and organizations because it leads to increased economic efficiency, market innovation, new job creation, and job retention. One of the main reasons for technopreneurship entrepreneurship is because it generates added value for businesses to achieve sustainability and economic reconstruction.

Based on Kolb's theory in Sukardi et al. (2022), entrepreneurial learning finds an experiential process in which an entrepreneur learns through four different elements: experiencing, reflecting, thinking, and acting. When this is done to build entrepreneurial interest, self-efficacy becomes an important factor.

Furthermore, the idea of ICT or ICT is associated with the relationship between self-efficacy and technopreneurship. The concept of ICT self-efficacy refers to people's perception of their ability to use ICT. In addition, it plays an important role in people's decision-making to use ICT.

There are many studies on the relationship between ICT self-efficacy, entrepreneurial/technopreneurial learning, and technopreneurial intention (Machmud et al., 2020). However, little is known about the relationship between the three variables.

According to Salhieh & Al-Abdallat (2022), engineering students play a crucial role in creating value and business opportunities through technological innovation. Engineering education also plays an important role in building new economies, with some institutions creating "engineering entrepreneurship" programs or integrating entrepreneurship in the curriculum. This is also supported by the research of Belmonte, et al. (2022), which said that technopreneurial learning has a significant effect on technopreneurial intention. In addition, the research (Alamsyahrir & Ie, 2022) also states that entrepreneurship education has a significant influence on technopreneurial intention. Based on this statement, it can be concluded that to have an interest in technopreneurship is not only to have an understanding of technology, but there must be other factors, namely education or learning in entrepreneurship.

Therefore, in this study, a test will be carried out on the influence of ICT self-efficacy on technopreneurial intention mediated by Entrepreneurial Learning in engineering students in the city of Bandung. This study aims to find out how much influence engineering students' understanding in the field of technology, as well as Entrepreneurial Learning on technopreneurial intention in the city of Bandung. It is also hoped that the results of this study can help universities in the city of Bandung in increasing interest in technopreneurship among students, so that they can support the government's program to create new technopreneurs, and contribute to reducing the unemployment rate in the city of Bandung.

This study has several objectives, namely: To find out how much influence ICT self-efficacy has on Entrepreneurial Learning in engineering students in the city of Bandung, to find out how much influence ICT self-efficacy has on technopreneurial intention in engineering students in the city of Bandung and to find out how much influence Entrepreneurial Learning mediates technopreneurial intention among engineering students in the city of Bandung. The benefits of this research are expected to contribute to the knowledge of technopreneurial intention of engineering students in the city of bandung. And this research is expected to provide information and be used as a new reference regarding factors that affect techopreneurship intentions among engineering students in the city of bandung.

RESEARCH METHODOLOGY

According to (Sugiyono, 2019), four important aspects that need to be emphasized are research methods, data, objectives, and benefits, because scientific methods are used to obtain data in order to achieve certain goals and benefits. In quantitative research, there are variables or parameters that are explanatory factors in predetermined quantitative research along with the hypothesis to be tested (Firmansyah & Masrun, 2021). The characteristics of the research used by the researcher in this study are shown in Table 1.

In this study, a quantitative research method is used. Based on (Machali, 2021), Quantitative research is a type of research in which numbers are widely used, ranging from data collection, interpretation, to conclusion and results. Based on its objectives, this study uses causal research. According to Indrawati in Rusyida (2018); Priadana & Sunarsi (2021), harmoniously states that causal research describes the reasons behind a problem, both experimental and non-experimental. Meanwhile, according to Sugiyono (2021), causality explains the causal relationship between two variables; In these cases, there are those that function as causes and those that function as a result of influence.

The study only collected one set of data and was conducted over a period of no more than one year. Thus, the cross-sectional method is defined as a study that collects data only once during a day, week, or month to answer a question.

Table 1. Research Characteristics

It	Research Characteristics	Kind
1	Research Methods	Quantitative
2	Research Objectives	Causal
3	Researcher Engagement	Not Intervening with Data
4	Research Analysis Unit	Individual
5	Implementation Time	*Cross-sectional*

Source: Processed data (2024).

RESULT AND DISCUSSION

Research Results

Descriptive Analysis

1) Descriptive statistical analysis of ICT Self-efficacy variables

To find out the level of ICT Self-efficacy in this study, there are three dimensions that are the benchmark measures, namely Privacy and Safety, Communication and Differentiation and Learning.

Table 2. ICT Self-Efficacy Level Assessment

It	Revelation	Valuation					Score	Ideal Score	%	Category
		STS	TS	KS	S	SS				
Privacy and Safety										
1	If I forget the password for my account or email, I can easily recover it	13	26	16	172	155	1.576	1.915	82,30	Tall
2	I can easily change the privacy settings of the social networking sites I use the most.	15	21	15	171	160	1.586	1.915	82,82	Tall
	TOTAL						3.162	3.830	82,5	Tall
Communication										
3	I can use chat rooms easily on the internet.	22	33	39	172	116	1.473	1.915	76,92	Tall
	TOTAL						1.473	1.915	76,92	Tall
Differentiation and Learning										
4	I now feel more confident about using a computer to write essays.	19	37	44	166	116	1.469	1.915	76,71	Tall
5	I am completely aware of the consequences of my actions on the Internet	26	26	72	145	113	1.439	1.915	75,14	Tall
	TOTAL						2.908	3.830	75,92	Tall

Based on the calculation of the respondents' response table to the ICT Self-efficacy variable, the results of the analysis were obtained as follows:

a. The statement item "If I forget the password for my account or email, I can easily recover

it" got a score of 1,576 with a percentage of 82.30% which falls into the high category. That is, this question item is said to be high.

b. The statement item "I can easily change the privacy settings of the social networking sites I use the most" received a score of 1,586 with a percentage of 82.82% which falls into the high category. That is, this question item is said to be high.
c. The statement item "I can use chat rooms easily on the internet" received a score of 1,473 with a percentage of 76.92% which is in the high category. That is, this question item is said to be high.
d. The statement item "I now feel more confident about using a computer to write an essay" received a score of 1,469 with a percentage of 76.71% which is in the high category. That is, this question item is said to be high.
e. The statement item "I am really aware of the consequences of my actions on the Internet" received a score of 1,439 with a percentage of 75.14% which is in the high category. That is, this question item is said to be high.

From the table and description, a recapitulation of 3 dimensions contained in the work discipline variables is obtained, namely:

Table 3. Percentage of ICT Self-Efficacy Level Assessment Recapitulation

It	Dimension	Percentage	Category
1.	*Privacy and Safety*	82,5%	Tall
2.	*Communication*	76,92%	Tall
3.	*Differentiation and Learning*	75,92%	Tall
Average		78,4%	Tall

From the data, we can see that the Privacy and Safety dimension is ranked highest with a percentage of 82.5%, categorized as high. Then, the Communication dimension is ranked second with a percentage of 76.92%, also categorized as high. And the dimension with the lowest percentage is Differentiation and Learning, with a percentage of 75.92% with a high category as well. If we add the percentages of the three dimensions, we get an average percentage score of 78.4%, then the ICT Self-efficacy variable has a high level.

2) Descriptive statistical analysis of Entrepreneurial Learning variables

To find out the level of Entrepreneurial Learning in this study, there are three dimensions that are the benchmark for its measure, namely Personal Data, Education and Experiences and Entrepreneurial and Knowledge.

Table 4. Entrepreneurial Learning Level

It	Revelation	Valuation					Score	Ideal Score	%	Category
		STS	TS	KS	S	SS				
Personal Data										
1	I keep updating my knowledge of entrepreneurship	25	20	20	159	158	1.551	1.915	80,99	Tall
TOTAL							1.551	1.915	80,99	Tall
Education and Experiences										
2	I now feel more confident about using a computer to write essays.	19	25	9	183	146	1.558	1.915	81,36	Tall
3	I am fully aware of the consequences of my actions on the Internet	43	52	27	151	109	1.377	1.915	71,91	Tall

	TOTAL						2.935	3.830	76,63	Tall
Entrepreneurial Knowledge										
4	Entrepreneurial Learning has allowed me to identify opportunities related to business	25	37	37	152	131	1.473	1.915	76,92	Tall
5	Entrepreneurship contributes to economic development	30	35	37	140	140	1.471	1.915	76,81	Tall
	TOTAL						2.944	3.830	76,86	Tall

Based on the calculation of the table of respondents' responses to the Entrepreneurial Learning variable, the results of the analysis are as follows:

a. The statement item "I am constantly updating my knowledge about entrepreneurship" received a score of 1,551 with a percentage of 80.99% which is included in the high category. That is, this question item is said to be high.
b. The statement item "I now feel more confident in using a computer to write an essay" received a score of 1,558 with a percentage of 81.36% which falls into the high category. That is, this question item is said to be high.
c. The statement item "I am really aware of the consequences of my actions on the Internet" received a score of 1,377 with a percentage of 71.91% which is included in the high category. That is, this question item is said to be high.
d. The statement item "Entrepreneurial Learning has enabled me to identify opportunities related to business" received a score of 1,473 with a percentage of 76.92% which is in the high category. That is, this question item is said to be high.
e. The statement item "Entrepreneurship contributes to economic development" received a score of 1,471 with a percentage of 76.81% which is included in the high category. That is, this question item is said to be high.

From the table and description, a recapitulation of 3 dimensions contained in the work discipline variables is obtained, namely:

Table 5. Percentage of Recapitulation of Entrepreneurial Learning Level

It	Dimension	Percentage	Category
1.	*Personal Data*	80,99%	Tall
2.	*Education and Experiences*	76,63%	Tall
3.	*Entrepreneurial Knowledge*	76,86%	Tall
Average		78,6%	Tall

From the data, we can see that the Personal Data dimension is ranked highest with a percentage of 80.99%, categorized as high. Then, the Entrepreneurial Knowledge dimension is ranked second with a percentage of 76.63%, also categorized as high. And the dimension with the lowest percentage is Education and Experiences, with a percentage of 76.86% with a high category as well. If we add the percentages of the three dimensions, we get an average percentage score of 78.6%, then the Entrepreneurial Learning variable has a high level.

3) Descriptive statistical analysis of Technopreneurial Intention variables

To find out the level of Technopreneurial Intention in this study, there are three dimensions that are the measure of Perceived Desiribility, Attitude and Innate Innovativeness

Table 6. Technopreneurial Intention Level

It	Revelation	Valuation					Score	Ideal Score	%	Category
		STS	TS	KS	S	SS				
Perceived Desiribility										
1	I'm ready to do anything to become a *technopreneur*	22	29	39	166	126	1.491	1.915	77,86	Tall
2	My goal is to become a *technopreneur*	23	22	33	156	148	1.530	1.915	79,9	Tall
TOTAL							3.021	3.830	78,88	Tall
Attitude										
3	I will make every effort to start and run my own technology-based company.	17	33	42	151	139	1.508	1.915	78,75	Tall
TOTAL							1.508	1.915	78,75	Tall
Innate Innovativeness										
4	I was able to see business opportunities to develop technology in the future	23	27	34	156	142	1.513	1.915	79,01	Tall
5	I have a good education to increase my desire to start a technology-based business one day.	31	27	42	150	132	1.471	1.915	76,81	Tall
TOTAL							2.984	3.830	77,91	Tall

Based on the calculation of the table of respondents' responses to the Technopreneurial Intention variable, the results of the analysis were obtained as follows:

a. The statement item "I am ready to do anything to become a technopreneur" received a score of 1,491 with a percentage of 77.86% which is included in the high category. That is, this question item is said to be high.
b. The statement item "My goal is to become a technopreneur" received a score of 1,530 with a percentage of 79.9% which is included in the high category. That is, this question item is said to be high.
c. The statement item "I will make every effort to start and run my own technology-based company" received a score of 1,508 with a percentage of 78.75% which is in the high category. That is, this question item is said to be high.
d. The statement item "I am able to see business opportunities to develop technology in the future" received a score of 1,513 with a percentage of 79.01% which is in the high category. That is, this question item is said to be high.
e. The statement item "I have a good education to increase my desire to start a technology-based business one day." received a score of 1,471 with a percentage of 76.81% which was included in the high category. That is, this question item is said to be high.

From the table and description, a recapitulation of 3 dimensions contained in the work discipline variables is obtained, namely:

Table 7. Percentage of Technopreneurial Intention Level Recapitulation

It	Dimension	Percentage	Category
1.	*Perceived Desiribility*	78,88%	Tall
2.	*Attitude*	78,75%	Tall
3.	*Innate Innovativeness*	77,91%	Tall
Average		78,5%	Tall

From the data, we can see that the Perceived Desiribility dimension is ranked highest with a percentage of 78.88%, categorized as high. Then, the Attitude dimension is ranked second with a percentage of 78.75%, also categorized as high. And the dimension with the lowest percentage is Innate Innovativeness, with a percentage of 77.91% with a high category as well. If we add up the percentages of the three dimensions, we get an average percentage value of 78.5%, then the Technopreneurial Intention variable has a high level.

4) Hypothesis Testing

This test was carried out to measure the level of significance of each independent variable to the dependent variable. The hypothesis test pays attention to the P-value value of the calculation results on the Smart PLS using the bootstrapping method which will get the results of the T-Statistic and the P-value.

The value of P itself has a role to know whether or not there is significance to a hypothesis. This is shown in the P-value if < 0.05, then the variable has a significant effect, while if the P-value shows a value of > 0.05, then the result is the opposite of the previous one. The results of the hypothesis testing can be seen in the table below;

Table 8. Results of Hypothesis Testing

H	Hypothesis	Original Sample (O)	T Statistics (|O/STDEV|)	P *Values*	Information
H1	*ICTSE -> EL*	0.606	12.073	0.000	Accepted
H2	*ICTSE -> IT*	0.651	14.220	0.000	Accepted
H3	*EL* -IT >	0.224	5.101	0.000	Accepted

Based on the table above, all the hypotheses that have been carried out are acceptable. This is because the results obtained are in accordance with the criteria that have been set. Therefore, if a student has good ICT Self-efficacy and Entrepreneurial Learning, it is likely that the student will have the intention to be technopreneurship.

In this test, the variable that has the greatest influence on creating the intention to become an entrepreneur in the field of technology (technopreneur) is ICTSE. This can happen because understanding yourself about something that the individual wants to do, will be important in becoming a technopreneur. After that, the individual begins to have experience in entrepreneurship in the form of Entrepreneurial Learning. This will attract the interest of a student to try to build a business in the field of technology and become a technopreneur.

Discussion of Research Results

This study aims to determine the influence of ICT Self-efficacy and Entrepreneurial Learning on Technopreneurial Intention among engineering students in the city of Bandung. So, there are 3 hypotheses to measure how much influence of these variables is analyzed using the SEM-PLS method, using 382 respondents.

After all stages of testing have been carried out, it is necessary to discuss the results of the study to find out the hypotheses accepted and rejected in this study. The following are the results of the discussion in this study:

1. Characteristics of Respondents

Based on the results of the study, there were 382 respondents who were sampled in this study. The results of the survey have a majority of male respondents as many as 258 respondents with a percentage of 67.5%, with an age range of 22-26 years as many as 340 respondents with a percentage of 89%. The majority of respondents were domiciled in the city of Bandung with a percentage of 100% with 382 respondents. Their educational background is engineering students, and the majority come from Telkom University with 238 respondents at a percentage of 62.3%, and have knowledge of entrepreneurship or technopreneurship.

2. Hypothesis One (H1)

In the results of this study, tests were carried out using the help of the SmartPLS v.3.2.9 application, and the results for the ICT Self-efficacy variable had a positive and significant influence on Entrepreneurial Learning. From the testing of the structural model or inner model, it was found that ICT Self-efficacy has a positive and significant influence on the Entrepreneurial Learning of engineering students. This can be seen from the results of path coefficients which have a positive value of 0.606. These results indicate that there is a strong relationship between Self-efficacy and Entrepreneurial Learning, which means that every factor identified as a student's confidence in the use of ICT devices will have an effect or positive impact on improving the Entrepreneurial Learning of engineering students.

Furthermore, the discussion of significance using two assessment parameters, namely t statistics and p-value. In the calculation results, it was found that the t-statistics value was 12,073 which was greater than the minimum requirement of 1.96 and the p-value value in the relationship between the ICT Self-efficacy variable and Entrepreneurial Learning was 0.000 which means that it has met the requirements with a maximum value or must be less than 0.05. This concludes that there is a significant positive influence on the relationship of the ICT Self-efficacy variable to the Entrepreneurial Learning variable, so that the H1 hypothesis is accepted and H01 is rejected. Therefore, the ICT Self-efficacy factor can increase Entrepreneurial Learning in engineering students.

These results show that ICTSE has the greatest influence with the positive and significant relationship given to the Entrepreneurial Learning variable. This result is in line with previous research which also produced a positive and significant relationship between these two variables (Belmonte, et al., 2022). As the impact of ICTSE on Entrepreneurial Learning is quite strong requires universities to provide more effective and targeted entrepreneurship training and education, and to do so, educators can involve involving students in various occasions such as on case studies, formulating business plans, etc.

In its application, in studying a business in the field of technology, you must have knowledge about technology. The entrepreneur must master the systematics and use of the technology in order to learn how to build a company from this field. Therefore, the greater the value of the path coefficient that the ICTSE variable has, it will be very helpful in understanding Entrepreneurial Learning.

From the results of the analysis carried out, engineering students have a higher chance to have creative skills and also understand practical theory rather than entrepreneurship if they are assisted by their belief in the ability to use good ICT devices. Engineering students can more easily learn every element of entrepreneurship with the help of existing technological devices. This dimension has a considerable impact on the level of entrepreneurship learning for students.

3. Hypothesis Two (H2)

Furthermore, in the results of this study, tests were carried out for the ICT Self-efficacy variable which has a positive and significant influence on Technopreneurial Intention. The ICT Self-efficacy variable has a positive and significant influence on the Technopreneurial Intention of engineering students. This is seen from the results of path coefficients which have a positive value of 0.651. These results indicate that there is a strong relationship between Self-efficacy and Technopreneurial Intention, which means that every factor identified as a student's confidence in the use of ICT devices will affect students' interest in the world of technopreneur.

The discussion of significance uses two assessment parameters, namely t-statistics and p-value. In the calculation results, it was found that the t-statistics value was 14,220 which was greater than the minimum requirement of 1.96 and the p-value in the relationship between the ICT Self-efficacy variable and Technopreneurial Intention was 0.000 which means that it has met the requirements with the maximum value or must be less than 0.05. This concludes that there is a significant positive influence on the relationship of the ICT Self-efficacy variable to the Technopreneurial Intention variable, so that the H2 hypothesis is accepted and H02 is rejected. Therefore, the ICT Self-efficacy factor can increase Technopreneurial Intention in engineering students.

This study also produced similar findings to Belmonte et al (2022). This result also highlights the development of regulations in each university that must be made on the basis for the purpose of producing technopreneurs who are not only able to compete on a national scale but also internationally. As a concrete form, universities may be able to design a program that allows students to directly enter the business world, for example by holding internships at technology-based business companies, providing opportunities for students to collaborate on business projects, or even presenting experts as speakers (Mahfuz et al, 2012).

4. Hypothesis Three (H3)

From the testing of the structural model or inner model, it was found that Entrepreneurial Learning has a positive and significant influence on the Technopreneurial Intention of engineering students. This can be seen from the results of path coefficients which have a positive value of 0.224. These results indicate that there is a strong relationship between Entrepreneurial Learning and Technopreneurial Intention, which means that every factor identified as student learning related to entrepreneurial practices will have an influence or positive impact on improving the Technopreneurial Intention of engineering students.

Furthermore, the discussion of significance using two assessment parameters, namely t statistics and p-value. In the calculation results, it was found that the t-statistics value was 5,101 which was greater than the minimum requirement of 1.96 and the p-value value in the relationship between the Entrepreneurial Learning variable and Technopreneurial Intention was 0.000 which means that it has met the requirements with a maximum value or must be less than 0.05. This concludes that there is a significant positive influence on the relationship of the Entrepreneurial Learning variable to the Technopreneurial Intention variable, so that the H3 hypothesis is accepted and H03 is rejected. Therefore, the Entrepreneurial Learning factor can increase Technopreneurial Intention in engineering students.

The findings in this study are in line with the results of Mahfuz et al's (2012) research and also with the support of some evidence that activities such as new product development projects, market research, business presentations and exhibitions, and business planning are important in influencing a student's intention to be involved in entrepreneurial activities, especially the encouragement to become a technopreneur.

This result is also similar to research conducted by Sudarwati & Chalimah (2022), entrepreneurial learning is the ability to learn through experience, the use of pelung, and understanding theories related to the implementation of entrepreneurship. The implications of this result make a student have the opportunity to develop knowledge to become a technopreneur through experiences that are reflected into action.

Technopreneurship requires other advantages besides technology to realize the ability in technology-based entrepreneurial practices. These competencies are creativity and innovation that can be obtained from learning to support the development of the required skills. Therefore, the above discussion is the right implication for this study to provide an overview of the influence of Entrepreneurial Learning on Technopreneurial Intention.

CONCLUSION

In a study conducted on the influence of ICT Self-efficacy and Entrepreneurial Learning on the Technopreneurship Intention of students in the city of Bandung, several findings were found, including:

a) ICT Self-efficacy has a positive and significant influence on Entrepreneurial Learning in engineering students in the city of Bandung.
b) ICT Self-efficacy has a positive and significant influence on Technopreneurship Intention in engineering students in the city of Bandung.
c) Entrepreneurial Learning has a positive and significant influence on Technopreneurship Intention in engineering students in the city of Bandung.

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