Digital Citizenship and Ethical Technology Use Among University Students in Rivers State: Legal, Wellness, and Security Perspectives

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Abstract

The study aimed to investigate the level of awareness and practice of digital citizenship among university students in Rivers State, Nigeria, with a focus on the ethical use of educational technology. Adopting a descriptive research survey, the study was conducted in the three public universities in Rivers State, Nigeria (University of Port Harcourt, Rivers State University, and Ignatius Ajuru University of Education), with a population of eight thousand seven hundred and sixty-one (8761) students studying in the Faculty of Education in the three public universities in Rivers State. Employing two sampling techniques, the sample of the study comprised two thousand one hundred and thirty-seven (2137) students. A stratified sampling technique was used to assign all the departments in the three universities into strata. Thereafter, the purposive sampling method was used to select only 400-level students for the study. A 40-item self-structured questionnaire was used for data collection using direct delivery and retrieval methods. Mean and standard deviation were calculated to answer the research questions. The hypotheses were tested using Analysis of Variance (ANOVA) at 0.05 level of significance. Findings revealed that students in the three public universities in Rivers State, Nigeria demonstrated a high to very high level of

awareness of digital laws and digital rights and responsibilities, and exhibited digital security behaviours to a high extent. With respect to digital health and wellness, students adhered to most wellness behaviours to a high extent; however, two specific behaviours were rated at a low extent, namely switching off phones at night and avoiding pornographic content online, indicating areas of notable concern within an otherwise positive profile. The study emphasised the significance of digital citizenship and responsible technology use among university students in the Nigerian university context, noting that high awareness does not uniformly translate into consistently safe digital behaviour. As such, it was recommended amongst others that universities, government agencies, and regulatory bodies should strengthen digital health programmes, improve cybersecurity education, and incorporate digital ethics into curricula,

Keywords: Digital citizenship, ethical practices, student awareness, legal dimensions, educational technology**.**

Introduction

The swift advancement of technology, especially the emergence of the internet, has significantly influenced humanity worldwide. This transition has led scholars and analysts to categorize the population through numerous generational and technological classifications, including terminology such as digital natives, digital immigrants, Generation Z (Gen Z), Millennials (Gen Y), and Generation X (Gen X), among others. The term "digital natives" denotes those born during or after the extensive incorporation of digital technologies into educational environments, usually known as the "digital age." The phrase was formerly considered to encompass anyone born in or after 1980; however, experts like Helsper and Eynon (2010) classify those born between 1980 and 1990 as the "first generation of digital natives."

Digital natives can be likened to the indigenous populations of a nation or region, who are anticipated to comprehend and communicate in the original language to engage fully in civic life. Fomsi (2021) notes that digital natives possess proficiency in digital technology, including computers, smartphones, tablets, the Internet, Web 2.0 platforms, and online gaming settings. Just as inhabitants of a nation are required to follow a code of conduct that regulates acceptable behavior and fosters harmonious coexistence, individuals in the digital realm are likewise governed by principles and conventions that define digital citizenship. According to Ribble and Park, (2019), this idea includes fundamental understanding of digital ethics, responsibilities, and

affordances, which empower users to properly traverse the digital landscape and promote mutual respect among its members. A digital citizen is an individual who actively interacts with modern digital technologies across multiple facets of life. A proficient digital citizen not only use modern technologies but also exhibits an understanding of their extensive potential and intrinsic benefits. This highlights the significance of education in digital citizenship, which provides individuals with the knowledge and skills required to navigate the digital environment responsibly. As practically everybody with internet connection qualifies as a digital citizen, digital citizenship has become an essential aspect of contemporary life.

In the contemporary interconnected world, comprehending how to ensure personal safety, extend respect to others, and engage constructively in digital culture is vital for all age demographics. Online communication frequently diverges markedly from in-person engagement. Non-verbal signals, including body language, vocal tone, and facial expressions, are often lacking in digital communications, resulting in potential misinterpretation and less empathy. Moreover, the physical distance, apparent anonymity, and reduced accountability inherent in online environments may lead to less compassionate or ethical behavior among users.

Ribble (2020) and Fomsi (2021) assert that the conduct of digital citizens is influenced by numerous fundamental factors. Digital law is an aspect that regulates online behavior and ensures the proper sanctioning of digital offenses. It is essential that students are informed of these laws and motivated to comply with them. The concept of digital rights and duties, closely associated with digital law, informs students of their entitlements and obligations within the global digital environment. This insight not only empowers students but also safeguards them against potential online predators, especially in the realm of remote learning.

Digital health and wellbeing represent an essential aspect of digital citizenship. This factor underscores the significance of ergonomic awareness and the cultivation of healthy technology usage practices. Students should be educated about behaviors that could adversely affect their physical and mental health, including extended screen time, inactivity, and excessive gaming. Unchecked habits can present considerable health hazards, particularly during prolonged online participation.

Digital security is equally crucial, as it significantly contributes to the promotion of responsible digital citizenship. Students must possess the information and abilities required to protect

themselves from online dangers and cyberattacks. Although parents and educators have historically offered advice on physical safety in traditional classrooms, the transition to online learning requires a corresponding focus on virtual security protocols.

Nigeria's digital education landscape within its university system remains a study in contrasting ambitions and realities. The Federal Government's commitment to digital transformation is evidenced by the National Digital Economy Policy and Strategy (2020–2030), the National Information Technology Development Agency's (NITDA) e-learning initiatives, and the National Universities Commission's (NUC) Core Curriculum and Minimum Academic Standards (CCMAS), which increasingly mandate the integration of digital tools and competencies across disciplines. Yet structural impediments persistently undermine these aspirations: erratic electricity supply, inadequate bandwidth, prohibitive device costs, and a chronic underfunding of university ICT infrastructure conspire to render digital learning more aspiration than reality for a significant proportion of Nigerian students and academics (Muraina, etal. 2025). Rivers State occupies a distinctive, if paradoxical, position within this national landscape. As the seat of Nigeria's petroleum economy and home to Port Harcourt, a city with growing technology hub coordinated through the Rivers State ICT Agency (RICTA), and a demonstrably entrepreneurial digital culture, the state possesses assets that many Nigerian counterparts lack. Its tertiary institutions, including the University of Port Harcourt, Rivers State University and Ignatius Ajuru University of Education have made incremental investments in e-learning platforms and digital library resources, particularly in the post-COVID-19 period, when the abrupt shift to remote learning exposed both the latent capacity and the acute vulnerabilities of university digital infrastructure (Ifijeh & Yusuf, 2020). Nevertheless, significant inequities persist between the digitally connected urban campuses of Port Harcourt and the comparatively underserved rural and riverine communities that fall within the state's educational catchment, underscoring the reality that digital education in Rivers State, as across Nigeria, remains unevenly distributed along lines of geography, socioeconomic status, and institutional resource endowment. The aforementioned challenges have been exacerbated by the excessive use of mobile phones by students which could lead to harmful behaviors. According Morgan, (2017) four out of five university students experience anxiety, isolation, and stress when they try to disconnect from their phones or engage in digital detoxification for a day. The trend of ‘sexting’: sending explicit photos and text

messages, is reportedly increasing among university students. It is against this backdrop that a study of this kind is considered apt and timely especially in Rivers State, Nigeria.

Statement of the Problem

Digital citizenship education plays a pivotal role in equipping individuals with the skills and awareness necessary to navigate the digital environment safely, ethically, and responsibly. As students increasingly rely on internet-based platforms for academic engagement, it becomes imperative to prioritise their digital competence and security. The transition to digital learning has revealed significant gaps in students' understanding and application of digital citizenship principles, particularly in legal compliance, personal wellness, and cybersecurity. Despite the widespread adoption of educational technology, a considerable number of students remain inadequately informed about digital laws, rights, and responsibilities. At the institutional level, a study conducted in tertiary institutions in Rivers State revealed that a significant proportion of respondents demonstrated limited awareness of cybersecurity and institutional acceptable use policies, data privacy obligations, and the legal implications of digital misconduct, suggesting that formal digital citizenship instruction remains absent or inadequate within the curriculum (Chinda, 2026). This lack of awareness can result in unethical online behaviour, increased vulnerability to digital threats, and potential breaches of institutional or national regulations. Consequently, it is essential to cultivate positive online behavioural traits among students to promote safe, effective, and responsible participation in the digital learning ecosystem.

Research Questions

The following research questions guided the conduct of the study.

1. To what extent are students in universities in Rivers State aware of digital laws?
2. To what extent are students aware of their digital rights and responsibilities?
3. To what extent do students in universities in Rivers State adhere to digital health and wellness behaviours?
4. What digital security behaviours are exhibited by students in universities in Rivers State?

Hypotheses

The following hypotheses were tested at 0.05 level of significance.

1. There is no significant difference in the extent of awareness of digital laws among students across the three universities in Rivers State.

2. The digital security behaviours exhibited by students across the three universities in Rivers State do not differ significantly.

Methodology

This is a descriptive study conducted in the three public universities in Rivers State. The population consisted of eight thousand seven hundred and sixty-one (8761) students studying in the Faculty of Education in the three public universities in Rivers State. Employing two sampling techniques, the sample of the study comprised two thousand one hundred and thirty-seven (2137) students representing 24.4% of the total population of the study. A stratified sampling technique was used to assign all the departments in the three universities into strata. Thereafter, purposive sampling was used to select only 400-level students for the study. 400-level students were purposively selected for this study on the grounds that they constitute the segment of the undergraduate population with the most accumulated exposure to institutional digital resources, academic platforms, and technology-driven learning processes, while simultaneously being positioned at the penultimate stage before entry into a world of work where digital literacy, cybersecurity awareness, and adherence to acceptable use policies are no longer optional competencies but fundamental professional expectations. However, out of the 2137 copies of the questionnaires that were administered to the respondents, 1506 copies were duly completed and returned and were then used for data analysis. The study adopted a 40-item self-structured questionnaire titled **Digital Citizenship Awareness and Ethical Technology Practices Among University Students Questionnaire (DCAETPAUSQ).** The instrument was designed on a four-point rating scale. Research questions 4 was answered using a criterion mean of 2.50. That is, any mean above 2.50 was taken as agreement while any mean below 2.50 was taken as disagreement.

Research questions 1, 2 and 3 were answered using the rating scale shown below:

Very High Extent/Degree/Level	3.25 – 4.00
High Extent/Degree/Level	2.50 – 3.25
Low Extent/Degree/Level	1.75 – 2.50
Very Low Extent/Degree/Level	1.00 – 1.75

The instrument was further validated by three experts, and their observations, comments and recommendations were incorporated into the final draft. The reliability of the instrument was determined using Cronbach Alpha, which yielded a coefficient of 0.89. This means that the

instrument was judged reliable. The instrument was administered to the students while they were in their lecture rooms. Direct delivery and retrieval methods were used. The data was analysed using descriptive and inferential statistical tools. Mean and standard deviation were calculated to answer the research questions. The hypotheses were tested using Analysis of Variance (ANOVA) at 0.05 level of significance. The decision rule was to either accept or reject the null hypothesis. The Statistical Package for Social Sciences (SPSS) version 25 was used for the analysis.

Results

Research Question 1: To what extent are students in universities in Rivers State aware of digital laws?

Table 1: Results showing the extent to which Students in Universities in Rivers State are aware of digital laws

S/N	Awareness of Digital Laws	Very High Extent	High Extent	Low Extent	Very Low Extent	Mean	Std. Deviation	Remark
1	I am aware that hacking a site to get information is against the law	980	384	80	62	3.52	0.78	VHE
2	I am aware that it is against the law to pirate purchase or download pirated software	772	544	135	55	3.35	0.79	VHE
3	I am aware that copyright infringement is illegal and punishable by law	741	415	298	52	3.23	0.88	HE
4	I am aware that plagiarism is against the law	728	422	292	64	3.20	0.90	HE
5	I am aware that identity theft is against the law	835	460	159	52	3.38	0.81	VHE

6	I am aware that creating viruses is against the law	720	503	210	73	3.24	0.87	HE
7	I am aware that illegal downloads from sites like YouTube and Netflix without paying are against the law	647	528	235	96	3.15	0.91	HE
8	I am aware that using hate speech in an online platform is against the Laws of our Country	583	497	222	204	2.97	1.04	HE
9	I am aware that copying and pasting someone else's work as mine without acknowledging the owner is against the law	683	451	283	89	3.15	0.93	HE
10	I am aware that watching pornography is against the law	479	397	260	370	2.65	1.16	HE
	Grand Mean					**3.18**	**0.91**	**HE**

Research Data, (2026) **N = 2137** **CM = 2.50**

The data in Table 1 show the mean and standard deviation of the responses to the ten items in Part 1 of the questionnaire. The results indicate that to a very high extent, the students are aware that hacking a site is against the law (X=3.52, SD=0.78); pirating purchases is against the law (X=3.35, SD=0.79); and that identity theft is against the law (X=3.38, SD=0.81). The results also show that to a high extent the students are aware copyright infringement is illegal and punishable by law (X=3.23, SD=0.88); that plagiarism is against the law (X=3.20, SD=0.90); that virus creation is against the law (X=3.24, SD=0.87); illegal downloads from YouTube, Netflix etc., is against the law (X=3.15, SD=0.91); using hate speech in an online platform is against the law (X=2.97, SD=1.04); and watching pornography is against the law (X=2.65, SD=1.16). Items with low standard deviations (below 1.00) indicate that the responses were more homogeneous, and as such, the respondents appeared to be tilting towards the same responses. Higher standard deviation (above 1.00) showed that the responses were heterogeneous and there was higher variability of the

responses. The grand mean of 3.18 indicates that the students in Universities in Rivers State are aware of digital laws to a high extent.

Research Question 2: To what extent are students aware of their digital rights and responsibilities?

Table 2: Results showing the extent to which students are aware of their digital rights and responsibilities

S/N	Awareness of Digital Rights and Responsibilities	Very High Extent	High Extent	Low Extent	Very Low Extent	Mean	Std. Deviation	Remark
11	I am aware that I have the right to freedom of expression	1086	332	61	27	3.64	0.65	VHE
12	I am aware that I have the right to privacy	982	403	89	32	3.55	0.70	VHE
13	I am aware that I have the right to my online identity	968	375	133	30	3.51	0.74	VHE
14	I am aware that I have the right to credit for my work	872	471	131	32	3.45	0.74	VHE
15	I am aware that I have a responsibility to report cyberbullying, harassment, sexting or identity theft	680	483	306	37	3.20	0.84	HE
16	I am aware that I have the responsibility to properly cite others when their works are used.	667	485	309	45	3.18	0.86	HE
17	I am aware that I have the responsibility to download videos, music and materials legally	906	455	82	63	3.46	0.78	VHE

18	I am aware that I have the responsibility to keep information safe from hackers	908	412	147	39	3.45	0.77	VHE
19	I am aware that I have the responsibility of not falsifying my online identity	821	482	158	45	3.38	0.79	VHE
20	I am aware that I have the responsibility of protecting my password and login details	921	403	135	47	3.46	0.78	VHE
	Grand Mean					**3.43**	**0.77**	**VHE**

Research Data, (2026) **N = 2137** **CM = 2.50**

The data in Table 2 shows the extent to which students in Universities in Rivers State are aware of digital rights and responsibilities. The results show that to a very high extent, the students are aware that they have the right to freedom of expression (X=3.64, SD=0.65); right to privacy (X=3.55, SD=0.70); right to one's online identity (X=3.51, SD=0.74); and right to credit for personal work (X=3.45, SD=0.74). The data indicate that to a high extent, the students are aware of their responsibility to report cyberbullying, sexting, harassment, and identity theft (X=3.20, SD=0.84). The students are aware to a very high extent of their responsibility to download materials legally (X=3.46, SD=0.78); to keep their information safe from hackers (X=3.45, SD=0.77); responsibility of not falsifying one's online identity (X=3.38, SD=0.79); and responsibility of protecting passwords and login details (X=3.46, SD=0.78). The low standard deviation of all the items indicates that the responses were more homogeneous, and variability was low. The grand mean of 3.43 indicates that to a very high extent, students in Universities in Rivers are aware of their digital rights and responsibilities.

Research Question 3: To what extent do students in universities in Rivers State adhere to digital health and wellness behaviours?

Table 3: Results showing the extent to which Faculty of Education Students in Universities in Rivers State adhere to digital health and wellness behaviour.

S/N	Digital Health and Wellness Behaviour	Very High Extent	High Extent	Low Extent	Very Low Extent	Mean	Std. Deviation	Remark
21	I leave my data switched on all the time	443	517	343	203	2.80	1.01	HE
22	I watch videos for a large part of the night	438	509	335	224	2.77	1.03	HE
23	I read books on my phone for a long time	395	497	487	127	2.77	0.93	HE
24	I chat with my friends for a long time	547	521	324	114	3.00	0.94	HE
25	I watch pornography sites and videos	367	323	258	558	2.33	1.20	LE
26	I switch off my phone at night	383	343	326	454	2.43	1.17	LE
27	I sit properly when using my laptop and phone	440	456	434	176	2.77	1.00	HE
28	I do not sit in one position for a long time	525	574	276	131	2.99	0.94	HE
29	I do not use the earpiece or Bluetooth for too long	437	505	392	172	2.80	0.98	HE
30	I do not stare at the computer screen for too long	323	646	344	193	2.73	0.94	HE
	Grand Mean					**2.74**	**1.01**	**HE**

Research Data, (2026) **N = 2137** **CM = 2.50**

The data in Table 3 show the extent to which students adhere to digital health and wellness behaviour. The results show that to a high extent, students exhibit negative digital behaviours that can be detrimental to their health and wellness. Students leave their data switched on all the time to a high extent (X=2.80, SD=1.01); the mean response to item two indicates that to a high extent, students watch videos a large part of the night (X=2.77, SD=1.03). The mean response to item 3

indicates that to a high extent, students read books on their phone for a long time (X=2.77, SD=0.93). The respondents also pointed out that to a high extent they chat with friends online for a long time. However, the results show that to a low extent, students watch pornography sites and videos. The result shows that to a low extent students switch off their phones at night (X=2.43, SD=1.17). To a high extent the students sit properly when using the laptop (X=2.77, SD=1.00); do not sit in one place for a long time (X=2.99, SD=0.94); do not use earpiece/Bluetooth devices for a long time (X=2.80, SD=0.98); and do not stare at the computer screen for a long time (X=2.73, SD=1.01). The grand mean of 2.74 indicates that to a high extent, students exhibit digital health and wellness behaviours. The standard deviation of 1.01 indicates that the variability of the responses is high, and the responses are more heterogeneous.

Research Question 4: What digital security behaviours are exhibited by students in universities in Rivers State?

Table 4: Results showing the digital security behaviour exhibited by students in Universities in Rivers State.

S/N	Digital Security Behaviour	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean	Std. Deviation	Remark
31	I have activated two-step verification on my social media handles	831	439	158	78	3.34	0.86	Agree
32	I have an antivirus that is updated on my phone and laptop	706	500	224	76	3.22	0.88	Agree
33	I use different characters and numbers as part of my password for my emails and social media accounts	821	449	192	44	3.36	0.81	Agree
34	I only post information that is necessary in public spaces	700	581	180	45	3.29	0.79	Agree
35	I do not share my password with anyone	820	398	219	69	3.31	0.88	Agree

36	I accept friend requests from people I do not know	572	441	317	176	2.94	1.03	Agree
37	I follow unknown investment invites posted on chat groups that I belong to	398	413	304	391	2.54	1.14	Agree
38	I share private information on my status	325	344	416	421	2.38	1.11	Disagree
39	I do not update my antivirus and firewall	321	346	414	425	2.37	1.11	Disagree
40	I give my friends my ATM cards and the PIN to help me withdraw money	496	377	284	349	2.68	1.16	Agree
	Grand Mean					**2.94**	**0.98**	**Agree**

Research Data, (2026) **N = 2137** **CM = 2.50**

The data in Table 4 show the digital security behaviour exhibited by students in Universities in Rivers State. The results indicated that the respondents agreed with items 31,32,33,34,35,36,37, and 40. The respondents agreed that they have activated two-step verification on their social media handles (X=3.34, SD=0.86). They agreed that they have updated antivirus on the phone and laptop (X=3.22, SD=0.88). They agreed that they would use different characters and numbers while creating their emails and social media accounts (X=3.36, SD=0.81). The respondents agreed that they do not share passwords with anyone (X=3.31, SD=0.88). The results also show that students accept friend requests from persons that they do not know (X=2.94, SD=1.03). The students follow unknown investment invites posted on chat groups that they belong to (X=2.54, SD=1.14). Also, they give friends their ATM cards and pins to help them withdraw money (X=2.68, SD=1.16). The result shows that the respondents disagreed with items 38 and 39. The students disagreed that they share private information on their status (X=2.38, SD=1.11). The results also show that they disagreed that they do not update their antivirus and firewall (X=2.37, SD=1.11). In general, the results show that the students exhibited some digital security behaviour.

Hypothesis 1: There is no significant difference in the extent of awareness of digital laws among students across the three universities in Rivers State.

Table 5: One-way ANOVA Results showing difference in the extent of digital law awareness among Students in the three Universities in Rivers State

	Sum of Squares	df	Mean Square	F-cal	F-crit	α-level	P-value	Decision
Between Groups	5.641	2	2.820					
Within Groups	535.278	1503	0.356	7.919	3.000	0.050	0.000	Reject Null Hypothesis
Total	540.918	1505						

Multiple Comparisons

Dunnett T3

(I) Institution		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
IAUE	RSU	-.15527*	0.04100	0.000	-0.2534	-0.0572
	UNIPORT	-0.03155	0.03645	0.769	-0.1187	0.0556
RSU	IAUE	.15527*	0.04100	0.000	0.0572	0.2534
	UNIPORT	.12371*	0.03787	0.003	0.0331	0.2143
UNIPORT	IAUE	0.03155	0.03645	0.769	-0.0556	0.1187
	RSU	-.12371*	0.03787	0.003	-0.2143	-0.0331

*. The mean difference is significant at the 0.05 level.

The data in Table 5 indicate that the F-cal is 7.919 and the F-crit is 3.000 at 0.05 level of significance and degrees of freedom between groups and within groups of 2 and 1503, respectively. The p-value is significant ($F_{2,1503}$=7.919, P<0.05) and hence the null hypothesis is

rejected. This means that there is a significant difference in the level of awareness of digital laws among students in the three Universities studied.

Table 6: Summary of Post-Hoc Analysis showing difference in the extent of digital law awareness among students in the three Universities in Rivers State

(I) Institution	(J) Institution	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
IAUE	RSU	-.15527*	.04100	.000	-.2534	-.0572
	UNIPORT	-.03155	.03645	.769	-.1187	.0556
RSU	IAUE	.15527*	.04100	.000	.0572	.2534
	UNIPORT	.12371*	.03787	.003	.0331	.2143
UNIPORT	IAUE	.03155	.03645	.769	-.0556	.1187
	RSU	-.12371*	.03787	.003	-.2143	-.0331

*. The mean difference is significant at the 0.05 level.

Post Hoc test was conducted to establish where the significant difference lies between the Universities. The Dunnett T3 test was conducted and the result show that students of Rivers State University (RSU) differed significantly from those of Ignatius Ajuru University of Education (IAUE) (mean difference = 0.15527, $P<0.05$), and University of Port Harcourt (UNIPORT) (mean difference=0.12371, $P<0.05$) in the level of awareness of digital laws that they have. However, there was no significant difference between the students of Ignatius Ajuru University of Education and University of Port Harcourt (mean difference = 0.03155, $P>0.05$).

Hypothesis 2: The digital security behaviours exhibited by students across the three universities in Rivers State do not differ significantly.

Table 7: One-way ANOVA Results showing difference in the digital security behaviour exhibited among Students in the three Universities in Rivers State

	Sum of Squares	df	Mean Square	F-cal	F-crit	α-level	P-value	Decision
Between Groups	1.378	2	0.689	2.533	3.000	0.050	0.080	

Within Groups	408.782	1503	0.272	Do not reject null hypothesis
Total	410.160	1505		

The data in Table 7 shows that the F-cal is 2.533 and the F.crit is 3.000 at 0.05 level of significance and degrees of freedom between groups and within groups of 2 and 1503, respectively. The p-value of 0.080 is not significant ($F_{2,1503}$=2.533, P>0.05) and, as such, the null hypothesis is not rejected. This means that the students in the three Universities do not differ significantly in the extent to which they exhibit digital security behaviours.

Conclusion

This study investigated the level of awareness and practice of digital citizenship among university students in Rivers State, with a focus on the ethical use of educational technology across legal, wellness, and security dimensions. Contrary to prevailing assumptions about deficits in digital citizenship among Nigerian undergraduates, the findings revealed that students in the three public universities in Rivers State demonstrated a high to very high level of awareness of digital laws, digital rights and responsibilities, and digital security behaviours, and adhered to digital health and wellness practices to a high extent. These outcomes suggest that sustained exposure to technology-mediated learning environments, institutional digital investments, and the broader digital culture of the Rivers State context have collectively contributed to a measurable level of digital citizenship competence among 400-level undergraduates. Notwithstanding these encouraging results, residual gaps were identified, particularly in students' tendencies to accept friend requests from unknown individuals, engage with unverified investment solicitations, and maintain continuous data connectivity — behaviours that carry significant implications for personal digital security and wellbeing. This study makes a contribution to knowledge by providing one of the first empirical assessments of digital citizenship awareness and practice among Faculty of Education undergraduates in Rivers State universities, using a validated, multi-dimensional instrument. The findings advance the understanding of digital citizenship in the Nigerian university context by demonstrating that high awareness does not always translate into consistently safe digital behaviour, thereby highlighting the importance of closing the gap between knowledge and

practice. As universities and regulatory bodies continue to navigate the demands of a technology-driven educational landscape, the findings of this study serve as a useful baseline for designing targeted interventions and policy frameworks aimed at deepening responsible digital conduct among students.

Recommendations

Based on the findings and conclusions, the following recommendations are made:

1. The universities and other tertiary institutions should strengthen digital law enforcement and continuous education.
2. University authorities should conduct Regular workshops and seminars to reinforce digital ethics, ensuring students understand the legal consequences of violations.
3. Universities should integrate digital wellness modules into orientation programs and provide resources on managing Problematic Internet Use (PIU) to mitigate health risks.
4. Government and universities should partner with IT security experts to provide hands-on training and promote a culture of proactive digital safety.
5. The National Universities Commission (NUC) and the National Information Technology Development Agency (NITDA) should leverage their regulatory and policy mandates to institutionalise digital citizenship education within the minimum academic standards for all Nigerian universities.

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