



# The Role of Digital Competencies on Digital Entrepreneurial Intentions Among University Students of Manipur

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**Citation:** Dr. Aribam Debala Devi et al. (2023). The Role of Digital Competencies on Digital Entrepreneurial Intentions Among University Students of Manipur, *Educational Administration: Theory and Practice*, 29(4) 5558 - 5564

Doi: 10.53555/kuey.v29i4.10449

## ARTICLE INFO ABSTRACT

With the rapid technological advancements, digital skill development emerged as an important factor in navigating the success of an entrepreneurs. Digital competencies or skills are any skills that enables us the ability to find, evaluate, utilize, share and create content using information technologies and the internet. Be it branding, communication, marketing, networking, learning digital skills undoubtedly will thrive entrepreneurial success in an increasingly interconnected world. The present study focus on how digital competencies of an individual will influence entrepreneurial intention mediated by entrepreneurial alertness, entrepreneurial self-efficacy and demographic variables, the results showed digital competencies impacts significantly the entrepreneurial self-efficacy, which again impacts digital entrepreneurial intention and likewise digital competencies impacts entrepreneurial alertness which again impacts Digital entrepreneurial intention highlighting a condition of full or complete mediation. It also revealed that there is significant correlation between age and EDI. However, there is negative correlation between Gender, Programme enrolled and Any computer courses Enrolled with EDI. The data for the study is collected from students of Dhanamanjuri University through questionnaire in google forms. Correlation and multiple regressions tools, Hayes Process 2022 for mediation analysis through SPSS are used for data analysis and interpretation.

**Keywords:** Digital Competencies, Networking, Entrepreneurial, Mediated, Alertness, Self efficacy.

## INTRODUCTION

Digital age has revolutionized every aspect of human life be it education, shopping, marketing etc. Digital technologies are broadening its eminent role as a facilitator of new venture creation (von Briel et al.,2021) Digital entrepreneurship has become a feasible career option as it offers a myriad of opportunities for those who are looking to start a business in today's dynamic business environment. Entrepreneurial opportunities towards innovative ideas, goods and services are assured to be discover, assess, and utilize by the prominent role of digital entrepreneurship (Shane & Venkataraman,2017), using digital means of enables, context or outcome (Nambisan,2017; von Briel et al,2021). In this regard, there is utmost need for imparting future-oriented competencies in technologies or digital skills to the aspiring entrepreneurs. Several studies comparing the outcome of digital entrepreneurs and non digital entrepreneurs have associate the use of digital technologies as essential promising factor for entrepreneurship Pavlov &El Sawy, (2006); von Briel et al.,(2018). Bartalome et al.,(2021), todays entrepreneurial world require more complex skills and needs to employ digital technologies towards innovation. Nina Bachmann et al.,(2024), in their study highlight the extnesion model of predicctors of entrepreneurial intention and introduce digital competencies act as a corresponding antecedent that only unfolds into entrepreneurial intention through mediation, digital competencies alone do not add but works in jointly with individuals' orientation and attitude or belief in their own aptitude or capability to become an entrepreneur. Steininger, D. M. (2019).

Waves of technological changes create new opportunities that need to be leveraged and exploited. Entrepreneurs play a crucial role in leveraging new opportunities created by technologies such as big data, business intelligence, cloud computing, augmented reality, mobile services, and the internet of things. The study contributes to the knowledge of entrepreneurship and digital competencies. First, we address the role of digital competencies on entrepreneurial intentions by providing various empirical evidence and then we reveal a presumed positive relationship between digital competencies and entrepreneurial intention established through the involvement of mediation. We conceptualize an extended approach to study the influence of entrepreneurial intention by introducing mediation of cognitive aspects especially entrepreneurial self-efficacy and entrepreneurial alertness in manifesting the impact of digital competencies on individual entrepreneurial intention. **MacKinnon et al., (2007)** Mediation is one way that a researcher can explain the process or mechanism by which one variable affects another.

## REVIEW OF LITERATURE

**Boyd and Vozikis, (1994); Chen et al., 1998).** Entrepreneurial self-efficacy (ESE) is the unwavering belief in one's entrepreneurial abilities and skills to successfully accomplish a wide range of tasks and projects within the realm of entrepreneurship research. This concept underscores the unshakable confidence that entrepreneurs possess in their capacity to effectively complete various entrepreneurial endeavors.

**Langowitz and Minniti (2007).** The cultivation of entrepreneurial alertness is instrumental in assisting students in forming a lucid comprehension of entrepreneurship, assessing their values and motivations in business, and shaping their predisposition toward entrepreneurship. Consequently, a heightened level of entrepreneurial alertness significantly heightens the probability of students fostering a disposition to pursue entrepreneurship. Thus entrepreneurial alertness aids in motivating, engaging and evaluating their values and attitudes towards entrepreneurship. This reflected a direct positive and significant link between individuals reporting high alertness and an increased the likelihood to start new firms.

**Hou (2008).** The research clearly indicates that individuals with strong entrepreneurial alertness are more adept at identifying opportunities, thus playing a critical role in taking entrepreneurial actions to establish new ventures. The study's findings highlight the influential role of environmental scanning, motivation, prior performance, level of education, and capability in shaping entrepreneurial alertness and subsequent entrepreneurial action. The research has determined that individuals with a strong entrepreneurial alertness are more likely to discern opportunities, thus playing a pivotal role in initiating entrepreneurial actions to establish new ventures.

**Tang et al.,(2012).** Entrepreneurial alertness encompasses the mental processes of actively seeking out new information, making connections between diverse sources of information, and assessing potential entrepreneurial opportunities. This involves scanning and searching for relevant data, associating and connecting disparate pieces of information, and finally, evaluating and making informed judgments about potential opportunities.

**Altaf Hussain et al., (2016),** The process of entrepreneurship involves discovering opportunities, gathering resources, organizing them, and adopting strategies to exploit them. Identifying opportunities is guided by an entrepreneurial mindset, which includes being alert. This study emphasizes that being alert can lead individuals to develop intentions to exploit opportunities. Entrepreneurial alertness influences the attention stage in individual decision-making by affecting attitude, subjective norms, and PBC. This, in turn, shapes individual intentions and actions, leading to the perception of new feasible ventures.

**Wang, L. Y., & Huang, J. H. (2019)** Entrepreneurial self-efficacy is used to define an individual's confidence in his/her abilities, and has a determinant role in shaping entrepreneurial intentions. It is reasonable to assume that the level of entrepreneurial self-efficacy is correlated with entrepreneurial intentions. Entrepreneurial self-efficacy scale, perceived social support scale, and entrepreneurial intention scale were employed to survey the students. The study thoroughly investigates the influence of university students' entrepreneurial self-efficacy on their intention to become entrepreneurs, while also examining the moderating effect of social support on this relationship. The following results were obtained: (a) entrepreneurial self-efficacy significantly and positively predicted entrepreneurial intentions, and (b) social support positively moderated the effect of entrepreneurial self-efficacy on entrepreneurial intentions.

**Cetinkaya, A.S. et al, (2023)** states that Since entrepreneurial self-efficacy is a strong predictor of entrepreneurship performance, so it's important to focus on this area. Research shows that individuals with a high sense of self-efficacy are more likely to be successful as entrepreneurs. Those with higher entrepreneurial self-efficacy feel confident in their ability to run a business effectively. When individuals are motivated, encouraged, supported, and given guidance to become entrepreneurs, their self-efficacy increases, and they become more determined to achieve their goals, even in the face of challenges. Therefore, it's essential to provide training, motivation, and support to help people become successful entrepreneurs.

**Triyono, M.B. et al, (2023).** Their study has proven the effect of entrepreneurial orientation and digital competence on the growth of entrepreneurial intention of vocational education students. The findings highlight the importance of strengthening digital competence to foster and build an important bridge for social and psychological capital in strengthening intentions.

**Shane. et al, (2023).** An individual with high self- efficacy for a given task tends to engage in more effort for a longer period, persist despite setbacks, set and accept higher goals and develop better plans to accomplish them. Hence, the higher the belief one has in its abilities, the greater its entrepreneurial intentions.

**Wibowo, A. et al (2023).** Examines the effect of digital entrepreneurial education, digital entrepreneurial knowledge affects digital entrepreneurial intentions of Indonesian University students and explains how psychological variables become predictors as well as mediators for increasing students' digital intention. The study offers valuable insights into how the integration of entrepreneurial human capital theory and social cognitive theory can effectively enhance the quantity and quality of students entering digital platform-based business establishments across diverse universities.

**Nina Bachmann et al., (2024)** In their compelling studies, they have underscored the established predictors of entrepreneurial intention and introduced digital competencies as corresponding antecedents. These competencies unfold into entrepreneurial intention through mediation, specifically entrepreneurial orientation and self-efficacy. In their studies they have highlighted the need of incorporating or felicitation of both entrepreneurial mind-set and digital competencies in educating and training of future entrepreneurs in today's dynamic and rapidly progressing digital society.

### METHOD:

The present study is exploratory in nature. Convenient sampling technique has been adopted for the study. The population of the study consists of 240 students of Dhanamanjuri University of Manipur.

A structured questionnaire adapted from **Rubach & Lazarides, (2021)** digital competencies, **Zhao et.al., (2005)** entrepreneurial self-efficacy, **Tang et al.,(2012)** digital entrepreneurial alertness, **linan (2004)** digital entrepreneurial intention. The study employed a Likert scale of 1(strongly disagree),2(disagree),3(neutral), 4(agree),5(strongly agree) to represent the respondents answers.

Furthermore, the collected data were tested at various stages, including regression analysis and mediation analysis (**Hayes Process model ,2022**) by converting data collected through SPSS.

### OBJECTIVES

1. To find out the role played by digital competencies in promoting entrepreneurial alertness.
2. To find out the linkage between digital competencies and entrepreneurial self-efficacy.
3. To ascertain the overall role played by digital competencies, digital entrepreneurial alertness, entrepreneurial self-efficacy in promoting entrepreneurial digital intention.

### HYPOTHESIS

H01: Digital competencies (DC) are not positively related to individual entrepreneurial self-efficacy (ESE)

H02: Digital competencies (DC) are not positively related to individual digital entrepreneurial alertness (DEA)

H03: Entrepreneurial self- efficacy (ESE) is not related to digital entrepreneurial intention (DEI)

H04: Digital entrepreneurial alertness (DEA) did not influence digital entrepreneurial intention (DEI).

H05: Both individual digital entrepreneurial alertness (DEA) and entrepreneurial self-efficacy (ESE) does not independently mediate the positive relationship between an individual's digital competencies and digital entrepreneurial intention (DEI)

### DATA ANALYSIS AND INTERPRETATION

**Table 1: Results of Correlation Between Demographic Variables (Age, Gender, Programme enrolled, computer courses enrolled) and Digital Entrepreneurial Intention.**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	4.305	.400		10.774	.000
Age	-.401	.104	-.281	-3.868	.000
Gender	-.077	.134	-.041	-.577	.565
ProgEnrld	-.039	.060	-.047	-.650	.516
AnyComptrCrseEnrld	-.033	.121	-.020	-.274	.784

a. Dependent Variable: DEI, P < 0.05

Source: Primary Data

This shows the relationship between DEI and demographic variables. It reveals that there is significant correlation between age and EDI ( $r = .000, p < .05$ ). However, there is negative correlation between Gender, Programme enrolled and Any computer courses Enrolled with EDI

**Table 2: Multiple Regression Analysis Model Summary of Independent Factors and Digital Entrepreneurial Intention(DEI):**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
	.287 <sup>a</sup>	.082	.064	.79774	1.987

a. Predictors: (Constant), AnyCompTrCrseEnrld, Gender, ProgEnrld, Age, Dependent variable- DEI  
Source: Primary Data

This table indicates that the demographic variables collectively accounts for 8.2% (square of multiple R,  $R^2 = .082$ ) of the total variance in DEI.

**Table 3: Results of correlation between DC and ESE, DC and DEA, ESE and DEI and DEA and DEI.**

		DC	ESE	DEA	DEI
DC	Pearson Correlation	1	.671**	.715**	.568**
	Sig. (2-tailed)		.000	.000	.000
	N	204	204	204	204
ESE	Pearson Correlation	.671**	1	.722**	.740**
	Sig. (2-tailed)	.000		.000	.000
	N	204	204	204	204
DEA	Pearson Correlation	.715**	.722**	1	.695**
	Sig. (2-tailed)	.000	.000		.000
	N	204	204	204	204
DEI	Pearson Correlation	.568**	.740**	.695**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	204	204	204	204

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Source: Primary Data

This indicates that there is positive and significant relationship between DC and ESE ( $r = .000, p < .01$ ), higher the digital skills, higher is the confidence and self-belief of an individual towards any entrepreneurial activities. The findings are consistent with the findings of Monllor & Soto-Simeone (2020), highlighting the influential impact of DC on entrepreneurial mindset and process. Hence,  $H_01$  is rejected.

The correlation between the measure of digital competencies and digital entrepreneurial alertness was found to be positive and statistically significant ( $r = .000, p < .01$ ). This indicates that the higher the digital competencies and skills of individual the higher the digital. Hence  $H_02$  is rejected.

This also indicates the positive relationship between Entrepreneurial self-efficacy and Entrepreneurial Intention ( $r = .000, p < .01$ ). Consistent with the findings of Shane et al., (2023), Li-Yu & Jian-Hao, (2019), they highlighted the positive relationship between ESE and DEI, higher the self-efficacy, higher the desire to attain goals, even under hard obstacles, increases, more confident in their ability to run business and more engaged in innovative opportunities in this E-world.  $H_03$  is rejected.

The table also indicates the positive and statistical significance between digital entrepreneurial alertness and digital entrepreneurial intention ( $r = .000, p < .01$ ). Confirming the results of some relevant studies by Cui and Bell (2022) and George et al. (2016) who highlighted that greater the individuals DEA, the more likely they are to succeed in initiating a business in the digital platform.  $H_04$  is rejected.

**Table 4: Result of Regression Analysis**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.260	.182		1.431	.154
DC	-.014	.067	-.014	-.207	.837
ESE	.506	.068	.503	7.394	.000
DEA	.376	.079	.341	4.731	.000

- a. Dependent Variable: DEI  $p < .05$ ,  
DC=Digital Competencies,  
ESE=entrepreneurial Self-Efficacy
- b. N=204 DEA=Digital Entrepreneurial Alertness,  
DEI= Digital Entrepreneurial Intention

Source: Primary Data

Table 4 summarises the result of regression analysis, ESE and DEA simultaneously but independently mediate the positive relationship between DC and DEI (ESE,  $r = .000, p < .05$ ; DEA,  $r = .000, p < .05$ ).

**Table 5: The analysis of variance (ANOVA)**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	83.036	3	27.679	100.697	.000 <sup>b</sup>
Residual	54.974	200	.275		
Total	138.010	203			

- a. Dependent Variable: DEI
  - b. Predictors: (Constant), ESE, DC, DEA
- Source: Primary Data

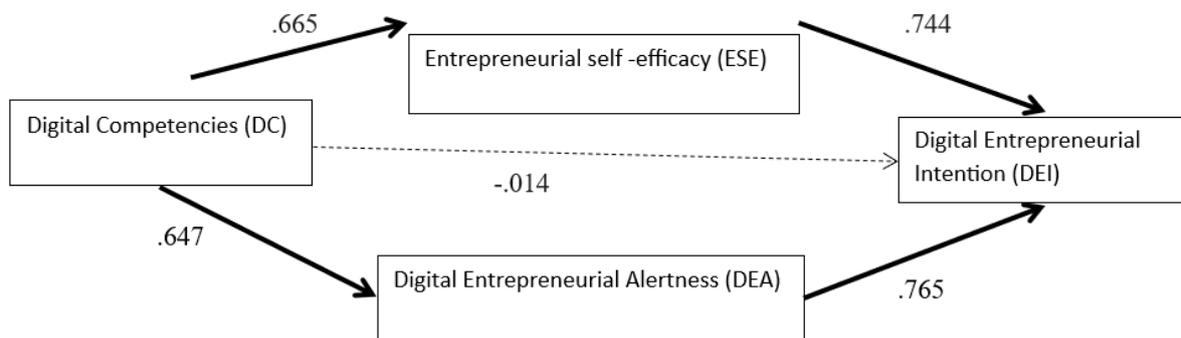
The high F value (100.697) and the corresponding low p-value(.000) strongly suggest that the regression model significantly improves the prediction of DEI compared to using mean of DEI alone. The predictors ESE,DC,and DEA together explain a substantial amount of the variability in DEI, making the model a valuable too, for understanding the factors that influence DEI.

**Table 6: Result of Mediation Analysis (Hayes Process,2022)**

	coefficient	SE	t	p	LLCI	ULCI
Total effect of DC on DEI	.566	.058	9.743	.000	.452	.679
Direct effect of DC on DEI	-.014	.067	-.207	.837	-.146	.185
Specific indirect effect of DC on DEI through ESE	.336	.064			.215	.469
Specific indirect effect of DC on DEI through DEA	.243	.075			.114	.419

Source: Hayes Process Model, 2022

In Table 6 of our mediation analyses result (Hayes,2022), the specific indirect that DC exert on DEI is significant through ESE and DEA (ESE Coeff.=.336, 95%CI [.215,.469] and (DEA Coeff.=.243,95%CI [.114,.419]. Surprisingly, the result provides no evidence that DC influence DEI independently of their indirect effect through ESE and DEA (Coeff. = -.014,95%CI [-.146,.185]. Concluding, the total effect of Digital competencies on Digital Entrepreneurial Intention rejects  $H_05$  when controlling for the specific indirect effects through ESE and DEA (Coeff. = .566,95%CI [.452,.679].



**Fig: Proposed mediation effect Model based on Hayes Process Model.**

This model highlights the relationship between Digital competencies and Digital Entrepreneurial Intention that is fully mediated by Entrepreneurial self-efficacy and Digital Entrepreneurial Alertness ( $b = -.014$ , direct effect of DC on DEI). Digital competencies impact significantly the entrepreneurial self-efficacy( $b = .665$ ), which again impacts digital entrepreneurial intention( $b = .744$ ) and likewise digital competencies impacts entrepreneurial alertness( $b = .647$ ) which again impacts Digital entrepreneurial intention( $b = .765$ ).

## SUGGESTIONS

1. The study only includes two selected mediators to examine the impact of digital competencies on entrepreneurial intention. Future researchers should consider testing a more extensive list of alternative mediators to gain a more comprehensive understanding.
2. Furthermore, expanding the population size beyond universities for further studies could provide valuable insights. It is important to explore the need for entrepreneurial education to impart digital skills to students in order to enhance entrepreneurial intention.
3. This study serves as a valuable starting point for defining an extended set of entrepreneurial competencies in today's complex business world.

## CONCLUSION:

In today's rapidly evolving digital age, it's imperative to equip oneself with essential technological skills to thrive, especially in the dynamic entrepreneurial landscape. Our research underscores the pivotal role of digital competencies in shaping entrepreneurial intention. We've established that digital skills significantly influence entrepreneurial intention through key factors such as self-efficacy and digital alertness towards entrepreneurship. While the impact of digital skills on entrepreneurial intention may seem ambiguous, our findings illuminate how digital competencies propel entrepreneurial intention through the mediation of entrepreneurial self-efficacy and digital alertness. Furthermore, our research highlights a positive correlation between age and digital entrepreneurial intention, and a negative correlation between gender, program enrollment, and completion of computer courses with digital entrepreneurial intention, respectively. This framework offers a comprehensive understanding of entrepreneurial intentions in diverse contexts and future developments. Educational institutions must prioritize the seamless integration of digital knowledge and skills into entrepreneurial education to empower students for thriving careers as entrepreneurs in the digital era. Education should transcend disciplinary boundaries, enabling students to apply their knowledge practically and ensuring that seeking traditional employment in the public or private sectors isn't their sole option.

## References

1. A, B. (1977). Self Efficacy: Toward a unifying theory of behavioural change. *Psychological Review*, 191-215.
2. Altaf Hussain Samo, N. H. (2016). The impact of Entrepreneurial alertness on entrepreneurial intention. *Journal of International Business research and marketing* , 174-181.
3. Bachmann, N. R. (2024). What makes for future entrepreneurs? The role of digital competencies for entrepreneurial intention. *Journal of Business Research*, 174-188.
4. Bartolome J, G. P. (2022). A pragmatic approach for evaluating and accrediting digital competence of digital profiles: A case study of entrepreneurs and remote workers. *Journal of Technology, Knowledge and Learning*, 843-878.
5. Boyd, N. V. (2011). The influence of self efficacy on the development of entrepreneurial intentions and actions. *Entrepreneursh Theory Practical*, 63-77.
6. Cetinkaya, A. S. (2020). The impact of Self efficacy on entrepreneurship Performance. *HHBIC*, 17-18.
7. Chen C C, G. P. (2015). Does entrepreneurial self efficacy distinguish entrepreneurs from managers? *Journal of Business Venturing*, 295-316.
8. Cui J, B. R. (2022). Behaviourial entrepreneurial mindset: How entrepreneurial education activity impacts entrepreneurial intention and behaviour. *The international Journal of Management Education*.
9. Drnovsek M, W. J. (2010). Entrepreneurial self Efficacy and Business start up: developing a multi dimensional definition. *International Journal of Entrepreneurial behaviour & Research*, 329-348.
10. F, H. A. (2022). *Methodology in the Social Sciences, Introduction to mediation, moderation and conditional process analysis: A regression based approach*. New York, NY: The Guilford Press.
11. H, w. L. (2019). Effect of entrepreneurial self efficacy on the entrepreneurial intentions of students at a university in Hainan province in China: Taking social support as a moderator. *International journal of learning, Teaching and Educational Research*, 183-200.
12. Linan F, R. c. (2015). Assessing the stability of graduates entrepreneurial intention andexploring its predictive capacity. *Academia Revista Latinamericana de Administracion*, 77-98.
13. Liu J, C. S. (2017). The modern effect of self efficacy and gender on work engagement for restaurant employees in the United States. *International Journal of Contemporary Hospitality Management.*, 624-642.
14. M, S. D. (2019). Linking Information systems and entrepreneurship: A review and agenda for IT Associated and Digital Entrepreneurship Research. *Information System Journals*, 363-407.
15. Mary George, N. P. (2016). A systematic literature review of entrepreneurial opportunity recognition: insights of influencing factors. *International entrepreneurship and Management Journal.*, 309-350.

16. Monllor J, S. S. (2020). the impact that exposure to digita fabrication technology has on student entrepreneurial intentions. *International journal of Entrepreneurial behaviour and Research*, 1505-1523.
17. Shane S, V. S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 217-226.
18. T, H. S. (2008). Antecedents and consequence of entrepreneurial alertness in franchise chain in Management of Innovation and Technology. *4th IEEE International Conference on Management and technology* (pp. 166-171). Bangkok: ICMIT.
19. Tang J, K. K. (2016). Entrepreneurial alertness in the pursuit of new opportunities. *J Bus Ventur*, 77-94.
20. Von Briel, F. D. (2018). Digital technologies as external enablers of new venture creation in the IT hardware sector. *Journal on Entrepreneurship theories and practice*, 217-226.
21. Wibowo A, Narmaditya, B S Saptono A, Effendi, M S Mukhtar S & Mohd Shafiai M H. (2023). Does digital entrepreneurship education matter for students digital entrepreneurial intentions? The mediating role of entrepreneurial alertness. *Journal on Cogent Education*.
22. Zhao H, Siebert S E & Hills G E. (2005). The mediating role of self efficacy in the development of entrepreneurial intentions. *Journal of Applied psychology*, 1265-1278.