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Youth Employment Creation as an Inclusive Solution for Sustainable Development: Lessons from the ‘Double You Digital Skills Initiative’ in Nigeria

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Abstract. Youth unemployment is one of the most pressing issues confronting world leaders in the 21st century. Youth unemployment has negative implications for economic and social progress. In Nigeria, youth unemployment hit an all-time high of 55.4% in the third quarter of 2018. With almost all sectors been digitalised, digital skills become one of the most promising solutions to youth unemployment. It is a necessity for wage employment and in the creation of a personal business. However, anecdotal and empirical evidence shows that many youths lack the requisite skills for using digital technology productively. Hence, there is an increase in international and local efforts toward digital skills training for youths. This study reports the findings from a pilot digital skills training programme organised by the Double You Initiative in July 2019. It was based on a quantitative research approach with the use of an online questionnaire to obtain information from youths across Nigeria through a purposive sampling technique. The findings show that youths within the ages of 19 and 24 will likely subscribe more to digital skills training than any other age group. Also, undergraduate students are more interested in digital skills training, and the most common digital skill preference among youths is digital marketing. The lessons from the digital skills training reported in this paper can be useful in enhancing the preparedness of stakeholders towards the provision of digital skills training that will promote decent jobs for youths in Nigeria.

1. Introduction

Africa has one of the most populous youth groups in the world. In 2015, about 226 million youths were living in Africa [1]. The teeming youth population in Africa can be a reservoir of human capital. However, youths constitute more than 80% of the unemployed population in Africa [2], and this, among other things, is responsible for the low human development indices in the region [3].

Youth unemployment is one of the most pressing issues confronting world leaders, particularly in Africa. Youth unemployment in Nigeria hit an all-time high of 55.4% in the third quarter of 2018 [4]. Youth unemployment is attributable to several factors including limited employment opportunities as a result of the rapid inflow of graduates into the labour market [5,6], limited workplace skills among the youths such as work experience, and networks [7].

The effects of youth unemployment cannot be undermined. It leads to a perpetual circle of vulnerability and poverty [2]. Consequently, some unemployed youths take up precarious work under harsh conditions to make ends meet. In Nigeria, 97.1% of underemployed youths work under inhumane conditions, with low pay and little or no welfare benefits such as insurance, medical aids, pension, and gratuity [8,9]. Moreover, youth unemployment can have
debilitating effects on the youths, which can affect their desire for productive living [10]. It can also lead to a lack of resilience that inhibits the ability of youths to confront shocks, disasters, and other forms of disruptions [2]. Furthermore, it leads to imbalances in the labour market [11] and economic exclusion [5] which ultimately hampers economic growth. Youth unemployment also deepens social challenges like cybercrime [12], armed robbery [5], urban violence [13], and prostitution [14].

One of the most promising solutions to youth unemployment is the intentional and systematic acquisition of digital skills. Digital skills have become vital because all sectors are now digitalised. Digital skill offers a competitive advantage for wage employment and is very useful in creating one's own business [15,2]. [16] also noted that there is a significant relationship between the use of digital technology and sustainability in business. Digital skill is the ability to use digital technology to access online contents [17]. It can also refer to skills that are required for operating digital media, computers, and cell phones [18]. It covers a wide range of competencies, and it includes such skills as computational thinking, app development, transcribing, content creation, editing, cognitive functioning, and digital media literacy [2]. It also covers skills in spreadsheet, word processing, presentation software, data mining, artificial intelligence, coding, and digital marketing. Generally, digital skills can provide decent job opportunities for unemployed youths of different gender groups. It also creates jobs without borders i.e. it enables people to work from anywhere, and with flexible working hours.

A review of extant literature provides some empirical evidence on digital skill competencies of different youth groups such as men and women, those who live in urban and rural areas, and the factors affecting the diffusion of digital skills. For instance, [19] investigated the digital competencies of student – teachers in Nigeria. The study indicated that data and word processing were the most common digital competencies among student-teachers in Nigeria. In a study by [20], it was found that most undergraduate students in Nigeria use the internet mainly to source for information relating to their course of study.

[21] compared the digital literacy level of secondary school students in Nigeria, and found that male students had higher digital literacy levels than female students in web browsing, data processing, and word processing. Similarly, [22] carried out a comparative study on women's perception and use of digital technologies in China and Nigeria. The finding showed that women from both countries agreed that digital technology is essential for social and economic development. Nevertheless, the majority of the women in Nigeria lacked access to proper digital skills training. Moreover, [23] assessed gender differences in the use of digital technologies among Nigerian students. The results indicated that male students were more proficient in the use of digital technologies than female students, males spent more time with digital technologies than females and male students used computer software more than their female counterparts.

[24] assessed internet accessibility and level of digital skills among youths in a rural community in Kano, Nigeria. The results indicated that many of the youths had access to the internet but lacked basic digital skills. [25] also examined the digital literacy of secondary school students in a rural area in Kwara state Nigeria, and found that digital competency among secondary school students was low. The study also found that a low level of digital literacy was due to a lack of digital training facilities in rural areas.
[26] investigated the factors affecting the acceptability of digital technologies in Nigerian universities. It was found that mass unawareness, low digital literacy, and limited funding as the major factors affecting digital acceptability. Similarly, [27] examined the factors responsible for the diffusion of digital technology in Nigeria. The study indicated that lack of commitment for digital knowledge, lack of strategy for digital skills acquisition, unreliable power supply, and limited funding are the main factors affecting the diffusion of digital technology in Nigeria.

An analysis of the literature above shows that most Nigerian youths have basic digital skills. The review also indicates gender differences in the use of digital technologies and competencies and a disparity in digital skills between youths in the rural areas and those in the urban centres. To fully harness the potentials of digital skills in tackling youth unemployment in Nigeria, there is a need for deliberate and systematic digital skills training, which will consider the specific needs of all gender youth groups in rural and urban areas.

International and local efforts towards digital skills training for youths in Nigeria have been on the increase. The Double You digital skills training Initiative, a non-for profit organisation founded by a 2019 graduate of Covenant University, Nigeria, is one of such efforts. The Double You Initiative. The goal of the Double You initiative is to provide digital skills for youths (15-35 years) in Nigeria to equip them with digital skills useful in the workplace and for starting their businesses. Double You is a partner of RCE Ogun, which is one of the 168 Regional Centers of Expertise (RCEs) in the world. The goal of RCE Ogun is to create resilient, inclusive, and environmentally friendly communities through formal and informal training, enlightenment programs, and exemplar projects for the sustainable development of the region.

This study reports the findings from a pilot digital skills training programme organised by the Double You Initiative in July 2019. The lessons from the digital skills training reported in this paper can be useful in enhancing the preparedness of stakeholders towards the provision of digital skills training that will promote decent jobs for youths in Nigeria.

2. Methods
This study is based on a quantitative research approach with the use of online questionnaires to report the findings from a pilot digital skills training programme organised by the Double You Initiative in July 2019. The participants comprised of youths from different states in Nigeria. One hundred youths were selected /invited based on a purposive sampling technique. The youths were invited based on the criteria of age (13-35 years), educational level (secondary school – postgraduate level), and were unemployed. Out of the 100 youths invited for the digital skills training programme, 44 youths accepted the invitation and partook in the training. A sample size of 44 was believed to be sufficient for a pilot study. [28] noted that for a pilot study to provide preliminary information, a sample between 30-40 participants is adequate. Moreover, [29] suggested that 30 participants were sufficient for pilot research, where the aim is to provide baseline information. Data from the online survey were analysed using descriptive statistics such as percentages and were presented in the form of pie-charts and tables.

3. Results and Discussions
3.1 Respondents’ Location
Fig 1 indicates the location of the respondents who were interested in the digital skills programme. The locations include: Lagos (66%), Rivers (7%), Abuja (5%), Oyo (5%), Ogun (5%), Delta (4%), Anambra (4%), Ondo (2%) and Kano (2%). Further analysis of the results shows that the three areas with the greatest percentage of interested youths (Lagos, Rivers, and Abuja) are the major economic hubs in Nigeria. This suggests that there will likely be more subscribers of digital skills training from commercial hubs than other areas. It supports the study of Salemink et al. [30], who noted that youths in rural areas need digital technology. However, a lack of basic digital infrastructure hinders the interest of youths in digital technology. [31] also confirmed that digital media reach in urban centres is far higher than in rural areas, thereby inhibiting the digital interest of youths from rural areas. The result also shows that there was no response from the North-East region of Nigeria. It appears that the instability and insecurity challenges in the North-East may be responsible for the lack of interest in the digital skills training programme. This finding implies that instability and insecurity can hinder the success of projects like digital skills training, which can result in the social and economic progress of the nation.

![Fig 1: Respondents’ Location](image)
Source: The Authors

3.2 Age group and subscription to digital training
Fig 2 presents the youth age categories of the respondents. The age groups were as follows: 13-18 years (2%), 19-24 years (73%), 25-30 years (23%), and above 30 years (2%). The highest age group interested in digital skills training was 19 and 24 years. This is not surprising because 60% of the population in Sub-Saharan Africa is below 25 years of age [32].
3.3 Gender and Digital Skills Training Design

From Figure 3, men outnumbered women in the digital skills training programme. 64% of the participants were men, while 34% of participants were women. This is similar to the findings of [23] who noted males outnumbered females in digital skills. However, policies on digital skills training programme should strive towards closing the gender gap because digital skills are beneficial to both men and women, and youth unemployment affects both groups in different ways.

For instance, men are regarded as 'breadwinners' in many parts of Africa. Culturally, young men are under more pressure than women to seek employment to fend for their families. Digital skills can provide the leverage needed by unemployed men for securing decent jobs. In the case of women, digital skills can solve specific unemployment challenges peculiar to women, such as fixed work schedules, childbearing, childcare, and domestic responsibilities. The current demographic advantage in Nigeria will yield more if the intellectual curiosity and creativity of both gender groups are harnessed through digital skills training. Hence, both men and women should be given the opportunity for digital skills training.
3.4 Educational level and in digital skills training

Fig 4 indicates the educational level of the participants, with 2% in secondary school, 5% had completed their secondary school education, 5% had diplomas, 75% were in the university, 11% were university graduates while 2% were on a postgraduate programme. The result shows that the most significant participants in digital skills training were undergraduate students. This result is surprising. The expectation is that university graduates would be more interested in digital skills training. Several reasons may be responsible. The reality of unemployment is no more news, and undergraduate students are not immune to the frightening unemployment statistics. They also see unemployed graduates around them. Hence, they are interested in skills that can give them an advantage in the job market when they graduate or skills that can be beneficial in creating their businesses. Further analysis of the results shows that only 11% of the participants were university graduates. This may be because most unemployed graduates take up low paying and indecent jobs to make ends meet because of the scarcity of jobs. Also, they do not have the time to engage in other meaningful activities such as personal and career development, which digital skills training offers. Consequently, underemployment statistics continue to rise. In Africa, 35% of youths are underemployed, 19% are inactive, while only 15% are gainfully employed [33].
3.5 Digital competence level among the Youths

Although self-appraisal is not the best way of judging digital skills competence, it gives us a sense of digital competence or the digital knowledge level of the participants. Fig 5 indicates that 80% of the participants have a basic knowledge of digital skills, while 20% of the respondents claimed to have intermediate knowledge of digital skills. This supports the findings of [19], who indicated that data and word processing were the most common digital competencies among student-teachers in Nigeria. It also corroborates with the study of [20] who found that most undergraduate students in Nigeria use the internet mainly to source for information relating to their course of study. Digital skills entail more than data and word processing. It is also more than an information search on the internet. It includes a wide range of skills such as computational thinking, app development, transcribing, content creation, editing, cognitive functioning, and digital media literacy [2]. However, digital skills trainers can leverage this information, to build on what youths already know about digital skills, thereby fast-tracking the training process.

Fig 4: Educational level and in digital skills training
Source: The Authors
3.6 The convenient time for digital skills training
Fig 6 presents convenient times for digital skills training. From fig 6, 52% of the respondents choose 3 pm-6 pm as the most convenient time to take part in digital skills training. This may be because the majority of those interested in the digital skills training were university students who are likely to be engaged with lecturers during the earlier periods of the day. Hence, from 3 pm to 6 pm was chosen as the most convenient time to attend a digital skills training program.

3.7 Digital competencies of the Respondents
Fig 7 shows the digital skills that the respondents were most interested in. The skills were as follows: Microsoft word (9%), Microsoft excel (4%), micro soft powerpoint (14%), and Digital Marketing (55%). Of all the skills assessed, respondents were most interested in
digital marketing skills. This may be because digital marketing skills can be used to market one to potential employers and also advertise goods and services.

![Digital skills of the respondents](image)

**Fig 7: Digital skills of the respondents**

Source: The Authors

3.8 Does interest in digital skills differ for men and women?

Table 1 presents the specific digital skills that the respondents were interested in. The table indicates that 29.55% of men were interested in digital marketing while 25% of women were interested in digital marketing. The results suggest that both men and women have a preference for digital marketing. This may be because people can advertise themselves and their businesses through digital platforms such as WhatsApp, Twitter, Instagram, Facebook, and LinkedIn.

The results also showed that 4.54% of males and females were interested in Microsoft Word, while 6.82% of males and females were interested in Microsoft PowerPoint skills. Moreover, 4.54% of the males were interested in Microsoft excel while none of the females was interested in Microsoft excel. The results further showed that 18.18% of the males were interested in Corel Draw while no female showed interest in Corel draw.

**Table 1: Cross-Tabulation of Digital Skills across Gender**

| Gender | Microsoft word | Microsoft excel | Microsoft PowerPoint | Graphic design | Corel Draw | Digital marketing | Total |
|--------|----------------|----------------|----------------------|----------------|------------|------------------|-------|
| Male   | 4.54%          | 4.54%          | 6.82%                | 18.18%         |            | 29.55%           | 63.64%|
| Female | 4.54%          | -              | 6.82%                | -              |            | 25.00%           | 16.00%|
| Total  | 25.00%         | 4.54%          | 13.64%               | 18.18%         | 4.54%      | 54.55%           | 100.00%|

4. Conclusion
This paper reported the findings from a pilot digital skills training programme. The findings imply that even though digital skills provide social and economic benefits for all youth groups, there will be more subscribers of digital skills training in the city centres. Youths within the age of 19 and 24 will likely subscribe more to digital skills training than any other youth age group. Moreover, undergraduate students were more interested in digital skills training. The most common digital skill preference among youths is digital marketing. The lessons from the digital skills training reported in this paper can be useful in enhancing the preparedness of stakeholders towards the provision of digital skills training that will promote decent jobs for youths in Nigeria.

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Conflict of Interest
We declare no conflict of interest whatsoever.

References
[1]. United Nations (2015). Youth Population Trends and Sustainable Development, New York: United Nations. Retrieved from http://www.un.org/en/development/desa/population/publications/pdf/popfacts/
[2]. Rodin, J, and Lore, E (2013). Youth Opportunity: Rethinking the Next Generation. Innovations, 8(1/2), 11-17
[3]. Oluwatosi, S, Ola-David, O, Olurinola, I, Alege, P, and Ogundipe, A (2016). Human Capital, Institutions, and Innovation in Sub-Saharan Africa. International Journal of Economics and Financial Issues, 6(4), 1507-1514.
[4]. Nigerian Bureau of Statistics (2019). Unemployment rate - National Bureau of Statistics. https://nigerianstat.gov.ng accessed 18/7/19
[5]. Efobi, U and Orkoh, E (2017). Assessing youth development in Sub-Saharan Africa with a multidimensional index, PEGNet Policy Brief, No. 12/2017, Kiel Institute for the World Economy (IfW), Poverty Reduction, Equity and Growth Network (PEGNet), Kiel
[6]. Perugini C and Signorelli M (2010) Youth labour market performance in European regions. Economic Change and Restructuring 43(2), 151–185.
[7]. Baah-Boateng, W (2016). The youth unemployment challenge in Africa: What are the drivers? The Economic and Labour Relations Review 27(4), 413–431
[8]. Fashoyin, T., Owoyemi, O. & Chidi, C (2012). Non-standard work, collective bargaining, and social dialogue in Nigeria. ILO Commissioned Work
[9]. Osabuohien, E., Olokoyo, F., Efobi, U., Karakara, A. & Beecroft, I (2019). Large-scale Land Investments and Households’ Livelihood in Nigeria: Empirical Insights
from Quantitative Analysis. In, Osabuohien. E (Ed.) The Palgrave Handbook of Agricultural and Rural Development in Africa, Geneva: Palgrave Macmillan

[10]. Coward, C, Cacedo, S, Rauch, H, and Vega, N (2014). Digital opportunities: innovative ICT solutions for youth unemployment. In digital opportunities: Innovative ICT solutions for youth employment, International Telecommunication Union (ITU).

[11]. Aceleanu, MI, Serban, AC and Burghlea, C (2015), Greening” the Youth Employment—A Chance for Sustainable Development, Sustainability 2015, 7, 2623-2643; DOI:10.3390/su7032623

[12]. Ajibike, T (2019). Youth and cybercrime in Nigeria. The Punch. https://punchng.com/youth-and-cybercrime-in-nigeria/ accessed 22/7/19

[13]. Akindola, RB, and Dada, OR (2015). Causes and Effects of Youth Unemployment: A Case Study of Oye Local Government Area of Ekiti State, Nigeria. Arts and Design Studies, 58, 30-40.

[14]. Nnatu, S (2018). Prostitution and its Adverse Effects on Nigerian Society. International Journal of Innovative Studies in Sociology and Humanities, 3(9), 65-70

[15]. Ejemeyovwi, JO, Osabuohien, ES, Johnson, OD (2019). Internet usage, innovation, and human development nexus in Africa: the case of ECOWAS. Economic Structures, 8 (15),. https://doi.org/10.1186/s40008-019-0146-2

[16]. Ejemeyovwi, JO, Osabuohien, ES, Bowale, EK, Abuh, O, Adedoyin, JP, Ayanda, B (2019). Information and Communication Technology Adoption and Innovation for Sustainable Entrepreneurship. Journal of Physics: Conference Series, 1378 (2), 1-11

[17]. Oyedemi, T (2014) Beyond access: Youth and digital skills, Communicatio, 40(2), 137-154, DOI: 10.1080/02500167.2014.907191

[18]. Van Deursen, A., van Dijk, J and Peters, O (2011). Rethinking Internet skills: The contribution of gender, age, education, Internet experience, and hours online to medium- and content-related Internet, skills. Poetics, 39(2), 124–144.

[19]. Emesini, NO (2015). Pattern of Acquisition of ICT-based Skills by Student-Teachers: Implications for Teacher Education in Nigeria in this Era of Digitalization. Journal of Education and Practice, 6(33), 81-83

[20]. Adeoye, AA, and Adeoye, BJ (2017). Digital Literacy Skills of Undergraduate Students in Nigeria Universities. Library Philosophy and Practice (e-journal), 1-23

[21]. Eneh, OC (2010) Gender digital divide: Comparative assessment of the information communication technology and literacy levels of students in Nigeria. Information Technology Journal, 9(8), 1739-1746

[22]. Ojokoh, B, Zhang, M, Oluwadare, S, and Akintola, K (2013). Women's Perceptions and Uses of Information and Communication Technologies in Nigeria and China: A Comparative Analysis. Information Management and Business Review, 5 (4), 203-216

[23]. Alakpodia, ON (2014). Gender differences in computer use skill among students of school of health technology, Ufuoma, Delta State, International Journal of Digital Library Services, 4(4), 1-11

[24]. Shittu, AJ, Ibrahim, H, Adedokun-Shittu, AA, and Jimoh RG (2014). Bridging the digital divide in Local Government: the study of internet access and digital literacy in Nigeria rural area. Proceedings of the Knowledge Management International Conference (KMICe) 2014, 35-43.

[25]. Mabayoje, MA, Isah, A, Bajeh, AO, and Oyekunle RA(2015). An assessment of ICT literacy among secondary school students in a rural area of Kwara State, Nigeria: A
community advocacy approach. Covenant Journal of Informatics and Communication Technology, 3(1), 40-53

[26]. Folorunso, O and Ogunseye, OS (2006). An exploratory study of the critical factors affecting the acceptability of e-learning in Nigerian universities, Information Management and Computer Security, 14(5), 496-505

[27]. Haliso, Y. (2011). Factors affecting Information and Communication Technologies (ICTs) use by academic librarians in Southwestern Nigeria. Library Philosophy and Practice. Retrieved from http://www.webpages.uidaho.edu/~mbolin/haliso.htm

[28]. Hertzog, MA (2008) Considerations in Determining Sample Size for Pilot Studies. Research in Nursing and Health, 31, 180–191

[29]. Johanson, A and Brooks, GP (2010) Initial Scale Development: Sample Size for Pilot Studies. Educational and Psychological Measurement, 70(3), 394–400

[30]. Salemink K., Strijker D., Bosworth G. (2015). Rural Development in the digital age: A systematic literature review on unequal ICT availability, adoption, and use in rural areas. Journal of Rural Studies, http://dx.doi.org/10.1016/j.jrurstud.2015.09.001

[31]. Kaur, S, and Marwaha, AS (2016). Digital Media Reach: A Comparative Study of Rural and Urban People in India. International Journal of Scientific Research and Education, 4(7), 5553–5562

[32]. World Economic Forum (2017). The future of jobs and skills in Africa: preparing the region for the fourth industrial revolution. Assessed from on http://www3.weforum.org/docs/WEF_EGW_FOJ_Africa.pdf 19/7/10

[33]. AFDB (2016). Jobs for youth in Africa: Catalysing youth opportunity across Africa assessed from https://www.afdb.org/fileadmin/uploads/afdb/Images/high_5s/Job_youth_Africa_Job_youth_Africa.pdf20/7/19