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Influence of Digital Divide on Skill Acquisition among Home Economics Students in Tertiary Institutions in Anambra state: Educators Perception

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Abstract
Digital tools are essential for skill acquisition among tertiary institution students. This study investigated the influence of digital divide on skill acquisition among Home Economics students in tertiary institutions in Anambra state. The study adopted descriptive survey design, and a sample of 28 lecturers from Federal College of Education Technical, Umunze and Federal Polytechnic, Oko was used. A structured questionnaire titled "Influence of Digital Divide on Skill Acquisition among Home Economics Students in Tertiary Institutions" (IDDSAHESTI), consisting of fifteen (15) validated items was reviewed by experts. Its reliability was tested using Cronbach Alpha yielding a coefficient of 0.84 and it was used to collect data from the lecturers. Data collected from the retrieved questionnaires were analysed using descriptive statistics, while t-test was used to examine the significant differences in the lecturers' responses. The study found that the inability to acquire practical skills, new skills, quality skills, entrepreneurial skill, with resultant effect of stunted growth, are the negative influences of digital divide. It also revealed that the digital divide affects students' ability to collaborate, engage in e-commerce and marketing, and stay up-to-date with the trends in the workspace. The study recommends among other things, that the government should partner with private individuals to provide digital infrastructure for effective skill acquisition among students and ensure that training is organized for both students and lecturers to facilitate the integration of digital tools in teaching and learning.

Key Words: Home Economics, Educator, Digital divide, Skill Acquisition

Introduction

In the rapidly evolving world of technology, digital literacy and skills have become an essential component of modern education. Digital literacy refers to the ability to use digital technology, communication tools and networks to access, manage, integrate, evaluate and create information (Eshet, 2012) while digital skills refer to the specific abilities required to operate digital tools and technologies effectively. This is task oriented and often tied to specific applications or

technologies like digital marketing or using design software (Van Laar *et al*., 2017). The integration of digital tools in education refers to the use of technology such as computers, mobile devices, digital platforms and software applications to facilitate learning, improve student engagement and enhance the efficiency of educational delivery (Selwyn, 2017). Digital tools serve as a game changer cutting across all facets of human endeavor thereby transforming the nature of work and the skills required for professional success. The integration of digital tools and resources in the teaching and learning process across various disciplines is imperative due to the evolving challenging environment. It also allows educators to adopt a more interactive and personalized approach to teaching, enabling students to access resources, collaborate and acquire skills in ways that were not possible with conventional methods (Kirkwood & Price, 2014).

Home Economics, a vocational discipline that emphasizes practical skills, is not exempted from this transformation. The field now demands a range of digital skills, from computer-aided design (CAD) for fashion and interior design, to food technology software for nutrition analysis and digital marketing skills for business promotion (Anderson & Parker, 2020). Other digital skills include online collaborations for remote work delivery and virtual learning for advancement; project management for ability to navigate through multiple contracts particularly in event planning or interior designing and 3D printing skills for creation of prototypes or design of garments. These skills are crucial in ensuring that Home Economics graduates are equipped to meet the demands of the modern workforce, which increasingly relies on technology for efficiency, innovation and competitiveness (Prensky, 2019).

Despite the role of digital skills, many Home Economics graduates, particularly in developing countries like Nigeria face challenges due to limited access to technology and inadequate training in digital tools. The digital divide- the

gap between those who have access to digital resources and those who do not – further worsen these challenges (Miller & Shapiro, 2019). In educational context, this divide manifests in unequal access to technological tools that are critical for modern teaching and learning. According to Prensky (2019), the digital divide impacts not only access to information but also the development of skills necessary for employability in the digital age where stiff competition thrives. Graduates who lack essential digital competencies find themselves at a significant disadvantage, struggling to compete in a labor market that values technological proficiency. This study aims to explore the educators' perception on the influence of digital divide on skill acquisition among Home Economics students in federal tertiary institutions in Anambra state.

Statement of Problem

The digital divide poses a significant challenge to the skill acquisition process in Home Economics education, particularly in Tertiary institutions in Anambra. Most tertiary institutions in Anambra state lack access to these technologies thereby exacerbating digital divide (Okeke, 2022). As digital tools become integral to teaching methods and industry practices, the lack of access to technology inhibits the ability of students to acquire and apply the skills necessary for their professional development. The absence of these technologies has severe consequences for Home Economics students' work life. For instance Prensky (2019) asserts that those who are not proficient in digital technologies face reduced employability, as many employers require candidates who are comfortable using industry-relevant software and platforms. Additionally, those who lack digital marketing and e-commerce skills struggle to succeed as entrepreneurs (Anderson & Parker, 2020) particularly in an era where online business and social media engagement are essential for customer acquisition and retention. This digital divide not only limits career opportunities but also hinders the ability of students to innovate, collaborate and adapt to technological

advancements upon graduation. This study seeks to address this problem by investigating educators' perceptions on the influence of digital divide on skill acquisition among home economics students in tertiary institutions in Anambra state, Nigeria.

Objectives of the Study

The main objective of the study was to investigate the influence of digital divide on skill acquisition among the Home Economics students in tertiary institutions in Anambra state. Specifically, the study determined:

1. the influence of the digital divide on the skill acquisition of Home Economics students in tertiary institutions in Anambra state,
2. the specific skills affected by the digital divide in tertiary institutions in Anambra state,
3. strategies for bridging the digital divide in Home Economics education for effective skill acquisition.

Research Questions

The following research questions guided the study:

1. What is the influence of digital divide on the skill acquisition of Home Economics students in tertiary institutions in Anambra state?
2. What are the specific skills affected by the digital divide among the Home Economic students in tertiary institutions in Anambra state?
3. What are the strategies for bridging the digital divide in Home Economics education for effective skill acquisition?

Hypotheses

The following hypotheses were formulated and tested at 0.05 level of significance:

H_{o1}: there is no significant difference between the mean ratings of home economics lecturers from Federal College of Education Technical, Umunze and Federal

Polytechnic, Oko on the influence of digital divide on the skill acquisition of Home Economics students in tertiary institutions in Anambra state.

H_{o2}: there is no significant difference between the mean responses of Home Economics lecturers from Federal; College of Education Technical, Umunze and Federal Polytechnic, Oko on the specific skills affected by the digital divide among the Home Economic students in tertiary institutions in Anambra state.

Concept Clarification

Digital Divide

The definition of digital divide has evolved over the years due to development in technology. According to Van Dijk (2017), in the early 2000s, the term digital divide shifted from a focus on only those who have access to technology to also include disparities in internet speed, computer hardware and digital literacy skills. In the context of this study, digital divide is technology gap between students with access to computerized technology and those with constrained or no means of access.

Skill Acquisition

The process of developing practical abilities, particularly those necessary for professional competence in a given field.

Home Economics

A field of study focused on the management of the household and includes areas such as cooking, sewing and interior decoration, increasingly reliant on technology for professional practice. Oluwaseun (2021) sees it as an academic discipline focused on equipping students with skills and knowledge in areas such as nutrition, family welfare and household management.

Methods

The study employed a descriptive survey design to collect data from 28 Home Economics lecturers in selected federal tertiary institutions in Anambra state

Nigeria. The population consisted of 13 Home Economics lecturers from Federal College of Education Technical, Umunze and 15 Home Economics lecturers from Federal Polytechnic, Oko. A four point scale structured questionnaire titled titled "Influence of Digital Divide on Skill Acquisition among Home Economics Students in Tertiary Institutions" (IDDSAHESTI), consisting of fifteen (15) items was used to gather data from the respondents to determine their perceptions of the influence of the digital divide on the skill acquisition of Home Economics students. The instrument was validated by experts. Test and re-test method was used to determine the reliability of the instrument, and with Cronbach's Alpha yielding a coefficient of 0.84 was certified reliable for the study. There was a 100% return rate for the questionnaire distributed. The data were analyzed using descriptive statistics and a t-test statistics with the aid of Statistical Package for Social Sciences (SPSS) version 25. The hypotheses were tested at 0.05 level of significance. However, a result above 0.05 is considered grounds for accepting null hypothesis.

Results

Research Question 1: What is the influence of digital divide on the skill acquisition of Home Economics students in tertiary institutions in Anambra state?

Table 1: Mean and Standard Deviation of the Respondents on the Influence of Digital Divide on the Skill Acquisition of Home Economics Students in Tertiary Institutions in Anambra State.

Descriptive Statistics

S/N	Items	N	Mean	Std. Deviation	Remark
1.	Lack of access to technology limits the students' ability to acquire practical skills.	28	3.57	.504	Accepted
2.	Students struggle to learn new skills due to the lack of access to necessary devices.	28	3.54	.508	Accepted
3.	Digital divide affects the quality of skills students gain from practical sessions.	28	2.25	.518	Rejected
4.	Digital divide can reduce entrepreneurail success of Home Economic students.	28	3.61	.497	Accepted
5.	Digital divide can lead to stunted career growth.	28	3.54	.508	Accepted
	Valid N (listwise)	28			
	Grand mean		**3.29**		

From the data presented in table 1, items 1, 2, 4 and 5 with mean scores of 3.57, 3.54, 3.61 and 3.54 and standard deviations of .504, .508, .497 and .508 respectively were agreed upon as the influences of the digital divide on skill acquisition of Home Economic students. However, item number 3 was rejected as one of the influences of digital divide on skill acquisition. The standard deviation values indicate the homogeneity of the responses while a Grand mean of 3.29 shows that the digital divide has an influence on their skill acquisition.

Research Question 2: What are the specific skills affected by the digital divide in tertiary institutions in Anambra state?

Table 2: Mean and Standard Deviations of Home Economics Lecturers on the Specific Skills Affected by the Digital Divide in Tertiary Institutions in Anambra State.

Descriptive Statistics

S/N		N	Mean	Std. Deviation	Remark
1.	Students need to understand how to use digital platforms for research, presentation and content creation.	28	3.54	.508	Accepted
2.	Students need to have digital skills for communication and collaboration for effective job delivery.	28	3.61	.497	Accepted
3.	Proficiency in online marketing and e-commerce platforms is necessary for employability of students in Home Economic field.	28	3.68	.476	Accepted
4.	Students need computer-aided design skills for creating and editing designs digitally.	28	3.57	.504	Accepted
5.	Digital literacy is essential for Home Economics students to stay competitive in the job market.	28	3.50	.509	Accepted
	Valid N (listwise)	28			
	Grand mean		**3.58**		

Table 2 presents the skills affected by the digital divide. All the items with mean scores of 3.54, 3.61, 3.68, 3.57 and 3.50 respectively were agreed upon by the respondents as skills affected by the digital divide. The standard deviations (.508, .497, .476, .504 and .509) indicate the extent of variability of dispersion in the dataset. Since the values are relatively close to each other, it suggests a moderate level of consistency in the dataset. The Grand mean of 3.58, which is above the benchmark, indicates that the digital divide has affected various areas where practical skills are paramount.

Research Question 3: What are the strategies for bridging the digital divide in Home Economics education for effective skill acquisition?

Table 3: Mean and Standard Deviations of Home Economics Lecturers on Strategies for Bridging the Digital Divide in Home Economics Education for Effective Skill Acquisition.

Descriptive Statistics

S/N		N	Mean	Std. Deviation	Remark
1.	Students should be provided with free internet access.	28	3.54	.508	Accepted
2.	Increasing the availability of digital devices in classrooms would enhance skill acquisition.	28	3.57	.504	Accepted
3.	Organizing regular digital literacy workshops would help Home Economics students bridge the digital divide.	28	3.75	.441	Accepted
4.	Government and private sectors should support in digital infrastructure for effective skill acquisition	28	3.46	.508	Accepted
5.	Instructors should integrate digital tools more effectively into practical teachng to bridge the digital divide among the students.	28	3.68	.476	Accepted
	Valid N (listwise)	28			
	Grand mean		**3.59**		

Table 3 shows that item 3 has the highest mean score of 3.75, while item 4 has the lowest mean score of 3.46, the other items have mean scores ranging from 3.54 to 3.68. This indicates that those are the various strategies to bridge the digital divide among Home Economic students for effective skill acquisition in tertiary institutions in Anambra state. Also the standard deviations of .508, 504, .441, .508, and .476 respectively indicate homogeneity in the lecturers' responses regarding the strategies for effective skill acquisition. The Grand mean of 3.59 shows that the situation can be salvaged if the listed strategies are adopted.

Test of Hypotheses

H_{o1}: There is no significant difference between the mean ratings of home economics lecturers' responses on the influence of digital divide on the skill acquisition of Home Economics students in tertiary institutions in Anambra state.

Table 4: Summary of t-test Analysis on Difference between Mean Scores of Lecturers' Perceptions on the Influence of Digital Divide on Skill Acquisition of Home Economics Students in Tertiary Institutions.

Group Statistics

	Institution Type	N	Mean	Std. Deviation	Std. Error Mean	df	Sig. (2-tailed)	Level of sig	t	Decision
Influence_Digital_Divide_skill	College of Education	13	3.3385	.20631	.05722	26	.381	.05	.533	Accept Null Hypothesis
	Polytechnic	15	3.2933	.23745	.06131					

Table 4 shows the summary of the t-test on the difference between mean scores of the lecturers from the two tertiary institutions regarding the influence of the digital divide on skill acquisition. It shows a P-value of 0.381 at the 0.05 level of significance. This implies that the null hypothesis is accepted, while the alternative is rejected since P-value is greater than 0.05.

H_{o2}: there is no significant difference between the mean responses of Home Economics lecturers on the specific skills affected by the digital divide among the Home Economic students in tertiary institutions in Anambra state.

Table 5: Summary of t-test Analysis on Difference between Mean Scores of Lecturers' Responses on the Specific Digital Skills Affected by Digital Divide among the Home Economics Students in Tertiary Institutions in Anambra state.

Group Statistics

	Institution Type	N	Mean	Std. Deviation	Std. Error	df	Sig. (2 – tailed)	t	Level of sig	Decision
Digital_Skills_Affected	College of Education	13	3.5846	.19081	.05292	26	.388	.878	.05	Accept Null Hypothesis
	Polytechnic	15	3.5200	.19712	.05090					

From the data presented in Table 5, the P-value is .388 at the 0.05 level of significance with 26 degree of freedom. Since the P-value is greater than 0.05, the null hypothesis, which states that there is no significant difference between the mean scores of lecturers from Federal College of Education Technical, Umunze and

Federal Polytechnic, Oko, regarding the specific digital skills affected by digital divide among the Home Economic students in tertiary institutions, is hereby accepted.

Discussion of Findings

On the influence of digital divide on skill acquisition of Home Economics students in tertiary institutions, it was found that lack of access to technology limits the students' ability to acquire practical skills, new and quality skills, with a resulting negative effect on entrepreneurial skill development and growth. This finding aligns with work of Adewole and Adeoye (2022) who noted that students without adequate access to digital tools are disadvantaged in acquiring new skills, as they miss out on practical technology-driven experiences that are increasingly essential in today's business environment. The findings also collaborate the study by Nwankwo *et al*. (2023), which emphasized that the digital divide creates a gap in the quality of education, making it difficult for students in low-tech environments to compete with their counterparts from more technologically advanced areas.

Regarding the skills affected by digital divide in tertiary institutions, the study found that due to a lack of competency in using digital tools, students were unable to research trends in their profession, engage in content creation, collaborate, participate in e-commerce and marketing, or create and edit designs using computer aid applications. These findings are consistent with the study by Odukoye and Olaniyan (2020), which highlighted those skills such as computerized pattern making in fashion design or the use of digital applications in meal planning are key areas where students in under-resourced environments fall behind. Furthermore, Anumudu and Eze (2020) found that digital illiteracy hinders students from gaining crucial soft skills like digital collaboration, critical thinking and online communication, which are essential in the global economy.

Regarding the strategies for bridging the digital divide in Home Economics education for effective skill acquisition. It was found that providing digital tools, internet connectivity, organizing workshop to train students in digital skills, and having instructors integrate digital tools into the teaching and learning of Home Economics can help bridge the digital divide and improve skill acquisition. This proposal aligns with the study by Adewumi and Ogunleye (2023), who suggested that government should partner with private individuals to provide ICT infrastructure in schools. Also, Okeke and Ogbu (2020) recommended digital literacy training programmes for teachers to enhance their ability to integrate technology into their teaching practices, ensuring that students have better access to, and utilization of digital tools.

Conclusion

The findings of this study emphasized on the influence of the digital divide on skill acquisition among Home Economics students in tertiary institutions. The lecturers perceived that unequal access to technology hinders students' ability to acquire essential skills, which in turn affects their employability in a rapidly digitizing world. Addressing this issue is crucial for ensuring that Home Economics students are equipped with the necessary skills to thrive in the workforce.

Recommendations

Based on the findings of the study the following recommendations were made:

1. Tertiary institutions should partner with private individuals to ensure most modern infrastructures are provided for equitable access to technology.
2. Home Economic departments should align the integration of digital tool for teaching and learning into their curriculum to prepare students for the demands of the modern workplace.
3. Continuous professional development programme should be organized for lecturers to enhance their digital teaching capabilities.

4. Cooperative education is necessary to provide students with practical exposure to digital tools used in the profession.

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