

Digital Literacy and Entrepreneurial Intentions of Business Education Students in Tertiary Institutions

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DOI: 10.56201/ijssmr.v9.no6.2023.pg101.112

Abstract

The advancement in technology is revolutionizing the way activities of the 21st-century business environment are being conducted. It saddening to note that despite the array of opportunities for jobs provided by technology, the high rate of unemployment among business education graduates has continued to be a course for concern. Therefore in a bid to stem this problem that it becomes imperative to determine the correlation between digital literacy and entrepreneurial intentions of business education students in tertiary institutions. The survey design was adopted for the study and the population of the study comprised 338 three hundred (300) level business education students in the 2022/2023 academic session from the four public tertiary institutions offering business education programmes in Anambra State. Two structured questionnaires were used to collect data for the study. The data was analyzed using the Bivariate Pearson Correlation matrix and simple linear regression techniques. Technology skills, digital communication, digital safety, and media literacy were found to be substantially connected with the entrepreneurial inclinations of business education students.

Keywords: *Digital Literacy, Technology Skills, Digital Communication, Digital Safety, Media Literacy, Entrepreneurial Intentions*

Introduction

Business education is an academic programme that prepares students for careers in business management and education. Business education is an important component of vocational education because it provides students with the core digital entrepreneurial skills they will need to contribute to society successfully as entrepreneurs. Business education is a purposefully designed component of an educational program that aims to give students the real-world vocational skills, business attitudes, knowledge, and values needed for effective social functioning. It emphasizes skill development in a variety of areas, including office technology and management, management

information systems, marketing, digital marketing, entrepreneurship, cooperative studies, insurance, and accounting, among others. Marketing, office technology and administration, and bookkeeping and accounting are all part of business education. Edokpolor and Egbri (2017) noted that the primary goals of Business Education in Nigeria are to prepare students for specific careers in office occupations, equip them with the skills needed for job creation and entrepreneurship, and provide them with knowledge about business, including digital skills that incorporate ICT. Sadly realizing these goals has proven to be a daunting task. The proficiency in digital skills possessed by graduates of business education programs in Nigeria has become a source of concern among IT experts and policymakers. This apprehension has been further magnified due to the limited job opportunities and the changing dynamics of the labour market. To address the high rate of unemployment among graduates, it is imperative to tap into the potential of the digital economy. However, achieving this requires the active involvement of business education programs in equipping students with essential digital skills.

According to Nwafor (2021), there is a huge gap in digital skills among Nigerian postsecondary institution graduates. A report by the World Bank reveals that only a small fraction of these graduates, ranging from 2-4%, possess the essential marketable skills, while a greater percentage, roughly 18-20%, would require training interventions lasting from 1-4 years to become employable (Nwafor, 2021). Furthermore, Okolocha and Nwaukwa (2020) recognized a lack of digital literacy as a major contributor to Nigerian unemployment. This assertion is premised upon the failure of the business education programme in Nigeria to equip students with digital skills for effective functioning in the global digital economy. A worrying issue is the dearth of digital literacy among business education students. Knowledge of technology and digital tools is becoming more and more crucial across a variety of fields, including business and entrepreneurship, in the current digital era. But a lot of students in business education lack the digital literacy needed to succeed in the contemporary workplace. Thus, digital literacy is the capacity to use information and communication technology (ICT) in a digital world with efficiency. It includes a variety of abilities, such as information literacy, basic computer knowledge, and fluency with the internet. Digital literacy is the ability to access, manage, integrate, evaluate, generate, and convey information using digital technology and communications tools and/or networks to function in a knowledge society.

Digital literacy encompasses the understanding, mindset, and proficiency of individuals in effectively utilizing digital devices, as well as their capacity to discern, access, manipulate, integrate, assess, analyze, and combine diverse digital resources in a meaningful and appropriate manner (Yuan et al., 2021). It involves the holistic mastery of digital skills and competencies that enable individuals to navigate and engage with the digital landscape in a knowledgeable, responsible, and productive manner. According to Suriwulan et al. (2020), digital literacy holds the utmost importance in the contemporary era dominated by digital advancements. It encompasses the skill set required to adeptly navigate and utilize digital technology while ensuring safety, wisdom, and productivity in its usage. Nyoman et al. (2022) averred that the growth and success of entrepreneurs can be greatly bolstered through the cultivation of digital literacy. This entails fostering proficiency in forging digital business connections, leveraging online resources and amenities, and harnessing the power of expansive networks. Digital literacy is having a profound impact on company structures, the way work is carried out and managed, and the skills needed in the workplace. It is also changing our expectations of company owners (Ojemaogha, 2019).

Essentially, digital literacy refers to the ability to understand and effectively utilize information presented in various formats, while ensuring its security and productivity. In a particular study, digital literacy was defined as the utilization of e-business technology for conducting and leveraging business opportunities, ultimately leading to enhanced entrepreneurial success (Ojeomogha). The impact of digital literacy on entrepreneurs' performance is both direct and indirect, further underscoring its paramount significance. The interplay between digital literacy and entrepreneurial prowess vividly illustrates the pivotal role it plays in fostering the expansion and effectiveness of business ventures, as well as the establishment and amplification of marketing networks.

The predisposition for entrepreneurship, also known as entrepreneurial intention, is a key predictor of individuals' future participation in entrepreneurial ventures and the development of their firms. Entrepreneurial intents are defined as an individual's internalized motivation and desire to engage in entrepreneurial activities and launch a business enterprise. It shows an individual's desire and ambition to become an entrepreneur, suggesting their readiness to take risks, innovate, and generate value through business activities. Entrepreneurial intents impact decision-making and steer individuals toward actively pursuing their entrepreneurial goals, hence they serve as a prelude to entrepreneurial activity. It is a concentrated attitude that guides an individual's attention and experiences into planned entrepreneurial actions (Do & Dadvari, 2017). Entrepreneurial intention is influenced by a combination of internal and external factors, including variables, events, and individuals (Dutot & Van Horne, 2015). Internal factors refer to personal attributes and characteristics that shape an individual's inclination towards entrepreneurship. These can include personality traits and the individual's educational environment (Youssef et al., 2021). Personality traits play a significant role in entrepreneurial intention, as certain traits like risk-taking propensity, proactiveness, innovativeness, and self-confidence are often associated with entrepreneurial tendencies. Additionally, the educational environment, such as entrepreneurship education and exposure to entrepreneurial role models, can have a positive impact on shaping individuals' intentions to engage in entrepreneurship. External factors also have a considerable influence on entrepreneurial intention. One of these factors is the attitude towards entrepreneurship. An individual's attitude, beliefs, and perceptions about the desirability and attractiveness of entrepreneurship significantly impact their inclination towards starting and running a business (Lai & To, 2020). Although studies have been carried out to determine the relationship between digital literacy and entrepreneurial intentions in Asia, Europe and America, it is imperative to determine the relationship between digital literacy and entrepreneurial intentions of business education students in tertiary institutions.

Digital Literacy Theory

Paul Gilster established Digital Literacy Theory in 1997, which focuses on the skills, knowledge, and competencies required to effectively navigate and utilize digital technologies. In the digital age, the notion emphasizes the necessity of not only technical proficiency but also critical thinking, information literacy, and communication skills. Digital Literacy Theory states that individuals must acquire a variety of digital skills to connect meaningfully with digital tools, platforms, and information. These abilities include the ability to acquire and retrieve information, assess its quality and relevance, and effectively communicate via digital media. According to the notion, digital literacy entails not just technical knowledge but also a comprehension of the social, cultural,

and ethical consequences of digital technology. The theory provides a comprehensive understanding of the various dimensions of digital literacy, including digital access, communication, safety and media literacy. This understanding helps researchers assess the digital competencies of business education students and their potential impact on entrepreneurial intentions.

Development of Research Model and Hypotheses

In this study, a research model was developed to illustrate the relationships between the independent variable, digital literacy, and the dependent variable, entrepreneurial intentions. The hypothetical propositions on these variables were also formulated. The research model provides a visual representation of the expected relationships and forms the basis for testing the hypotheses as seen in Figure 1 below:

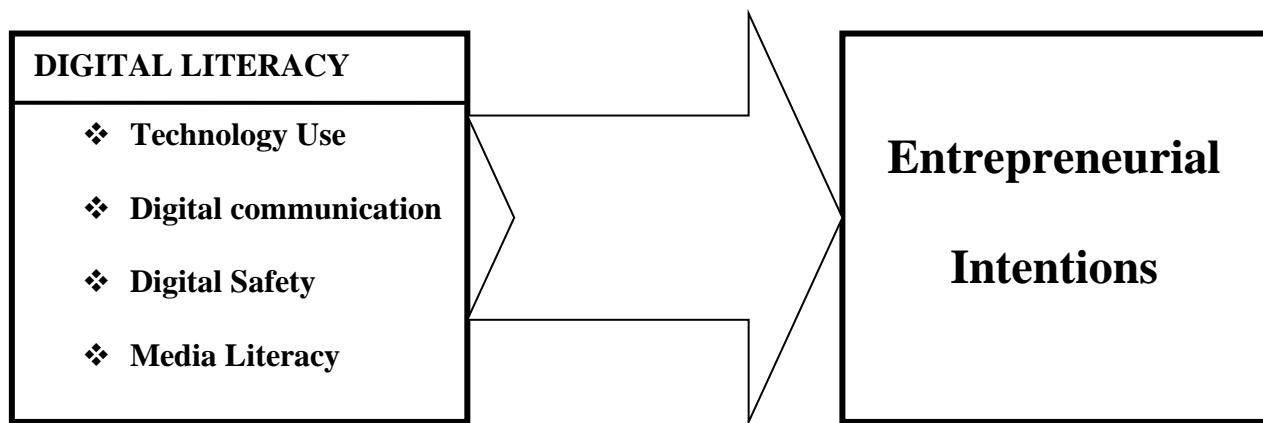


Fig 1: Relationship between Digital Literacy and Entrepreneurial Intentions of Business Education Students in Tertiary Institutions

Source: Researcher (2023)

Technology Skills and Students' Entrepreneurial Intentions

Technology skills refer to the proficiency and knowledge individuals possess in effectively using and adapting to various technological tools, software applications, and digital platforms. The development of students' entrepreneurial ambitions is anticipated to be significantly influenced by their technical abilities, which include competence in using digital tools, software programs, and technical platforms. Technology skills are often synonymous with digital literacy skills or Information and Communication Technology (ICT) skills, as stated by Kivunja (2015). Developing these skills that are in line with the market demand can significantly enhance the likelihood of achieving greater success in business ventures (Elia et al., 2020). Students with higher degrees of technical proficiency may be better able to see and seize digital possibilities, traverse the digital world, and create original company concepts as entrepreneurship and technology becomes more and more entwined (Nyoman et al., 2022). It is expected that if students have access

to digital tools, it will increase their entrepreneurial intentions based on this view, the researcher raised the first hypothesis of the study.

Hypothesis 1: There is a positive relationship between technical skills and entrepreneurial intentions among business education students.

Digital Communication and Students' Entrepreneurial Intentions

Digital communication is the exchange of information, ideas, and messages via digital platforms and technologies. Digital communication has a big impact on how students behave and what their objectives are when it comes to starting their own business. Insights into this relationship have been gained from empirical studies that looked at the connection between digital communication and students' desire to start businesses (Lifintsev et al., 2022). The potential of digital communication channels like social media to support quick growth, improve marketing and promotional efforts, and offer beneficial networking and information-sharing opportunities demonstrates their revolutionary power in corporate activities (Kirakosyan, 2014). Social media can be used by business owners, particularly those who are just starting, to grow their clientele, improve their operational procedures, and obtain a competitive advantage in both domestic and international markets. Digital communication according to Seroka-Stolka and Tomski (2014), offers significant tools that help aspiring entrepreneurs connect with both domestic and international contacts and quickly obtain the information they need. The possession of digital communication skills will allow business education students to be able to influence the entrepreneurial intention of business education students in tertiary institutions. Based on this assumption, the second hypothesis was formulated.

Hypothesis 2: There is a positive relationship between digital communication and entrepreneurial intentions among business education students.

Digital Safety and Students' Entrepreneurial Intentions

Digital safety, sometimes referred to as online safety or cybersecurity, refers to the procedures and safeguards put in place to guard against various online hazards and threats for people, businesses, and their digital assets. It entails making sure that data and information are available, confidential, and intact in digital contexts (Ribble, 2021). Digital safety measures aid in reducing the dangers involved in establishing and operating a business online (Aytekm & Ozlem, 2014). Entrepreneurs who place a high priority on online security are more likely to defend against cyber threats and safeguard their priceless assets, including intellectual property, customer data, and financial information. Entrepreneurs may lower their risk of data breaches, financial fraud, and other cyber-attacks by putting strong security measures in place. This can boost their confidence in moving on with their business ventures (Mohsen et al., 2021). Entrepreneurs rely on developing relationships of trust and goodwill with their stakeholders, partners, and clients. Digital safety practices including secure online transactions, client data security, and privacy protection help to build a trustworthy and dependable reputation. Additionally, digital safety practices contribute to mitigating risks and protecting valuable assets, fostering a safer environment for entrepreneurial activities. Entrepreneurs can encourage trust in their prospective customers and boost their entrepreneurial aspirations and client loyalty by showing a commitment to online safety. The possession of digital safety skills will allow business education students to be able to influence the

entrepreneurial intention of business education students in tertiary institutions. Based on this assumption, the third hypothesis was formulated.

Hypothesis 3: There is a positive relationship between digital safety and entrepreneurial intentions among business education students.

Media Literacy and Student's Entrepreneurial Intentions

Media literacy has to do with an individual's capacity to critically assess and interpret various forms of digital information, which could have a substantial impact on students' entrepreneurial inclinations. Students with higher levels of media literacy may be more suited to recognize entrepreneurial opportunities and traverse the complicated digital ecosystem by comprehending the impact of media messages, recognizing biases, and engaging with media in a discerning manner. Agus et al. (2021) discovered that information literacy has a beneficial impact on students' entrepreneurial interests and that entrepreneurship education in the family also has a positive impact. Islami (2019) reported media and information literacy, digital safety, and digital law, have a statistically significant positive impact on entrepreneurial learning among secondary students. Islami further stated that enhancing media literacy skills can increase the efficiency of entrepreneurial behaviour. By developing media and information literacy skills, students become better equipped to critically analyze and interpret digital media, leading to more informed entrepreneurial decision-making. Media literacy may have an impact on business education students' intentions to start their own companies. The fourth hypothesis was developed in light of this assumption.

Hypothesis 4: There is a positive relationship between media literacy and entrepreneurial intentions among business education students.

Methodology

The study adopted the survey design. The population of the study comprised 338 three hundred (300) level business education students in the 2022/2023 academic session from the four public tertiary institutions offering business education programmes in Anambra State. The entire population of the study was sampled in the study because it was manageable for the researcher. The instruments for data collection were questions. The first was a questionnaire on Digital Literacy. The questionnaire was structured on a five (5) point rating scale. 5 (Strongly Agree) to 1 (Strongly Disagree). The instrument contains 20 items. Technology Skills (TS) contains 6 items, Digital Communication (DC) contains 6 items, Digital Safety (DS) contains 4 items and Media Literacy (ML) contains 4 items. The second instrument was titled Questionnaire on Entrepreneurial Intention. It contains 8 items on the entrepreneurial intentions of business education students. Cronbach Alpha was used to examine the instrument's reliability, and a reliability coefficient of 0.88 was achieved. The information gathered from the respondents was analyzed with the IBM Statistical Package for Social Scientists (SPSS) version 22.0. The Bivariate correlation matrix and basic linear regression statistical methods were utilized to investigate the link between the study's digital literacy and the entrepreneurial intentions of business education students.

Results

The result of the data analyzed are presented in Tables 1 to 5.

Table 1: Mean, Standard Deviations and Bivariate Pearson Correlation of the Study Variables

S/N	Variables	M	SD	TS	DC	DS	ML	EI
1	TS	3.28	.40	1				
2	DC	3.22	.52	.704**	1			
3	DS	3.16	.50	.684**	.628**	1		
4	ML	3.11	.44	.680**	.752**	.607**	1	
5	EI	3.24	.51	.450	.381	.410	.532	1

N=338, M=Mean, SD= Standard Deviations, TS= Technology Skills, DC= Digital Communication, DS= Digital Safety, ML= Media Literacy, EI= Entrepreneurial Intentions

Source: Field Study (2023)

The findings presented in Table 1 demonstrate the correlations between the variables examined in the study. The table provides information on the mean responses and standard deviations of business education students, as well as the correlation coefficients between the study variables. The mean responses of business education students ranged from 3.11 to 3.28, indicating the average level of their digital literacy related to the study variables. The standard deviation values ranged from .40 to .52, reflecting the extent of variability in the responses among the students. The table also revealed that the correlation coefficients between the study variables ranged from .381 to .752. These correlation coefficients indicate the strength and direction of the relationships between the variables. The positive correlation coefficients suggest that there is a positive association between business education students' digital literacy and their entrepreneurial intentions.

Hypothesis 1: There is a positive relationship between technology skills and entrepreneurial intentions among business education students.

Table 2: Simple Linear Regression of Technology Skills as Correlate of Entrepreneurial Intentions of Business Education Students

	Technology skills		Entrepreneurial Intentions		
	B	SEB	Beta	T	F
Constant	1.720	1.602		9.111	.000
TS	.610	.051	.442	9.421	.000

R²= .18, Adjusted R²= .18, F= 50.920, p< .005

The findings presented in Table 2 indicate a significant correlation between the technology skills and business education students' entrepreneurial intentions. The statistical analysis revealed a significant relationship between these variables, as evidenced by the F-value of 50.920 and t-value of 9.111. The beta coefficient (β) of .442 suggests a positive association between technology skills and entrepreneurial intentions. Furthermore, the p-value of .000 indicates that the correlation

between technology skills and entrepreneurial intentions is statistically significant. This means that the likelihood of observing such a relationship due to chance alone is very low. The adjusted R-square value of .018 provides insight into the amount of variance in business education students' intentions to venture into entrepreneurship after school which can be explained by the acquisition of technology skills. In this case, the adjusted R-square suggests that approximately 1.8% of the variations in students' intentions can be attributed to their possession of technology skills. These findings imply that business education students who possess strong technology skills are more likely to be motivated to establish their businesses immediately after completing their education. The results suggest that technology skills play a significant role in shaping the entrepreneurial intentions of business education students.

Hypothesis 2: There is a positive relationship between digital communication and entrepreneurial intentions among business education students.

Table 3: Simple Linear Regression of Digital Communication as Correlate of Entrepreneurial Intentions of Business Education Students

	Digital Communication		Entrepreneurial Intentions		
	B	SEB	Beta	T	F
Constant	1.602	1.61		8.014	.000
DC	.540	.048	.410	8.287	.000

R2= .13, Adjusted R2= .13, F= 40.110, p< .005

The findings presented in Table 3 indicate a significant correlation between digital communication and business education students' entrepreneurial intentions. The statistical analysis revealed a significant relationship between these variables, as evidenced by the F-value of 40.110 and t-value of 8.014. The beta coefficient (β) of .410 suggests a positive association between digital communication and entrepreneurial intentions. Furthermore, the p-value of .000 indicates that the correlation between digital communication and entrepreneurial intentions is statistically significant. This means that the likelihood of observing such a relationship due to chance alone is very low. The adjusted R-square value of .013 provides insight into the amount of variance in business education students' intentions to venture into entrepreneurship after school which can be explained by the acquisition of digital communication. In this case, the adjusted R-square suggests that approximately 1.3% of the variations in students' intentions can be attributed to their possession of digital communication skills. These findings imply that business education students who possess strong digital communication skills are more likely to be motivated to establish their businesses immediately after completing their education. The results suggest that digital communication skills play a significant role in shaping the entrepreneurial intentions of business education students.

Hypothesis 3: There is a positive relationship between digital safety and entrepreneurial intentions among business education students.

Table 4: Simple Linear Regression of Digital Safety as Correlate of Entrepreneurial Intentions of Business Education Students

	Digital Safety		Entrepreneurial Intentions		
	B	SEB	Beta	T	F
Constant	1.543	1.59		6.772	.000
DS	.501	.045	.385	6.112	.000

R²= .11, Adjusted R²= .11, F= 39.342, p< .005

The findings presented in Table 4 indicate a significant correlation between digital safety and business education students' entrepreneurial intentions. The statistical analysis revealed a significant relationship between these variables, as evidenced by the F-value of 39.342 and t-value of 6.772. The beta coefficient (β) of .385 suggests a positive association between digital communication safety and entrepreneurial intentions. Furthermore, the p-value of .000 indicates that the correlation between digital safety and entrepreneurial intentions is statistically significant. This means that the likelihood of observing such a relationship due to chance alone is very low. The adjusted R-square value of .011 provides insight into the amount of variance in business education students' intentions to venture into entrepreneurship after school which can be explained by the acquisition of digital safety. In this case, the adjusted R-square suggests that approximately 1.1% of the variations in students' intentions can be attributed to their possession of digital safety skills. These findings imply that business education students who possess strong digital safety skills are more likely to be motivated to establish their businesses upon completion of their academic programme.

Hypothesis 4: There is a positive relationship between media literacy and entrepreneurial intentions among business education students.

Table 4: Simple Linear Regression of Media Literacy as Correlate of Entrepreneurial Intentions of Business Education Students

	Media Literacy		Entrepreneurial Intentions		
	B	SEB	Beta	T	F
Constant	2.043	.259		5.342	.000
ML	.491	.048	.354	4.216	.000

R²= .10, Adjusted R²= .10, F= 30.115, p< .005

The findings presented in Table 4 indicate a significant correlation between media literacy and business education students' entrepreneurial intentions. The statistical analysis revealed a significant relationship between these variables, as evidenced by the F-value of 30.115 and t-value of 5.342. The beta coefficient (β) of .354 suggests a positive association between media literacy and entrepreneurial intentions. Furthermore, the p-value of .000 indicates that the correlation between media literacy and entrepreneurial intentions is statistically significant. This means that the likelihood of observing such a relationship due to chance alone is very low. The adjusted R-square value of .010 provides insight into the amount of variance in business education students' intentions to venture into entrepreneurship after school which can be explained by the acquisition

of media literacy. In this case, the adjusted R-square suggests that approximately 1.0% of the variations in students' intentions can be attributed to their possession of media literacy skills. These findings imply that business education students who possess strong media literacy skills are more likely to be motivated to establish their businesses upon completion of their academic programme.

Discuss

The present study determined the correlation between digital literacy and entrepreneurial intentions of business education students in tertiary institutions. The findings of the study on hypothesis one showed that technology skills significantly correlated with students' entrepreneurial intentions of business education students in tertiary institutions. This finding is in agreement with Nyoman et al.(2022) who reported that students' ability to use technology significantly correlated with their entrepreneurial intentions. The finding is also in line with Elia et al. (2020) stated that the ability to use technology would propel students to be able to innovate their business ideas.

Findings in hypothesis two revealed that digital communication significantly correlated with students' entrepreneurial intentions of business education students in tertiary institutions. This finding indicates that the possession of digital communication skills will increase the entrepreneurial desires of business education students. This finding is in line with Lifintsev et al. (2022) who reported that students' digital communication skills could impact their entrepreneurial intentions. In the same vein, Seroka-Stolka and Tomski (2014) stated that digital communication offers significant tools that help aspiring entrepreneurs connect with both domestic and international contacts and quickly obtain the information they need.

Furthermore, the findings of the study on hypothesis three showed that digital safety significantly correlated with students' entrepreneurial intentions of business education students in tertiary institutions. This finding is in agreement with Nyoman et al.(2022) who reported that digital safety significantly correlated with their entrepreneurial intentions. According to Mohsen et al., (2021), knowledge of digital safety would help nascent entrepreneurs lower their risk of data breaches, financial fraud, and other cyber-attacks by putting strong security measures in place, thereby improving their confidence in moving on with their business ventures.

The finding on hypothesis four revealed that media literacy significantly correlated with students' entrepreneurial intentions of business education students in tertiary institutions. This is in line with Islami (2019) reported media and information literacy have a statistically significant positive impact on entrepreneurial learning among secondary students. In support, Agus et al. (2021) reported that media literacy influenced students' entrepreneurial interests.

Conclusion

The study concludes that digital literacy significantly influenced the entrepreneurial intentions of business education students in tertiary institutions. The study showed that technology skills, digital communication, digital safety and media literacy significantly influenced business education students' entrepreneurial intentions. However, there were a few limitations to the study. The study was conducted using a non-experimental approach, specifically through a survey design. As a result, it was not possible to establish causal relationships within the study. Additionally, the

population of the study was limited to business education students in Anambra State. To obtain results that can be generalized, it would be beneficial to include students from other geographical regions and academic programmes in tertiary institutions.

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