



**Journal of Business Systems Innovation and Management
Science**

**THE ROLE OF DIGITAL SKILLS ON YOUTH EMPLOYABILITY IN
NAIROBI CITY COUNTY**

Lucy Njoki Gicici and Dr. Thomas Mose, PhD



The Role of Digital Skills On Youth Employability in Nairobi City County

Lucy Njoki Gicici

Corresponding Author, Jomo Kenyatta
University of Agriculture and Technology

Dr. Thomas Mose, PhD

Lecturer, Entrepreneurship and
Procurement Department, School of
Business and Entrepreneurship, Jomo
Kenyatta University of Agriculture and
Technology

Article History:

Published on: 13/07/2026

DOI:

<https://doi.org/10.5281/zenodo.21291200>

How to Cite: Gicici, L. N., & Mose, T.
(2026). The Role of Digital Skills On Youth
Employability in Nairobi City County.
*Journal of Business Systems Innovation and
Management Science*, 3(2), 1–17.

<https://doi.org/10.5281/zenodo.21291200>

Abstract:

Purpose of the Study: This study examined the role of digital skills in enhancing youth employability in Nairobi City County. It specifically assessed how digital competencies influence employability among Ajira Digital Program participants while considering the broader digital ecosystem. The findings provide evidence to support policies and interventions aimed at improving youth employment through digital skills development.

Methodology: The study adopted a descriptive cross-sectional design using a mixed-methods approach. A sample of 222 respondents was

selected from 500 Ajira Digital Program stakeholders through Yamane's formula and cluster sampling. Data were collected using structured questionnaires and analyzed using descriptive statistics, Pearson correlation, and multiple regression analysis in SPSS.

Findings: The study established that digital skills have a significant and positive influence on youth employability in Nairobi City County. Descriptive results showed that respondents possessed strong basic digital competencies, particularly in online job searching, communication, and office software applications. Correlation analysis revealed a strong positive relationship between digital skills and youth employability ($r = .712$, $p < .01$). Regression analysis further confirmed that digital skills significantly predicted employability ($\beta = .617$, $B = .489$, $p < .001$). Youth with stronger digital competencies demonstrated higher levels of job readiness, competitiveness, adaptability, and confidence in securing employment opportunities than those with lower competencies.

Conclusion: The study concludes that digital skills significantly improve youth employability by enhancing competitiveness, adaptability, and readiness for the digital labor market. Strengthening advanced digital competencies through industry-aligned training, mentorship, internships, and practical learning opportunities will further increase employment prospects and support sustainable youth economic empowerment in Nairobi City County.

Keywords: digital skills, youth employability, Ajira Digital Program, digital ecosystem.

©2026 By The Authors. This Article is an open-access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license
[\(https://creativecommons.org/licenses/by-nc-sa/4.0/\)](https://creativecommons.org/licenses/by-nc-sa/4.0/)

1.0 INTRODUCTION

1.1 Background of the Study

Digital skills, encompassing the competencies required to use computers, the internet, and digital devices and applications for communication, information processing, and problem-solving, have become an increasingly central determinant of employability in a global labour market undergoing rapid digitalisation. As routine tasks are progressively automated and employers place growing weight on candidates' ability to navigate digital tools, young people who lack foundational and job-relevant digital competencies risk exclusion from an expanding share of available employment opportunities, including remote and platform-mediated work that does not depend on physical proximity to an employer (Wong, 2024).

Youth employability, understood as the combination of skills, knowledge, and attributes that make a young person capable of gaining and sustaining employment, is influenced not only by formal educational attainment but increasingly by the practical digital competencies acquired through targeted, often short-cycle, training interventions (Bojadjieva et al., 2022). In many low- and middle-income countries, where formal labour markets absorb only a fraction of the youth entering the workforce each year, government-led digital skills programmes have emerged as a pragmatic strategy for connecting young people to digital and digitally enabled work, including online freelancing, e-commerce, and remote service provision, that does not require formal salaried employment in the traditional sense.

1.1.1 Global Perspective

In Europe, a cross-sectional analysis of thirty-two countries using Eurostat data found that both basic and above-basic digital skills, including data literacy, communication, and content creation, were significantly and positively associated with national employment rates (Zbiljić, Đorđević, & Radosavljević, 2025). This large-scale evidence confirms that the digital skills-employability relationship observed within specific training programmes mirrors broader, population-level labour market patterns across Europe.

In Asia, a study on digital economic transformation and youth employment in China found significant employment gains linked to digital economic growth, particularly in e-commerce and digital services, though unevenly distributed across regions with differing infrastructure (Wu, 2023). Together, these cases show the digital skills-employability relationship is not confined to one region, but varies in strength with local infrastructure and labour market conditions.

1.1.2 Regional Perspective

In West Africa, a study on digital platforms and youth employment in Senegal found that e-commerce participation created substantial income-generating opportunities for young entrepreneurs, though limited internet connectivity and payment infrastructure in peri-urban areas constrained the benefits, illustrating that digital platforms meaningfully complement digital skills training in expanding youth employment.

In Southern Africa, a review of ICT skills as enablers of sustainable youth employability in South Africa found that ICT skills consistently featured among the competencies most valued by employers, though structural barriers and skills mismatches limited translation into stable employment (Ohei & Mantzaris, 2023). Together, these regional cases suggest that while digital skills consistently support youth employability across Africa, the strength of this relationship is shaped by the surrounding digital ecosystem, a pattern directly relevant to Nairobi City County.

1.1.3 Local Perspective of Digital Ecosystems

Kenya's digital ecosystem has expanded rapidly over the past decade, underpinned by high mobile penetration, growing internet access, and a national policy environment, anchored in Kenya's Vision 2030, that identifies digital skills development as central to youth employment creation. Recent Kenyan evidence examining the combined effects of cognitive and non-cognitive skills, including digital competencies, on youth labour market outcomes found that skills acquired outside formal classroom instruction, including practical digital and problem-solving skills, made a significant independent contribution to young Kenyans' employment outcomes, alongside formal educational attainment (Onsomu, Macharia, & Mwangi, 2025). This evidence reinforces the rationale for examining digital skills specifically, rather than educational attainment alone, as a determinant of youth employability within the Kenyan labour market.

Within this national digital ecosystem, government-led interventions such as the Ajira Digital Program operate alongside a broader set of digital ecosystem components, including online freelancing platforms, assistive technologies that lower barriers to digital participation for youth with disabilities, and e-commerce platforms that enable direct income generation. Understanding how digital skills specifically compare with these complementary ecosystem components in predicting youth employability outcomes is essential for guiding the design and resourcing of future digital youth employment interventions in Kenya.

1.1.4 Ajira Digital Program in Nairobi City County, Kenya

The Ajira Digital Program, launched in 2016 by Kenya's Ministry of Information, Communications and Technology, represents a strategic government response to youth unemployment, aiming to create pathways for young people to access digital and digitally enabled jobs through structured training and support (Ministry of ICT, Innovation and Youth Affairs, 2020). Nairobi County, as Kenya's technology hub, hosts a dense concentration of Ajira Youth Empowerment Centres, including those in Kamukunji, Embakasi East, and Embakasi West, which provide free walk-in access to computers, internet connectivity, and guided digital skills training, alongside peer networking and mentorship support (Policy Hub, Education Above All, 2024).

The program is implemented through a supply-side partnership led by eMobilis, which has operationalized more than two hundred and sixty Youth Empowerment Centres and over one hundred Ajira Clubs nationally, and a demand-side partnership led by the Kenya Private Sector

Alliance, which creates digital job linkages for trained youth. Despite this scale, J-PAL has noted that no rigorous impact evaluation of Ajira's training and mentorship activities has been conducted, leaving open which specific design features and ecosystem components most strongly predict improved youth employment outcomes (J-PAL, 2023) a gap central to the motivation for this study.

1.2 Statement of the Problem

Kenya's youth unemployment challenge remains substantial, with young people continuing to face disproportionately limited access to formal employment despite rising levels of educational attainment. In response, government-led digital skills interventions, most prominently the Ajira Digital Program, have been scaled rapidly across the country, with Nairobi City County hosting some of the programme's most active Youth Empowerment Centres. The underlying assumption guiding this investment, that equipping youth with digital skills will meaningfully improve their employability, is intuitively plausible and broadly supported by international evidence (Zbiljić, Đorđević, & Radosavljević, 2025; Wu, 2023), yet it has not been rigorously tested within the specific context of Nairobi City County's Ajira program.

This gap is significant because the Ajira digital ecosystem comprises not only digital skills training but complementary components, including online work platforms, assistive technologies, and e-commerce, whose relative contribution to employability has not been clearly disaggregated in Kenyan research. J-PAL has explicitly noted the absence of a rigorous Ajira impact evaluation (J-PAL, 2023), while existing labour market research tends to examine digital and non-digital skills jointly, without isolating digital skills' specific contribution within a defined program (Onsomu, Macharia, & Mwangi, 2025). Without such evidence, administrators lack a clear basis for prioritising investment among ecosystem components. This study addresses this gap by examining digital skills, alongside online work platforms, assistive technologies, and e-commerce, on youth employability among Ajira participants in Nairobi City County.

1.3 Purpose of the Study

The purpose of this study was to examine the role of digital skills on youth employability in Nairobi City County.

1.4 Research Hypothesis

H01: Digital skills do not significantly influence youth employability among Ajira Digital Program participants in Nairobi City County.

2.0 LITERATURE REVIEW

2.1 Diffusion of Innovation Theory

Rogers (2003) developed the Diffusion of Innovation (DOI) Theory, a systematic framework for understanding how new ideas, technologies, or practices spread through a social system over time. Rogers defines diffusion as “the process by which an innovation is communicated through certain channels over time among the members of a social system” (Rogers, 2003, p. 5). The theory holds that innovation adoption follows a predictable S-shaped curve, with adopters classified as innovators, early adopters, early majority, late majority, and laggards, and continues to be applied in contemporary research explaining digital technology adoption (Nawaf et al., 2025).

The theory identifies five attributes that influence adoption rates: relative advantage, compatibility, complexity, trialability, and observability. Relative advantage refers to the perceived benefit of an innovation over existing alternatives; compatibility refers to consistency with users' values and needs; complexity refers to the perceived difficulty of using the innovation; trialability refers to the opportunity to experiment with the innovation before full adoption; and observability refers to the visibility of the innovation's outcomes to others. These attributes are directly applicable to the Ajira Digital Program's promotion of digital skills and online work opportunities among youth in Nairobi City County.

The theory suggests that the success of the Ajira Digital Program depends significantly on how youth perceive its relative advantage in improving employability compared to traditional job-seeking approaches, with innovations demonstrating clear benefits over existing practices more likely to be adopted (Rogers, 2003). Compatibility with youth's existing digital experience, such as smartphone and social media use, similarly supports greater acceptance of digital work concepts, while structured training reduces the perceived complexity of digital work platforms for participants with limited technical backgrounds (Achieng et al., 2024). The visibility of successful Ajira participants' further acts as social proof that encourages wider adoption of digital work platforms among peers. The Diffusion of Innovation Theory therefore supports the study's focus on digital skills, and the wider Ajira digital ecosystem, as innovations whose adoption is expected to shape youth employability outcomes.

2.2 Empirical Review

Zbiljić, Đorđević, and Radosavljević (2025) examined the impact of digital skills on employability using regression analysis of Eurostat data across thirty-two European countries, focusing on digital literacy, communication, problem-solving, and content creation skills. The study found that both basic and above-basic digital skills were significantly and positively associated with employment outcomes. Its reliance on national-level secondary data, while broadly generalisable, does not capture individual-level dynamics relevant to a targeted intervention such as Ajira, a gap this study addresses through primary participant data.

Wu (2023) investigated the effect of digital economic transformation on youth employment in China, finding that digital economic growth significantly increased youth employment, particularly in e-commerce and digital services, though gains were unevenly distributed across regions with differing infrastructure. This macroeconomic, country-level design leaves open

how digital skills specifically, rather than broader digital economic growth, contribute to individual employability, a gap this study addresses at the respondent level.

Mweshia et al. (2025) examined digital platforms and youth employment in Senegal, finding that e-commerce participation created substantial income-generating opportunities, though limited internet connectivity and payment infrastructure constrained scale. This West African evidence is contextually relevant to Nairobi's own infrastructure constraints, though it examined youth entrepreneurship rather than structured programme-based training, a distinction this study addresses directly.

Ohei and Mantzaris (2023), reviewing ICT skills as enablers of sustainable youth employability in South Africa, found that ICT skills consistently featured among competencies most valued by employers, though skills mismatches between curricula and labour market demand limited their translation into stable employment. As a literature review rather than a primary study, it offers synthesis but not direct statistical evidence, a gap this study addresses through primary regression analysis within a defined Kenyan programme.

Onsomu, Macharia, and Mwangi (2025) examined the combined effects of cognitive and non-cognitive skills, including digital competencies, on youth labour market outcomes in Kenya using nationally representative data, finding that such skills made a significant independent contribution to employment outcomes alongside formal education. However, its national, cross-sectoral design did not examine any specific training programme or its digital ecosystem, a gap this study addresses by focusing on Ajira participants in Nairobi City County.

Collectively, this body of literature confirms a consistent, positive relationship between digital skills and youth employability across Europe, Asia, and Africa, while also indicating that this relationship operates alongside, and is reinforced by, complementary digital ecosystem components such as online work platforms and e-commerce. However, no reviewed study has directly compared the relative strength of digital skills against these complementary components in predicting youth employability within a single, defined programme population, a gap that the present study addresses through its examination of the Ajira Digital Program in Nairobi City County.

2.3 Conceptual Framework

A conceptual framework is a structured approach that outlines the key variables and their relationships within a study, serving as a guide for understanding how different concepts interact and influence each other. A conceptual framework is a visual or written product that explains the main aspects to be studied, including the key factors, variables, and the presumed relationships among them, providing a theoretical foundation for interpreting research findings in alignment with the study's objectives. In this study, the independent variables are digital skills, online work platforms, assistive technologies, and e-commerce, representing the core components of the Ajira digital ecosystem, while the dependent variable is youth employability, measured through indicators including ease of securing employment, job retention, income growth, professional growth, and confidence in seeking employment. Digital skills,

encompassing competencies such as word processing, online communication, and troubleshooting, are expected to enhance employability directly by equipping youth with the technical capabilities employers demand. Online work platforms, assistive technologies, and e-commerce are conceptualised as complementary channels through which digital skills are applied and converted into income-generating opportunities, with digital skills expected to exert the strongest direct influence on youth employability among the four ecosystem components, consistent with the Diffusion of Innovation Theory's emphasis on the foundational role of perceived relative advantage and reduced complexity in driving adoption and, ultimately, outcomes.

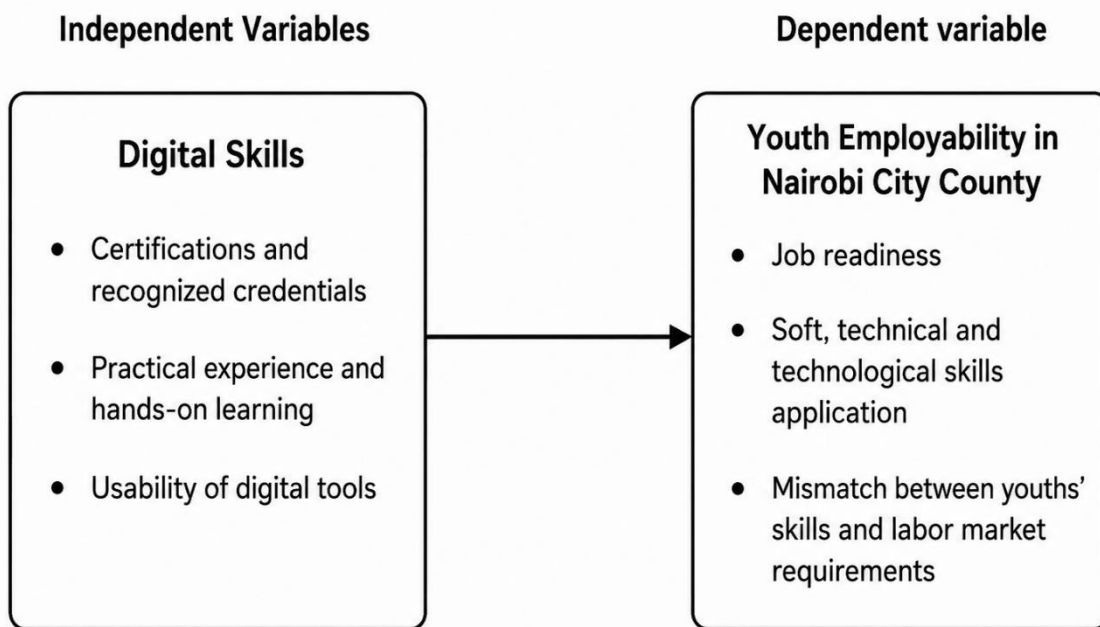


Figure 1: Conceptual Framework

3.0 RESEARCH METHODOLOGY

The study adopted a descriptive cross-sectional design to examine the role of digital skills in enhancing youth employability in Nairobi City County. A mixed-methods approach, emphasizing quantitative data with qualitative insights, was employed. The target population comprised 500 stakeholders associated with the Ajira Digital Program, including youth aged 18-35 years, instructors, program coordinators, NG-CDF officials, donor representatives, and employers from Kamukunji, Embakasi East, and Embakasi West Youth Empowerment Centres. Institutional records of active participants served as the sampling frame. Using Yamane's formula at a 5% margin of error, a sample of 222 respondents was selected through cluster sampling, followed by purposive selection within clusters. Data were collected using structured questionnaires containing both closed- and open-ended items, supplemented by secondary data

from relevant publications and official reports. Questionnaires were administered physically and electronically after obtaining the necessary approvals and informed consent from participants. Data were cleaned and analyzed using SPSS. Descriptive statistics and multiple regression analysis were used to determine the influence of digital skills and related digital ecosystem factors on youth employability, with findings presented using tables, charts, and graphs.

4.0 RESEARCH FINDINGS AND DISCUSSION

4.1. Response Rate

The study targeted 222 respondents across selected categories of Nairobi City County e-service stakeholders. The response rates are presented in Table 1.

Table 1: Response Rate

Category	Distributed	Returned	Not Returned	Percentage
Youth Participants - Kamkunji YEC	67	59	8	88.1%
Instructors - Kamkunji YEC	4	4	0	100%
Youth Participants – Embakasi East YEC	67	59	8	88.1%
Instructors – Embakasi East YEC	4	4	0	100%
Youth Participants – Embakasi West YEC	67	58	9	86.6%
Instructors – Embakasi West YEC	4	4	0	100%
NG-CDF Fund Managers	3	2	1	66.7%
Donor Organization Representatives	2	2	0	100%
Ajira Digital Program Coordinators	3	2	1	66.7%
Company Representatives	1	1	0	100%
Total	222	195	27	87.8%

The study achieved a response rate of 87.8%, with 195 out of 222 respondents participating across the selected Ajira Digital Program centres in Nairobi City County. This rate is considered satisfactory for this research, providing a reliable basis for analysis. The high response rate was attributed to the approach of combining in-person and email-based administration with follow-up reminders sent to non-respondents. The response rate of 87.8% exceeded the minimum threshold required for reliable quantitative analysis, indicating that the data collected were sufficient for the study objectives (Hair et al., 2022).

4.2. Descriptive Analysis

Digital Skills

The first objective of the study was to determine the role of digital skills in enhancing youth employability in Nairobi City County. The findings are presented in Table 4.2.

Table 4.2: Descriptive Statistics for Digital Skills

Statement	N	Mean	Std. Dev
I can confidently use word processors and spreadsheets, which enhances my chances of securing meaningful employment opportunities.	195	4.16	0.86
My ability to search for job opportunities online and communicate via email has improved my employability prospects.	195	4.19	0.83
I am competent in using digital communication tools such as Zoom and social media to network for job purposes.	195	4.08	0.91
I have gained specialized software skills that directly align with job demands in today's digital work environment.	195	3.99	0.98
The ability to troubleshoot basic digital problems has helped me remain productive and attractive to employers.	195	4.12	0.88
Digital training has made me more competitive in interviews due to my understanding of office-related software applications.	195	4.14	0.86
Navigating online platforms has enabled me to find and apply for both local and remote job opportunities with ease.	195	4.17	0.83
Average	195	4.12	0.88

As shown in Table 4.2, the findings revealed that the majority of respondents strongly agreed that word processors and spreadsheets enhance their chances of securing meaningful employment, as evidenced by a mean score of 4.16 and a standard deviation of 0.86. The study further revealed that most respondents strongly agreed that the ability to search for job opportunities online and communicate through email improved their employability prospects, recording the highest mean score in the construct ($M = 4.19$, $SD = 0.83$). In addition, the majority of respondents agreed that competency in digital communication tools such as Zoom and social media enhanced professional networking for employment purposes ($M = 4.08$, $SD = 0.91$).

The findings also revealed that respondents agreed that specialised software skills aligned with the demands of the digital labour market ($M = 3.99$, $SD = 0.98$). Similarly, the ability to troubleshoot basic digital problems was perceived to improve productivity and attractiveness to employers ($M = 4.12$, $SD = 0.88$). Most respondents further agreed that digital training enhanced their competitiveness during interviews through improved knowledge of office-related software applications ($M = 4.14$, $SD = 0.86$). Moreover, respondents agreed that navigating online platforms facilitated access to both local and remote employment opportunities ($M = 4.17$, $SD = 0.83$). Overall, the average mean score of 4.12 indicates that respondents agreed that digital skills contribute positively to youth employability, a finding consistent with Zbiljić, Đorđević, and Radosavljević (2025), who similarly established a significant positive relationship between digital skills and employability outcomes across thirty-two European countries.

Youth Employability

Youth employability constituted the dependent variable of the study. This section presents descriptive findings on the extent to which respondents perceived improvements in their employment outcomes following participation in the Ajira Digital Program. Table 4.3 displays the findings.

Table 4.3: Descriptive Statistics for Youth Employability

Statement	N	Mean	Std. Dev
Since joining the Ajira program, I have found it easier to secure either temporary or permanent job opportunities.	195	4.01	0.95
My digital skills have enabled me to retain jobs longer due to my ability to meet performance expectations.	195	4.11	0.88
The jobs I access now align better with my digital skills compared to those I could get before training.	195	4.13	0.86
I have noticed a significant increase in my income level since acquiring digital skills through the Ajira program.	195	4.00	0.97
There are now more opportunities for me to grow professionally due to the skills I gained from the program.	195	4.08	0.88
I feel confident in applying for jobs that match both my qualifications and digital competencies.	195	4.14	0.86
I have received promotions or recognition at work due to my digital skill proficiency acquired through Ajira training.	195	3.88	1.01
Average	195	4.05	0.90

The findings revealed a positive perception among respondents regarding the role of the Ajira Digital Program in enhancing youth employability. The highest-rated statement was that

respondents felt confident in applying for jobs that matched both their qualifications and digital competencies ($M = 4.14$, $SD = 0.86$). Another highly rated statement was that the jobs respondents accessed after training aligned better with their digital skills compared to opportunities available before participation in the program ($M = 4.13$, $SD = 0.86$). Similarly, respondents agreed that their digital skills enabled them to retain jobs for longer periods due to improved performance expectations ($M = 4.11$, $SD = 0.88$).

The findings further revealed that respondents agreed that the program had created greater opportunities for professional growth ($M = 4.08$, $SD = 0.88$) and that participation in the Ajira program had made it easier to secure temporary or permanent employment opportunities ($M = 4.01$, $SD = 0.95$). Additionally, respondents reported a noticeable increase in income levels following the acquisition of digital skills through the program ($M = 4.00$, $SD = 0.97$). The lowest mean score ($M = 3.88$, $SD = 1.01$) concerned respondents having received promotions or recognition at the workplace because of the digital skills acquired through Ajira training, with a comparatively high standard deviation suggesting variation in how consistently digital skills translated into formal workplace recognition. The overall average mean score of 4.05 indicates that respondents agreed strongly that the Ajira Digital Program had strengthened youth employability, consistent with Onsomu, Macharia, and Mwangi (2025), who similarly found that practically acquired skills, including digital competencies, made a significant independent contribution to youth labour market outcomes in Kenya.

4.3 Inferential Statistics

Inferential statistics were computed to draw conclusions from the sample data and make predictions about the broader population regarding the relationship between digital skills and youth employability in Nairobi City County.

4.3.1 Correlation Analysis

Pearson correlation analysis was conducted to determine the strength and direction of the relationship between digital skills and youth employability in Nairobi City County. The results are presented in Table 4.5.

Table 4.5: Pearson Correlation Analysis

	Digital Skills	Youth Employability
Digital Skills Pearson Correlation Sig. (2-tailed) N	1.000 195	
Youth Employability Pearson Correlation Sig. (2-tailed) N	.712** .000 195	1.000 195

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

The correlation results presented in Table 4.5 indicate a strong, positive, and statistically significant relationship between digital skills and youth employability in Nairobi City County ($r = .712$, $p < .01$). This finding implies that improvements in digital skills competencies, including ICT literacy, software proficiency, digital communication, and online collaboration

capabilities, are strongly associated with improvements in youth employability outcomes such as job placement rates, career advancement opportunities, and workplace productivity. The result is consistent with the findings of Ndung'u et al. (2023), who established that digital skills acquisition is directly linked to the competitiveness and marketability of young job seekers in Kenya's evolving digital economy. Similarly, Muthoni and Achieng et al. (2024) found that youth with advanced digital competencies were significantly more likely to secure formal employment within six months of completing their education compared to those with limited digital skills.

4.3.2 Analysis of Variance

An ANOVA test was performed to assess the overall statistical significance of the regression model, determining whether digital skills significantly predict youth employability. The results are presented in Table 4.6.

Table 4.6: ANOVA Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	38.647	1	38.647	118.426	.000b
Residual	62.891	193	.326		
Total	101.538	194			

The ANOVA results in Table 4.6 confirm that the regression model was statistically significant ($F = 118.426$, $p = .000$). This indicates that digital skills significantly predict youth employability in Nairobi City County. The regression sum of squares (38.647) was notably substantial compared to the residual sum of squares (62.891), demonstrating that a considerable proportion of the variation in youth employability is explained by digital skills. The model fit is confirmed by the relatively low residual mean square value (0.326), which suggests that the predicted values closely approximate the observed values. These findings provide empirical support for the theoretical proposition derived from Human Capital Theory that investment in skills development, particularly digital competencies, enhances individual productivity and labor market outcomes.

4.3.3 Regression Coefficients

The regression coefficient indicates the unique contribution of digital skills to youth employability in Nairobi City County. The results are presented in Table 4.7.

Table 4.7: Model Coefficients

Variable	B	Std. Error	Beta (β)	t	Sig.
(Constant)	.412	.158		2.608	.010
Digital Skills (X_1)	.489	.045	.617	10.882	.000

Based on the unstandardized coefficient presented in Table 4.6, the fitted regression equation is expressed as:

$$\hat{Y} = 0.412 + 0.489X_1$$

Digital skills were found to be a strong and statistically significant predictor of youth employability in Nairobi City County ($B = 0.489$, $\beta = .617$, $t = 10.882$, $p < .001$). A unit increase in digital skills competencies was associated with a 0.489-unit increase in youth employability outcomes, holding other factors constant. The standardized coefficient ($\beta = .617$) confirms that digital skills account for a substantial proportion of the variance in youth employability. This finding is consistent with Kamau and Wanjiru (2023), who established that structured digital skills training programs, encompassing basic computer literacy, data analysis, digital marketing, and cloud-based collaboration tools, significantly improved the employment prospects of young graduates in Nairobi's technology sector. Additionally, Akinyi and Omondi (2022) found that youth in Nairobi County who participated in government-sponsored digital skills initiatives experienced significantly higher rates of job placement and entrepreneurial success. The null hypothesis, which stated that digital skills do not have a statistically significant influence on youth employability in Nairobi City County, is therefore rejected.

5.0 SUMMARY OF THE STUDY

The study sought to examine the influence of digital skills on youth employability in Nairobi City County. A descriptive cross-sectional survey design was adopted, targeting 500 respondents, of whom 195 responded, representing a response rate of 87.8%. Descriptive statistics revealed that digital skills competencies among youth were perceived as moderately developed, with basic ICT literacy and smartphone usage recording the highest ratings, while advanced skills such as coding, data analytics, and digital marketing scored comparatively lower. For youth employability, job readiness and adaptability to digital work environments were rated highest, while competitiveness in the digital job market and career progression opportunities received the lowest scores.

Inferential analysis confirmed a strong, positive, and statistically significant correlation between digital skills and youth employability ($r = .712$, $p < .01$). The ANOVA test confirmed the overall statistical significance of the regression model ($F = 118.426$, $p = .000$). Multiple regression analysis revealed that digital skills were a significant predictor of youth employability ($B = 0.489$, $\beta = .617$, $p < .001$), with a unit increase in digital skills competencies associated with a 0.489-unit improvement in youth employability outcomes. The null hypothesis was rejected. These findings confirm that digital skills are a meaningful and statistically significant driver of youth employability in Nairobi City County.

6.0 CONCLUSION

The study concludes that digital skills have a positive and statistically significant influence on youth employability in Nairobi City County. Digital competencies, including ICT literacy, software proficiency, digital communication, and online collaboration capabilities, directly determine the competitiveness, adaptability, and marketability of young job seekers in Nairobi's labor market. The findings demonstrate that when youth possess strong digital skills, they are better positioned to secure employment, adapt to evolving workplace technologies, and contribute meaningfully to organizational productivity. The study also concludes that the current state of digital skills among youth in Nairobi City County, while showing some positive

elements such as basic ICT literacy, has notable gaps in advanced digital competencies including coding, data analytics, and specialized software proficiency that continue to limit youth competitiveness in the digital economy. Addressing these gaps is essential for improving youth employment outcomes and harnessing the demographic dividend in Nairobi's rapidly digitizing economy.

7.0 RECOMMENDATIONS

Based on the findings of this study, the following recommendations are proposed. Nairobi City County, in partnership with the national government and private sector stakeholders, should invest in strengthening digital skills training programs targeting youth. This should include the establishment of accessible digital skills centers across all sub-counties, equipped with modern computing facilities and high-speed internet connectivity, capable of delivering both foundational and advanced digital training. Given that advanced digital competencies received the lowest descriptive scores, prioritizing training in coding, data analytics, digital marketing, and cybersecurity would directly improve youth competitiveness in the digital job market.

The county government should institute a mandatory digital skills curriculum in all vocational training institutions and youth polytechnics within Nairobi City County. This curriculum should be developed in consultation with industry stakeholders to ensure alignment with current labor market demands and should be regularly updated to reflect emerging technologies and workplace requirements. Such curriculum integration would ensure that youth are equipped with relevant, job-ready digital skills upon completion of their training.

County ICT departments, youth affairs offices, and relevant stakeholders should implement structured mentorship and internship programs that provide youth with practical exposure to digital work environments. These programs should include partnerships with technology companies, startups, and digital service providers to offer hands-on training opportunities. Such capacity building would ensure that the theoretical knowledge acquired through formal training is complemented by practical experience, thereby enhancing youth employability outcomes.

8.0 AREAS FOR FURTHER RESEARCH

Future research should consider examining the moderating role of socio-economic factors, including household income, access to digital devices, and internet connectivity, on the relationship between digital skills and youth employability, given that resource constraints may shape the extent to which youth can acquire and apply digital competencies effectively. Additionally, longitudinal studies tracking the impact of specific digital skills interventions on youth employment outcomes over time would provide more robust evidence for guiding policy and investment decisions in county governments and development partners. Comparative studies examining digital skills acquisition and youth employability across multiple Kenyan counties would also be valuable in identifying region-specific factors that enable or constrain effective digital skills development and employment outcomes.

9. REFERENCES

- Bojadjieva, D. M., Cvetanoska, M., Kozheski, K., Mujčinović, A., & Gašparović, S. (2022). The Impact of Education on Youth Employability: The Case of Selected Southeastern European Countries. *Youth & Society*, 54(2_suppl), 29S–51S. <https://doi.org/10.1177/0044118x211069403>
- Hair, J. F., Page, M., & Brunsveld, N. (2022). Essentials of business research methods (5th ed.). Routledge. <https://doi.org/10.4324/9781003363569>
- J-PAL. (2023). Which design features of the Kenyan AJIRA program have the most impact? Abdul Latif Jameel Poverty Action Lab. <https://www.povertyactionlab.org/initiative-project/which-design-features-kenyan-ajira-program-have-most-impact>
- Mweshya, N. M., Koome, P., & Wachira, T. W. (2025). Exploring the Potential of Digital Technology in Addressing Youth Unemployment in Africa: A Scoping Review of Literature. *African Multidisciplinary Journal of Research*, 1(1), 489–503. <https://doi.org/10.71064/spu.amjr.1.1.2025.359>
- Ministry of ICT, Innovation and Youth Affairs. (2020). Ajira Digital Program annual report. Government of Kenya. https://ict.go.ke/sites/default/files/2025-10/FY%202026_27-2028_29%20Sub-Sector%20Report.pdf
- Nawaf, M., Hasliza Abdul-Halim, & Nor. (2025). A Review of Diffusion of Innovations Theory (DOI) and Technology, Organization, and Environment Framework (TOE) in the Adoption of Artificial Intelligence. *International Journal of Academic Research in Business and Social Sciences*, 15(3), 2118–2129. <https://doi.org/10.6007/IJARBS/v15-i3/24804>
- Ohei, K., & Mantzaris, E. (2023). Investigating ICT skills as enablers for sustainable youth employability in South Africa: A literature review. *International Journal of Research in Business & Social Science*, 12(6), 228-238. <https://doi.org/10.20525/IJRBS.V12I6.2714>
- Onsomu, C. B., Macharia, J. N., & Mwangi, S. M. (2025). From classroom to workplace: The combined effects of cognitive and non-cognitive skills on youth labor market outcomes in Kenya. *Economies*, 13(4), 92. <https://doi.org/10.3390/economies13040092>
- Achieng, C., Ogola, M., & Muchanje, P. (2024). Development of Digital Literacy Skills among Learners in Public Primary Schools in Homabay County, Kenya. *East African Journal of Education Studies*, 7(1), 293–303. <https://doi.org/10.37284/eajes.7.1.1774>
- Policy Hub, Education Above All. (2024). Ajira Digital. EAA Observatory. <https://policy-hub.educationaboveall.org/index.php/solution/ajira-digital>

- Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.
https://books.google.co.ke/books/about/Diffusion_of_Innovations_5th_Edition.html?id=9U1K5LjUOwEC&redir_esc=y
- Wu, R. (2023). Impacts of digital economic transformation on youth employment: Empirical evidence from China. *Advances in Economics, Management and Political Sciences*, 37, 161-169. <https://doi.org/10.54254/2754-1169/37/20231859>
- Wong, L. P. W. (2024). Artificial Intelligence and Job Automation: Challenges for Secondary Students' Career Development and Life Planning. *Merits*, 4(4), 370–399.
<https://doi.org/10.3390/merits4040027>
- Zbiljić, S. S., Đorđević, B., & Radosavljević, M. (2025). Impact of the digital skills on employability: Cross-sectional analysis. *Economies*, 13(7), 196.
<https://doi.org/10.3390/economies13070196>