

“Unfolding the determinants of university students’ intentions toward digital social entrepreneurship”

AUTHORS	Md. Mobarak Karim   Khadiza Rahman Tanchi  Farhana Noor  Shahana Kabir  Sabrina Akhter 
ARTICLE INFO	Md. Mobarak Karim, Khadiza Rahman Tanchi, Farhana Noor, Shahana Kabir and Sabrina Akhter (2024). Unfolding the determinants of university students’ intentions toward digital social entrepreneurship. <i>Problems and Perspectives in Management</i> , 22(2), 93-102. doi: 10.21511/ppm.22(2).2024.08
DOI	http://dx.doi.org/10.21511/ppm.22(2).2024.08
RELEASED ON	Friday, 19 April 2024
RECEIVED ON	Tuesday, 30 January 2024
ACCEPTED ON	Thursday, 04 April 2024
LICENSE	 This work is licensed under a Creative Commons Attribution 4.0 International License
JOURNAL	"Problems and Perspectives in Management"
ISSN PRINT	1727-7051
ISSN ONLINE	1810-5467
PUBLISHER	LLC “Consulting Publishing Company “Business Perspectives”
FOUNDER	LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

34



NUMBER OF FIGURES

2



NUMBER OF TABLES

4

© The author(s) 2024. This publication is an open access article.



BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10,
Sumy, 40022, Ukraine
www.businessperspectives.org

Received on: 30th of January, 2024

Accepted on: 4th of April, 2024

Published on: 19th of April, 2024

© Md. Mobarak Karim, Khadiza Rahman Tanchi, Farhana Noor, Shahana Kabir, Sabrina Akhter, 2024

Md. Mobarak Karim, Ph.D. Student, University of Dhaka, Bangladesh; Assistant Professor, School of Business, Presidency University, Bangladesh. (Corresponding author)

Khadiza Rahman Tanchi, Ph.D., Associate Professor, Department of Business Administration, Daffodil International University, Bangladesh.

Farhana Noor, Assistant Professor, Department of Business Administration, Daffodil International University, Bangladesh.

Shahana Kabir, Assistant Professor, Department of Business Administration, Daffodil International University, Bangladesh.

Sabrina Akhter, Assistant Professor, Department of Business Administration, Daffodil International University, Bangladesh.



This is an Open Access article, distributed under the terms of the [Creative Commons Attribution 4.0 International license](https://creativecommons.org/licenses/by/4.0/), which permits unrestricted re-use, distribution, and reproduction in any medium, provided the original work is properly cited.

Conflict of interest statement:

Author(s) reported no conflict of interest

Md. Mobarak Karim (Bangladesh), Khadiza Rahman Tanchi (Bangladesh), Farhana Noor (Bangladesh), Shahana Kabir (Bangladesh), Sabrina Akhter (Bangladesh)

UNFOLDING THE DETERMINANTS OF UNIVERSITY STUDENTS' INTENTIONS TOWARD DIGITAL SOCIAL ENTREPRENEURSHIP

Abstract

Digital social entrepreneurship is increasingly receiving recognition in emerging economies to maximize societal benefit. The objective of this study is to examine the factors determining students' intentions toward digital social entrepreneurial ventures. The targeted population was students of various programs, namely business, humanities, science, tourism, and pharmacy, of private and public universities in Bangladesh. This study is quantitative and exploratory in nature, whereas online self-administered questionnaires were prepared to collect data from 433 students in Bangladesh between January and June 2023. The model was tested and the hypotheses were confirmed at the 5% significance level using SPSS v26.0; a Cronbach's alpha (α) value of 0.70 or higher was considered adequate for measuring reliability. The results show that students' innovativeness, social pro-activeness, and risk-taking motive positively affect their intention toward digital social entrepreneurial intention. These results may aid in developing successful plans and regulations to support the expansion of digital social entrepreneurial intention in Bangladesh by the government, non-governmental organizations, the neighborhood, civil society, and researchers.

Keywords

digital social entrepreneurship, university students, innovativeness, risk-taking, pro-activeness, digital entrepreneurial intention

JEL Classification

M10, M13

INTRODUCTION

Digitalization has significantly changed the world, facilitating the development of innovative and creative digital enterprises. In addition, the quick growth of the internet and the development of digital technologies have revolutionized many facets of everyday life, including entrepreneurship. Therefore, the rising desire among university graduates to launch digital or online social entrepreneurial companies is a particularly noteworthy development (Nambisan & Baron, 2021). These initiatives combine the power of digital technology with a social purpose, seeking to address urgent social or environmental concerns while creating sustainable economic benefits. Moreover, university graduates' desire to start digital or online social entrepreneurial companies reflects the entrepreneurial landscape's altering paradigm.

Young people today are more motivated by a desire to have a positive impact on society than ever before, linking their job goals with the pursuit of social good alongside their job objectives. Henceforth, the ubiquitous accessibility of digital technologies and the simplicity of internet resources have lessened entry barriers for aspirant business owners, enabling them to turn their ideas into genuineness. Today, the government has a significant challenge as it focuses specifically on

achieving the SDGs in the 21st century, whereas fulfilling, long-term sustainable goals are being prioritized around the world (Bali Swain & Yang-Wallentin, 2020). However, students are more interested in digital entrepreneurship since it has recently become a major trend in today's quick-paced, technology-driven society as they look to traverse the digital terrain and create their own opportunities (Asheq et al., 2021). On the other hand, digital technologies are a significant feature of other businesses due to the rapid use of digital activities in various industries (Younis et al., 2020).

It is an extensive challenge for a nation to measure the SDGs and sustainable development to monitor and quantify the impact of Agenda 2030 (Swain, 2018). Moreover, as a new challenge to the adaptability of socioeconomic systems, digitalization is also seen as a mechanism between various economic systems, such as ecological, economic, social, and technological forces. Furthermore, the majority of students are unemployed in Bangladesh, whereas the unemployment problem among graduates could be a solution to increase the intention to create digital entrepreneurial activities that will help to achieve the country's SDGs (Barba-Sánchez & Atienza-Sahuquillo, 2018). Specifically, the pressing issue at hand is unemployment, with a considerable portion of the unemployed population in Bangladesh comprising students. Addressing graduate unemployment could serve as a solution to bolster the intention to participate in digital social entrepreneurial events, ultimately contributing to the attainment of the country's SDGs (Barba-Sánchez & Atienza-Sahuquillo, 2018). Harmoniously, digital entrepreneurial ventures among students can also contribute to the overall economic development of a country or region by promoting entrepreneurship and innovation in the digital sector. Therefore, digital entrepreneurship intention among students can be a valuable educational approach to inspire and prepare for the digital economy, and it can assist in promoting a more dynamic and entrepreneurial-oriented workforce that is well-equipped to thrive in the ever-evolving digital landscape.

1. LITERATURE REVIEW

Due to the widespread use of digital technology and the changing requirements and goals of the younger generation, entrepreneurship has experienced considerable upheaval in the modern age. In addition, students are in charge of this entrepreneurial wave because of their innovative attitude, readiness to take calculated risks, and access to digital resources, which have opened the door for a new era of digital entrepreneurship. There is a relationship between students' innovativeness, risk-taking, pro-activeness, and intention to pursue digital entrepreneurship.

1.1. Innovativeness

Innovativeness is the capacity for individuals to willingly embrace change and give effort to the creation of new ideas, objects, or practices, fostering a climate of enthusiastic acceptance for change (Rambe & Ndofirepi, 2021). This trait involves conceiving and implementing novel, useful, and valuable concepts, products, services, processes, or business models. On the other hand, it encompasses the identification and resolution of challenges or

opportunities in novel and distinctive ways, setting individuals and organizations apart from others in the market (Wathanakom et al., 2020).

According to Law and Breznik (2017), innovativeness is crucial for digital social entrepreneurship, which can lead to more effective problem-solving, increased efficiency, competitive advantage, sustainability, and finding solutions regularly to start a new venture. Mueller (2011) postulated a positive relationship between innovativeness and digital entrepreneurial intention among students. Furthermore, the degree of innovativeness positively influences the success of digital social entrepreneurship ventures among university graduates. Thus, innovative ideas, practices, and strategies are instrumental in helping young entrepreneurs overcome challenges and establish sustainable digital social ventures, often characterized as knowledge-oriented organizations (Weerakoon et al., 2020; Rahaman et al., 2020).

1.2. Social pro-activeness

Pro-activeness is the act of taking the initiative and being proactive in a given situation, which as-

sists a person in anticipating problems or opportunities and taking action before being prompted or required to do so (Al-Mamary & Alshallaqi, 2022). Besides, pro-activeness refers to the willingness that can manifest in various ways, such as seeking out new opportunities, taking on new challenges, and being persistent in pursuing goals through research and trend analysis (Astrini et al., 2020; Rahaman et al., 2021). Consequently, social pro-activeness is an essential determinant of success, characterized by active participation in volunteering, charitable donations, and community development initiatives.

Social pro-activeness has become a significant characteristic in an entrepreneurial context as a component of an individual's attitude toward engaging in pro-social behaviors, which directly affect the intention to engage in digital social entrepreneurship (Lumpkin et al., 2013; Farrukh et al., 2019). In addition, individuals with a social pro-active orientation tend to possess a heightened sense of empathy toward others, rendering them more capable of identifying social issues and employing digital technology to address them (Lai et al., 2021). Social pro-activeness also substantially influences individuals' intention to engage in digital social entrepreneurship (Astrini et al., 2020). Additionally, socially proactive individuals are more likely to be motivated by the potential for social impact and exhibit a heightened sense of responsibility toward society. This predisposition makes them more inclined to harness digital technology to address social challenges (Lumpkin & Dess, 2011).

1.3. Risk-taking motive

Risk-taking is the act of making decisions or taking actions with uncertain outcomes, typically driven by the pursuit of a specific desired outcome or goal. This inclination can manifest in various forms, such as initiating a new business venture, investing financial resources in the stock market, embarking on a novel career path, or even extreme sports (Younis et al., 2020; Yuan et al., 2021). Besides, risk-taking has long been recognized as a pivotal element that plays a critical role in venturing into uncharted territories and starting a new enterprise (Zhang & Cain, 2017). Thus, crucial factor is associated with digital entrepre-

neurship intention among students (De Pillis & Reardon, 2007; Abbasianchavari & Moritz, 2021). Henceforth, entrepreneurially-oriented individuals often exhibit a propensity for risk-taking when launching their ventures. Consequently, individuals who are more willing to invest their time, capital, and resources into the initiation of digital businesses tend to foster greater innovation and attain success (Kumar et al., 2021).

Entrepreneurial people are considered risk-takers when they start their new ventures and generate new thinking and ideas to pursue digital entrepreneurship (Luc, 2020). Chipeta et al. (2022) also assumed that risk-taking is an essential factor in shaping an individual's intention to track digital entrepreneurship and to strike a balance between taking calculated risks and avoiding excessive risks for creating the intention to pursue digital social entrepreneurship. Additionally, a person's attitudes toward launching a social entrepreneurial setup are strongly correlated with risk-taking behavior (Chipeta & Surujlal, 2017).

The literature review thoroughly analyzed the extant academic literature and research on the subject matter. Through synthesizing and analyzing a diverse array of sources, this review has illuminated the principal discoveries, patterns, and areas of deficiency in understanding the subject matter.

1.4. Aim and hypotheses

The objective of this paper is to investigate the influence of innovativeness, social pro-activeness, and risk-taking motive on students' behavioral intentions toward digital social entrepreneurship venture (Figure 1). Thus, the study suggests the following hypotheses:

H1: Graduate students' innovativeness positively and significantly affects their digital social entrepreneurial intention.

H2: Graduate students' social pro-activeness positively and significantly affects their digital social entrepreneurial intention.

H3: Graduate students' risk-taking motive positively and significantly affects their digital social entrepreneurial intention.

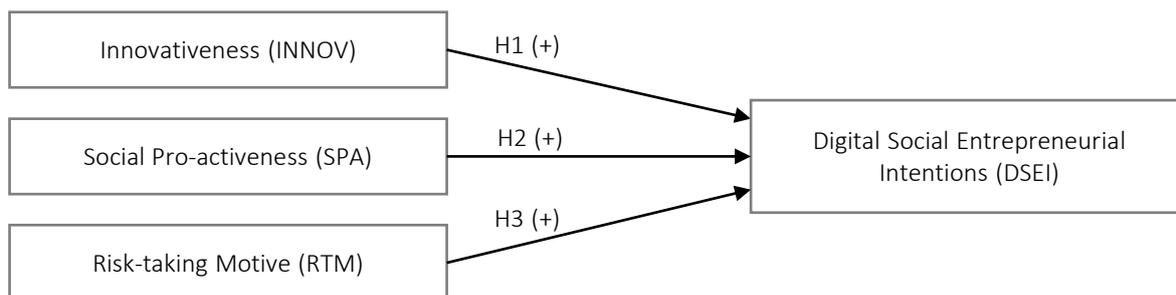


Figure 1. Conceptual model

2. METHOD

The targeted population was university students in Bangladesh. The study used convenience sampling because the total number of university students in Bangladesh is unclear. The primary data examined the influence of innovativeness, social pro-activeness, and risk-taking motives on the intention to pursue digital social entrepreneurship among the students. The study is quantitative and exploratory in nature, whereas data have been collected from three independent variables, namely innovativeness, social pro-activeness, and risk-taking motive, and one dependent variable, digital social entrepreneurial intention. An online survey was carried out through a social media platform to gather information from the target respondents. In addition, every university in Bangladesh has its own online community of students, including one on Facebook where the link to the online survey was shared, emphasizing that participation was entirely optional.

Therefore, the study developed an online self-administered questionnaire to collect data from 433 university students in Bangladesh. However, three responses were invalid; the final sample size was $N = 430$. After carefully examining online survey forms, 430 responses were determined to be significant for this study, and a valid response rate of 99% was achieved. In terms of sample size, more than 200 should be considered for data analysis in multivariate research (Hoe, 2008).

The self-administered questionnaire was divided into two sections: one for demographic information and another for item-wise survey of selected variables. A five-point Likert scale was used to assess each measure item on the questionnaire (with five being strongly agree and one being strongly

disagree). Appendix A shows a detailed description of the constructs. This study used the social science statistics application to survey results, and the data were examined using regression and descriptive statistical techniques. Using SPSS 26.0, the study model and the proposed hypotheses were analyzed. Interpretations were only allowed if they satisfied a 5% significance threshold. In this investigation, a Cronbach Alpha (α) score of 0.70 or above was considered a suitable threshold for assessing reliability.

Table 1. Reliability and validity analysis

Construct	Items	Loading	Cronbach (α) value
Innovativeness (INNOV)	INNOV1	.883	.894
	INNOV2	.859	
	INNOV3	.862	
	INNOV4	.865	
	INNOV5	.878	
Social Pro-activeness (SPA)	SPA1	.861	.868
	SPA2	.831	
	SPA3	.833	
	SPA4	.836	
	SPA5	.840	
Risk-taking Motive (RTM)	RTM1	.877	.896
	RTM2	.878	
	RTM3	.864	
	RTM4	.873	
	RTM5	.874	
Digital Social Entrepreneurship Intention (DSEI)	DSEI1	.864	.864
	DSEI2	.878	
	DSEI3	.834	
	DSEI4	.831	
	DSEI5	.850	

Table 1 demonstrates that the reliability of the study variables was found tolerable for the constructs of innovativeness ($\alpha = .894$), social pro-activeness ($\alpha = .868$), and risk-taking motive ($\alpha = .896$).

3. RESULTS

Table 2 shows the demographic statistics of the respondents. The number of male students was 274 (64%), and the number of female students was 156 (36%). According to the age brackets, 76 respondents were between 18 and 20 years old, while 302 respondents were between 21 and 25 (70%). On the other hand, 8% (n = 35) of respondents were between 26 and 30, seven respondents were between 31 and 35, five (1%) were between 36 and 40, and five (1%) were between 41 and 45 years old. In terms of departments, 287 respondents came from the business department (67%), 33 (8%) came from the tourism and hospitality management (THM) department, and 62 (14%) had a science and engineering background. At the same time, 34 participants were students of the pharmacy department (8%), four respondents were from the marketing department, one studied at the civil engineering department, one at the computer science and engineering (CSE) department, and five participants had an art and social science background (1%). Finally, three respondents (0.7%) were from the bachelor of laws (LLB). Next, 332 respondents (77%) were students of the private universities, while 98 (23%) were students of public universities.

Table 2. Demographic information

Variables	Frequency	Percentage (%)
Gender		
Male	274	64
Female	156	36
Age (years)		
18-20	76	18
21-25	302	70
26-30	35	8
31-35	7	2
36-40	5	1
41-45	5	1
Department		
Business	287	67

Variables	Frequency	Percentage (%)
THM(Tourism and Hospitality Management)	33	8
Science and Engineering	62	14
Pharmacy	34	8
Marketing	4	.9
Civil Engineering	1	.2
CSE(Computer Science and Engg.)	1	.2
Art and Social Sciences	5	1.2
LLB(Bachelor of Law)	3	.7
University Type		
Private	332	77
Public	98	23

Table 3. Regression coefficients

Variables	β -value	t-value	Sig.	Tolerance	VIF
Innovativeness (INNO)	.351	6.461	.000***	.358	2.792
Social Pro-activeness (SPA)	.169	3.225	.001***	.384	2.606
Risk-taking Motive (RTM)	.288	5.171	.000***	.341	2.929

Note: $R^2 = 0.549$. Durbin Watson value = 1.785. Dependent variable: Digital Social Entrepreneurial Intentions (DSEI). ** $p < 0.05$; *** $p < 0.01$ (n = 430).

Table 3 shows the regression coefficient values, Durbin-Watson (Durbin & Watson, 1950) value, and R^2 value, whereas the Durbin-Watson value, 1.785, is within the acceptable threshold range of 1.5 to 2.5 points. Furthermore, concerning variance inflation factor (VIF), the tolerance level ranged between 0.10 to 1.0, while VIF values fell from 1.00 to 5.00. Therefore, there are no multi-collinearity problems with the research model. $R^2 = 0.549$ or 54.9%, which is composed of three independent variables, innovativeness, social pro-activeness, and risk-taking motive, that are recognized at a 5% significance level (Figure 2). In addition, this level represents that innovativeness, social pro-activeness, and risk-taking have a positive and significant influence on digital social entrepreneurship.

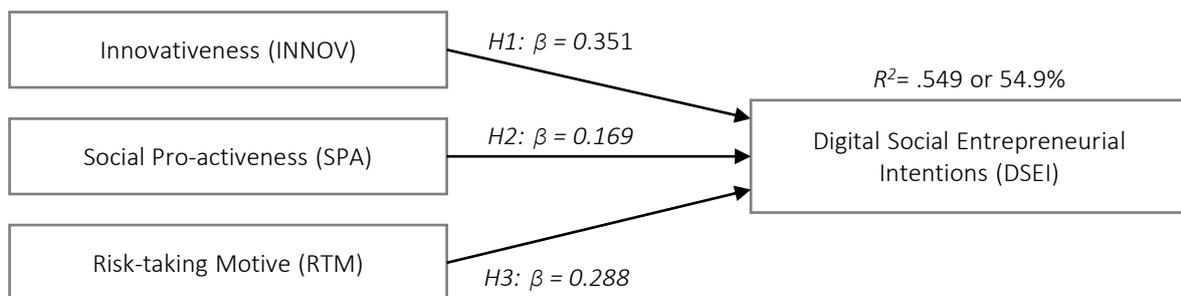


Figure 2. Regression results

4. DISCUSSION

The goal of the study was to examine the influence of three elements, innovativeness, social pro-activeness, and risk-taking motive, on digital social entrepreneurial intention among university students. According to Table 3 and Figure 2, H1 is accepted by the 5% significance criterion ($\beta = 0.351$; $p < 0.05$), which reveals that innovativeness has a positive and significant effect on digital social entrepreneurial intention. These findings are consistent with past studies, which found that innovativeness is crucial for digital social entrepreneurship. It can lead to more effective problem-solving, increased efficiency, scalability, competitive advantage, sustainability, and finding solutions to start a new venture (Law & Breznik, 2017). A further finding was that innovativeness and digital social entrepreneurial intention are directly related and positively correlated (Wathanakom et al., 2020).

According to regression results, H2 is accepted by the 5% significance criterion ($\beta = 0.169$; $p < 0.05$). Henceforth, pro-activeness among the students creates inspiration to become a digital entrepreneur. This outcome is supported by Astrini et al. (2020), who claimed that social pro-activeness is a crucial indicator that creates an intention to become a digital entrepreneur. Lumpkin et al. (2013) also found that social pro-activeness has grown to be crucial in an entrepreneurial context, and it can be viewed as a component of a person's assertiveness toward digital social entrepreneurship. Moreover, while Lai et al. (2021) identified a direct and positive association between proactivity and students' inclination to engage in digital entrepreneurship intention, this result is unexpected and inconsistent with their findings.

Finally, H3 is accepted by the regression result at 5% ($\beta = 0.288$; $p < 0.05$), which directly promotes students' intentions to become a digital entrepreneur. Accordingly, students are extremely motivated to get digitalized support to increase their knowledge, technical skills, and abilities to use technology for their digital business. Kumar et al. (2021) also support this hypothesis, as individuals more enthusiastic toward investing their time, resources, and money into starting a digital business can lead to greater business innovation and success.

This study explored the connection between students' perspectives and their intentions toward digital social entrepreneurship within the context of Bangladesh. The paper conducted a comprehensive analysis of the impact of the selected three variables to determine the intention of students to become digital social entrepreneurs. Hence, fostering digital entrepreneurship intentions among students can serve as a valuable educational approach, inspiring and preparing them for the digital economy. This approach can help cultivate a dynamic and entrepreneurial-oriented workforce equipped to excel in the ever-evolving digital landscape. As a result, these outcomes carry substantial implications for stakeholders, such as funders, educators, and facilitators within higher education institutions who are dedicated to nurturing their students' aspirations in social entrepreneurship.

In order to create the ideal market circumstances and growth possibilities for start-ups, the government's intervention will be essential. Additionally, the government might offer loans to students who want to launch firms, thereby improving their self-assurance and motivation to do so (Sharahiley, 2020). In light of the global transition from analog to digital paradigms, educational institutions should offer contemporary entrepreneurship courses that equip individuals with the skills to conduct savvy business operations by harnessing digital technology. The government's active involvement is paramount in creating an environment conducive to optimal market conditions and fostering growth opportunities for entrepreneurs.

Future research might include comparative studies based on cross-discipline students from business and non-business fields, as well as students from developed and developing nations. Additionally, the government might offer loans to students who want to launch firms, improving their self-assurance and motivation. Moreover, since social entrepreneurship is thought to improve the socioeconomic situation in an economy and since no government can solve socioeconomic problems like population growth, poverty, and unemployment, corporate sectors may enrich educational support for the students to create eagerness to start digital social entrepreneurial intention.

CONCLUSION

The purpose of this study was to explore the effect of innovativeness, social pro-activeness, and risk-taking motives on digital social entrepreneurial intention among university students. This study reveals that innovativeness, social pro-activeness, and risk-taking motives significantly and positively influence digital social entrepreneurial intention. The outcomes can significantly advance the body of information about social entrepreneurship and provide new perspectives on social entrepreneurial behavior. Recently, academia, researchers, and the business community have all demonstrated their interest in studying socially driven digital entrepreneurship. However, the findings of this paper can enhance future researchers' comprehension of students' intentions to start digital businesses when they examine the usefulness of entrepreneurship in running a business during their studies at university. Moreover, the outcomes offer significant implications for a broad spectrum of stakeholders, including scholars, professionals, researchers, policymakers, and individuals actively advancing social entrepreneurship-driven initiatives.

This study suggests that digital entrepreneurial education programs should prioritize exploring strategies aimed at enhancing entrepreneurial aspirations through the effective integration of digital platforms and technology in business management. In light of the global transition from analog to digital paradigms, educational institutions should offer contemporary entrepreneurship courses that equip individuals with the skills to conduct savvy business operations by harnessing digital technology. The government's active involvement is paramount in creating an environment conducive to optimal market conditions and fostering growth opportunities for entrepreneurs. Additionally, the government might offer loans to students who want to launch firms, improving their self-assurance and motivation.

The primary constraint of this study is that its sample population consists solely of university students participating in bachelor's or master's programs, which may limit the applicability of the findings. Henceforth, future researchers should target people who have already received their degrees and are looking for work. However, university students are positioned to inspire a new generation of change-makers, redefine success, and challenge existing norms as digital social entrepreneurs.

Future research might also include comparative studies based on cross-discipline students from business and non-business fields, as well as students from developed and developing nations. In addition, the journey of digital social entrepreneurship offers university students a distinctive learning opportunity that gives them useful skills, encourages an entrepreneurial perspective, and cultivates a thorough awareness of the intricate relationships between technology, society, and sustainable development. Therefore, their efforts epitomize teamwork as they form alliances across fields, sectors, and cultural boundaries to find fresh solutions to complex problems. Last but not least, to raise students' level of proficiency and increase their understanding of digital entrepreneurship, educators, policymakers, entrepreneurs, practitioners, and managers should take educational efforts and motivational factors into consideration, which can be accomplished by using the media, annual events, awareness, workshops, and lectures.

AUTHOR CONTRIBUTIONS

Conceptualization: Md. Mobarak Karim, Khadiza Rahman Tanchi, Sabrina Akhter.

Data curation: Md. Mobarak Karim, Khadiza Rahman Tanchi.

Formal analysis: Farhana Noor, Shahana Kabir, Sabrina Akhter.

Funding acquisition: Farhana Noor, Shahana Kabir, Sabrina Akhter.

Investigation: Md. Mobarak Karim, Khadiza Rahman Tanchi.

Methodology: Md. Mobarak Karim, Khadiza Rahman Tanchi.

Project administration: Farhana Noor, Shahana Kabir, Sabrina Akhter.

Resources: Farhana Noor, Shahana Kabir.

Software: Khadiza Rahman Tanchi.

Supervision: Khadiza Rahman Tanchi, Farhana Noor.

Validation: Farhana Noor, Shahana Kabir, Sabrina Akhter.

Visualization: Farhana Noor, Shahana Kabir, Sabrina Akhter.

Writing – original draft: Md. Mobarak Karim, Khadiza Rahman Tanchi.

Writing – review & editing: Md. Mobarak Karim, Khadiza Rahman Tanchi, Farhana Noor, Shahana Kabir, Sabrina Akhter.

REFERENCES

1. Abbasianchavari, A., & Moritz, A. (2021). The impact of role models on entrepreneurial intentions and behavior: A review of the literature. *Management Review Quarterly*, 71, 1-40. <https://doi.org/10.1007/s11301-019-00179-0>
2. Al-Mamary, Y. H. S., & Alraja, M. M. (2022). Understanding entrepreneurship intention and behavior in the light of TPB model from the digital entrepreneurship perspective. *International Journal of Information Management Data Insights*, 2(2), Article 100106. <https://doi.org/10.1016/j.jjime.2022.100106>
3. Asheq, A. A., Tanchi, K. R., Kamrujjaman, M., & Karim, M. M. (2021). The impact of e-marketing orientation, technological orientation, and learning capacity on online SME performance. *Innovative Marketing*, 17(3), 168-179. [http://doi.org/10.21511/im.17\(3\).2021.14](http://doi.org/10.21511/im.17(3).2021.14)
4. Astrini, N. J., Rakhmawati, T., Sumaedi, S., Bakti, I. G. M. Y., Yarmen, M., & Damayanti, S. (2020). Innovativeness, proactiveness, and risk-taking: Corporate entrepreneurship of Indonesian SMEs. *IOP Conference Series: Materials Science and Engineering*, 722(1), Article 012037. <https://doi.org/10.1088/1757-899X/722/1/012037>
5. Bali Swain, R., & Yang-Wallentin, F. (2020). Achieving sustainable development goals: Predicaments and strategies. *International Journal of Sustainable Development & World Ecology*, 27(2), 96-106. <https://doi.org/10.1080/13504509.2019.1692316>
6. Barba-Sánchez, V., & Atienza-Sahuquillo, C. (2018). Entrepreneurial intention among engineering students: The role of entrepreneurship education. *European Research on Management and Business Economics*, 24(1), 53-61. <https://doi.org/10.1016/j.iiedeen.2017.04.001>
7. Chipeta, E. M., & Surujlal, J. (2017). Influence of attitude, risk taking propensity and proactive personality on social entrepreneurship intentions. *Polish Journal of Management Studies*, 15(2), 27-36. [10.17512/pjms.2017.15.2.03](https://doi.org/10.17512/pjms.2017.15.2.03)
8. Chipeta, E. M., Venter, R., & Kruse, P. (2022). Measuring the role of reductive bias in social enterprise formation: Development and validation of a social entrepreneurial intention bias scale. *Journal of Social Entrepreneurship*, 13(2), 164-182. <https://doi.org/10.1080/19420676.2020.1758196>
9. De Pillis, E., & Reardon, K. K. (2007). The influence of personality traits and persuasive messages on entrepreneurial intention: A cross-cultural comparison. *Career Development International*, 12(4), 382-396. <https://doi.org/10.1108/13620430710756762>
10. Durbin, J., & Watson, G. S. (1950). Testing for serial correlation in least squares regression: I. *Biometrika*, 37(3/4), 409-428. <https://doi.org/10.2307/2332391>
11. Farrukh, M., Lee, J. W. C., Sajid, M., & Waheed, A. (2019). Entrepreneurial intentions: The role of individualism and collectivism in perspective of theory of planned behavior. *Education + Training*, 61(7/8), 984-1000. <https://doi.org/10.1108/ET-09-2018-0194>
12. Hoe, S. L. (2008). Issues and procedures in adopting structural equation modelling technique. *Journal of Quantitative Methods*, 3(1), 76-83. Retrieved from https://ink.library.smu.edu.sg/sis_research/5168
13. Kumar, S., Paray, Z. A., & Dwivedi, A. K. (2021). Student's entrepreneurial orientation and intentions: A study across gender, academic background, and regions. *Higher Education, Skills and Work-Based Learning*, 11(1), 78-91. <https://doi.org/10.1108/HESWBL-01-2019-0009>
14. Lai, F. Y., Lin, C. C., Lu, S. C., & Chen, H. L. (2021). The role of team-member exchange in proactive personality and employees' proactive behaviors: The moderating effect of transformational leadership. *Journal of Leadership & Organizational Studies*, 28(4), 429-443. <https://doi.org/10.1177/15480518211034847>
15. Law, K. M., & Breznik, K. (2017). Impacts of innovativeness and attitude on entrepreneurial intention: Among engineering and non-engineering students. *International Journal of Technology and Design Education*, 27, 683-700. <https://doi.org/10.1007/s10798-016-9373-0>
16. Luc, P. T. (2020). The influence of personality traits on social entrepreneurial intention among owners of civil society organizations in Vietnam. *International Journal of Entrepreneurship and Small Business*, 40(3), 291-308. <https://doi.org/10.1504/IJESB.2020.107799>
17. Lumpkin, G. T., & Dess, G. G. (2001). Linking two dimensions of entrepreneurial orientation to

- firm performance: The moderating role of environment and industry life cycle. *Journal of Business Venturing*, 16(5), 429-451. [https://doi.org/10.1016/S0883-9026\(00\)00048-3](https://doi.org/10.1016/S0883-9026(00)00048-3)
18. Lumpkin, G. T., Moss, T. W., Gras, D. M., Kato, S., & Amezcua, A. S. (2013). Entrepreneurial processes in social contexts: How are they different, if at all? *Small Business Economics*, 40, 761-783. <https://doi.org/10.1007/s11187-011-9399-3>
 19. Mueller, S. (2011). Increasing entrepreneurial intention: Effective entrepreneurship course characteristics. *International Journal of Entrepreneurship and Small Business*, 13(1), 55-74. <https://doi.org/10.1504/IJESB.2011.040416>
 20. Nambisan, S., & Baron, R. A. (2021). On the costs of digital entrepreneurship: Role conflict, stress, and venture performance in digital platform-based ecosystems. *Journal of Business Research*, 125, 520-532. <https://doi.org/10.1016/j.jbusres.2019.06.037>
 21. Rahaman, M. A., Ali, M. J., Mamoon, Z. R., & Al Asheq, A. (2020). Understanding the entrepreneurial intention in the light of contextual factors: Gender analysis. *Journal of Asian Finance, Economics and Business*, 7(9), 639-647. <https://doi.org/10.13106/jafeb.2020.vol7.no9.639>
 22. Rahaman, M. A., Luna, K. F., Mite, S., Islam, M., & Wafik, H. (2021). The effect of entrepreneurial orientation, market orientation and gender on business performance: An empirical study of SMEs in Bangladesh. *The Journal of Asian Finance, Economics and Business*, 8(6), 741-746. <https://doi.org/10.13106/jafeb.2021.vol8.no6.0741>
 23. Rambe, P., & Ndofirepi, T. M. (2021). Explaining social entrepreneurial intentions among college students in Zimbabwe. *Journal of Social Entrepreneurship*, 12(2), 175-196. <https://doi.org/10.1080/19420676.2019.1683878>
 24. Satar, M. S., & Natasha, S. (2019). Individual social entrepreneurship orientation: Towards development of a measurement scale. *Asia Pacific Journal of Innovation and Entrepreneurship*, 13(1), 49-72. <https://doi.org/10.1108/APJIE-09-2018-0052>
 25. Sharahiley, S. M. (2020). Examining entrepreneurial intention of the Saudi Arabia's University students: Analyzing alternative integrated research model of TPB and EEM. *Global Journal of Flexible Systems Management*, 21, 67-84. <https://doi.org/10.1007/s40171-019-00231-8>
 26. Sulphey, M. M., & Salim, A. (2021). Development of a tool to measure social entrepreneurial orientation. *Journal of Entrepreneurship in Emerging Economies*, 13(2), 231-253. <https://doi.org/10.1108/JEEE-07-2019-0099>
 27. Swain, R. B. (2018). A critical analysis of the sustainable development goals. In W. L. Filho (Ed.), *Handbook of sustainability science and research* (pp. 341-355). Springer. https://doi.org/10.1007/978-3-319-63007-6_20
 28. Tu, B., Bhowmik, R., Hasan, M. K., Asheq, A. A., Rahaman, M. A., & Chen, X. (2021). Graduate students' behavioral intention towards social entrepreneurship: Role of social vision, innovativeness, social proactiveness, and risk taking. *Sustainability*, 13(11), Article 6386. <https://doi.org/10.3390/su13116386>
 29. Urban, B., & Kujinga, L. (2017). The institutional environment and social entrepreneurship intentions. *International Journal of Entrepreneurial Behavior & Research*, 23(4), 638-655. <https://doi.org/10.1108/IJEBR-07-2016-0218>
 30. Wathanakom, N., Khlaisang, J., & Songkram, N. (2020). The study of the causal relationship between innovativeness and entrepreneurial intention among undergraduate students. *Journal of Innovation and Entrepreneurship*, 9, 1-13. <https://doi.org/10.1186/s13731-020-00125-5>
 31. Weerakoon, C., McMurray, A. J., Rametse, N. M., & Arenius, P. M. (2020). Social capital and innovativeness of social enterprises: Opportunity-motivation-ability and knowledge creation as mediators. *Knowledge Management Research & Practice*, 18(20), 147-161. <https://doi.org/10.1080/14778238.2019.1590138>
 32. Younis, H., Katsioloudes, M., & Al Bakri, A. (2020). Digital entrepreneurship intentions of Qatar university student's motivational factors identification: Digital entrepreneurship intentions. *International Journal of E-Entrepreneurship and Innovation (IJEEI)*, 10(1), 56-74. <https://doi.org/10.4018/IJEEI.2020010105>
 33. Yuan, D., Rahman, M. K., Issa Gazi, M. A., Rahaman, M. A., Hossain, M. M., & Akter, S. (2021). Analyzing of user attitudes toward intention to use social media for learning. *Sage Open*, 11(4). <https://doi.org/10.1177/21582440211060784>
 34. Zhang, P., & Cain, K. W. (2017). Reassessing the link between risk aversion and entrepreneurial intention: The mediating role of the determinants of planned behavior. *International Journal of Entrepreneurial Behavior & Research*, 23(5), 793-811. <https://doi.org/10.1108/IJEBR-08-2016-0248>

APPENDIX A

Table A1. Questionnaire variables

Constructs	Items	Sources
Innovativeness (INNOV)	INNOV1: I often try new, innovative, and unusual activities.	Satar and Natasha (2019); Tu et al. (2021)
	INNOV2: In general, I prefer a strong emphasis on unique projects.	
	INNOV3: I prefer to try my own unique way of learning new things rather than doing it like everyone else.	
	INNOV4: I like to apply innovative and experimental approaches to solve problems.	
	INNOV5: I believe there are always new and better ways of doing things.	
Social Pro-activeness (SPA)	SPA1: I am willing to be at the forefront of making a society a better place to live in.	Sulphey and Salim (2021); Tu et al. (2021); Satar and Natasha (2019)
	SPA2: I am able to clearly identify social problems ahead of others.	
	SPA3: I am ahead of others in addressing social needs.	
	SPA 4: I like to act quickly in tackling social problems.	
	SPA 5: Usually, any societal problem more actively drives me to take necessary actions to address	
Risk-taking Motive (RTM)	RTM1: I am willing to be involved in ventures that benefit society.	Sulphey and Salim (2021); Satar and Natasha (2019); Tu et al. (2021)
	RTM2: I am willing to take risks for the benefit of the society.	
	RTM3: I am willing to make sacrifices for the welfare of the society.	
	RTM4: I believe all individuals should be willing to take risks for the welfare of society.	
	RTM5: I tend to act/work actively to solve the socioeconomic problems in society.	
Digital Social Entrepreneurship Intention (DSEI)	DSEI1: My professional goal is to be a digital social entrepreneur.	Urban and Kujinga (2017); Tu et al. (2021)
	DSEI2: My qualifications have positively contributed to my interest in starting a digital social entrepreneurship venture.	
	DSEI3: I had a strong intention to start my own digital social entrepreneurship venture before I started studying.	
	DSEIN4: I have very seriously thought of starting a digital social entrepreneurship venture in the future	
	DSEI5: I am ready to do anything to be a digital social entrepreneur	