DIGITAL ENTREPRENEURIAL KNOWLEDGE AND ALERTNESS AS PREDICTORS OF BUSINESS EDUCATION STUDENTS' DIGITAL ENTREPRENEURIAL INTENTION IN EDO STATE

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Abstract

The increasing level of unemployment amongst graduates and non-graduates in this digital age is giving serious concern to stakeholders and this has informed this study. The purpose of this study was to ascertain the extent to which digital entrepreneurial knowledge and alertness predict business education students' digital entrepreneurial intention in Edo State. A total of 382 students of business education from the University of Benin, Benin City and Ambrose Alli University, Ekpoma participated in the study. The "Digital Entrepreneurial Knowledge, Alertness and Digital Entrepreneurial Intention Questionnaire (DEKADEIQ)" was the instrument used to collect data. The Cronbach Alpha was used in ascertaining the reliability and each of the sub-scales yielded the following: digital entrepreneurial alertness (.912); digital entrepreneurial knowledge (.850) and digital entrepreneurial intention (.804). The Pearson Product Moment Correlation and simple linear regression analysis were used for the analysis. According to the results, digital entrepreneurial knowledge significantly predicted business education students' digital entrepreneurial intention in Edo State (R^2 = .823, F (1, 242) = 1124.178, P <. 05, t = 33.529, β = .977, SE = .029). Digital entrepreneurial alertness significantly predicted business education students' digital entrepreneurial intention in Edo State (R^2 = .957, F (1, 242) = 5379.193, P <. 05, t = 73.343, β = .519, SE = .007). The study therefore recommends that stakeholders should give emphasis on digital entrepreneurship in the face of this digital age.

Keywords: *Digital Entrepreneurial knowledge, digital entrepreneurial alertness and digital entrepreneurial intention*

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Introduction

The introduction of digital technologies has transformed traditional company processes, goods, services, and strategies, bringing with it both possibilities and problems for entrepreneurs in the quickly changing world of modern business (Elnadi & Gheith, 2023). As a result, the broad use of digital technologies has fostered an atmosphere that is conducive to entrepreneurship. Thus, a noteworthy shift in how businesses navigate and profit on this dynamic technology age has occurred as a result of the revolutionary character of the digital landscape, which has encouraged a rise in entrepreneurial endeavors (Nambisan, 2017). This led to the emergence of a new subset of traditional entrepreneurship that is known as digital entrepreneurship (Hynes & Richardson 2007; Vineela, 2018; Rippa & Secundo 2019; Sahut et al 2021). Elia et al. (2020) define digital entrepreneurship as the practice of creating new value by utilizing digital technology in the process of manufacturing a good or service or managing a firm. Mohammed et al. (2023) define digital entrepreneurship as the process of using information and communication technologies, including digital

media, to influence shifts in the competitive environment. Digital entrepreneurs actively seek opportunities by leveraging the capabilities of digital media and information technology. By pursuing these opportunities and possibly advancing the continuous process of creative destruction within the digital economy, they contribute to notable changes in the competitive landscape (Davidson & Vaast, 2010). While there are some fundamental principles that both traditional and digital entrepreneurship share, like identifying opportunities, coming up with creative ideas, and commercializing goods or services (Mir et al., 2022), their main differences lie in how much digital technology is incorporated into the various venture activities along the value chain (Elnadi & Gheith, 2023; Kraus et al., 2018). The unique traits and operational dynamics that set digital entrepreneurship apart from traditional entrepreneurship are shaped in large part by this integration. Digital entrepreneurship, which is a significant divergence from traditional entrepreneurial techniques, essentially emphasizes a more fundamental reliance on and incorporation of digital tools, platforms, and tactics throughout the entire business process.

The increasing prevalence of digital entrepreneurship has reinforced people's intentions, particularly those of business education students (Sahrah et al., 2023). Digital entrepreneurial intention has been defined as the wish to invest in digitally enabled company platforms (Al-Mamary & Alraja, 2022; Sahrah et al., 2023). According to Aloulou et al. (2023), the phrase "digital entrepreneurial intention" describes a person's cognitive propensity to actively choose and pursue a job in digital entrepreneurship. This includes starting up new and creative businesses that run on digital technologies. To put it another way, digital entrepreneurial intention is more than just a desire to start a business; it is a proactive decision to use the digital space to explore new business opportunities. DEI has been defined by academics as a person's readiness and willingness to launch a business using technology or the internet (Vejayaratnam et al., 2019; Akhter et al., 2022; Nikzad & Vafaian, 2022; Al Amimi & Ahmad, 2023; Xin & Ma, 2023). Because it is relatively easy and simple to do business with, this type of business has gained popularity among many people, particularly business education students (Ramadani et al., 2021). It requires a great deal of knowledge in navigating the internet sphere to encourage people to engage in online entrepreneurship.

According to Darmanto et al. (2023), entrepreneurial knowledge is human capital that embodies the experience one has received through others' experiences or by vicarious experience. This experience aids in the development of cognitive capacity while starting a business. According to Wu et al. (2008), entrepreneurial knowledge is the main expression of human capital, ideas, abilities, and mindset that business owners employ or ought to employ in order to achieve and maintain their level of success. In a similar vein, entrepreneurial knowledge is defined by Alkhalaf et al. (2022) as a thorough comprehension of the various facets of entrepreneurship. According to Sufyan et al. (2023), "digital entrepreneurial knowledge" (DEK) is the thorough comprehension and skill in using digital tools, platforms, and strategies for the various aspects of entrepreneurial activity. The skills and talents that a person possesses to enable him or her to navigate online business platforms are referred to in this study as digital entrepreneurial knowledge.

There is no doubt that certain degree of knowledge is required for an individual to be able to harness the business opportunities online. This knowledge can be acquired

from formal and informal institutions. Business education students are often exposed to such knowledge during their entrepreneurship courses. Individuals can also acquire such knowledge through their social networks and interactions with friends and families. Entrepreneurs with adequate digital knowledge can develop better products or services to meet market tastes and demands. This digital entrepreneur will also be more obedient in dealing with opportunities, carrying change, and employing resources optimally and effectively. In recent times, observations have shown that individuals are beginning to embrace online business activities. For example, there are more people selling goods online with the help of their smartphones and digital devices. Others are creating contents online and getting returns from Facebook. They are able to earn their livelihood by these online activities and business engagement. Numerous researchers like Mulyana et al. (2024), Fannya and Daru (2023), and Pham et al. (2023), have discovered empirical data confirming the link between entrepreneurial knowledge and intention. According to similar findings, digital entrepreneurial intention is strongly influenced by digital entrepreneurial knowledge. These findings were reported by Mir et al. (2022), Akhter et al. (2022), Xin and Ma (2023), Wibowo et al. (2023), Aloulou et al. (2023), Nguyen et al. (2024), Alzougool (2024), Baskaran et al. (2023), and Bui and Duong (2024). This knowledge makes them to be more alert to business opportunities.

The ability to spot opportunities that others may miss is known as alertness, according to Kirzner (1979). The author goes on to argue that part of alertness is judgment, which is concerned with assessing new developments, shifts, and information to determine whether they would represent a profitable business opportunity. Alertness is comprised of three main components: information scanning and searching, information connecting previously disparate sources, and assessing whether profitable business opportunities exist (Chavoushi, & Valliere, 2021). Entrepreneurial alertness is defined by Tang et al. (2012) as a mental activity that includes search and scanning, association and connection, evaluation and judgment, and associating with heterogeneous information from various sources as well as assessing possible entrepreneurial opportunities.

Scanning and searching allude to the entrepreneur's capacity to continuously examine the digital environment for useful information, which includes emerging technologies, market trends, and customer habits. The ability to make connections between seemingly unrelated bits of data to create a cohesive picture of possible opportunities is referred to as association and connection. The digital age is making this process much more important since markets and digital technology are intertwined. Entrepreneurs need to be able to spot patterns and connections among different digital trends and advances in order to spot new business prospects (Ediagbonya, 2023; Ediagbonya et al., 2023). For instance, entrepreneurs who were aware of these links identified new business models, such as digital content creation and influencer marketing, as a result of the growth of social media platforms and these activities have led to growth and development in the country (Tang et al., 2012). The process of evaluating the viability of opportunities that have been identified is known as evaluation and judgment. Considering the resources needed, the competitive environment, and potential rewards and risks is part of this. The uncertainty that comes with the rapid pace of technological advancement complicates this process in the digital context. These studies in the field have been further informed by this.

Research has linked DEI to several antecedents, including attitude towards entrepreneurship (Alkhalaileh, 2021); entrepreneurial passion (Al Halbasi et al., 2022; Maziriri et al., 2023); educational support (Al Amimi & Ahmad, 2023); social media (Wibowo et al., 2023); digital entrepreneurship education (Alkhalaileh, 2021; Wibowo & Narmaditya, 2022; Wibowo et al., 2023); entrepreneurial self-efficacy (Al Amimi & Ahmad, 2023); perceived behavioral control (Alkhalaileh, 2021); digital entrepreneurial knowledge (Wibowo & Narmaditya, 2022; Wibowo et al., 2023); digital entrepreneurial alertness (Wibowo et al., 2023);. Furthermore, the studies by Mir et al (2022), Akhter et al (2022), Xin and Ma (2023), Wibowo et al (2023), Aloulou et al (2023), Nguyen et al (2024), Alzougool (2024), Baskaran et al (2023), Bui and Duong (2024) found that digital entrepreneurial knowledge significantly influence digital entrepreneurial intention. Despite the extensive research in digital entrepreneurship, a gap remains. The extent to which digital entrepreneurial knowledge and digital entrepreneurial alertness predict digital entrepreneurial intention has yet to be fully explored especially in developing country like Nigeria. This study has addressed this gap.

Hypotheses

The 0.05 threshold of significance was used to design and test the following hypotheses.

i. Digital entrepreneurial knowledge is not a significant predictor of Business Education Students' digital entrepreneurial intention in Edo State.
ii. Digital entrepreneurial alertness is not a significant predictor of Business Education Students' digital entrepreneurial intention in Edo State.

Theoretical Underpinnings

Social Cognitive Career Theory (SCCT)

The theoretical framework of this study is based on Social Cognitive Career Theory (SCCT), developed by Lent et al. (1994). SCCT highlights the influence of social and cognitive factors on individuals' career choices and development. Specifically, it explains how career decisions are shaped by the interaction of cognitive elements, such as self-efficacy beliefs and outcome expectations, alongside environmental factors like social support and barriers. The theory also emphasizes contextual influences (external factors), including socioeconomic status, educational opportunities, and support systems, and how these relate to career decisions. In this study, digital entrepreneurial knowledge (DEK) is considered a cognitive factor, while digital entrepreneurial alertness (DEA) represents the cognitive processes involved. Digital entrepreneurial intention (DEI) is viewed as the individual's career choice. The DEK is derived as a result of the exposure of the students to entrepreneurship education and this is knowledge is capable propelling them to venture into digital entrepreneurial venture. In a similar vein, the DEA is also individual inputs and it is an individual that is alert to the dynamics of the business environment that will be able to invest. Both DEK and DEA play crucial roles in shaping DEI, significantly influencing the decision to pursue digital entrepreneurship.

Method

In order to ascertain the degree to which digital entrepreneurial knowledge and digital entrepreneurial alertness predict the digital entrepreneurial intention of Edo State business education students, this study used a correlational survey approach. All 382 business education students from the University of Benin and Ambrose Alli University in Ekpoma participated. Because of the study's manageable population, a sampling technique wasn't required. This is in agreement with Larsen and Buss (2014) who argued that studying entire populations can offer comprehensive insights into psychological phenomena and enhance the generalizability of findings. The Digital Entrepreneurial Knowledge, Alertness and Digital Entrepreneurial Intention Questionnaire (DEKADEIQ) was a structured questionnaire used to gather data. This instrument was sub-divided into two sections: Section B concentrated on the two independent variables (digital entrepreneurial knowledge and digital entrepreneurial alertness) and one dependent variable (digital entrepreneurial intention), while Section A addressed the bio-data of the respondents. Twenty-six items were adapted from existing scales for this study, utilizing a 5-point Likert scale ranging from Strongly Agree (5) to Strongly Disagree (1). The digital entrepreneurial alertness component included 13 items adopted from Tang et al. (2012). One of the items in the instrument reads 'I have a better feeling for seeking out new opportunities'. The digital entrepreneurial intention component consisted of seven items from the Wibowo et al. (2023), including "I believe that I can have an online business in the near future." The digital entrepreneurial knowledge component was made up of six items adopted from Roxas (2014) and Younis et al. (2020). One of the items in the instrument reads 'I have adequate knowledge to manage a digital entrepreneurship."

Experts in business education evaluated the face and content validity of the instrument, and their recommendations were integrated into the final questionnaire. The Cronbach Alpha was used in ascertaining the reliability after administering the instrument to 20 business education students in Delta State University, Abraka. Each of the sub-scales yielded the following coefficients: digital entrepreneurial alertness (.912); digital entrepreneurial knowledge (.850) and digital entrepreneurial intention (.804). An online Google Form was used to simplify data collection, and 244 questionnaires—or 63.9% of the total population—were completed. The data were examined using regression analysis and Pearson Product Moment Correlation with the help of the Statistical Package for Social Sciences (SPSS) Version 23.0.

Results

The results of the data analysis are presented in this section with respect to the correlation matrix and hypotheses testing of the study variables.

Table 1: Correlation matrix showing the relationship among digital entrepreneurial knowledge, digital entrepreneurial alertness and Digital Entrepreneurial Intention (N=244)

Variables	Mean	Standard Deviation	1	2	3
DEK	4.10	0.81	1		
DEA	4.14	0.79	.975**	1	
DEI	4.07	0.82	.978**	.907**	1

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

Note: DEK – Digital entrepreneurial knowledge; DEA – Digital entrepreneurial alertness; DEI - Digital entrepreneurial intention

Table 1 displays the correlations between intention, digital entrepreneurial alertness, and digital entrepreneurial knowledge. The variables have correlation coefficients ranging from.907 to.978. There was a high favorable association (r=.978, n=244) between the intentions of business education students to pursue a digital business and digital entrepreneurial knowledge. The intention to pursue digital entrepreneurship and digital entrepreneurial alertness showed a high association (r=.907, n=244). There was a high correlation (r=.975, n=244) between digital entrepreneurial knowledge and digital entrepreneurial alertness.

Hypothesis One: Digital entrepreneurial knowledge is not a significant predictor of Business Education Students' digital entrepreneurial intention in Edo State.

Table 2: Digital entrepreneurial knowledge predicting digital entrepreneurial intention

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.265	.731		5.835	.000
	Digital Entrepreneurial Knowledge	.977	.029	.907	33.529	.000

a. Dependent Variable: Digital Entrepreneurial Intention

Note: R^2 = .823, Df = 1, 242, F = 1124.178, P < .05, t = 33.529, β = .977

Source: Authors' Work (2024)

Table 2 reveals that DEK (F (1, 242) = 1124.178, SE = .029, β = .977, t = 33.529, 95% LLCI = .499 – ULCI = .537 had a significant positive influence on DEI. The adjusted R-square (.822) reveals that 82.2% of the variance in DEI is influenced by DEK. The results of the 5000-resample bootstrap coefficients for DEK influencing DEI (bias = .001, p = .000) were statistically significant. All in all, the results confirmed the expectations of the authors. Therefore, hypothesis 1 is rejected in the study. That is, digital entrepreneurial knowledge is a significant predictor of business education students' digital entrepreneurial intention in Edo State.

Hypothesis Two: Digital entrepreneurial alertness is not a significant predictor of Business Education Students' digital entrepreneurial intention in Edo State.

Table 3: Digital entrepreneurial alertness predicting digital entrepreneurial intention

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	.809	.381		2.123	.035
	Digital Entrepreneurial Alertness	.519	.007	.978	73.343	.000

a. Dependent Variable: Digital Entrepreneurial Intention

Note: R^2 = .957, Df = 1, 242, F = 5379.193, P < .05, t = 73.343, β = .519

Source: Authors' Work (2024)

Table 3 reveals that DEA (F (1, 242) = 5379, 193), SE = .007, β = .519, t = 73.343, 95% LLCI = .499 – ULCI = .537 had a significant positive influence on DEI. The adjusted R-square (.957) reveals that 95.7% of the variance in DEI is influenced by DEA. The results of the 5000-resample bootstrap coefficients for DEA influencing DEI (bias = .000, p = .000) were statistically significant. All in all, the results confirmed the expectations of the authors. Therefore, hypothesis 2 is rejected in the study. That is, digital entrepreneurial alertness is a significant predictor of business education students' digital entrepreneurial intention in Edo State.

Discussion of Findings

The findings from the analysis of the first hypothesis revealed that digital entrepreneurial knowledge significantly predicts business education students' digital entrepreneurial intention. This implies that the knowledge of digital entrepreneurship acquired by business education students has a significant role to play in propelling them to launch digital entrepreneurial ventures in Edo State. It shows that once business education students have knowledge of the enormous opportunities online, they will be more motivated to engage in digital entrepreneurship. This finding corroborates the findings by Dutot and Horne (2015), Batool and Ullah (2019), Yao et al. (2021), Akhter et al. (2022), Mir et al. (2022), Wibowo (2023), Baskaran et al. (2023), Xin and Ma (2023), Aloulou et al. (2023), Alzougool (2024), Biu and Duong (2024) and Nguyen et al. (2024) who found a significant relationship between digital entrepreneurial knowledge and digital entrepreneurial intention.

The analysis of the second hypothesis revealed that digital entrepreneurial alertness is a significant predictor of business education students' digital entrepreneurial intention in Edo State. It implies that when students are able to scan the digital environment for business opportunities; and also be alert to the happenings, the students will be more motivated to launch a digital entrepreneurship. This finding corroborates the findings by Gano-an and Gempes (2022), Wibowo et al. (2023), Purwandari and Sadik (2024), and Wibowo et al. (2024) who found a significant relationship between digital entrepreneurial alertness and digital entrepreneurial intention.

Conclusion

The findings show that the digital entrepreneurial intention of business education students is influenced by both the digital entrepreneurial knowledge and digital entrepreneurial alertness. These findings therefore emphasized the great role of digital entrepreneurial knowledge and alertness in shaping the intention of business education students in Edo State. These findings has made significant contribution to knowledge especially in addressing these variables (DEK and DEA) that are capable of influencing digital entrepreneurial intention among business education students in Edo State. This has further reaffirmed earlier studies done in Western World; and it has filled the gap which hitherto existed in developing countries such as Nigeria.

Recommendations

Based on the study's findings, the following recommendations are made:

i. Stakeholders should give emphasis on digital entrepreneurship in the face of this digital age;
ii. Lecturers and educators should make conscious efforts to expose students to different digital business opportunities via their teachings, practical work and field trips;
iii. There should be conscious effort by entrepreneurship experts and management to bridge the gap between theory and practice in the teaching of digital entrepreneurship by exposing the students to practical and field trips;
iv. Stakeholders should make conscious effort on the training and retraining of business education students via conferences, seminars and workshops on the potentials of online resources for business; and
v. More research should be encouraged in this field.

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