

Mediating Role of Cognitive Creativity in Connection with Technological Literacy and Social Entrepreneurship of Students

Hassan Shafiee^{1*}, Zahra Solgi², Fateme Saberi Hossein Abad³

1. Assistant professor, Department of Psychology, Payame Noor University, Tehran, Iran
2. Associate professor, Department of Psychology, Payame Noor University, Tehran, Iran
3. M.A in Educational Psychology, Department of Psychology, Payame Noor University, Tehran, Iran

*Corresponding Author: h_shafiee@pnu.ac.ir

Abstract

Purpose: The present study was conducted with the aim of investigating the relationship model of social entrepreneurship and technology literacy with the mediating role of cognitive creativity in female students.

Method: The current research was a descriptive-correlation research of SEM structural equation modeling. The statistical population of the research included all female students of Payam Noor University of Yazd in the academic year of 1400-1401. A sample of 300 people was selected by convenience sampling method. The questionnaires used in this research included information and communication technology literacy (Katz and McLean, 2007), Abedi's cognitive creativity (Ghanbari, 2013) and social entrepreneurship (Arab, 2015). Data were analyzed with AMOS and SPSS version 24 software and using Pearson correlation and path analysis.

Findings: The results showed that there is a significant relationship between technology literacy and social entrepreneurship of students, there is a significant relationship between cognitive creativity and social entrepreneurship, and there is a significant relationship between cognitive creativity and technology literacy. Also, the results of the path analysis showed that cognitive creativity plays a mediating role in the relationship between technology literacy and social entrepreneurship of students.

Conclusion: The results of the present study indicate the importance of the role of cognitive creativity in relation to technological literacy and social entrepreneurship. Based on this, empowering students in connection with cognitive creativity and improving and identifying students' creativity can be the application of the results of the present research in the field of social entrepreneurship.

Keywords: social entrepreneurship, technological literacy, cognitive creativity

Introduction

Social entrepreneurship has emerged as a promising strategy to address societal challenges such as poverty and unemployment (Wannamakok & Chang, 2020; Mousavi et al., 2021). This approach involves identifying and leveraging opportunities to create social value through business-oriented activities (Aquino, Lück, & Schänzel, 2018). Unlike economic entrepreneurs who measure success by profit, social entrepreneurs prioritize social impact (Salehi Sadghiani, 2009). Technological literacy, which encompasses the ability to understand, use, and evaluate technology, is a critical factor influencing social entrepreneurship (Adib, Fathiaze, & Mahmoudi, 2015). Research has shown that many social enterprises lack the necessary IT skills (Lyver & Lu, 2018). Additionally, cognitive creativity plays a pivotal role in social entrepreneurship, enabling individuals to generate innovative ideas to solve societal problems (Elahi, Hasani, & Nasiri, 2021). Students, as the future generation of entrepreneurs, need to develop creativity and

technological skills to contribute to economic and social development (Rajaei, Mohammadi, & Arghavan, 2016). This study investigates the role of cognitive creativity and technological literacy in social entrepreneurship, particularly examining the mediating role of cognitive creativity in the relationship between these two variables. Given the limited research in this area, this study aims to answer the question of whether cognitive creativity can mediate the relationship between technological literacy and social entrepreneurship

Materials and Methods

The current research was a descriptive-correlation research of SEM structural equation modeling. The statistical population of the research included all female students of Payam Noor University of Yazd in the academic year of 1400-1401. A sample of 300 people was selected by convenience sampling method. The questionnaires used in this research included information and communication technology literacy Abedi's cognitive creativity and social entrepreneurship. Data were analyzed with AMOS and SPSS version 24 software and using Pearson correlation and path analysis.

Results and Discussion

The path analysis model presented in Table 1 indicates that technological literacy has a significant direct positive effect on social entrepreneurship ($\beta = .21$). Furthermore, the results reveal a significant indirect effect of technological literacy on social entrepreneurship through creativity ($\beta = .22$). These findings suggest that creativity (originality, flexibility, fluency, and elaboration) mediates the relationship between technological literacy and social entrepreneurship. The path analysis model accounts for 26% of the variance in social entrepreneurship, indicating that originality, flexibility, fluency, and elaboration play a mediating role in the relationship between technological literacy and social entrepreneurship

Table 1. Standardized Total, Direct, and Indirect Coefficients in the Model

Paths	Direct Effect	Indirect Effect	Total Effect
Originality → Social Entrepreneurship	0.11*	-	0.11*
Flexibility → Social Entrepreneurship	0.15*	-	0.15*
Fluency → Social Entrepreneurship	0.16*	-	0.16*
Elaboration → Social Entrepreneurship	0.16*	-	0.16*
Technological Literacy → Social Entrepreneurship	0.21*	0.22**	0.43**

*p < .05, **p < .01

Conclusion

The findings of this study indicate a significant relationship between technology literacy and social entrepreneurship among students. This aligns with previous research (Elhiyar, 2019; Biranvand, Rastegar, & Ahanvarz, 2019; Rejaei, Mohimi, & Arghavani, 2017; Yazdani, Shahamat, & Moslemi, 2017; Zhang & Li, 2018). Utilizing information and communication technologies (ICT) is a key factor in recognizing entrepreneurial opportunities, fostering innovation, and overcoming barriers in social entrepreneurship. ICT enables efficient information exchange, reduces the need for physical mobility, and helps social entrepreneurs expand their market reach (Asongu & Biekpe, 2017). Educational institutions should

emphasize ICT literacy to enhance creativity and entrepreneurship skills among students (Moghimi & Ahmadpour Dariani, 2021). The study also found a significant relationship between cognitive creativity and social entrepreneurship, supporting prior research (Ahmadzadeh Ravangi, Mahmoudzadeh, & Jafari, 2021; Emraei et al., 2021; Vijaiyalakshmi, 2019; Aji, Safindi, Termedi, & Saifuddin, 2019; Harding, 2006). Creativity serves as the foundation of social entrepreneurship, enabling entrepreneurs to develop innovative solutions for social challenges. Competitive environments demand innovation-driven decision-making, highlighting the critical role of creativity in social entrepreneurship (Sullivan Mort, Weerawardena, & Carnegie, 2003). Moreover, findings reveal a meaningful connection between technology literacy and cognitive creativity, consistent with prior studies (Azizi et al., 2019; Pisana, Bestersha, & Jimenez, 2012). ICT fosters creativity by facilitating access to diverse information and enhancing problem-solving skills (Zanganeh, Mousavi, & Badali, 2013). Given the increasing integration of technology, creativity, and entrepreneurship, educational institutions should prioritize fostering these skills. Universities should incorporate social entrepreneurship education into curricula to equip students with technological literacy, creativity, self-sufficiency, and logical thinking, ensuring their preparedness for future professional challenges

References

- Adib, E., Fathi-Azar, E., & Mahmoudi, F. (2016). Assessing the attention to "technological literacy" in general education (Grades 1-9). *Educational Research and Evaluation Journal*, 9(35), 125-154.
- Ahmadzadeh Ravangi, A., Mahmoudzadeh, S., & Jafari, A. (2021). Examining the impact of creativity and sensation-seeking on students' entrepreneurship. *Ormazd Research Journal*, (57) 2.
- Aji, A. D., Sofyandi, H., Tarmidi, D., & Saefudin, N. (2019). The Effect of Self-Efficacy, Creativity, and Motivation on Entrepreneurship Interest in FBM Students of Widyatama University, Indonesia. *Global Business & Management Research*, 11(1).
- Aquino, R. S., Lück, M., & Schänzel, H. L. (2018). A conceptual framework of tourism social entrepreneurship for sustainable community development. *Journal of Hospitality and Tourism Management*, 37, 23-32.
- Asongu, S., & Biekpe, N. (2017). Mobile phone innovation and entrepreneurship in Sub-Saharan Africa. *African Governance and Development Institute WP/17/023*.
- Azizi, Z., Saffari Nia, M., Alipour, A., & Zafarian, R. (2019). The effect of an entrepreneurship training package on creativity and self-confidence of preschool children. *Entrepreneurship Development Journal*, 12(2), 261-280.
- Biranvand, A., Rastegar, A., & Ahanvarz, Z. (2019). Developing a predictive model for identifying entrepreneurial opportunities based on ICT literacy. *Rahyaft Journal*, 29(74), 65-76.
- Elahi, T., Hasani, F., & Nasiri, F. (2022). Examining the linear and multiple relationships of ambiguity tolerance, psychological flexibility, and thinking styles with cognitive and emotional creativity. *Cognitive Science Innovations*, 94(24), 145-155.
- Elhiyar, M. (2020). The mediating role of employee creativity in the relationship between job self-efficacy and entrepreneurship among education department employees in Birjand. *Management and Educational Perspectives Quarterly*, 2(1), 1-18.
- Emraei, M., Rejaei, M., Salari Hamzekhani, M., & Faraji Khiavi, F. (2021). Correlation between creativity and entrepreneurial skills among hospital managers. *Health Image Journal*, 12(3), 240-250.

- Ghasemzadeh, M., & Salatin, P. (2019). The impact of information and communication technology on entrepreneurship. *New Economy and Trade Journal*, 14(1), 107-128.
- Katz, I.R. & Macklin, A.S. (2007). Information and communication technology (ICT) literacy: Integration and assessment in higher education. *Journal of Systemics, Cybernetics and informatics*, 5(4): 50-55
- Lyver, M. J., & Lu, T. J. (2018). "Sustaining innovation performance in SMEs: Exploring the roles of strategic entrepreneurship and IT capabilities". *Sustainability*, 10(2), 442-467.
- Moghim, S. M., & Ahmadpour Dariani, M. (2021). *Foundations of Entrepreneurship*. Farandish Publications.
- Mousavi, S. Z. (2022). An integrated model of environmental factors affecting social entrepreneurship development: A grounded theory approach. *Interdisciplinary Studies in Strategic Knowledge*, 12(47), 169-197.
- Piscina, T., Basterretxa, J. I., Jimenz, E. (2011). Report about the Media Literacy Situation in the Basque. *School Community*, 36, Pp. 157-164.
- Rejaei, Z., Mohimi, Z., & Arghavani, A. (2017). Examining the impact of information and communication technology on creativity and entrepreneurship among students in Birjand universities. *Jundishapur Educational Development Journal*, 8(Special Issue), 168-173.
- Salehi Sedghiani, J. (2010). Investigating social entrepreneurship from a behavioral characteristics perspective. *Entrepreneurship Development Research Quarterly*, 3(1), 67-94.
- Sullivan Mort, G., Weerawardena, J., & Carnegie, K. (2003). Social entrepreneurship: Towards conceptualisation. *International journal of nonprofit and voluntary sector marketing*, 8(1), 76-88.
- Vijayalakshmi, S. (2019). The role of creativity in entrepreneurship. *Journal of the Gujarat Research Society*, 21(16), 241-244.
- Wannamakok, W., & Chang, Y. Y. (2020). "Institutional Environments and Social Entrepreneurial Intentions: A Case of Thailand". *Review of Integrative Business and Economics Research*, 9(1), 97-111.
- Yazdani, A., Shahamat, N., & Salehi, M. (2017). The relationship between the use of information technology and job motivation and creativity among high school teachers in Beyza. *New Approach in Educational Management Journal*, 8(4), 277-303.
- Zanganeh, H., Mousavi, S. R., & Badali, M. (2013). The impact of information and communication technology on fostering creative thinking. *Innovation and Creativity in Humanities*, 3(2), 39-59.
- Zhang, F., & Li, D. (2018). Regional ICT access and entrepreneurship: Evidence from China. *Information & Management*, 55(2), 188-198.

Conflict of Interest

The authors of this study declare no conflict of interest.