Technopreneur Intention in Developing Technopreneur Behaviour: Case of Entrepreneurship Learning and Digital

Imami Arum Tri Rahayu, Eko Hariadi, Ratna Suhartini, Lutfiyah Hidayati

Universitas Negeri Surabaya, Indonesia
Email: imamirahayu@unesa.ac.id

Abstract

Technopreneur intention describes the desire to combine entrepreneurship and ICT in business practices. This research aims to understand the factors that shape technopreneur attitudes and behavior among Fashion Design Vocational School students through Technopreneur intention. This research uses a qualitative model with an ex post facto type of research, which aims to find the causes of changes in behavior, symptoms or phenomena caused by an event. This research involved 396 vocational school students of the Fashion Design Skills program in the 2022/2023 academic year in East Java, Indonesia. The research sample was determined using the Slovin formula with a margin of error of 5%. The data in the research was obtained by giving tests and questionnaires to students. The data in the research were analyzed using the SEM-PLS model. The research results show that understanding the factors that shape technopreneur attitudes and behavior among Fashion Design Vocational School students is very important in developing technopreneur intentions. Understanding the factors that shape technopreneurial attitudes and behavior helps develop technopreneurial intentions and contributes to creating an educational ecosystem that supports innovation, creativity and technological entrepreneurship.

Keywords: HTechnopreneur Intention, Technopreneur Behaviour, Entrepreneurship Learning, Digital ICT, Vocational Schools.

The entrepreneurial industry and information technology (ICT) are two critical elements in facing the era of Industrial Revolution 4.0. Among vocational school students. Understanding and integration between entrepreneurial learning and ICT significantly impact the formation of technopreneur behavior. Information and technology positively influence technopreneurship (Purwati & Hamzah, 2022; Surjandy & Meyliana, 2023). Technopreneur intention (the intention to become a technopreneur) emerged as an important factor influencing whether students will adopt technopreneur behavior. It is important to understand the motivations and barriers students face when pursuing a career in technopreneurship (Soomro & Shah, 2021).

The importance of entrepreneurship and ICT learning lies in forming students with entrepreneurial spirit and technological competence. This situation encourages students to use technology, especially social media, to start a business or become technopreneurs (Surjandy & Meyliana, 2023). Entrepreneurship learning involves students in developing business skills, market understanding, and managerial abilities. Meanwhile, ICT learning equips them with knowledge about technology,

data analysis and digital skills. Educational institutions should provide vocational educators with training and retraining on using new technological tools for proper integration in teaching and learning (Anorue et al., 2023). Capabilities are constantly evolving and progressive in nature, digital entrepreneurship must consider the specifics and challenges at each stage (Damasceno et al., 2023). Academic entrepreneurship as a channel for disseminating knowledge to the market is greatly influenced by digital technology (Huang et al., 2024).

The role of Fashion Design Vocational Schools in preparing students to become technopreneurs is increasingly being paid attention to, considering the dynamics of the fashion market, which is increasingly influenced by technology. The emergence of technopreneurship in students faces challenges in developing competent and versatile technopreneurs (Belmonte et al., 2022). Students' competencies include technical skills, decision-making, organization, marketing and financial management, risk-taking, creativity and innovation (Sari et al., 2024). The growth of entrepreneurship is still limited, and the results are less than satisfactory among students (Belmonte & Lira, 2023). In the era of globalization, the success of technopreneurship is measured by the extent to which a person can combine entrepreneurial knowledge and ICT skills in forming innovation and increasing industrial competitiveness. Students who are familiar with digital media can contribute to the development of entrepreneurial skills (Agung & Mashuri, 2022).

Technopreneur intention describes students' desire to combine entrepreneurship and ICT in business practice, being key in encouraging behavioral change towards technopreneurship. Respondents' technopreneurial intentions can be influenced by attitudes towards using social media, self-efficacy and perceptions of the people around them (Shamsuddin & Mohd, 2018). In addition, further understanding of the interactions between entrepreneurial learning and ICT can provide valuable insights for educational institutions, curriculum developers, and industry stakeholders. The success of technopreneurship depends not only on individual understanding but also on the education system's readiness to create an environment that supports the development of entrepreneurial and ICT competencies. Business development cannot be separated from and must be based on ICT technology (Bărbulescu et al., 2021). The role of ICT technology has been tested in various contexts, and it has succeeded in transforming the way of doing business (Shukla et al., 2021).

A deep understanding of how entrepreneurial learning and ICT can impact students' technopreneurial behavior is essential. ICT can influence technopreneurial intentions (Loon Koe et al., 2021). The integration between entrepreneurial orientation and the technopreneur concept will produce competent graduates who have technological knowledge enhanced with entrepreneurial abilities (Purnama et al., 2023). In the digital economy era, higher demands are placed on versatile talents, and the development of students with innovative and entrepreneurial abilities has become an important issue for the further development of higher education (Feng et al., 2023). So, it is necessary to analyze the influence of entrepreneurial learning and ICT on technopreneur behavior through technopreneur intention. This research aims to contribute to understanding the factors that shape technopreneur attitudes and behavior among Fashion Design Vocational School students through Technopreneur intention. Thus, this research will provide in-depth insight into the factors that influence the technopreneur behaviour of vocational school students. This behavior is influenced by entrepreneurial learning and ICT, which focus on the role of technopreneur intention as an important intermediary in the learning process.

The combination of entrepreneurship education and digital ICT integration can

influence students' intentions and behavior to become technopreneurs in the fashion industry. This may involve examining the curriculum, teaching methodology, availability of resources, and the overall educational ecosystem that supports the development of technopreneurial skills among students. By understanding the link between entrepreneurial learning, digital ICT integration, and the fashion industry, this research can provide valuable insights and recommendations for increasing the effectiveness of vocational education in cultivating technopreneurs. This, in turn, can contribute to economic growth, innovation and job creation in the fashion sector. Based on the research objectives developed, the hypothesis development is as follows.

H1: Entrepreneurship has a significant positive direct effect on the technopreneur intention of vocational school students

H2: ICT has a significant positive direct effect on the technopreneur intention of vocational school students

H3: Entrepreneurial ability has a significant positive direct effect on the technopreneur behavior of vocational school students

H4: ICT skills have a significant positive direct effect on the technopreneur behavior of vocational school students

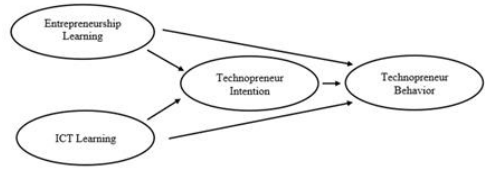
H5: Technopreneurship intention has a significant positive direct effect on the technopreneur behavior of vocational school students. The entrepreneurial ability has a significant positive indirect effect on technopreneur behavior through technopreneur intention of vocational school students.

H7: ICT skills have a significant positive indirect effect on technopreneurship behavior through vocational school students' technopreneurship intentions.

Method

Research Design

This type of ex post facto research aims to find the causes that allow changes in behavior, symptoms or phenomena caused by an event. This model is used because it can explain the behavior that causes changes in the independent variables. The relationship between variables in the research can be seen in Figure 1.



Population and Sample

This research involved vocational school students of the Fashion Design Skills program in the 2022/2023 academic year in East Java, Indonesia, from August to November 2023. The research population was 43,940 vocational school students (Kementerian Pendidikan, Kebudayaan, 2022). The research sample was determined using the Slovin formula with a margin of error of 5%. Sample calculation is as follows:

$$S = \frac{N}{1 + Ne2} = \frac{43{,}940}{1 + 43{,}940\ (0.05)2} = \frac{43{,}940}{110.85} = 396.39 = 396 \quad (1)$$

Sample distribution data by school can be seen in Table 1.

Table 1. Sample distribution by school and region

No	Regency	School Name	Student
1	Sumenep Regency	SMK N 1 Sumenep	20
		SMK N 1 Sumenep	20
2	Magetan Regency	SMK N 2 Magetan	20
3	Mojokerto Regency	SMK N 1 Jatirejo	20
4	Bojonegoro Regency	SMK N Margomulyo Bojonegoro	20
		SMKN Margomulyo	20
5	Sidoarjo Regency	SMK YPM 2 taman	20

6	Situbondo Regency	SMK N 1 Banyuputih	20
7	Lumajang Regency	SMK N Rowokangkung	20
		SMK N 2 Lumajang	20
8	Malang Regency	SMK Terpadu Al Ishlahiyah Singosari	16
9	Malang City	SMK N 3 Malang	20
10	Jombang	SMK N 2 Jombang	20
11	Lamongan	SMK N 1 Sarirejo	20
12	Tuban	SMK Sunnatunnur	20
13	Surabaya Regency	SMK N 8 Surabaya	20
14	Pasuruan Regency	SMK Negeri Puspo Pasuruan	20
15	Probolinggo Regency	SMK N 3 Probolinggo	20
16	Ngawi Regency	SMK N 1 Kasreman Ngawi	20
17	Pacitan Regency	SMK N 3 Pacitan	20
	Total		396

Data Collection

The data in the research was obtained by giving tests and questionnaires to students. The test was carried out to obtain data on entrepreneurship learning, ICT learning, and Technopreneurship behavior from students. A questionnaire was used to obtain data on the Technopreneurship Intention variable. The instruments used in the research can be seen in Table 2.

Table 2. Research instrument variables and indicators

No	Variable	Dimension	Indicator
1	Technopreneur Behavior	1. Business Plan	Company Logo, key partners, Key activities, Value proportions, Customer relationship, Channels, Customer segments, Cost structure, Revenue sources
		2. Marketing	Product Description, Price, Promotion, Marketing Place
		3. Innovation	Desain Prototype, Desain Production I, Desain Production II
2	Technopreneurship Intention	Factor Intrinsic	Feeling happy, Interest, Attention, Involvement
3	Entrepreneur Learning	1. Knowledge	Computer logic and algorithms, Evaluate the paragraph, Logic and data calculation operations, Creating effective presentation slides, Search engine searches, E-commerce
		2. Skill	Product planning, create promotional media, Determine Break Even Point (BEP) and business profits
4	Digital Literacy Learning	1. Knowledge	Computer logic and algorithms, Evaluate the paragraph, Logic and data calculation operations, Creating effective presentation slides. Search engine searches, E-commerce
		2. Skill	Rearrange word-processing document formats, operate number processing software, Create slides for presentations

Data analysis

1. Validity

Content validity was carried out using CVR. CVR, or content validity ratio, is a validation test of the contents of a measuring instrument. After going through the CVR test, not all items will be declared to have passed. Several items that passed and were tested in the field will be explained in the discussion later. A positive CVR indicates that at least half of the validators agree on the item's necessity for the construct. The minimum value for CVR is 0.3.

2. Reliability

The item-total correlation score of items considered good is ≥ 0.2 (Cristobal et al., 2007). The generally accepted rule is that an alpha of 0.6-0.7 indicates an acceptable level of reliability, and 0.8 or greater is an excellent level. However, a value higher than 0.95 is not necessarily good because it may indicate redundancy.

3. Fit-Item Analysis

After carrying out the test, the researcher analysed the respondents using item response theory (IRT) with Rasch modelling. The infit mean square (IMS) and outfit meansquare

(OMS) values are used as a reference in measuring research instruments. The results of the fit-item test can be seen in Table 3.

Table 3. Mean square values and their implications for measurement

No	Value Mean square	Implications for measurement
1	> 2.0	Tampering with measurements
2	1.5 – 2.0	Not useful for measurement but not detrimental
3	0.5 – 1.5	Useful for measurements
4	< 0.5	Not useful for measurement but not detrimental

4. Hypothesis testing

Research hypothesis testing was carried out using the Structural Equation Model (SEM) approach. The SEM model is used to test the relationship between variables, indicators and their constructs, or the relationship between them.

Results

Instrument Content Validity

Five validators are from various fields of expertise (Vocational Field, Information Engineering, Indonesian Language, Fashion Design and Entrepreneurship). The CVR test results from the Validator can be seen in Table 4.

Table 4. Instrument CVR Values

No	Instrument	Number of Items	CVR	
			Min	Max
1	Technopreneur Behavior	16	1	1
2	Entrepreneur Learning	50	1	1
3	Digital Literacy Learning	50	0.8	1

Three instruments have been content validated, resulting in a CVR assessment with a minimum value of 0.8 and a maximum value of 1. The minimum value for CVR is 0.3, proving that each item in the nine instruments can be used to measure constructs in research.

Item-Total Correlation and Reliability

Item-total correlation and reliability for the questionnaire were calculated using the Cronbach alpha formula, while item-total correlation and reliability for the test were obtained using the KR20 formula. The results of the item-total correlation and test reliability of the instrument are shown in Table 5.

Table 5 Item-Total Instrument Trial Correlations

No	instrument	Number of Items	Item-Total Correlation	Reliabilities	No. Items That Do Not Criteria
1	Technopreneur Behavior	16	0.24 – 0.69	0.7769	i15
3	Entrepreneur Learning	50	0 – 0.87	0.9044	i4, i5, i6, i7, i8, i11, i20, i27, i29, i32, i33, i37, i38, i40, i43
4	Digital Literacy Learning	50	0 – 0.3	0.9183	i1, i5, i6, i8, i17, i24, i25, i27, i33, i35, i44, i46, i48

The results show that the reliability values for all instruments tested have exceeded the minimum limit of 0.2, but several items have item-total correlation values below the criteria.

Analysis Fit-Item

Fit-item analysis was carried out on test instruments and questionnaires using the Rasch Model with the help of ConQuest software. Values that are useful in the fit-item analysis are the outfit value (unweighted MNSQ) and the infit value (weighted MNSQ) are 0.5 – 1.5. Outfit and infit analysis results for each instrument category can be seen in Table 6.

Table 6 Results of OMS and IMS Instrument Trials

No	Instrument	Number of Items	OMS	IMS	No. Items That Do Not Criteria
1	Technopreneur Behavior	16	0.33 – 2.23	0.37 -2.21	i1, i10, i12, i15
2	Entrepreneur Learning	50	0 – 5.69	0 – 1.7	i4, i5, i11, i33, i38, i40, i43, i48, i50
3	Digital Literacy Learning	50	0 – 5.62	0 – 1.47	i8, i46

Based on content validity tests, item-total correlation and reliability, and fit analysis, several items did not meet the CVR, total correlation, OMS, and IMS criteria, so these items had to be discarded. Thus, it can be concluded that all items can be maintained and used as research instruments.

Table 7. Validates convergent

Laten Construct	Entrepreneur Learning	ICT Learning	Technopreneur Behavior	Technopreneur Intention
Canva Business Models			0.964	
Prototype Products			0.955	
Marketing Plan			0.958	
Entrepreneur Knowledge	0.931			
Entrepreneur Skills	0.935			
ICT Knowledge		0.944		
ICT Skills		0.939		
Involvement				0.938
Interest				0.935
Feeling Happy				0.933
Attention				0.941

Based on Table 7, all indicators get values above 0.7. This shows that all indicators have met the required validity criteria.

Construct Reliability and Validity

Table 8. Construct Reliability and Validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Entrepreneur Learning	0.852	0.852	0.931	0.871
ICT Learning	0.872	0.873	0.940	0.886
Technopreneur Behavior	0.956	0.957	0.972	0.919
Technopreneur Intention	0.953	0.954	0.966	0.878

Table 8 shows that all variables' AVE values are 0.871 -0.919. Construct AVE value > 0.5. It was concluded that in this study, all variables met validity standards, so they were declared valid instruments. The greater the AVE value, the higher the ability to explain the value of the indicators that measure the variable (Ghozali, 2014).

Discriminant Validity

Table 9. Discriminant Validity

Instrument	EL	ICT L	TB	TI
Entrepreneur Learning (EL)	0.933			
ICT Learning (ICT L)	0.762	0.941		
Technopreneur Behavior (TB)	0.844	0.823	0.959	
Technopreneur Intention (TI)	0.793	0.780	0.903	0.937

The Fornell-Larcker Criterion method compares the squared value of each variable's Average Variance Extracted (AVE) with the correlation between other variables (Henseler et al., 2015). Suppose the square root value of the AVE for each variable is greater than the correlation between the variable and other variables in the model. In that case, the model is said to have good discriminant validity (Wong, 2013). Table 9 shows that the square root value of the variable AVE is greater than the variable coefficient with other variables. It can be concluded that the variable values in this PLS model have met the requirements for discriminant validity.

Cross Loadings

Table 10. Cross Loading

Cross Loadings	Entrepreneur Learning	ICT Learning	Technopreneur Behavior	Technopreneur Intention
Entrepreneur Knowledge	0.931	0.712	0.773	0.732
Entrepreneur Skills	0.935	0.710	0.801	0.748
ICT Knowledge	0.737	0.944	0.789	0.751
ICT Skills	0.697	0.939	0.760	0.717
Canva Business Models	0.838	0.841	0.964	0.889
Prototype Products	0.803	0.751	0.955	0.859
Marketing Plan	0.785	0.773	0.958	0.849
Involvement	0.770	0.743	0.860	0.938
Interest	0.730	0.750	0.847	0.935
Feeling Happy	0.748	0.725	0.852	0.933
Attention	0.723	0.702	0.823	0.941

The cross-loading value of each variable is evaluated to ensure that the variable's correlation with the measurement item is greater than other variables. High cross-loadings can indicate discriminant validity problems, indicating that the indicator does not differentiate between variables. Each indicator has the highest loading on the measured variable and lower on other variables to meet the requirements for discriminant validity (Hair et al., 2021). The Cross loadings value is expected to be greater than 0.7 (Ghozali & Latan, 2015).

Reliability

Table 11. Reliability Test

No	Instrument	Cronbach's Alpha
1	Entrepreneur Learning	0.852
2	ICT Learning	0.872
3	Technopreneur Behavior	0.956
4	Technopreneur Intention	0.953

In the reliability test, researchers use Cronbach's Alpha, which must be greater than 0.7. The table above shows that the Cronbach's Alpha value for each variable is more than 0.7, so it can be concluded that all variables are said to be reliable.

Hypothesis test

Table 12. Hypothesis Test Results

Hipotesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
H1	0.264: 26,4%	0.263	0.035	7.640	0.000
H2	0.475	0.472	0.048	9.977	0.000
H3	0.207	0.209	0.035	5.966	0.000
H4	0.418	0.420	0.047	8.856	0.000
H5	0.532	0.531	0.040	13.297	0.000
H6	0.253	0.251	0.032	7.788	0.000
H7	0.222	0.223	0.030	7.435	0.000

Note: if the p-value is 0 then the impact is positive

R-Square dan F-Square

Table 13. R-Square and F-Square

No	Test	Instrument	Value
1	R-Square	Technopreneur Behavior	0.874
		Technopreneur Intention	0.702
2	F-Square	Entrepreneur Learning => Technopreneur Behavior	0.176
		Entrepreneur Learning => Technopreneur Intention	0.318
		ICT Learning=> Technopreneur Behavior	0.114
		ICT Learning=> Technopreneur Intention	0.246
		Technopreneur Intention => Technopreneur Behavior	0.668

In the table above, the R-Square value of technopreneur behavior is 0.874, illustrating that the variables of entrepreneurial learning, ICT learning and technopreneur intention correlate or contribute to explaining the variable of technopreneur behavior by 87.4%. Technopreneur Intention has a value of 0.702, illustrating that the entrepreneurial learning and ICT learning variables correlate or contribute to explaining the technopreneur intention variable by 70.2%. The F-square value of entrepreneurial learning has a partial effect of 17.6% on technopreneur behavior, ICT learning has a partial impact of 11.4% on technopreneur behavior, and technopreneurship intention has a partial effect of 66.8% on technopreneur behavior. Meanwhile, the f-square value of entrepreneurial learning has a partial effect of 31.8% on technopreneurship intention, and ICT learning has a partial effect of 24.6% on technopreneurship intention.

Discussion

Entrepreneurial ability has a direct and significant positive effect on technopreneur intention. This shows that the better the entrepreneurial ability, the better the student's technopreneur intention. Increasing entrepreneurial capabilities through education and training programs can increase the likelihood of students pursuing a technopreneur-ship as a career path. In addition, various factors that influence technopreneur behavior are technical skills, entrepreneurial mindset, and behavior in navigating technopreneurship successfully. Teachers and schools can develop an entrepreneurial spirit by regularly monitoring and evaluating students (Mujtahid et al., 2023). These findings underscore the need for targeted interventions and support systems to foster and develop technopreneurial abilities among vocational school students in fashion modelling skills programs.

ICT learning ability has a direct and significant positive effect on technopreneur intention. This shows that the better the ICT learning, the better the technopreneur intention of Vocational School Students in the Fashion Skills Program. Students with internet skills will have greater confidence in their technological and entrepreneurial abilities (Agung & Mashuri, 2022). Therefore, it is recommended that policymakers increase investment in ICT learning in vocational high schools, especially in fashion design skills programs. Apart from that, there is a need for supporting programs and targeted support systems to help students develop their technopreneurial abilities. Thus, it can be expected that the number of successful technopreneurs from the Fashion Design skills program in East Java will increase through the formation of skills and educational activities of Creativity, Innovation and Entrepreneurship as a teaching strategy to foster students' entrepreneurial mindset and behavior (Chou et al., 2023).

Entrepreneurial learning abilities have a direct and significant positive effect on technopreneur behavior. The better the entrepreneurship learning, the better the technopreneur behavior of Vocational School Students in the Fashion Skills Program. Entrepreneurial activities and entrepreneurial abilities can impact students' abilities (Hua et al.,

2022). Thus, schools and governments need to improve curriculum and training programs that encourage the development of entrepreneurial and technological skills. Curriculum. School entrepreneurship education curricula must be adjusted based on the complexity and cultural sensitivity of the antecedents of students' entrepreneurial intentions (Tekic & Tsyrenova, 2024). The right intervention and support can make students more ready and able to compete in the increasingly competitive world of technopreneurship. In the future, it can help create an innovative young generation that can face technological changes better.

Entrepreneurial learning has a direct and significant positive effect on technopreneur behavior. The better the ICT learning, the better the technopreneur behavior of vocational school students. Entrepreneurship education has a positive impact on students' entrepreneurial spirit and entrepreneurial self-efficacy (Doan & Phan, 2020). Students can have the skills and knowledge necessary to develop innovative business ideas and keep up with the latest technological developments. Individuals' altruistic values, ongoing entrepreneurial education, and the belief they have in themselves to achieve their goals (Romero-Colmenares & Reyes-Rodríguez, 2022). Students with a strong tendency towards desire show a high intention to engage in entrepreneurial activities aligned with sustainable development goals (Meslem et al., 2024). So, students have a better chance of succeeding in the business world and can become a driving force for economic growth in the future. A good program can be improved to stimulate students' interest and talent in technopreneurship.

Technopreneurship intention has a direct and significant positive effect on technopreneur behavior. This shows that the better the technopreneurship intentions, the better the technopreneur behavior of vocational school students. With an increase in technopreneurship intentions, it is hoped that students at the Fashion Skills Program Vocational School in East Java will be increasingly motivated to develop creativity and innovation in the businesses they are building. Key factors in developing entrepreneurial attitudes in students include soft-skill development, particularly in creative thinking, risk-taking, problem-solving, and leadership development (Shahin et al., 2021). Building students' entrepreneurial attitudes cannot be separated from elements of behavioral control, subjective norms and entrepreneurial encouragement from schools (Lopes et al., 2023; Malhotra & Kiran, 2024). So, students will be able to create products that are unique and have the potential to be successful. Continuous guidance and support can make a successful entrepreneur who can positively contribute to the economy.

The entrepreneurial ability indirectly positively affects technopreneur behavior through vocational school students' technopreneur intentions. Entrepreneurship education programs at the secondary level must emphasize changing attitudes towards entrepreneurship and increasing self-confidence in their entrepreneurial abilities (Torres-Ortega et al., 2024). Entrepreneurship education support does not directly impact entrepreneurial intentions but has an indirect positive influence mediated by entrepreneurial self-efficacy (Maheshwari & Kha, 2022). Entrepreneurship education directly impacts students' self-efficacy and entrepreneurial intentions (Subhaktiyasa et al., 2024). It is hoped that students will become successful technopreneurs with increased entrepreneurial abilities. This will have a positive impact not only for themselves but also for regional economic growth. Students' high enthusiasm and commitment have great potential to become pioneers of innovation and creativity in industry. We hope that continuous support and coaching can motivate and inspire them to pursue success in the business world.

ICT skills indirectly positively affect technopreneur behavior through the technopreneur intentions of vocational school students in the Fashion Design skills program in

East Java. Continuous support and guidance for vocational school students can optimize their ICT abilities and realize strong technopreneur interests. In this way, students can become a driving force for the fashion industry's growth in Indonesia and play an important role in advancing the economy. Schools must build an entrepreneurial culture so that they can encourage students to become entrepreneurs so that they can influence entrepreneurial intentions (Maheshwari, 2024).

The Technopreneur Intention model in developing Technopreneur Behavior can be seen in Figure 1.

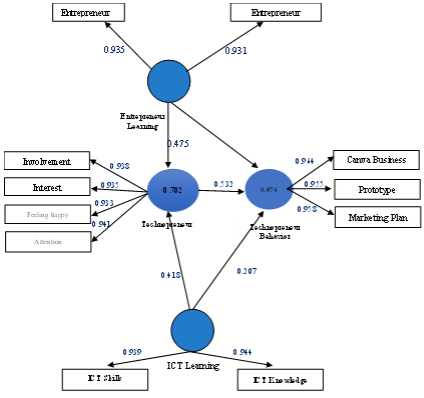


Fig. 2 Model Technopreneur Intention in Developing Technopreneur Behaviour

Conclusion

Understanding the factors that shape technopreneur attitudes and behavior among Fashion Design Vocational School students is very important in developing technopreneur intention. By understanding these factors, schools can design curriculum that suit students' needs and motivate them to engage in technopreneurship. Schools can provide in-depth knowledge of markets and technology, which can help students identify business opportunities and develop innovative products or services. Schools can adapt learning methods such as technology-based projects, collaborative learning, and internships to students' needs and interests to increase learning effectiveness, designing programs that can improve students' practical skills in technology and business, which are important for technopreneurship. Overall, a deep understanding of the factors that shape technopreneurial attitudes and behavior among Fashion Design Vocational School students helps develop technopreneurial intentions and contributes to creating an educational ecosystem that supports innovation, creativity and technological entrepreneurship. In the future, it can produce young technopreneurs who are ready to face the challenges of the world of work and contribute to economic growth. Schools can develop an effective curriculum by integrating factors that influence technopreneurial attitudes and behavior into more relevant and applicable material.

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WORKS CITED

Agung, A. I., & Mashuri, C. (2022). Strategies For Exploring Business Opportunities : Technopreneur In Vocational High School Students. Journal of Positive School Psychology, 6(8), 2662–2668.

Anorue, H. C., Ekuma, J. E., Olinya, T. O., & Nwandu, L. O. (2023). Empowering vocational educators instructional delivery through information and communication technology training in universities. Journal of Education and Learning (EduLearn), 17(4), 555–565. https://doi.org/10.11591/edulearn.v17i4.20311

Bărbulescu, O., Tecău, A. S., Munteanu, D., & Constantin, C. P. (2021). Innovation of Startups, the Key to Unlocking Post-Crisis Sustainable Growth in Romanian Entrepreneurial Ecosystem. Sustainability, 13(2), 671. https://doi.org/10.3390/su13020671

Belmonte, Z. J. A., Cruz, C. S. C., Castro, P. A. P. De, Estoesta, L. A., Mitra, E. J. A., & R Lira, P. E. V. (2022). Factors Influencing Technopreneurial Intention among Undergraduate Engineering Students in the Philippines. Journal of Engineering Education Transformations, 36(1), 148–157. https://doi.org/10.16920/jeet/2022/v36i1/22146

Belmonte, Z. J. A., & Lira, P. E. V. R. (2023). Factors influencing engineering students for choosing techno-entrepreneurship as a career: An implication for better learning. International Journal of Evaluation and Research in Education (IJERE), 12(1), 268. https://doi.org/10.11591/ijere.v12i1.22925

Chou, C.-M., Shen, T.-C., Shen, T.-C., & Shen, C.-H. (2023). The impact of CIE education integrated with the BIG 6 teaching strategy on students' innovative motivation, creativity, metacognition, and self-perceived employability. Thinking Skills and Creativity, 48, 101287. https://doi.org/10.1016/j.tsc.2023.101287

Damasceno, A. L. T., Morini, C., & Junior, E. I. (2023). High digital growth: essential capabilities and the research agenda. International Journal of Entrepreneurship and Innovation Management, 27(5/6), 330–359. https://doi.org/10.1504/IJEIM.2023.136398

Doan, X. T., & Phan, T. T. H. (2020). The impact of entrepreneurial education on entrepreneurial intention: The case of Vietnamese. Management Science Letters, 1787–1796. https://doi.org/10.5267/j.msl.2019.12.040

Feng, X., Wang, X., & Qi, M. (2023). A comparison study on innovation and entrepreneurship education in and out of China from a bibliometric perspective. Library Hi Tech. https://doi.org/10.1108/LHT-06-2022-0313

Ghozali, I., & Latan, H. (2015). Partial Least Squares Konsep Teknik dan Aplikasi dengan Program Smart PLS 3.0. Universitas Diponegoro Semarang.

Hair, J. . F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R. In Practical Assessment, Research and Evaluation (Vol. 21, Issue 1).

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. Journal of the Academy of Marketing Science, 43(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Hua, J., Zheng, K., & Fan, S. (2022). The impact of entrepreneurial activities and college students' entrepreneurial abilities in higher education—A meta-analytic path. Frontiers in Psychology, 13. https://doi.org/10.3389/fpsyg.2022.843978

Huang, Y., Xu, Y., Zhang, J., Long, Z., Qian, Z., Liu, W., & Chen, L. (2024). Research on factors influencing the academic entrepreneurial ability of teachers in the digital age: Evidence from China. Heliyon, 10(2), e24152. https://doi.org/10.1016/j.heliyon.2024.e24152

Loon Koe, W., Krishnan, R., & Alias, N. E. (2021). The Influence of Self-Efficacy and Individual Entrepreneurial Orientation on Technopreneurial Intention among Bumiputra Undergraduate Students. Asian Journal of University Education, 17(4), 490. https://doi.org/10.24191/ajue.v17i4.16196

Lopes, J. M., Suchek, N., & Gomes, S. (2023). The antecedents of sustainability-oriented entrepreneurial intentions: An exploratory study of Angolan higher education students. Journal of Cleaner Production, 391, 136236. https://doi.org/10.1016/j.jclepro.2023.136236

Maheshwari, G. (2024). Influence of culture and personality factors in Vietnam: in view of theory of planned behaviour towards formation of entrepreneurial intentions. International Journal of Innovation Science. https://doi.org/10.1108/IJIS-11-2023-0235

Maheshwari, G., & Kha, K. L. (2022). Investigating the relationship between educational support and entrepreneurial intention in Vietnam: The mediating role of entrepreneurial self-efficacy in the theory of planned behavior. The International Journal of Management Education, 20(2), 100553. https://doi.org/10.1016/j.ijme.2021.100553

Malhotra, S., & Kiran, R. (2024). Integrating Cognitive Competency, Social Competency and Risk Propensity with the Theory of Planned Behaviour to Attain Sustainable-Development-Goal-8-Driven Sustainable Entrepreneurial Intentions. Sustainability, 16(10), 3888. https://doi.org/10.3390/su16103888

Meslem, A., Bouchetara, M., Gahlam, N., Djennadi, L., & Belali, M. (2024). Exploring Entrepreneurial Intention for Sustainable Development: a Study of University Students in Kolea, Algeria. Economics and Culture, 21(1), 46–63. https://doi.org/10.2478/jec-2024-0004

Mujtahid, I. M., Berlian, M., Vebrianto, R., & Thahir, M. (2023). Student entrepreneurial skills in facing ASEAN Economic Community: A case study at Universitas Terbuka, Indonesia. International Journal of Evaluation and Research in Education (IJERE), 12(4), 1844. https://doi.org/10.11591/ijere.v12i4.25653

Purnama, R., Mohd Tajuddin, R., & Mohd. Shariff, S. (2023). Systematic Literature Review of Technopreneur versus Entrepreneur Orientation on Fashion Design Curriculum. Asian Journal of University Education, 19(4), 651–661. https://doi.org/10.24191/ajue.v19i4.24627

Purwati, A. A., & Hamzah, M. L. (2022). Instrument Readiness Analysis of Technology-Based Businesses. Journal of Applied Engineering and Technological Science (JAETS), 4(1), 611–617. https://doi.org/10.37385/jaets.v4i1.1434

Romero-Colmenares, L. M., & Reyes-Rodríguez, J. F. (2022). Sustainable entrepreneurial intentions: Exploration of a model based on the theory of planned behaviour among university students in north-east Colombia. The International Journal of Management Education, 20(2), 100627. https://doi.org/10.1016/j.ijme.2022.100627

Sari, M. N., Harto, S. P., & Muhyadi, M. (2024). Development of entrepreneurship education based on the menara berkah model in Indonesian vocational high schools. Journal of Education and Learning (EduLearn), 18(3), 868–880. https://doi.org/10.11591/edulearn.v18i3.21003

Shahin, M., Ilic, O., Gonsalvez, C., & Whittle, J. (2021). The impact of a STEM-based entrepreneurship program on the entrepreneurial intention of secondary school female students. International Entrepreneurship and Management Journal, 17(4), 1867–1898. https://doi.org/10.1007/s11365-020-00713-7

Shamsuddin, N., & Mohd, F. (2018). Social media and technopreneurial intention: A model based on technopreneur development. Opcion, 34(Special Issue 17), 501–517.

Shukla, A., Kushwah, P., Jain, E., & Sharma, S. K. (2021). Role of ICT in emancipation of digital entrepreneurship among new generation women. Journal of Enterprising Communities: People and Places in the Global Economy, 15(1), 137–154. https://doi.org/10.1108/JEC-04-2020-0071

Soomro, B. A., & Shah, N. (2021). Technopreneurship intention among nonbusiness students: a quantitative assessment. World Journal of Entrepreneurship, Management and Sustainable Development, ahead-of-p(ahead-of-print). https://doi.org/10.1108/WJEMSD-10-2020-0129

Subhaktiyasa, P. G., Sutrisna, I. G. P. A. F., Sumaryani, N. P., & Sunita, N. W. (2024). Entrepreneurial intentions among medical laboratory technology students: effect of education and self-efficacy. Journal of Education and Learning (EduLearn), 18(3), 719–726. https://doi.org/10.11591/edulearn.v18i3.21467

Surjandy, & Meyliana. (2023). Analysis of the Influence of Three Essential Factors of Social Media in Intention To Technopreneur Based on the Entrepreneurial Event Model. ICIC Express Letters, 17(5), 587–594. https://doi.org/10.24507/icicel.17.05.587

Tekic, A., & Tsyrenova, E. (2024). Drivers and constraints of students' entrepreneurial intentions across cultural contexts: A neo-configurational perspective. The International Journal of Management Education, 22(3), 100996. https://doi.org/10.1016/j.ijme.2024.100996

Torres-Ortega, J., Loyola-Campos, J., Ibarra-Pérez, D., & Hernández-Muñoz, V. (2024). Factors influencing entrepreneurial intentions among Chilean secondary vocational students. Academia Revista Latinoamericana de Administración, 37(2), 265–286. https://doi.org/10.1108/ARLA-03-2023-0051

Wong, K. K. K. (2013). Partial Least Squares Structural Equation Modeling (PLS-SEM) Techniques Using SmartPLS. Marketing Bulletin, 24(1), 1–32.