

**DIGITAL SKILLS ACQUISITION AS A MEDIATOR OF GOVERNMENT  
TECH INITIATIVES AND YOUTH SELF-EMPLOYMENT IN  
SOUTH-SOUTH NIGERIA: EVIDENCE FROM  
A CROSS-SECTIONAL SURVEY**

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**Abstract**

Youth unemployment remains a significant socio-economic challenge in Nigeria, particularly in the South-South region where limited formal employment opportunities constrain youth economic participation. In response, federal and state governments have implemented technology-driven initiatives aimed at equipping youths with digital skills to enhance self-employment. This study examined the effect of digital skills acquisition on youth self-employment in South-South Nigeria. The study was anchored on Human Capital Theory and conceptualized digital skills acquisition into three dimensions: technical digital skills, digital marketing and e-commerce skills, and soft digital literacy. A quantitative cross-sectional survey design was adopted. Data were collected using a structured questionnaire from 420 youths who participated in federal and state digital training programmes across Delta, Rivers, and Akwa Ibom States. A total of 376 valid responses were analyzed using descriptive statistics and multiple regression analysis. The results revealed that digital skills acquisition had a significant effect on youth self-employment ( $R=0.721$ ,  $R^2=0.520$ ,  $Adj. R^2=0.516$ ). The regression model was statistically significant  $F(3,372) = 23.54$ ,  $p<0.05$ ), indicating that the independent variables jointly predicted youth self-employment. Collectively, the predictors explained 52.0% of the variance in youth self-employment. The study concludes that digital skills acquisition is a strong determinant of youth self-employment in South-South Nigeria. It recommends increased investment in comprehensive digital capacity-building programmes that integrate technical, marketing, and digital literacy skills to enhance youth entrepreneurial outcomes and reduce unemployment.

*Keywords:* digital skills acquisition, youth self-employment, digital entrepreneurship, digital marketing skills, South-South Nigeria

**1. Introduction**

In the modern global landscape, the digital economy has emerged as a major driver of economic transformation by reshaping the way goods and services are produced, distributed, and consumed (UNCTAD, 2019; Bukht & Heeks, 2017). Indeed, the integration of digital tools and e-commerce platforms has reduced barriers to entry, enabling individuals from diverse backgrounds to establish businesses and access

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global markets (Perkins & Pryor, 2021). While advances in artificial intelligence and automation pose risks of job displacement, they also create new opportunities that demand advanced digital and creative competencies (OECD, 2023).

Consequently, digital innovation is increasingly recognized as a critical mechanism for economic diversification, productivity enhancement, and employment generation across both developed and developing economies (Otarinia, 2024). In Africa, particularly in Nigeria, the digital economy is widely acknowledged as a strategic pathway for addressing structural unemployment and promoting inclusive growth (Datti, 2025).

Nigeria's demographic structure, with over 60% of the population below the age of 30, presents both an opportunity and a challenge for sustainable development (ActionAid Nigeria, 2025; National Population Commission, 2025). Despite this demographic advantage, youth unemployment remains persistently high due to limited industrial capacity, weak job creation mechanisms, and a mismatch between formal education and labour market requirements (World Economic Forum, 2025; Nelson, 2024).

This mismatch has resulted in a significant "skills gap," where graduates possess theoretical knowledge but lack practical digital competencies required in contemporary workplaces. As a result, digital skills acquisition has become a critical policy priority for enhancing employability and promoting self-employment among Nigerian youths (National Information Technology Development Agency [NITDA], 2024).

In response, the Federal Government of Nigeria and various state governments have introduced several technology-driven initiatives aimed at strengthening the country's digital talent ecosystem. Notably, programmes such as the 3MTT initiative seek to position Nigeria as a global exporter of digital talent (Federal Ministry of Communications, Innovation & Digital Economy, 2023; NITDA, 2026).

The proliferation of digital training centres, innovation hubs, and coding bootcamps reflects efforts to address the estimated deficiency in technical competencies among graduates (World Economic Forum, 2025). These initiatives emphasize not only technical skills such as software development and data analytics but also entrepreneurial capabilities required for digital self-employment. Empirical evidence suggests that digital entrepreneurship can enhance job creation, expand business opportunities, and improve economic participation among youths (Egunjobi, 2023).

Despite these developments, existing literature reveals important gaps. Conceptually, many studies have treated digital skills as a unidimensional construct, with limited attention to its multidimensional nature encompassing technical digital skills, digital marketing and e-commerce skills, and soft digital literacy (Nelson, 2024; Datti, 2025).

Methodologically, prior studies have often relied on descriptive analyses or simple correlations, with limited application of robust multivariate techniques to examine the relative contributions of different digital skill components to self-employment outcomes (Otarinia, 2024).

Geographically, most empirical studies have focused on major urban centres such as Lagos and Abuja, with insufficient attention to the South-South region, despite its unique socio-economic and infrastructural challenges (World Bank, 2024; World Economic Forum, 2025). These limitations constrain the generalizability of findings and underscore the need for context-specific empirical investigation.

Furthermore, although digital skill acquisition is widely promoted as a solution to youth unemployment, there remains limited empirical clarity on how specific dimensions of these skills translate into measurable self-employment outcomes such as income generation, business sustainability, and level of entrepreneurial engagement. This creates a critical knowledge gap regarding the effectiveness of ongoing federal and state digital initiatives in fostering sustainable youth self-employment in the South-South region of Nigeria. Against this backdrop, this study empirically examines the effect of digital skills acquisition on youth self-employment in South-South Nigeria.

Specifically, the study seeks to:

- (i) determine the effect of technical digital skills on youth self-employment outcomes measured by engagement in income-generating digital activities;
- (ii) examine the effect of digital marketing and e-commerce skills on youth self-employment outcomes measured by online business participation and revenue generation; and
- (iii) assess the effect of soft digital literacy on youth self-employment outcomes measured by operational efficiency and sustainability of digital ventures.

By addressing these conceptual, methodological, and geographical gaps, this study contributes to the growing body of literature on digital entrepreneurship and provides empirical evidence to inform policy and practice aimed at reducing youth unemployment through digital skill development in Nigeria.

## **2. Literature Review**

### **Digital Skills Acquisition**

Digital skills acquisition refers to the development of competencies required to effectively use digital technologies for economic and social activities (Nwogwugwu, 2022). These competencies extend beyond basic device usage to include the ability to utilize online platforms, analyze data, and engage in technology-enabled problem-solving (Reddy et al., 2023). In the digital economy, Muzaki et al. (2022) posit that such skills constitute a critical form of human capital that enhances participation in both labour markets and entrepreneurial ventures.

Some recent empirical studies emphasize the multidimensional nature of digital skills and their differential effects on employment outcomes. For instance, Carolus et al. (2023), using survey data across European countries, found that advanced digital competencies significantly predict entrepreneurial engagement, while basic digital literacy has a weaker effect.

Similarly, Singh and Singh (2024), in a cross-country regression analysis, reported that digital skill acquisition positively influences youth employability, although the strength of the relationship varies by skill type and economic context. In contrast, Massi et al. (2026) argue that the impact of digital skills is contingent on complementary institutional factors such as infrastructure and access to finance, suggesting that skill acquisition alone may not guarantee employment outcomes.

Measurement of digital skills acquisition in empirical studies commonly relies on self-reported Likert-scale items capturing proficiency in technical tasks, online engagement, and digital problem-solving (van Laar et al., 2020; Reddy et al., 2023). Indicators often include the ability to use digital tools, create digital content, and apply technology in business contexts. Despite growing interest, Ezeoha et al. (2025). Indicate that studies in Nigeria remain largely descriptive and lack rigorous multivariate

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analysis, particularly in examining how distinct dimensions of digital skills influence self-employment outcomes.

## **Technical Digital Skills**

Technical digital skills have to do with advanced competencies in areas such as programming, data analytics, cloud computing, and cybersecurity (van Laar et al., 2020). These skills are central to innovation and digital entrepreneurship, enabling individuals to develop digital products and services. Empirical evidence suggests that technical skills significantly enhance entrepreneurial capability and income generation. For example, Ofori-Kyeremeh et al. (2025), using a quantitative survey of African youth, found that programming and data analytics skills have a strong positive effect on participation in freelance digital work.

Similarly, Mundo (2022) reported that individuals with advanced technical competencies are more likely to engage in high-value digital services compared to those with only basic skills. However, some studies present a more nuanced perspective. UNCTAD (2021) notes that while technical skills are important, they may not directly translate into business success without complementary marketing and managerial competencies. This aligns with findings by van Laar et al. (2020), who argue that technical skills alone are insufficient for sustainable entrepreneurship.

Measurement of technical digital skills typically involves Likert-scale items assessing proficiency in software development, data analysis, system design, and use of specialized digital tools (van Laar et al., 2020). These indicators capture the extent to which individuals can create and manage digital solutions.

## **Digital Marketing and E-Commerce Skills**

Digital marketing and e-commerce skills involve the ability to promote, sell, and distribute products through digital platforms (Chaffey & Ellis-Chadwick, 2022; Saura et al., 2021). These skills have been identified as critical drivers of business growth and competitiveness in the digital economy. Empirical studies provide strong support for their role in entrepreneurial success. For instance, Saura et al. (2021), using structural equation modeling, found that digital marketing capabilities significantly improve firm performance through enhanced customer engagement. Similarly, Terzi (2023) reported that small businesses with strong e-commerce competencies are more likely to access international markets and diversify revenue streams.

From the perspective of the African continent, ILO (2023) highlights that digital marketing skills enable small enterprises to overcome traditional market barriers. However, contrasting evidence from some developing economies suggests that the effectiveness of these skills may be constrained by infrastructural challenges such as poor internet access and low digital trust.

Measurement indicators for digital marketing and e-commerce skills include the ability to use social media for promotion, manage online sales platforms, conduct digital advertising, and analyze customer data (Chaffey & Ellis-Chadwick, 2022). These are typically assessed using Likert-scale items reflecting frequency and proficiency of use.

## **Soft Digital Literacy Skills**

Soft digital literacy skills encompass non-technical competencies required to function effectively in digital environments, including communication, collaboration, problem-solving, and digital financial management (van Laar et al., 2020; World Economic Forum, 2023). These skills are increasingly recognized as critical for adapting to rapidly evolving digital workplaces. Empirical evidence highlights their

growing importance. Ganiyu et al. (2024), in a study of Nigerian youth entrepreneurs, found that digital communication and virtual collaboration significantly influence business sustainability.

Similarly, OECD (2023) reports that soft digital competencies enhance adaptability and resilience, particularly in freelance and gig economy contexts. However, some studies suggest that these skills have an indirect effect on entrepreneurial outcomes, often mediated by technical or marketing competencies (World Economic Forum, 2023). Soft digital literacy typically measurement includes Likert-scale items assessing abilities such as online communication, teamwork using digital tools, time management, and digital financial transactions (van Laar et al., 2020). These indicators capture behavioural and cognitive aspects of digital engagement.

### **Youth Self-Employment**

Youth self-employment refers to the creation and management of income-generating activities by young individuals outside formal wage employment (Apeh et al., 2023; Osimen et al., 2025). It is widely regarded as a viable strategy for addressing unemployment and promoting economic inclusion. The ILO emphasizes that self-employment contributes to income generation, job creation, and poverty reduction, particularly in developing economies.

Empirical studies provide mixed findings on the determinants of youth self-employment. Sele and Mukundi (2025) found that entrepreneurial skills and access to finance significantly influence self-employment outcomes in Nigeria. In contrast, some studies argue that structural barriers such as inadequate infrastructure and limited market access may constrain the success of youth-led ventures despite skill acquisition (World Bank, 2024).

Measurement of youth self-employment in empirical research often includes indicators such as engagement in income-generating activities, business ownership, revenue generation, and sustainability of ventures (Apeh et al., 2023). These are typically operationalized using Likert-scale items or objective income measures.

On the whole, while the literature provides substantial evidence on the importance of digital skills for employment outcomes, there remains limited consensus on the relative contributions of different skill dimensions. In addition, few studies have simultaneously examined technical, marketing, and soft digital skills within a unified analytical framework, particularly in the South-South region of Nigeria. This study addresses these gaps by adopting a multidimensional approach and employing rigorous statistical analysis to examine their effects on youth self-employment.

### **Hypotheses Development and Theoretical Framework**

#### **Technical Digital Skills and Youth Self-Employment**

Technical digital skills refer to specialized competencies required to develop, operate, and manage digital technologies such as software development, data analytics, web design, and cybersecurity. For many young people in developing regions, self-employment through digital platforms offers a resilient pathway to financial independence in the absence of traditional job growth (International Labour Organisation [ILO], 2023; World Bank, 2024).

For youths, the acquisition of technical digital skills plays a significant role in facilitating self-employment opportunities. Individuals who possess skills in software development, programming, and data analysis can create digital startups, design mobile applications, develop websites, and provide freelance technology services to clients across the world. According to the World Bank (2024), fostering an environment

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conducive to youth self-employment is essential for capturing the "demographic dividend" in countries with rapidly growing young populations

In developing economies such as Nigeria, formal employment opportunities are limited, technical digital skills can serve as a pathway for young people to create sustainable livelihoods through digital entrepreneurship. Youths with programming and technological competencies are more able to provide freelance services, develop software products, and establish digital enterprises that operate within both local and global markets. Consequently, the acquisition of technical digital skills is expected to positively influence youth self-employment.

**H1:** Technical digital skills have a significant positive effect on youth self-employment in South-South Nigeria.

## **Digital Marketing and E-Commerce Skills and Youth Self-Employment**

Digital marketing and e-commerce skills refer to the competencies required to promote, distribute, and sell goods and services through digital platforms. These skills include social media marketing, content creation, search engine optimization (SEO), online advertising, and the management of digital marketplaces. With the growing penetration of internet technology and mobile devices, digital marketing has become an essential strategy for business development and customer engagement (Chaffey & Ellis-Chadwick, 2022).

For youth entrepreneurs, digital marketing and e-commerce skills significantly expand market access and business opportunities. Through social media platforms and online marketplaces, entrepreneurs can reach customers beyond geographical boundaries, reduce operational costs, and increase the visibility of their products and services. According to the Organisation for Economic Co-operation and Development, digital commerce platforms enable small businesses and entrepreneurs to participate in global value chains and increase their competitiveness in the digital economy.

In Nigeria, many youth-led enterprises rely heavily on digital platforms to conduct business activities. Social media platforms have become important tools for advertising products, interacting with customers, and completing financial transactions. As a result, entrepreneurs who possess strong digital marketing and e-commerce competencies are better positioned to attract customers, expand their businesses, and sustain their ventures. Therefore, digital marketing and e-commerce skills are expected to significantly influence the growth and sustainability of youth self-employment.

**H2:** Digital marketing and e-commerce skills have a significant positive effect on youth self-employment in South-South Nigeria.

## **Soft Digital Literacy and Youth Self-Employment**

Soft digital literacy refers to the behavioural and cognitive competencies required to effectively operate within digital environments. These skills include virtual collaboration, online communication, digital problem-solving, and digital financial management. The adoption of digital marketing and e-commerce tools allows small-scale entrepreneurs to overcome traditional geographical constraints and reduce the overhead costs associated with physical storefronts (Chaffey & Ellis-Chadwick, 2022; Terzi, 2023)

Soft digital literacy, which includes competencies like virtual teamwork and digital critical thinking, is increasingly viewed as a critical component of 21st-century employability (OECD, 2023; van Laar et al., 2020). Effective digital communication and collaboration allow entrepreneurs to engage with clients, manage online transactions, and coordinate business operations efficiently. According to van Laar et

al. (2020), while technical skills provide the foundation for digital work, soft digital literacy is what enables professionals to effectively communicate and solve problems within complex online ecosystems. For self-employed youths, these skills contribute to the operational efficiency and sustainability of their ventures.

Entrepreneurs who possess strong digital literacy are able to manage online payments, maintain digital records, communicate effectively with customers, and collaborate with remote partners. These capabilities improve business performance and increase the likelihood of long-term entrepreneurial success. Consequently, soft digital literacy is expected to have a positive relationship with youth self-employment.

**H3:** Soft digital literacy has a significant positive effect on youth self-employment in South-South Nigeria.

### **Theoretical Framework**

This study is anchored on the Human Capital Theory. This theory was popularized by Gary Becker in 1964. The theory posits that investments in education, training, and skill development enhance the productivity and economic value of individuals. Human capital represents the knowledge, competencies, and abilities that individuals acquire through learning and experience, which in turn influence their economic performance and income generation capacity.

Human Capital Theory suggests that individuals who possess higher levels of education and specialized skills are more likely to secure employment, establish businesses, and contribute to economic development. In the context of the digital economy, digital skills acquisition represents an important form of human capital investment. By acquiring technical digital skills, digital marketing capabilities, and digital literacy competencies, youths improve their ability to create entrepreneurial opportunities and participate in technology-driven economic activities.

The theory is particularly relevant to this study because it explains how investment in digital skill development can enhance the entrepreneurial capacity of young people. Government initiatives and training programs designed to develop digital competencies can therefore be viewed as investments in human capital that improve the economic productivity of youths. When young people acquire relevant digital skills, they become capable of establishing technology-based enterprises, participating in online labour markets, and generating income through self-employment.

Consequently, Human Capital Theory provides a suitable theoretical foundation for examining how digital skill acquisition influences youth self-employment in South-South Nigeria. It supports the argument that investment in digital training programs can enhance entrepreneurial capacity and contribute to sustainable economic development.

## **3. Methodology**

### **Research Design**

This study adopted a quantitative research design to examine the effect of digital skills acquisition on youth self-employment in South-South Nigeria. A cross-sectional survey design was employed, allowing data to be collected from respondents at a single point in time. This design was considered appropriate because it enabled the statistical examination of relationships among the study variables while capturing real-time responses from participants of digital training programmes.

### **Population of the Study**

The population of the study comprised youths in the South-South geopolitical zone of Nigeria who had participated in federal and state-sponsored digital technology training initiatives. These programmes were implemented by agencies such as the

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National Information Technology Development Agency (NITDA), the National Directorate of Employment (NDE), and relevant state innovation and digital skills centres.

Based on available records obtained from programme coordinators and training centres, the estimated population of trained youths across Delta, Rivers, and Akwa Ibom States was approximately 3,850 participants. This constituted youths engaged in various digital-related entrepreneurial activities such as freelancing, digital marketing, e-commerce, and technology-enabled services.

## **Sample Size and Sampling Technique**

The sample size was determined using Yamane's (1967) statistical formula for finite populations:  $n = N/1 + N(e)^2$ ; Where:  $n$  = sample size;  $N$  = population size (3,850);  $e$  = level of precision (0.05). Substituting the values, we got a sample of 362 respondents. However, in order to improve representation and account for possible non-response, the sample size was adjusted to 420 respondents.

A multi-stage sampling technique was adopted. In the first stage, three states: Delta, Rivers, and Akwa Ibom, were purposively selected due to their active digital skills development programmes. In the second stage, lists of programme beneficiaries were obtained from training centres and coordinating agencies, forming the sampling frame. In the third stage, simple random sampling was used to select respondents from the lists, ensuring that every eligible participant had an equal chance of selection and improving representativeness.

## **Instrument for Data Collection**

Data were collected using a structured questionnaire developed by the researcher. The instrument consisted of two sections. Section A captured respondents' demographic characteristics such as age, gender, educational qualification, and type of digital skill acquired. Section B measured the study variables: technical digital skills, digital marketing and e-commerce skills, soft digital literacy, and youth self-employment. All items were measured on a five-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5), ensuring consistency in response measurement.

## **Validity and Reliability of the Instrument**

Face and content validity were established through expert review by scholars in entrepreneurship, digital innovation, and research methodology. Their observations were used to refine and improve the clarity and relevance of the instrument.

Reliability was tested using Cronbach's Alpha coefficient. The results showed values ranging from 0.78 to 0.86 across the constructs, which exceeded the minimum acceptable threshold of 0.70. This confirmed that the instrument had strong internal consistency and was reliable for the study.

## **Method of Data Analysis**

Data were coded and analyzed using the Statistical Package for Social Sciences (SPSS). Descriptive statistics such as frequency distribution, percentages, mean, and standard deviation were used to summarize respondents' demographic characteristics. Multiple regression analysis was employed to examine the effect of technical digital skills, digital marketing and e-commerce skills, and soft digital literacy on youth self-employment. The choice of regression analysis was justified by its suitability for determining both the individual and combined effects of multiple independent variables on a dependent variable. All hypotheses were tested at a 0.05 level of significance.

#### **4. Results and Discussion**

##### **Response Rate Analysis**

A total of 420 copies of the questionnaire were distributed to respondents who participated in federal and state digital skill acquisition initiatives in the South-South region of Nigeria. Out of these, 376 copies were properly completed and returned, representing a response rate of 89.5%. According to social science research standards, a response rate above 70% is considered adequate for statistical analysis, indicating that the data obtained were sufficient and reliable for the study.

**Table 1**

*Response Rate*

<b>Questionnaire Distribution</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Questionnaires Distributed	420	100
Questionnaires Returned	376	89.5
Questionnaires Not Returned	44	10.5

**Source: Field Survey (2026)**

##### **Demographic Characteristics of Respondents**

The demographic characteristics of the respondents were analyzed using frequency and percentage distributions.

**Table 2**

*Gender Distribution of Respondents*

<b>Gender</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Male	214	56.9
Female	162	43.1
Total	376	100

**Source: Field Survey (2026)**

The results show that 56.9% of respondents were male, while 43.1% were female, indicating a relatively balanced gender representation among youths participating in digital skill programmes.

**Table 3**

*Age Distribution of Respondents*

<b>Age Group</b>	<b>Frequency</b>	<b>Percentage (%)</b>
18 – 24 years	118	31.4
25 – 30 years	174	46.3
31 – 35 years	64	17
Above 35 year	20	5.3
Total	376	100

**Source: Field Survey (2026)**

The results indicate that the majority of respondents (46.3%) were between 25–30 years, followed by 31.4% aged 18–24 years, suggesting that digital skill initiatives largely attract young adults within the economically active age bracket.

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**Table 4**

*Educational Qualification of Respondents*

<b>Qualification</b>	<b>Frequency</b>	<b>Percentage (%)</b>
SSCE	76	20.2
ND/NCE	102	27.1
HND/BSc	158	40
Postgraduate	40	10.6
Total	376	100

**Source: Field Survey (2026)**

The results show that 42.0% of respondents possessed HND/BSc qualifications, suggesting that most participants in digital skill programmes have tertiary education.

**Descriptive Statistics of Study Variables**

Descriptive statistics were conducted to determine the mean and standard deviation of the key variables in the study.

**Table 5**

*Descriptive Statistics of Study Variables*

<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev.</b>
Technical Digital Skills	376	3.87	0.71
Digital Marketing	376	3.94	0.68
Soft Digital Literacy	376	3.76	0.73
Youth Self-Employment	376	3.91	0.69

**Source: Field Survey (2026)**

The results indicate that respondents generally agreed that digital skills contributed to their self-employment activities, as the mean values for all variables were above 3.50, which represents agreement on the Likert scale.

**Correlation Analysis**

A Pearson correlation analysis was conducted to examine the relationships between the independent variables and youth self-employment.

**Table 6**

*Correlation Matrix*

<b>Variable</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Technical Digital Skills	1.000			
Digital Marketing	0.514**	1.000		
Soft Digital Literacy	0.462**	0.497**	1.000	
Youth Self-Employment	0.612**	0.645**	0.533**	1.000

**Note:**  $p < 0.01$

**Source: Field Survey (2026)**

The correlation results indicate significant positive relationships between all dimensions of digital skills and youth self-employment. Digital marketing and e-commerce skills showed the strongest relationship with youth self-employment ( $r = 0.645$ ).

**Multiple Regression Analysis**

Multiple regression analysis was conducted to determine the combined and individual effects of the independent variables on youth self-employment.

**Model Summary**

**Table 7**

*Model Summary*

<b>R</b>	<b>R<sup>2</sup></b>	<b>Adj R<sup>2</sup></b>	<b>S.E</b>
0.721	0.52	0.516	0.482

**Source: Field Survey (2026)**

The model summary indicates that the independent variables jointly explained 52.0% of the variance in youth self-employment. This suggests that digital skill acquisition significantly contributes to youth entrepreneurial outcomes in the South-South region

**ANOVA Result**

**Table 8**

*ANOVA*

<b>Model</b>	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig</b>
Regression	86.432	3	28.811	123.5	0.000
Residual	79.561	372	0.214		
Total	165.993	375			

**Source: Field Survey (2026)**

The ANOVA results show that the regression model is statistically significant (F = 123.54, p < 0.05), indicating that the independent variables collectively predict youth self-employment.

**Regression Assumption and Diagnostic Tests**

To ensure the validity and robustness of the regression results, key diagnostic tests were conducted.

**Multicollinearity Test**

Multicollinearity was assessed using Tolerance values and Variance Inflation Factor (VIF). The results indicated that all predictor variables had Tolerance values greater than 0.10 and VIF values below 5.0. Technical digital skills: VIF = 2.14, Tolerance = 0.47; Digital marketing and e-commerce skills: VIF = 2.38, Tolerance = 0.42; and Soft digital literacy: VIF = 1.89, Tolerance = 0.53. These values indicate that multicollinearity was not a problem in the model.

**Normality Test**

The normality of residuals was assessed using the Shapiro-Wilk test and normal probability (P-P) plot. The Shapiro-Wilk test produced a non-significant result (p > 0.05), indicating that the residuals were normally distributed. In addition, the P-P plot showed that the residuals closely followed the diagonal line, further confirming normality.

**Heteroskedasticity Test**

Heteroskedasticity was tested using the Breusch-Pagan / Cook-Weisberg test. The result was not statistically significant (p > 0.05), indicating the absence of heteroskedasticity. This implies that the variance of the residuals was constant across all levels of the independent variables.

**Residual Diagnostic Check**

A visual inspection of the residual scatter plot confirmed that the residuals were randomly distributed around zero, with no clear pattern. This further supports the assumption of linearity and homoscedasticity.

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**Multiple Regression Analysis**

Multiple regression analysis was conducted to determine the individual effects of technical digital skills, digital marketing and e-commerce skills, and soft digital literacy on youth self-employment in South-South Nigeria.

**Table 9**

*Multiple Regression Coefficients*

Variables	Unstd B	Std. Error	Std/Coeff	t-value	Sig.
Constant	0.842	0.184		4.57	0.000
Technical Digital Skills	0.315	0.049	0.328	6.69	0.000
Digital Marketing	0.348	0.052	0.371	7.13	0.000
Soft Digital Literacy	0.201	0.047	0.219	4.66	0.000

**Source: Field Survey (2026)**

**Dependent Variable:** Youth Self-Employment

**Interpretation of the Regression Coefficients**

The regression results indicate that all the independent variables exerted significant positive effects on youth self-employment. Technical digital skills recorded a standardized beta coefficient of 0.328 ( $t = 6.69$ ,  $p < 0.05$ ), indicating that improvements in technical competencies such as programming, web development, and data analytics significantly increased the likelihood of youth engaging in self-employment activities.

Digital marketing and e-commerce skills had the highest standardized beta value of 0.371 ( $t = 7.13$ ,  $p < 0.05$ ), suggesting that the ability to promote and sell products through digital platforms significantly enhanced the growth and sustainability of youth-led ventures.

Soft digital literacy also showed a significant positive influence on youth self-employment ( $\beta = 0.219$ ,  $t = 4.66$ ,  $p < 0.05$ ). This implies that competencies such as virtual collaboration, online communication, and digital financial management contributed to improved operational efficiency among self-employed youths.

**Discussion of Findings**

The findings of this study provide deeper insight into the relationship between digital skill acquisition and youth self-employment when interpreted through the lens of Human Capital Theory. This theory posits that investments in knowledge and skills enhance individuals' productivity and economic outcomes.

From the perspective of South-South Nigeria, the significant influence of technical digital skills on youth self-employment suggests that such competencies constitute a critical form of human capital that enables young people to create and sustain economic opportunities. Skills in software development, web design, and data analytics do not merely improve employability; they expand the productive capacity of youths by equipping them to function as independent economic agents within the digital economy.

This is particularly relevant in a region characterized by high youth unemployment and limited formal sector opportunities, where digital entrepreneurship serves as an alternative pathway to economic participation. However, beyond confirming prior studies, this finding highlights an important theoretical nuance: technical digital skills alone represent foundational human capital, but their

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effectiveness depends on how they are deployed within specific socio-economic contexts.

In South-South Nigeria infrastructural constraints persist, the mere possession of technical skills may not automatically translate into entrepreneurial success. This helps explain the contrasting position of Okolie, Igwe, and Elom (2020), suggesting that human capital must be complemented by contextual enablers and market-oriented capabilities to yield optimal outcomes.

More importantly, the study found that digital marketing and e-commerce skills exert the strongest influence on youth self-employment. This result can be theoretically explained by extending Human Capital Theory to include market-facing and opportunity-exploiting capabilities. Unlike technical skills, which focus on production, digital marketing skills directly enhance value realization by connecting products and services to markets.

In the South-South Nigerian context, digital platforms provide a low-cost and scalable alternative for reaching customers. Social media platforms, online marketplaces, and mobile-based commerce reduce entry barriers and enable youths to bypass traditional distribution challenges. Thus, digital marketing emerges as the most impactful because it bridges the gap between capability and commercialization. It transforms latent entrepreneurial potential into actual income-generating activity.

This finding extends existing literature by demonstrating that, within developing economies, the returns on human capital investment may be higher for skills that facilitate market access and visibility rather than purely technical production capabilities. It also reflects the growing importance of Nigeria's informal and digital economies, where success is often determined by visibility, customer engagement, and network reach rather than technological sophistication alone.

Furthermore, the significant contribution of soft digital literacy underscores the multidimensional nature of human capital in the digital age. Skills such as virtual communication, online collaboration, and digital financial management enhance the efficiency with which entrepreneurial activities are coordinated and executed.

From a theoretical standpoint, these competencies represent complementary human capital, enabling individuals to effectively utilize both technical and marketing skills. In South-South Nigeria business transactions increasingly rely on mobile banking, social networks, and remote interactions, it is expected that soft digital literacy will facilitate trust-building, customer retention, and operational efficiency.

Nevertheless, the impact of digital literacy must be interpreted within the region's socio-economic realities. Persistent challenges such as digital inequality, limited broadband penetration, and varying levels of educational attainment may constrain the extent to which these skills translate into sustainable self-employment. This suggests that while human capital development is essential, its effectiveness is mediated by structural factors, thereby reinforcing the need for supportive digital infrastructure and inclusive policies.

Generally, this study advances Human Capital Theory by demonstrating that not all forms of digital human capital yield equal economic returns in a developing economy context. Specifically, market-oriented digital skills (digital marketing and e-commerce) appear to generate the highest impact on self-employment because they directly address contextual barriers related to market access and business visibility. The findings therefore imply that policies and interventions aimed at promoting youth entrepreneurship in South-South Nigeria should adopt a more integrated approach: one that combines technical training with strong emphasis on digital marketing competencies and soft digital literacy, while also addressing infrastructural limitations.

# DIGITAL SKILLS ACQUISITION AS A MEDIATOR OF GOVERNMENT TECH INITIATIVES AND YOUTH SELF-EMPLOYMENT IN SOUTH-SOUTH NIGERIA: EVIDENCE FROM A CROSS-SECTIONAL SURVEY

## 5. Conclusion and Recommendations

This study deepens understanding of how digital skills drive youth self-employment in South-South Nigeria by emphasizing their differential value within Human Capital Theory. The findings show that while technical and soft digital skills are important, digital marketing and e-commerce skills generate the highest entrepreneurial returns by enhancing market access and business visibility in a constrained economic environment. Theoretically, this extends Human Capital Theory by highlighting the importance of market-oriented digital competencies in developing economies.

From a policy standpoint, the study advocates for integrated digital training that combines technical, marketing, and soft skills, alongside improved digital infrastructure and support for e-commerce ecosystems. However, the study is limited by its cross-sectional design and regional focus, which may affect generalizability. Future research should adopt longitudinal and comparative approaches while incorporating contextual factors such as infrastructure and access to finance. In all, digital skills remain a critical pathway for promoting sustainable youth entrepreneurship.

Based on the above findings the following recommendations are given: Government agencies and policymakers should expand digital skill development programmes targeted at youths, particularly those that focus on technical competencies such as software development, data analytics, and web development, in order to enhance their capacity to create technology-driven enterprises.

Training institutions and digital innovation hubs should incorporate comprehensive modules on digital marketing and e-commerce strategies in their training curricula to equip youth entrepreneurs with the skills required to effectively promote products, reach wider markets, and sustain their businesses.

Youth empowerment programmes should also emphasize the development of soft digital literacy skills such as virtual collaboration, online communication, and digital financial management to improve the operational efficiency and sustainability of youth-led digital ventures.

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