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Ownership and Utilisation of Information and Communication Technology Devices by Technical College Graduates in Professional Settings and Personal Skill Development

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Abstract: *The study investigated the extent to which ownership of Information, Communication Technology (ICT) gadgets, and awareness of the utility value of the gadgets among* Technical, Vocational Education and Training *(TVET) graduates has translated to their employability or personal skill enhancement in Enugu State. A cross sectional survey design was adopted in the study. A sample of 308 respondents were drawn using the stratified random selection process across the six education zones in Enugu State. The questionnaire was the major instrument for data collection. Data was analyzed using table summaries, frequency count, and the Pearson Chi -square (χ^2). The three hypotheses were tested at 95 percent level of significance. Findings show that majority of TVET graduates are ICT compliant 97.4% for males and 95.5% for females. However, the use of ICT skills among the TVET graduates was found to be more inclined to social activities than self-development, work and employment creation. Urban based TVET graduates were more knowledgeable in ICT skills (52%) than rural based TVET graduates (37%). The modal age for use of ICT at work was 19-21 years among the TVET graduates and declined with age. Males TVET graduates in Enugu used ICT skills for self-development and work than females. In conclusion, while the TVET graduates in Enugu possess some ICT skill set required by employers and self-development, this has not resulted into improving employability. The TVET graduates were also not known to have made use of their ICT skills in creating employment for themselves.*

Keyword: ownership, utilisation, Information and Communication Technology, devices, technical college graduates, professional settings, personal skill development

INTRODUCTION

The place of Information and Communication Technology (ICT) skills in today's World is enormous. At home, school, work, leisure, governance, health care, transport, and other spheres we can simply not do without it. At work, the World Bank (2014), notes that the advent of ICTs provides new, more flexible forms of employment. By enabling new forms of work, ICT also changes the structure of jobs, the way people develop their careers, and the way they work. According to Indeed (2024) ICT has changed several aspects of many industries, allowing companies to use different tools to complete everyday tasks. Organizations look for employees with ICT skills to promote and enhance organizational and institutional productivity, efficiency, and effectiveness (Hadyn, 2015).

The rising numbers of unemployed persons across all sectors of Nigeria's economy today have brought to the fore the issue of possession of requisite skills for employment. Relevant employability skills entail hard and soft skills required to get a job, stay on the job, be useful at work, and facilitate promotion. According to Lapan, Tucker, Kim, and Kosciulek (2003), a good educational program empowers graduates with skills in effective communication, supervision, coordination, planning and strategic thinking, visioning, competency in information and communication technology (ICT), creative/self-confidence, good self-management, and time-management which are considered as requisite skills for employment.

In other words, graduates of educational training institutions are required to possess employability skills to prepare themselves to meet the needs of various employers.Technical, Vocational Education and Training (TVET) was born out of this expectation. Its main purpose being the preparation of its beneficiaries for employment in an occupation or group of occupations (Maigida, Saba, and Namkere 2013; Usoro and Otu, 2020). According to Robinson (2000) in Audu, Yusri, and Muhammed (2013), TVET skills are the skills needed to perform specific tasks, whereas employability skills or people skills are the skills needed to become employed, remain in employment, and progress in a chosen career. Despite this high expectation, Audu et al (2013, Damian, Grace, Omeje, Nneka, and Sunday (2023), note the contrary. According to their observation, despite the high number of graduates from TVET institutions who could have become employers themselves after graduation,or be readily absorbed by employers due to their possession of requisites skills, have themselves joined the ranks of the unemployed. This is not good for the economy given that unemployment is often used as one of the measures of the health of the economy (Adam, 2020).

According to Olurounbi (2021), the jobless rate in Nigeria rose to 33.3 percent in the three months through December, an increase from 27.1 percent in the second quarter of 2020, Little wonder that 40 percent of Nigerians lived below the poverty line of ₦137,430 ($381.75) per year (National Bureau of Statistics report, 2020). This represents 82.9 million people out of a population of about 200 million. The situation appears dire with the rapidly increasing population.

There are 41 public technical and vocational colleges spread across the six educational zones in Enugu State, these are Agbani zone with 5 technical colleges, Agwu zone 9, Enugu zone 4, Nsukka zone 9, Obollo zone 6, and Udi zone 8 (Science Technical and Vocational Schools Management Board -STVSMB, 2020). Despite the number of Technical and Vocational Colleges in Enugu state, the state has a high level of unemployment. According to NBS (2020) report for Q4 2020, Enugu had a working population of 2,924,626; the number of people not in the labour force stood at 1,211,875, the labour force was 1,712,751 with an unemployment rate of 31.62 percent, while under-employment stood at 21.29 percent. Enugu State ranks second in terms of poverty (58.13 percent) among the States in South East Nigeria (NBS 2020).

Furthermore, NBS (2021) report for Q1 reveals the Enugu state had an active internet subscription of 2,890,843 in Q1 of 2021, and by Q4 2021 it increased to 3,043,685 of active internet subscription Mobile (GSM) all network; this represents a quarter on quarter growth of 5.02% and a year on year increase of 4.86% as the number of active internet subscription in Q1 of 2020 was 2,756,871. Available statistics also show that in 2021, 91.7 percent of households in Enugu had a phone and 50.5 percent of households in Enugu had access to the internet (Global Data Lab, 2023). This shows a considerable spread of ICT in the state. However, youths including graduates of TVET Institutions constitute the bulk of the unemployed persons in the State. Given the preponderance of TVET institutions in Enugu State and the considerable spread of ICT technologies in the state, the level of unemployment should not be this high as the graduates of these institutions would have become job creators themselves.

Research Hypotheses
The following hypotheses were set for the study:

Ho: There is no significant difference in the ICT skills of TVET graduates in Enugu.
Ho: There is no significant difference in awareness among TVET graduates on the value of ICT skills in employment in Enugu.
Ho: The possession of ICT skills by TVET graduates have not enhanced their employability in Enugu state.
Ho: TVET graduates in Enugu are not utilizing ICT skills in the performance of their jobs.

METHODOLOGY

The study adopted a cross sectional survey research design. The chosen design was considered appropriate for carrying out this study because it facilitated the collection of data systematically from a segment of the population that could be generalized for the entire population.

RESULTS

Distribution of the respondents by gender
Respondents were grouped based on gender (Table 1).

Table .1: Distribution of respondents by gender

Gender	**Frequency**	**Percent**
Male	187	68.0
F Female	88	32.0
Total	275	100.0

Source: *Authors fieldwork 2023*

Table 1 shows the distribution of the respondents by gender. The table shows that male respondents are more than twice of the number of female respondents. The disparity between the number of males and females in the total population is expected as there were more male graduates than female graduates in the 2022 session in the technical colleges covered in the study.
Distribution of the respondents by age

Table 2: Distribution of Respondents by Age

Age Group (years)	*Frequency*	*Percent*
less than 15yrs	*9*	*3.3*
16-18yrs	*94*	*34.2**
19-21yrs	*149*	*54.2**
22-24yrs	*23*	*8.4*
Total	*275*	*100.0*

Source: *Authors fieldwork 2023*

Table 4.1.2 shows the breakdown of respondents by age. Among the TVET graduates who participated in the study, the highest proportion of respondents fell within the 19-21 age bracket. The modal age of the respondents was 19-21 years while the average age was 19 years.

Distribution of Respondents by Nature of Employment
Respondents were grouped based on nature employment (Table 3)

Table 3: Distribution of respondents by employment Type

Type of Employment	Frequency	Percent
Self-employment	262	95.3*
Paid employment	13	4.7
Total	275	100.0

Source: *Authors fieldwork 2023*
Table 3 shows the nature of employment among TVET graduates in Enugu state. It is evident from Table 3 that self-employed respondents constitute the highest among TVET graduates of the 2022 session at (95.3%).

Awareness among TVET Graduates Regarding ICT Skills and Employability
Information obtained on respondents' awareness of the use of ICT in enhancing employability in Enugu is summarized in Table 4.

Table 4: Awareness of the ability to use ICT as an advantage in the labour market

			The ability to use ICT can be an advantage in the labour market.				Total
			strongly disagree	disagree	agree	strongly agree	
Gender	Male	Count	1	4	94	88	187
		% within gender	0.5%	2.1%	50.3%	47.1%	100.0%
	Female	Count	0	4	46	38	88
		% within gender	0.0%	4.5%	52.3%	43.2%	100.0%
Total		Count	1	8	140	126	275
		% within gender	0.4%	2.9%	50.9%	45.8%	100.0%

Source: *Authors fieldwork 2023*

Table 4 shows that out of a total of 140 respondents moremales (47.1%) compared to females 38(43.2%) strongly agreed that the ability to use ICT was advantageous in the labour market. Generally, the respondents were aware that ICT skills enhance one's ability to secure employment in the labour market. A chi square test at 95 percent level of significance regarding **a**wareness of ICT skills and employability of TVET graduates in Enugu state was $X^2(9) = 153.182$, $p \leq 0.05$. Thus, the null hypothesis was rejected.

Application of ICT Skills at Work

Apart from ascertaining the degree of awareness of ICT skills from the respondents, information was collected on the application of ICT skills at work (Table 5)

Table 5: Responses on frequency of use of computer disaggregated by age

Age group		*How often do you use a computer?*				Total
		Daily	once a week	occasionally	never	
Less than 15yrs	Count	*6	0	2	1	9
	% within the age group	66.7%	0.0%	22.2%	11.1%	100.0%
16-18yrs	Count	*49	21	20	4	94
	% within the age group	52.1%	22.3%	21.3%	4.3%	100.0%
19-21yrs	Count	*68	33	43	5	149
	% within the age group	45.6%	22.1%	28.9%	3.4%	100.0%
22-24yrs	Count	*15	4	3	1	23
	% within the age group	65.2%	17.4%	13.0%	4.3%	100.0%
Total	Count	*138	58	68	11	275
	% within the age group	50.2%	21.1%	24.7%	4.0%	100.0%

Source*: Authors fieldwork 2023*

Table 5 shows that the majority of the respondents from all age brackets use computers daily, while just a few across all age brackets have never used a computer. This finding also shows that of the 275 respondents, a number of the respondents have had access to a computer daily or at certain points in time.Access and

use of ICT for self-development was higher among the 19-21 years TVET graduates. Chi-square test statistics on the use of ICT at work gave a value of $X^2(25) = 276.295$, $p \leq 0.05$. Thus, the hypothesis is rejected.

Use of ICT for self-development by Gender of Respondents

Figure 1 shows the use of ICT for self-development among the TVET graduates. While respondents use the ICT reportedly use ICT self-development, more males constitute (68%), than females (32%) actually do so

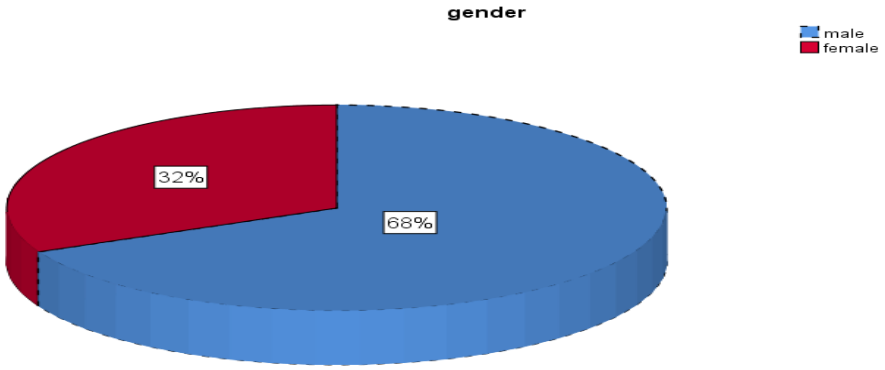

Figure 1: Use of the ICT self-development by gender
Source: Authors fieldwork 2023

Location and Use of ICT Self development

Table 6: *Respondents responses on the rate of use of the Internet for personal capacity development by school location*

			How often do you use ICT for Self Development?				Total
			Frequently	Occasionally	Rarely	never	
school location	urban	Count	*109	63	35	3	210
		% within the school location	51.9%	30.0%	16.7%	1.4%	100.0%
	rural	Count	24	26	9	6	65
		% within the school location	36.9%	40.0%	13.8%	9.2%	100.0%
Total		Count	*133	89	44	9	275
		% within the school location	48.4%	32.4%	16.0%	3.3%	100.0%

Source*: Authors fieldwork 2023*

Table 4.3.8 shows that more than half of urban respondents (109 out of 210) frequently use the internet for personal capacity development; while less than half of rural respondents use the internet for personal capacity development. The findings show that more than average of all respondents frequently uses the internet for capacity building.Chi-square test statistics on use of ICT for self-development by TVET graduates yielded a value of $X^2(23) = 140.855$, $p \leq 0.05$. Thus, the hypothesis is rejected.

DISCUSSION

Awareness among TVET graduates on ICT skills as enhancer in employment

The results show that graduates from TVET are aware that ICT skills enhances employability in the labour market.Chi-square test statistics (LOS 95), yielded $X^2(9) = 153.182$, $p \leq 0.05$. Thus, the hypothesis is rejected. The awareness regarding the value of ICT and employability was slightly higher for males than females. This accords with the position of UNDP, (2000).that females were disadvantaged in terms of digital literacy in Nigeria. It also aligns with Dambo, &Uranta(2016), who found high level of awareness among Business Education students in tertiary institutions in Rivers State.

Application of ICT Skills at Work

In terms of what they use ICT skills for at work, the majority of the respondents in all the educational zones use ICT skills for design, Enugu zone 59.2%, Nsukka zone 65%, Awgu Zone 57.7%, Agbani zone 37.5%, and Obollo-Afor zone 75%, this closely followed by bookkeeping. In terms of access to the Internet, 68.1% of respondents in the urban area have daily access to the internet as compared to respondents in the rural area with 46.6% access to the internet daily.This agrees with Jaiyeola (2022), who found that only 23% of Nigerians and other African countries in rural areas used the Internet in 2022 as compared to 64% of their urban counterparts.

Furthermore, on the use of the internet for self and personal capacity development, findings show that among the male gender, more than average of the respondents (68%) use the internet for self-development while 32% of the female gender uses the internet for self-development. Similarly, the majority of the respondent in the urban area use the internet for personal capacity development more than their counterparts in the rural area; this is not unconnected with the level of internet penetration in the urban and rural areas. Access and use of ICT for self-development was higher among the 19-21 years TVET graduates. Chi-square test result at a 95 percent level of significance yielded $X^2(25) = 276.295$, $p \leq 0.05$.

Similarly, Susanti, et al. (2019), in their study on students' perspective regarding ICT usage in a learning activity at Vocational Education and Training (VET), they found that as many as 97.25% of students agreed that the use of ICT was very useful in learning to find learning material and complete assignments. However, it is not just using the internet but using it for a more productive purpose as noted by Samir, et al (2019) who investigated youth understanding of TVET, analyzing the thoughts of the youth, their parents, and entrepreneurs regarding the status, acceptance, and necessity of TVET and its link with employment. The findings revealed that although 72.2% of the sampled youth had access to the Internet, only 28.3% of them searched TVET-related materials there.

CONCLUSION

There was a relatively high level of awareness of the value of ICT skills regarding employment, utility at work and self-development among TVET graduates surveyed. However, this knowledge was not

maximized. ICT skills showed a gender as well as location bias. More males than females had high level of awareness and use ICT more for self-development and at work than females.Similarly, urban based TVET graduates had more awareness of the value of ICT skills and used it more than rural based graduates for self-development and at work.

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