
Digital Skills and Entrepreneurial Capability of Graduates in Nigerian Public University

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Abstract

The study investigated the relationship between digital skills and entrepreneurial capability of graduates in University of Lagos. The study adopted a descriptive correlational research design. Seven hypotheses were formulated and tested. The study's population composed 12, 920 graduates in University of Lagos for the 2021/2022 academic session. Multi-stage sampling procedure was adopted for the study. At the first stage, the sample size of 388 was ascertained using Taro Yamane formula. Afterwards, based on the existing stratification by programmes, proportionate sampling technique was used to select 57 participants from Distance learning institute, 206 participants from undergraduate, 2 participants from Institute of Continuing Education (ICE) and 123 participants from postgraduate studies. In addition, the 388 participants were purposively selected based on their involvement in entrepreneurial practices. A researcher-constructed, validated and reliable instrument ($r=0.88$) was used for data collection. Pearson Product Moment Correlation (PPMC) was used to test the hypotheses at the .05 significance level. According to the study, indicators of entrepreneurial capability and digital skills were significantly correlated. The study found that, there was a significant relationship between digital skills and entrepreneurial capability indicators. Based on these findings, the following recommendations among many others were made; Universities should integrate digital entrepreneurship training into academic programs; Universities should promote digital career pathways through workshops, online freelancing seminars, and mentorship schemes that connect students with self-employment opportunities in the digital space; and Universities Introduce a compulsory 1-2 unit course on digital marketing strategy across all faculties to build students' marketing acumen for business growth.

Keywords: Digital skills, Digital skills acquisition, Entrepreneurial capability, educational output, University

Introduction

The Nigerian tertiary institutions are saddled with the responsibility of manpower training and human capital development among many others by the national policy on education. On this note, while one could argue that they yearly chalk out graduates in their large number, however, discussion around the quality of educational output remains questionable. Along both sides, there are no commensurate available jobs in line with the former, likewise, the latter emphasizes the problem of graduate employability. This latter position emanates from the disconnect between the educational curriculum structure of the university and the demand of the labour market which breeds educational output in the form of graduates who lack the bespoke employability skills to suit the world of work amidst the era of digitalization. Either way, in the Nigerian context, both positions continue to extend the already long queue of unemployed and unemployable educational output, this also speaks volume of the high level of external inefficiency of the University educational system. This among many other factors has begged the need for the inclusion of entrepreneurship education in the tertiary institutions. The programme is aimed at producing graduate who can creatively convert business ideas to profitable ventures that contribute to the Gross Domestic Product (GDP) of the nation and ease the already existing long queue of unemployment through the creation of viable ventures that become employers of labour.

Odey *et al.*, (2021) reported that the introduction of Entrepreneurship studies is one of the intervention strategies developed, employed and grafted into our curriculum by the federal government to surmount the prevailing issues of poverty, unemployment, unemployability, and to increase functionality and self-reliant attributes among youths. However, in the face of the reality of the era of digitalization, it remains a debate if the type of entrepreneurship education offered to students in our tertiary institutions hone students with the required skills to flourish in the new entrepreneurial and business parlance driven by digitalization, a factor that has massively changed the competitive dynamics of the business terrain. This line of thought has helped to enrich literature along the discourse of the indispensable role of digital skills in entrepreneurship. This has been described by scholars as "Digital Entrepreneurship Education" or "Entrepreneurial Digital skills" (Osiesi, *et al.*, 2024).

United Nations Educational Scientific and Cultural Organisation (2018) described digital skills as the capabilities of a person to use digital technologies, communication applications, and networks to access, evaluate, analyze, manage and use information. The Organisation for Economic Co-operation and Development (OECD) (2015) highlighted the following as a category of digital skills, they include, digital foundation skills, communication skills, information skills, content creation skills, safety skills, transacting skills and problem-solving skills.

According to the European Commission (2018), developing entrepreneurial digital skills is crucial for starting a business and allows everyone, but particularly entrepreneurs, to take advantage of online opportunities and possibilities. This entails the use of digital technologies, both software and hardware; and digital skills such as Artificial intelligence, Digital marketing, Social media like content creation, Networking skills, Graphic design using Canva, CorelDraw or Photoshop, Email

marketing, cyber-security, and Data analytics among many others to explore and have a stake in the digitally driven new business opportunities.

Several researches conducted have shown that digital skills play vital role in entrepreneurial interest, entrepreneurial intention, entrepreneurial success and entrepreneurial returns (Adeniyi, *et al.*, 2024). Although, this study is concerned with the relationship between digital skills and entrepreneurial capability. The term entrepreneurial capability is a story with different sides to how it has been told. It is viewed by some scholars as personal idiosyncrasies, traits and behavioural make up of an entrepreneur, which is able to translate to entrepreneurial success. While others sees it as the totality of effort, resources, specific abilities, innovativeness, business strategy and the deployment of bespoke effective business operational framework required to run a sustainable business venture (Oyeku *et al.*, 2020).

“Entrepreneurial capabilities, such as learning, innovation, and technology orientations, are not nearly as important as entrepreneurial capabilities, which broadly define the startup, survival, and success of firms” (Faroque *et al.*, 2021). In order to make their evaluation of the concept of "entrepreneurial capability" more measurable, Xiao-Gang and Lin Gu-Yan (2009) used the following indicators: learning proficiency, relationship ability, strategic competence, management capability, innovation capability, and the ability to seize opportunities. In a similar vein, Oyeku *et al.* (2020) describe entrepreneurial capability as the innate ability of the entrepreneur to launch and run a lucrative enterprise, as demonstrated by entrepreneurial self-efficacy and entrepreneurial orientation.

Entrepreneurial capabilities are the intrinsic and extrinsic factors required to foster entrepreneurial success. This includes the intrinsic and extrinsic factors that fosters entrepreneurial intention and other in-demand effective business operational strategy essential for a success business venture. For the purpose of this study, entrepreneurial capability is measured along the following parameters decision to start a business, decision to be self-employed, business promotion, improved marketing strategy, better customer engagement, innovativeness and ability to empower others. These indicators in the parlance of business enterprise are factors that predict the overall business performance of a business venture, thus, entrepreneurial success and returns. However, studies have shown that entrepreneurial capability influences entrepreneurial success (Oyeku, *et al.*, 2020), as well as business performance. They assert that entrepreneurial capability significantly influenced entrepreneurial success in Lagos State and that it is a statistical predictor of entrepreneurial success. Oyeku *et al.* (2014) postulated that competence, orientation and self-efficacy as entrepreneurial proficiencies are a must-have for entrepreneurs to make sustainable performance of their enterprise in the face of the dynamic business environment.

However, this study investigated the relationship between digital skills acquisition and entrepreneurial capabilities.

Statement of the Problem

Tertiary institutions continue to dish out graduates with no commensurate available jobs. Thus, extending the already long queue of unemployment. Relatedly, unemployability has become a great concern especially in the digitalized world. A situation that is a product of the existing incongruity between the type of education offered in the tertiary institutions and the demand of the labour market. Along this

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disequilibrium is the fruit of educational external inefficiency. This is because many of the said educational output even having acquired a degree seems to not have the required skill like digital skills, soft skills and job-specific skills to fit into the workspace. Consequently, they join the long queue of unemployment and are unable to leave up to the expectation of self-reliance and self-employment that are the major ethos of entrepreneurship education in the Nigerian University. Therefore, to close this gap, the researchers investigated the relationship between digital skills and entrepreneurial capability of graduates in University of Lagos.

Purpose of the study

The study's objective was to investigate the relationship between the digital skills and entrepreneurial capability of graduates in University of Lagos.

Research Hypotheses

The following hypotheses were formulated to guide the study:

Ho1: Digital skills do not significantly relate to the decision to start a business of graduates of the University of Lagos

Ho2: Digital skills do not significantly relate to the decision to be self-employed of graduates of the University of Lagos

Ho3: Digital skills do not significantly relate to business promotion of graduates of the University of Lagos

Ho4: Digital skills do not significantly relate to improved marketing strategy of graduates of the University of Lagos

Ho5: Digital skills do not significantly relate to better customer engagement of graduates of the University of Lagos

Ho6: Digital skills do not significantly relate to graduates' level of innovation of the University of Lagos

Ho7: There is no significant relationship between digital skills and the capacity to empower others of graduates of the University of Lagos

Methodology

The descriptive correlational research design was used for the study. The population for the study comprised 12,920 graduates, composed of 1,914 from the Distance Learning Institute, 6,863 from Undergraduate, 33 from the Institute of Continuing Education, and 4,110 from Postgraduate of the 2021–2022 academic year of the University of Lagos (University of Lagos, 2024). This particular academic year was used because it was assumed that the graduate must have honed practical experience to provide needed information having being in the world of work for a good number of years.

Multi-stage sampling procedure was adopted for the study. At the first stage, the sample size of 388 was ascertained using Taro Yamane formula. Afterwards, based on the existing stratification by programmes, proportionate sampling technique was used to select 57 participants from Distance learning institute, 206 participants from undergraduate, 2 participants from the Institute of Continuing Education (ICE) and 123 participants from postgraduate studies. In addition, the 388 participants were purposively selected based on their involvement in entrepreneurial practices.

A researcher constructed an instrument tagged “Digital Skills and Entrepreneurial Capability Questionnaire (DSECQ)” was used for data collection. The questionnaire was in two sections ‘A’ and ‘B’. Section A comprised items which sought personal

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information about the participants, while Section B was organized into seven sub – scales with 4 items each, resulting in 28 items on a modified Likert scale with four-point rating scale classified as: Very High Extent (VHE), High Extent (HE), Low Extent (LE) and Very Low Extent (VLE) with the values of 4, 3, 2, and 1 respectively. Face and content validity of the instrument were determined by experts from the Departments of Educational Management and Test and Measurement.

The reliability of the instrument was estimated using a test-re-test method through its administration of 25 participants not involved in the main study. This was done twice within the interval of two weeks. The scores of the two responses were correlated using Pearson Moment Correlation, and with a reliability coefficient of 0.88, this was deemed to be trustworthy. Research hypotheses were tested at .05 level of significance utilizing inferential statistics of the Pearson Product Moment Correlation statistical tool.

Results

Test of Research Hypotheses

Research Hypothesis One: There is no significant relationship between the use of digital skills and the decision to start a business of graduates of the University of Lagos?

Table 1

Digital Skills and Decision to Start a Business

Variable	Mean	S.D	N	DF	r-cal	p-value	Remark	Decision
Digital skills	3.23	0.87	388	386	0.540	0.000	Sig	Rejected
Decision to start a business	3.22	0.75						

Digital skills and the decision to start a business among University of Lagos graduates are positively and significantly correlated, according to Table 1 ($r\text{-cal} = 0.540$; $df = 386$; $P < 0.05$). The null hypothesis was thus rejected. It suggests that a significant relationship existed between digital skills and decision to establish a business.

Research Hypothesis Two: There is no significant relationship between digital skills and the decision to be self-employed of graduates of the University of Lagos?

Table 2

Digital Skills and Decision to be Self-Employed

Variable	Mean	S.D	N	DF	r-cal	p-value	Remark	Decision
Digital skills	3.23	0.87	388	386	0.819	0.000	Sig	Rejected
Decision to be self-employed	3.23	0.75						

Table 2 demonstrates a strong and positive correlation between University of Lagos graduates' decision to be self-employed and the acquisition of digital skills ($r\text{-cal} =$

0.819; df= 386; $P < 0.05$). The null hypothesis was thus rejected. It indicates that the decision to be self-employed and digital skills were significantly correlated.

Research Hypothesis Three: There is no significant relationship between the use of digital skills and business promotion of graduates of the University of Lagos

Table 3

Digital Skills and Business Promotion

Variable	Mean	S.D	N	DF	r-cal	p-value	Remark	Decision
Digital skills	3.23	0.87	388	386	0.871	0.000	Sig	Rejected
Business promotion	3.32	0.76						

Table 3 indicates a positive and significant relationship between digital skills and business promotion of graduates in University of Lagos, (r-cal= 0.871; df= 386; $P < 0.05$). Therefore, the null hypothesis was rejected. It means that a significant relationship existed between digital skills and business promotion.

Research Hypothesis Four: There is no significant relationship between digital skills and improved marketing strategy of graduates of the University of Lagos?

Table 4

Digital Skills and Improved Marketing Strategy

Variable	Mean	S.D	N	DF	r-cal	p-value	Remark	Decision
Digital skills	3.23	0.87	388	386	0.777	0.000	Sig	Rejected
Marketing strategy	3.36	0.78						

Digital skills and business promotion among University of Lagos graduates are positively and significantly correlated, according to Table 3 (r-cal= 0.871; df= 386; $P < 0.05$). The null hypothesis was thus rejected. It indicates that there was a strong correlation between business promotion and digital skills.

Research Hypothesis Five: There is no significant relationship between the use of digital skills and better customer engagement of graduates of the University of Lagos

Table 5

Digital Skills and Better Customer Engagement

Variable	Mean	S.D	N	DF	r-cal	p-value	Remark	Decision
Digital skills	3.23	0.87	388	386	0.797	0.000	Sig	Rejected
Better customer engagement	3.39	0.78						

Digital skills and improved customer engagement among University of Lagos graduates are positively and significantly correlated (r-cal= 0.797; df= 386; $P < 0.05$), as Table 5

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demonstrates. The null hypothesis was thus rejected. It indicates that improved customer engagement and digital skills were significantly correlated.

Research Hypothesis Six: There is no significant relationship between the use of digital skills and graduates' level of innovation of the University of Lagos

Table 6

Digital Skills and Innovativeness

Variable	Mean	S.D	N	DF	r-cal	p-value	Remark	Decision
Digital skills	3.23	0.87	388	386	0.814	0.000	Sig	Rejected
Innovativeness	3.30	0.74						

Table 6 shows that graduates at the University of Lagos had a positive and significant relationship between their decision to be innovative and the use of digital skills ($r\text{-cal} = 0.814$; $df = 386$; $P < 0.05$), which means that there was a significant relationship between the two.

Research Hypothesis Seven: There is no significant relationship between digital skills and the capacity to empower others by graduates of the University of Lagos

Table 7

Digital Skills and Ability to Empower Others

Variable	Mean	S.D	N	DF	r-cal	p-value	Remark	Decision
Digital skills	3.23	0.87	388	386	0.767	0.000	Sig	Ho7 is rejected
Ability to empower others	3.29	0.75						

Digital skills and the capacity to empower graduates are positively and significantly correlated among University of Lagos graduates, as Table 7 demonstrates ($r\text{-cal} = 0.767$; $df = 386$; $P < 0.05$). The null hypothesis was thus rejected. It indicates that the capacity to empower graduates and digital skills were significantly correlated.

Discussion of Findings

According to the study, graduates decision to launch or start a business was significantly influenced by their digital skills. The results of Adeniyi et al.'s (2024) study, which found a positive and substantial correlation between digital skills and starting a business, lend weight to this. This suggests that graduates' decision to launch a business was influenced by their acquisition of digital skills. For example, graduates who have acquired digital marketing skills are better equipped to launch online businesses that sell items like jewelry, clothing, perfumes, and kitchenware, among other things.

Additional research shows that a strong correlation between University of Lagos graduates' willingness to work for themselves, that is to be self-employed, and their digital skills. This is corroborated by the research of Adeniyi et al. (2024), who

discovered a strong correlation between learning digital skills and choosing to be self-employed.

According to the study, graduates business promotion prowess was positively and significantly correlated with their digital skills. Olaniyi (2022) backed this up by stating that digital skills are crucial for enhancing corporate marketing efforts in the global business economy. The practice of carefully and creatively providing customized material that provides product details with the goal of generating interest and awareness in a customer, ultimately leading to their purchase, is known as business promotion. Relatedly, Azih *et al.*, (2023) Stressed that search engine optimization skills is a veritable mechanism that entrepreneurs can adopt to intensify their promotional and advertising activities towards engendering traffic for products and services.

The study's findings demonstrated a strong and positive correlation between graduates' enhanced marketing strategies and their digital skills at the University of Lagos. The results of Puro *et al.* (2022), who discovered a strong and favorable correlation between digital abilities and marketing strategy, lend credence to this. They contend that an entrepreneur's proficiency with digital abilities, including social media marketing, is a key factor in determining how effective they are at marketing strategy. Digital capabilities and improved customer interaction among University of Lagos alumni were shown to be significantly correlated by the study. The result of this study correspond to research conducted by Ismael and Othman's overview 2020, as cited in Azih *et al.*, (2023), who found out that on one hand, the adaptability, dynamism and flexibility of the social media give customers the opportunity to review products, which could serve as a form of feedback to businesses (p.199). Likewise, business owners are also able to expand their business network and engagement to intending customers without the limitations of space, distance and time (Ike, 2019, as cited in Azih *et al.*, 2023, p. 199). Concisely, digital skills enriches business and customer relationship, engagement, loyalty and trust.

Additionally, the study's results demonstrated a strong and positive correlation between University of Lagos graduates' innovativeness and their digital skills. This is consistent with the study by Adeniyi *et al.* (2024), "who discovered that there existed a significant positive relationship between the innovativeness of business owners and the acquisition of digital skills."

In addition, the study illustrated that exist digital skills significantly relates to ability to empower others of graduates in University of Lagos. By implication, entrepreneurs who have acquired digital skills are not only self-reliant and self-employed, rather, they are able to create jobs for others as well as empower others through training, internship and mentoring.

Conclusion

The study found out that digital skill, to a high extent relates to entrepreneurial capability of graduates. Based on this, the study concluded that in order to ensure that university educational output reduce the queue of employment rather than extend the already long queue unemployment, digital skill acquisition is indispensable and of great necessity, especially in a world where the parlances employment, labour market and business is driven by digitalization. Therefore, the school university curriculum should be tailored in a way that it is in congruity with the demands of the world of work. Thus, prepare students in the areas of digital skills needed for successful participation in the

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global business economy, such that, they are self-reliant, able to create jobs for others, contribute their quota to economic growth of the nation and empower others in developing digital entrepreneurial intentions.

Recommendations

Based on the findings, the following recommendations were made, they include,

1. Universities should integrate digital entrepreneurship training into academic programs. This will equip graduates with practical tools and confidence to start business ventures in today's technology-driven economy.
2. Universities should promote digital career pathways through workshops, online freelancing seminars, and mentorship schemes that connect students with self-employment opportunities in the digital space.
3. Universities should provide students with access to digital marketing training, including social media management, branding, and online advertising, to enhance the visibility and growth of their business initiatives.
4. Universities should introduce a compulsory 1-2 unit course on digital marketing strategy across all faculties to build students' marketing acumen for business growth.
5. Students before graduation should endeavour to take up digital training in the area of social media marketing in order to improve their customer relationship and engagement prowess.
6. Universities should create innovation hubs and digital labs where students can explore and understand technology-driven solutions, thereby cultivating creativity, problem-solving, and entrepreneurial thinking.
7. Institutions should encourage peer learning models where digitally skilled students mentor others, enhance leadership, and collaboration among students

References

- Adeniyi, B. C., Fasanmi, O. O., & Olawemo, A. S. (2024). Digital skills acquisition and entrepreneurial intentions of business owners in Ekiti State. *International Journal of Humanities Social Science and Management (IJHSSM)*, 4(2), 911-1001.
- Azih, N. & Egbu, V. N. (2023). Digital skills required by start-up operators for effective management of small and medium scale enterprise in Ebonyi State. *International Journal of Innovative Education Research* 11(2), 193-202.
- European Commission (2018). *Commission announces pilot project to boost digital skills through internships*. Retrieved from <https://ec.europa.eu/digital-single-market/en/news/commission-announces-pilot-project-boost-digital-skills-through-internships>
- He, Xiao-Gang & Gu-Yan L. (2009). "Venturing business diversification: An empirical examination based on entrepreneurial competence". *Science & Technology Progress and Policy*, 26(10), 75-80.
- Martinez, T. M. A., La Torre, A. E. M., & Vega, S. A. J. (2024). Exploring digital entrepreneurship and the development of entrepreneurial skills in general studies students. *Academic Journal of Interdisciplinary Studies*, 13(3), 388-406. DOI: <https://doi.org/10.36941/ajis-2024-0089>
- Odey, B. N., Udu, G. O. & Odoh, N. E. (2021). Evaluation of the implementation of entrepreneurship studies in Ebonyi state public secondary curriculum. *Journal of Business and Management*, 23(4), 37-42.

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- OECD (2015). *OECD digital economy outlook*. Retrieved from http://www.oecd-ilibrary.org/science-and-technology/oecd-digital-economy-outlook-2015_9789264232440-e
- Ojeomogha, T. O. (2019). Digital literacy and entrepreneurial returns among small business owners in Lagos State, Nigeria. *Education & Science Journal of Policy Review and Curriculum Development*, 9(2), 1-11.
- Olaniyi, O. N. (2022). Digital skill and future of business education Students. *International Journal of Multidisciplinary and Current Educational Research (IJM CER)*, 4(1), 186-192.
- Olowolayemo, A., Mamun, A. A., Wani, S., & Sofiadin, A. M. (2022). Exploring the impact of digital entrepreneurship education among graduates in Bangladesh. *Journal of Information Systems and Digital Technologies*, 4(2), 58-81.
- Osiesi, P. M., Adegbaoyega, M. S., Fadiya, A. A., & Blignaut, S. (2024). Assessment of entrepreneurial digital skills, knowledge, and use among business education undergraduates in the Federal University Oye-Ekiti, Nigeria. *Journal of African Education*, 5(1), 267-286. DOI: <https://doi.org/10.31920/2633-2930/2024/v5n1a12>
- Oyeku, O. M., Odunyoye, O., Karimu, F. A., Akindoju, F. A., Togunde, M. O., & Elemo, G. N. (2020). Entrepreneurial capability and entrepreneurial success. *European Journal of Business and Innovation Research*, 8 (5), 56-79.
- Oyeku, O. M., Oduyoye, O. O., Elemo, G. N., Akindoju, A. F., & Karimu, F. A. (2014). Entrepreneurial capability and entrepreneurial success: A review of conceptual and theoretical framework. *Research on Humanities and Social Sciences*, 4(17), 136-143.
- Puro, W. I., Kussudyarsana, Sholahuddin, M., & Achmad, N. (2022). Advances in Economics, Business and Management Research, volume 655 Proceedings of the International Conference on Economics and Business Studies (ICOEBS 2022). Atlantis Press. 237-246.
- Somwetee, P., Aujirapongpan, S., & Ru-Zhue, J. (2023). The influence of entrepreneurial capability and innovation capability on sustainable organization performance: Evidence of community enterprise in Thailand. *Journal of Open Innovation: Technology, Market, and Complexity*, 9(2023), 1-12.
- UNESCO (2018). *Digital skills critical for jobs and social inclusion*. Retrieved from <https://en.unesco.org/news/digital-skills-critical-jobs-and-socialinclusion>
- University of Lagos (2024). *University of Lagos 2023/2024 pocket statistics*. Academic Planning Unit (Data Management Office), University of Lagos.