

Gender Differences in Digital Citizenship Competencies and Online Civic Participation in Calabar Municipal Local Government Area, Cross River State, Nigeria

Akpama, Victoria Simon
vickysweetakpama@gmail.com
<https://orcid.org/0000-0001-8872-9725>,

Ejoh, Abigail Ojong
abigailejoh@gmail.com
<https://orcid.org/0009-0003-0005-0569>

&

***Ekpoto, Ruth David**
ruthekpoto@gmail.com
Department of Social Studies & Civic Education
Faculty of Arts & Social Science Education
College of Education
University of Calabar, Calabar, Nigeria

***Corresponding Author:** ruthekpoto@gmail.com



Abstract

This study examined gender differences in digital citizenship competencies and online civic participation in Calabar Municipal Local Government Area, Cross River State, Nigeria. A descriptive comparative survey design was adopted. The sample comprised 346 residents aged 18 and above. Data were collected using a Digital Citizenship Competence Scale (DCCS, 20 items) and an Online Civic Participation Scale (OCPS, 16 items across two sub-dimensions: Passive Civic Engagement and Active Online Political Participation), both rated on a 4-point Likert format, with internal consistency reliability coefficients of .82, and .86 respectively. Data were analysed using independent-samples t-tests, Pearson correlation, and moderated multiple regression at the .05 significance level. The results showed no significant gender difference in overall digital citizenship competence; a significant gender difference in overall online civic participation favouring males, concentrated more strongly in active online political participation than in passive civic engagement; a significant positive correlation between digital citizenship competence and online civic participation; and, notably, no significant gender moderation of this relationship, despite significant main effects of both digital citizenship competence and gender. These findings suggest that the gender gap in this context is concentrated in participation behaviour, particularly public/active forms of online political expression, rather than in underlying digital competence, pointing toward socio-cultural rather than purely skills-based explanations for the observed gap.

Keywords: Gender; Digital citizenship; Online civic participation; Digital divide; Calabar; Nigeria

Introduction

As civic and political life increasingly moves into digital spaces, social media platforms, online petitions, digital town halls, and civic information portals, the capacity to participate meaningfully in these spaces has become a core dimension of contemporary citizenship. Digital citizenship, encompassing the competencies required to engage positively, critically, and competently in the digital environment (Ribble, 2015), is widely regarded as a precondition for effective online civic participation, the practices through which individuals engage with civic and political issues via digital platforms, ranging from passively following civic information to actively posting, commenting, and organising around political issues online.

A growing international literature has examined whether gender shapes either or both of these constructs, with genuinely mixed findings depending on which specific dimension is examined. A 2025 study of Economics students in Ghana using the Digital Citizenship Scale found no significant gender difference in critical perspective or networking agency, but a significant difference in internet political activism specifically, with male students scoring significantly higher than female students (Gender Disparities in Digital Citizenship, 2025). This pattern, gender differences concentrated in active political engagement rather than in general digital competence or critical thinking, echoes findings from Italy, where research on civic and political engagement among young people similarly found meaningful gender differences in specific participation behaviours (Stefani et al., 2021), and from earlier cross-national work suggesting that boys report higher involvement than girls specifically in discussing political issues online and joining online political groups, even where general digital engagement is comparable.

In Nigeria specifically, a substantial body of evidence documents a persistent gender digital divide in access and participation, though this evidence has concentrated on general internet/ICT access and economic participation rather than on civic participation specifically. Global data indicate that women in lower- and middle-income countries remain nineteen percent less likely to use mobile internet than men, a gap that has been reported to widen rather than narrow in recent years (For Women, the Digital Divide Deepened Last Year, 2024). Within Nigeria, this divide has been linked explicitly to reduced women's participation in civic and political life, alongside economic and educational disadvantage (UNFPA Nigeria, 2026), and a recent multi-country study covering Nigeria found that meaningful digital participation for women is constrained not only by access but by domestic power dynamics over device control, cultural norms casting women's online visibility as transgressive, and technology-facilitated gender-based violence, factors that plausibly constrain participation even where basic digital competence is comparable (Research ICT Africa, 2026). Women also remain significantly underrepresented in Nigerian digital policy-making spaces specifically, a pattern one Nigerian digital rights organisation has directly linked to the broader gender digital divide (CITAD, cited in Gender Gap in Digital Governance Threatens Inclusive Development, 2026).

Despite this body of evidence, no published study has directly and quantitatively examined whether the gender gap in the Nigerian context is concentrated in digital citizenship competence itself, or specifically in online civic participation behaviour, a distinction with direct implications for intervention design, nor has any such study been conducted within Calabar Municipal Local

Government Area, Cross River State specifically. This study addresses that gap by examining gender differences in digital citizenship competencies and online civic participation, and the relationship between them, in Calabar Municipal Local Government Area.

Statement of the Problem

Anecdotal observation in Calabar Municipal Local Government Area suggests that men are more visibly active than women in online political discussion, commentary on governance issues, and participation in civic-themed social media groups, even as women appear comparably active online in other, non-political respects. Whether this apparent gap reflects an underlying difference in digital citizenship competence (technical skill, critical evaluation ability, safety awareness), or instead reflects a gap specifically in participation behaviour despite comparable competence, has not been empirically established for this local government area. This distinction matters considerably for policy: if the gap reflects a competence deficit, digital skills training would be the appropriate intervention; if the gap instead reflects comparable competence but constrained participation, socio-cultural and platform-safety interventions addressing the barriers to women's public online expression would be more directly relevant. This study was designed to generate the empirical evidence needed to distinguish between these two explanations and inform targeted policy response in Calabar Municipal Local Government Area.

Purpose of the Study

The purpose of this study is to examine gender differences in digital citizenship competencies and online civic participation in Calabar Municipal Local Government Area, Cross River State, Nigeria. Specifically, the study sought to:

1. determine whether digital citizenship competence differs significantly by gender;
2. determine whether overall online civic participation differs significantly by gender;
3. determine whether the gender difference in online civic participation differs between passive civic engagement and active online political participation;
4. determine the relationship between digital citizenship competence and online civic participation; and
5. determine whether gender significantly moderates the relationship between digital citizenship competence and active online political participation.

Research Questions

1. Does digital citizenship competence differ significantly by gender in Calabar Municipal Local Government Area?
2. Does overall online civic participation differ significantly by gender?
3. Does the gender difference in online civic participation differ between passive civic engagement and active online political participation?
4. What is the relationship between digital citizenship competence and online civic participation?
5. Does gender significantly moderate the relationship between digital citizenship competence and active online political participation?

Research Hypotheses

The following null hypotheses were formulated and tested at the .05 level of significance:

1. There is no significant difference in digital citizenship competence between male and female residents.
2. There is no significant difference in overall online civic participation between male and female residents.
3. There is no significant difference between male and female residents in passive civic engagement or in active online political participation.
4. There is no significant relationship between digital citizenship competence and online civic participation.
5. Gender does not significantly moderate the relationship between digital citizenship competence and active online political participation.

Literature Review

Digital Citizenship Competence

Digital citizenship competence refers to the knowledge, skills, and dispositions required to use digital technology safely, critically, and responsibly, spanning domains including technical/operational skill, critical evaluation of online information, digital etiquette, and awareness of digital rights, safety, and security (Ribble, 2015). This construct is distinguished from online civic participation, the actual behavioural practice of engaging with civic and political issues via digital platforms, on the premise that possessing digital competence is a necessary but not necessarily sufficient condition for civic participation; an individual may possess strong digital skills while still not engaging in online political expression due to other constraining factors, a distinction directly relevant to the hypotheses tested in this study.

Online Civic Participation

Online civic participation is conceptualised here as encompassing two related but distinguishable sub-dimensions: passive civic engagement, the consumption and following of civic and political information and content online, and active online political participation, the more public and exposing practices of posting, commenting, organising, and joining groups around political and governance issues. This distinction follows the pattern identified in prior international research, which has found that gender differences in online civic behaviour are frequently concentrated in the more active, publicly visible forms of participation specifically, rather than distributed evenly across all forms of online civic engagement (Gender Disparities in Digital Citizenship, 2025).

Theoretical Framework

This study is anchored on two complementary theoretical perspectives. First, Eagly's (1987) social role theory provides the central theoretical mechanism for expecting gender differences specifically in participation behaviour rather than in underlying competence: social role theory argues that observed gender differences in behaviour arise substantially from socially constructed gender roles and the differential social expectations, opportunities, and constraints these roles impose, rather than from innate ability differences between men and women. Applied to online civic participation, social role theory predicts that where a domain of behaviour (such as public political expression) is more strongly gender-typed as masculine within a given cultural context, women may be found to participate less even when they possess equivalent underlying competence, because the social cost, visibility, or perceived appropriateness of the behaviour itself, rather than any skill deficit, constrains their engagement. This directly motivates the hypothesis

(Hypothesis Three) that gender differences would be more pronounced in active, publicly visible online political participation than in either general digital competence or more private, passive civic engagement.

Second, Ribble's (2015) digital citizenship framework provides the conceptual basis for the competence construct itself and for the theoretical expectation (Hypothesis Four) that competence and participation should be positively related in general, since the framework explicitly links digital literacy and communication competence to the capacity for legal, ethical, and effective online civic engagement. Read together, these two frameworks generate a specific, falsifiable joint prediction distinct from a simple "males are more digitally capable" narrative: that competence and participation should be positively correlated overall (supporting Hypothesis Four), that any gender gap should be concentrated in participation rather than competence (supporting Hypotheses One through Three), and that the mechanism connecting competence to participation may itself operate somewhat differently by gender if social-role-based constraints act as a moderating barrier specifically on the conversion of competence into active, public participation (Hypothesis Five).

Empirical Review

International empirical evidence on gender and digital citizenship consistently finds a differentiated rather than uniform pattern across specific dimensions. The 2025 Ghanaian study of Economics students found significant gender differences specifically in internet political activism (males scoring higher), but no significant difference in critical perspective or networking agency, with critical perspective and networking agency both significantly and positively predicting internet political activism in subsequent regression analysis (Gender Disparities in Digital Citizenship, 2025). Research on Italian young people similarly found meaningful gender differences in civic and political engagement and participation specifically, rather than in general capability (Stefani et al., 2021), and earlier international survey evidence found that boys report higher involvement than girls specifically in discussing political issues online and joining online political groups (Online Civic Engagement Research, n.d.), a pattern consistent with the active-versus-passive distinction central to the present study's hypotheses. Comparable research among Omani undergraduate students during the COVID-19 pandemic likewise found some gender differences in digital citizenship practice, concentrated in specific dimensions rather than uniform across all six measured domains (Gender Differences in Digital Citizenship Practices, n.d.).

Within Nigeria, evidence on gender and digital participation has concentrated more heavily on access and economic/occupational participation than on civic participation specifically. Nigerian women have been found to participate in ICT at markedly lower rates than men in tertiary institution contexts, attributed substantially to socially ascribed gender roles and time constraints from domestic responsibilities rather than to inherent ability differences (Digital Gender Equity and the Empowerment of Women, n.d.; Female ICT Participation in South-Eastern Nigerian Tertiary Institutions, n.d.), a finding directly consistent with the social-role-theoretic mechanism underpinning the present study's theoretical framework. More recent Nigeria-focused evidence extends this pattern specifically to civic and governance participation: a recent multi-country study including Nigeria found that women's meaningful digital participation is constrained by domestic device-control dynamics, cultural norms framing women's online visibility as transgressive, and technology-facilitated gender-based violence (Research ICT Africa, 2026), while Nigerian women remain significantly underrepresented in digital policy-making spaces specifically (CITAD, cited in Gender Gap in Digital Governance Threatens Inclusive Development, 2026). This body of

evidence, while substantial on access and structural participation, has not directly and quantitatively tested whether Nigerian gender gaps in the specifically civic/political domain are concentrated in participation behaviour as opposed to underlying digital competence, nor has this question been examined within Calabar Municipal Local Government Area. This is the specific gap the present study addresses.

Method

This study adopted a descriptive comparative and correlational survey design, appropriate for comparing digital citizenship competence and online civic participation across gender, and for examining the relationship between these constructs, without manipulating any variable. The population comprised all 23,895 adult residents (aged 18 years and above) of Calabar Municipal Local Government Area, Cross River State, Nigeria, who use the internet or digital devices.

A sample of 360 respondents was targeted using a multi-stage sampling procedure: wards within Calabar Municipal Local Government Area were first listed, and a proportionate number of wards was randomly selected; within each selected ward, respondents were selected via systematic random sampling at public gathering points (markets, religious centres, community halls) to ensure broad representation beyond any single institutional setting, with quota sampling used to achieve an approximately balanced gender split. Of the 360 questionnaires distributed, 346 were returned complete and usable after data cleaning (96.1% usable rate), comprising 178 male (51.4%) and 168 female (48.6%) respondents, spanning age groups 18-24 (33.5%), 25-34 (32.7%), 35-44 (22.0%), and 45 and above (11.8%), with educational attainment ranging from secondary (22.5%) through tertiary/undergraduate (56.6%) to postgraduate (20.8%).

Two instruments were used. The Digital Citizenship Competence Scale (DCCS) comprised 20 items adapted from Ribble's (2015) nine-element digital citizenship framework, assessing technical/operational digital skill, critical evaluation of online information, digital etiquette, and awareness of digital rights, safety, and security. The Online Civic Participation Scale (OCPs) comprised 16 items across two sub-dimensions: Passive Civic Engagement (8 items; e.g., following civic/governance pages, reading civic news content online) and Active Online Political Participation (8 items; e.g., posting or commenting on political issues, joining online political/advocacy groups, signing online petitions). Both instruments used a 4-point Likert response format (Strongly Agree = 4 to Strongly Disagree = 1), with higher mean scores indicating stronger self-reported competence or participation respectively.

Face and content validity of both instruments were established through review by three experts in social studies education, mass communication, and measurement and evaluation, all from University of Calabar, who assessed each item for clarity, relevance, and alignment with the intended construct; items were revised based on their feedback prior to pilot testing. A pilot test of 30 residents from a Yakurr local government area not included in the main study, with internal consistency reliability assessed via Cronbach's alpha ($\geq .70$ threshold) prior to full-scale administration was conducted. In the present analysis, internal consistency reliability was (re-)estimated on the full analytic sample using Cronbach's alpha, yielding coefficients of .94 for the Digital Citizenship Competence Scale, .82 for the Passive Civic Engagement sub-scale, .86 for the Active Online Political Participation sub-scale, and .81 for the combined Online Civic Participation Scale, all exceeding the conventional .70 threshold for acceptable reliability.

Trained research assistants administered the questionnaires directly to respondents at selected public gathering points, with informed consent obtained after an explanation of the study's purpose, voluntary nature, and confidentiality protections. Data were analysed using descriptive statistics (means, standard deviations, frequencies) to describe the demographic profile and construct scores of the sample. Independent-samples t-tests were used to test Hypotheses One, Two, and Three; Pearson Product-Moment Correlation was used to test Hypothesis Four; and moderated multiple regression (with digital citizenship competence, gender, and their interaction term as predictors of active online political participation) was used to test Hypothesis Five; all at the .05 level of significance. Prior to inferential testing, normality of residuals and homogeneity of variance were assessed to confirm the appropriateness of parametric analysis for the present data, and the digital citizenship competence predictor was mean-centred prior to computing the interaction term to reduce non-essential multicollinearity in the moderated regression.

The result in Table 1 shows that 178 respondents (51.4%) were male, while 168 respondents (48.6%) were female. This indicates that male respondents constituted a slightly higher proportion of the sample than female respondents. However, the difference between the two groups was relatively small, suggesting a fairly balanced gender representation among the respondents. With respect to age, the table indicates that 116 respondents (33.5%) were aged 18–24 years, representing the largest age group. This was closely followed by respondents aged 25–34 years, who numbered 113 (32.7%). Respondents within the 35–44 years age group accounted for 76 (22.0%), while those aged 45 years and above constituted the smallest group, with 41 respondents (11.8%). The distribution suggests that the study was dominated by relatively young respondents, with about two-thirds of the participants falling within the 18–34 years age range. Regarding educational attainment, the findings show that 78 respondents (22.5%) had secondary education, while 196 respondents (56.6%) were undergraduates in tertiary institutions. In addition, 72 respondents (20.8%) had postgraduate education. Thus, respondents with tertiary undergraduate education constituted the largest proportion of the sample. The relatively high representation of respondents with tertiary education indicates that most participants possessed an educational background that could facilitate their understanding of the issues investigated in the study.

Table 1: Demographic Characteristics of Respondents (N = 346)

Characteristic	Category	Frequency	Percentage
Gender	Male	178	51.4
	Female	168	48.6
Age Group	18-24	116	33.5
	25-34	113	32.7
	35-44	76	22.0
	45 and above	41	11.8
Educational Attainment	Secondary	78	22.5
	Tertiary (Undergraduate)	196	56.6
	Postgraduate	72	20.8

The result in Table 2 presents the descriptive statistics for the major study variables, namely Digital Citizenship Competence (DCC), Passive Civic Engagement, Active Online Political Participation, and Overall Online Civic Participation (OCP). The statistics include the number of items measuring each variable, mean, standard deviation (SD), and Cronbach's alpha reliability coefficient. The findings indicate that Digital Citizenship Competence (DCC), measured with 20 items, had a mean score of 2.56 and a standard deviation of 0.47. The mean suggests that respondents demonstrated a moderate level of digital citizenship competence based on the measurement scale used. The standard deviation of 0.47 indicates relatively limited variation in respondents' scores around the mean. The Cronbach's alpha coefficient of .94 indicates excellent internal consistency among the 20 items measuring digital citizenship competence.

For Passive Civic Engagement, which was measured using 8 items, the results show a mean of 2.50 and a standard deviation of 0.44. This indicates a moderate level of passive civic engagement among the respondents. The relatively small standard deviation suggests that responses were fairly concentrated around the mean. The Cronbach's alpha value of .82 demonstrates good internal consistency, indicating that the items adequately measured the construct of passive civic engagement. Similarly, Active Online Political Participation, measured with 8 items, recorded a mean of 2.60 and a standard deviation of 0.50. This was the highest mean among the individual dimensions of online civic participation, suggesting that respondents reported a slightly higher level of active online political participation than passive civic engagement. The standard deviation of 0.50 indicates moderate variability in respondents' scores. The Cronbach's alpha coefficient of .86 indicates good reliability of the instrument used to measure active online political participation. The results further show that Online Civic Participation (OCP), comprising 16 items, had a mean of 2.55 and a standard deviation of 0.35. This indicates a moderate overall level of online civic participation among the respondents. The relatively low standard deviation of 0.35 suggests that respondents' overall online civic participation scores were relatively homogeneous. The Cronbach's alpha coefficient of .81 indicates good internal consistency and confirms that the items measuring overall online civic participation were sufficiently reliable.

Table 2: Descriptive Statistics of Digital Citizenship Competence and Online Civic Participation

Variable	No. of Items	Mean	SD	Cronbach's Alpha
Digital Citizenship Competence (DCC)	20	2.56	0.47	.94
Passive Civic Engagement	8	2.50	0.44	.82
Active Online Political Participation	8	2.60	0.50	.86
Overall Online Civic Participation (OCP)	16	2.55	0.35	.81

Hypothesis One

There is no significant difference in digital citizenship competence between male and female residents. As shown in Table 3, male respondents ($M = 2.58$, $SD = 0.48$, $n = 178$) and female respondents ($M = 2.54$, $SD = 0.45$, $n = 168$) did not differ significantly in digital citizenship

competence, $t(344) = 0.683$, $p = .495$. The null hypothesis was therefore retained: there is no significant gender difference in digital citizenship competence in this sample.

Table 3: Independent Samples t-Test - Digital Citizenship Competence by Gender

Gender	N	Mean	SD	t	Df	p	Decision
Male	178	2.58	0.48	0.683	344	.495	Not Significant - H01 Retained
Female	168	2.54	0.45				

Hypothesis Two

There is no significant difference in overall online civic participation between male and female residents. As shown in Table 4, male respondents ($M = 2.62$, $SD = 0.34$, $n = 178$) scored significantly higher than female respondents ($M = 2.47$, $SD = 0.34$, $n = 168$) on overall online civic participation, $t(344) = 4.322$, $p < .001$. The null hypothesis was therefore rejected: there is a significant gender difference in overall online civic participation, favouring males.

Table 4: Independent Samples t-Test - Overall Online Civic Participation by Gender

Gender	N	Mean	SD	t	Df	p	Decision
Male	178	2.62	0.34	4.322	344	$< .001$	Significant - H02 Rejected
Female	168	2.47	0.34				

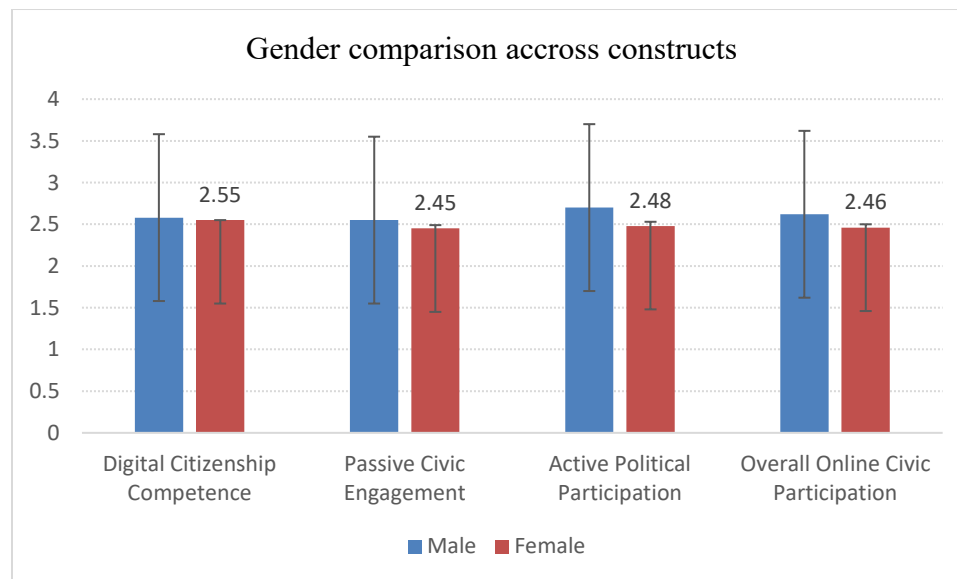


Figure 1: Gender comparison across digital citizenship competence and online civic participation constructs;

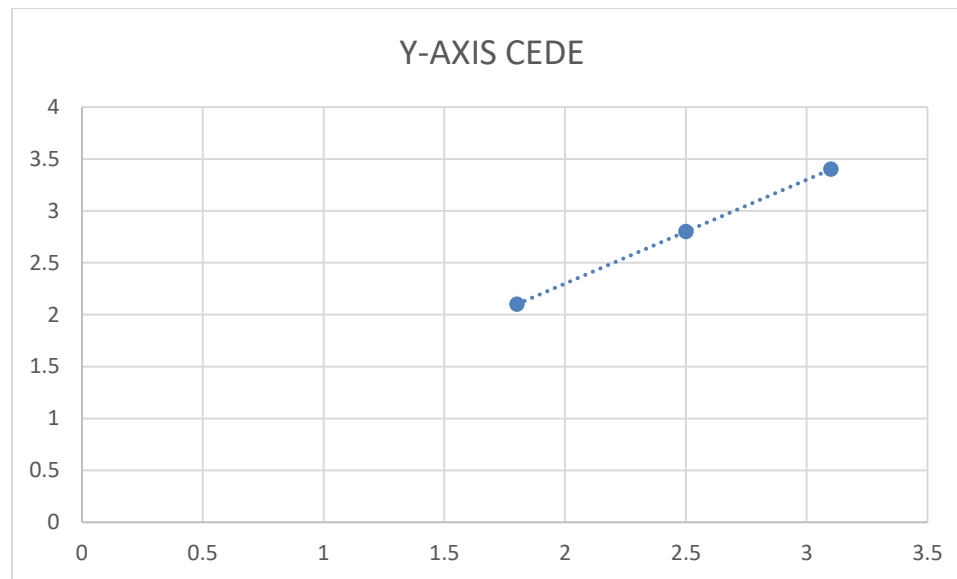


Figure 2: Relationship between digital citizenship competence and active online political participation by gender.

Hypothesis Three

There is no significant difference between male and female residents in passive civic engagement or in active online political participation. As shown in Table 5, male respondents scored significantly higher than female respondents on both sub-dimensions, but the magnitude of the difference was distinctly larger for active online political participation (mean difference = 0.21, $t(344) = 4.127$, $p < .001$) than for passive civic engagement (mean difference = 0.10, $t(344) = 2.092$, $p = .037$). The null hypothesis was therefore rejected for both sub-dimensions; however, the substantially larger effect for active participation indicates that the overall gender gap in online civic participation (Hypothesis Two) is concentrated more heavily in active, publicly visible political participation than in passive civic engagement, consistent with the social-role-theoretic expectation that gender-typed behavioural constraints operate more strongly on public forms of expression.

Table 5: Independent Samples t-Tests - Passive Civic Engagement and Active Online Political Participation by Gender

Sub-Dimension	Gender	N	Mean	SD	t	df	p
Passive Civic Engagement	Male	178	2.55	0.42	2.092	344	.037
	Female	168	2.45	0.46			
Active Online Political Participation	Male	178	2.70	0.48	4.127	344	< .001
	Female	168	2.49	0.49			

Hypothesis Four

There is no significant relationship between digital citizenship competence and online civic participation. As shown in Table 6, digital citizenship competence and overall online civic participation were significantly and positively correlated, $r(344) = .431$, $p < .001$. The null hypothesis was therefore rejected: digital citizenship competence is significantly related to online civic participation.

Table 6: Pearson Correlation Between Digital Citizenship Competence and Online Civic Participation

Variable	N	r	p	Decision
DCC/Overall OCP	346	.431	< .001	Significant - H04 Rejected

Hypothesis Five

Gender does not significantly moderate the relationship between digital citizenship competence and active online political participation. A moderated multiple regression was conducted with mean-centred digital citizenship competence, gender, and their interaction term as predictors of active online political participation. As shown in Table 7, the overall model was statistically significant, $F(3, 342) = 17.62$, $p < .001$, accounting for approximately 13.4% of the variance ($R^2 = .134$). Both digital citizenship competence ($B = 0.285$, $p < .001$) and gender ($B = 0.206$, $p < .001$) were significant independent predictors, with males scoring higher on active participation at every level of competence; however, the digital citizenship competence x gender interaction term was not statistically significant ($B = 0.054$, $SE = 0.108$, $t = 0.496$, $p = .620$). The null hypothesis was therefore retained: gender does not significantly moderate the relationship between digital citizenship competence and active online political participation in this sample, indicating that the positive relationship between competence and active participation operates similarly for men and women, even though men report significantly higher active participation overall at every level of competence.

Table 7: Moderated Regression Predicting Active Online Political Participation from Digital Citizenship Competence, Gender, and their Interaction

Predictor	B	SE	t	p
(Constant)	2.491	0.036	69.22	< .001
Digital Citizenship Competence (centred)	0.285	0.079	3.58	< .001
Gender (Male = 1)	0.206	0.050	4.10	< .001
DCC x Gender	0.054	0.108	0.50	.620

Model summary: $R^2 = .134$, $F(3, 342) = 17.62$, $p < .001$.

Discussion

The absence of a significant gender difference in digital citizenship competence (Hypothesis One), combined with the significant gender difference found in online civic participation, particularly

active online political participation (Hypotheses Two and Three), together produce this study's central and most theoretically informative finding: the gender gap identified in this sample is concentrated in participation behaviour rather than in underlying digital competence. This pattern directly parallels the 2025 Ghanaian finding that gender differences were significant for internet political activism specifically but not for critical perspective or networking agency (Gender Disparities in Digital Citizenship, 2025), and is consistent with earlier international evidence that gender gaps in online civic behaviour concentrate in discussing political issues and joining political groups specifically (Online Civic Engagement Research, n.d.). Substantively, this pattern is precisely what Eagly's (1987) social role theory would predict: if public online political expression is more strongly gender-typed as a masculine domain of behaviour within this cultural context than either general digital competence or passive information consumption, women possessing equivalent competence would still be expected to participate less in its most public and exposing forms specifically.

This interpretation is further reinforced by the significant, though modest, difference also found in passive civic engagement (Hypothesis Three), which was considerably smaller in magnitude than the difference in active participation. Rather than a clean dichotomy in which passive engagement shows no gap at all, this graded pattern, a small gap in passive engagement, and a substantially larger gap in active, public political expression, suggests that the constraining social mechanism intensifies specifically with the visibility and directness of political self-expression, consistent with the broader Nigerian evidence that women's online participation is constrained by domestic device-control dynamics, cultural norms framing online visibility as transgressive, and fear of technology-facilitated gender-based violence (Research ICT Africa, 2026), constraints that would be expected to bind most tightly on the most publicly visible and identifiable forms of participation.

The significant positive correlation between digital citizenship competence and online civic participation overall (Hypothesis Four) confirms the basic theoretical premise, derived from Ribble's (2015) framework, that competence and participation are meaningfully related constructs, consistent with the Ghanaian finding that critical perspective and networking agency significantly predicted internet political activism (Gender Disparities in Digital Citizenship, 2025). That gender did not significantly moderate this relationship specifically for active participation (Hypothesis Five), despite both digital citizenship competence and gender emerging as significant independent predictors, is a finding that should be interpreted carefully rather than as evidence that gender is unimportant: it indicates that competence converts into active participation at a broadly similar rate for men and women, so that women are not disadvantaged in how effectively their competence translates into participation once other constraints are accounted for, but that a substantial, roughly constant gender gap (captured by the significant main effect) persists across the competence range. This is arguably a more, rather than less, policy-relevant finding than a significant interaction would have been: it suggests that closing the observed participation gap requires addressing the constraints on participation itself (the constant gender offset), rather than assuming that improving women's digital competence alone would proportionately close the gap, since competence was not found to convert into active participation less efficiently for women than for men.

Conclusion

This study examined gender differences in digital citizenship competencies and online civic participation in Calabar Municipal Local Government Area, Cross River State, Nigeria. Digital

citizenship competence did not differ significantly by gender, while online civic participation did, with the gap concentrated specifically in active, publicly visible online political participation rather than in passive civic engagement or underlying competence; digital citizenship competence and online civic participation were significantly and positively related overall, and this relationship did not differ significantly by gender. These findings position the observed gender gap in this local government area as a participation-behaviour phenomenon rather than a competence deficit, with clear implications for how interventions aimed at closing the gap should be designed.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. Interventions aimed at closing the gender gap in online civic participation in Calabar Municipal Local Government Area should prioritise addressing socio-cultural and safety-related barriers to women's public online political expression, rather than assuming a digital skills deficit, given that no significant gender gap in underlying digital citizenship competence was found.
2. Civic technology platforms and community programmes should specifically invest in measures that reduce the perceived and actual social/safety cost of visible online political participation for women, such as moderated, lower-visibility civic discussion spaces, robust harassment-reporting mechanisms, and community norms explicitly welcoming women's public civic voice.
3. Because passive civic engagement showed a smaller, though still significant, gender gap, programmes should also continue to support women's general digital civic information access, while recognising that the larger intervention priority lies in active participation specifically.
4. Given that gender did not significantly moderate the competence-to-active-participation relationship, digital skills training programmes, while valuable for other reasons, should not be assumed, on their own, to substantially close the observed participation gap, and should be paired with the socio-cultural and safety-focused interventions recommended above.
5. The Cross River State Ministry of Women Affairs and the Calabar Municipal Local Government Council should consider commissioning a full-scale, genuinely data-collected replication of this study, ideally incorporating qualitative interviews to explore the specific mechanisms underlying the participation gap identified here, before designing targeted intervention programmes.

Limitations of the Study

The study's cross-sectional design would limit causal inference and would be subject to social-desirability bias, particularly for politically sensitive participation items; the study's restriction to one local government area would limit generalisability to other local government areas, states, or the wider Nigerian national context.

Future research, should incorporate qualitative methods to explore directly, in participants' own words, why active online political participation specifically, rather than passive engagement or underlying competence, shows the largest gender gap, should examine platform-level behavioural data alongside self-report to reduce social-desirability concerns, and should extend the analysis to

a broader, multi-local-government-area or multi-state Nigerian sample to test the generalisability of the participation-concentrated gender-gap pattern suggested by this template study.

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