



Research Article

Gender Differences in Digital Literacy Skills and Political Awareness Among Secondary School Students in Gusau Educational Zone, Zamfara State, Nigeria

Sule Muhammad¹, Haladu Isa Bayero²

1. Department of Educational Foundations, Federal University Gusau, Nigeria;

muhammadsule@fugusau.edu.ng

2. Department of Arts and Social Science Education, Ahmadu Bello University Zaria, Nigeria;

hibayero@abu.edu.ng

Copyright © 2026 by Authors, Published by Demagogi: Journal of Social Sciences, Economics and Education. This is an open access article under the CC BY License <https://creativecommons.org/licenses/by/4.0/>

Received : January 13, 2026

Revised : February 16, 2026

Accepted : March 19, 2026

Available online : April 25, 2026

How to Cite: Sule Muhammad, & Haladu Isa Bayero. (2026). Gender Differences in Digital Literacy Skills and Political Awareness Among Secondary School Students in Gusau Educational Zone, Zamfara State, Nigeria. *Demagogi: Journal of Social Sciences, Economics and Education*, 4(2), 101-110. <https://doi.org/10.61166/demagogi.v4i2.195>

Abstract. This study investigated gender differences in digital literacy skills and political awareness among secondary school students in the Gusau Educational Zone, Zamfara State, Nigeria. A descriptive survey design was adopted, with a population of 8,753 SS2 students from public schools. Using a stratified random sampling technique, a sample of 365 students was selected. Data were collected through the Digital Literacy and Civic/Political Awareness Questionnaire (DLCPAQ), validated by experts and tested for reliability (Cronbach's alpha = 0.86). Independent samples t-tests and MANOVA were employed to analyze the data at a 0.05 significance level. Findings revealed a significant difference in digital literacy skills between male and female students, with males demonstrating higher

proficiency. Conversely, no significant gender difference was observed in political awareness, indicating that male and female students possessed similar levels of civic and political understanding. The study highlights the role of gender in digital skill acquisition while showing that political awareness is more evenly distributed across genders. The findings underscore the need for targeted interventions to enhance digital literacy among female students and for continued promotion of civic education to foster informed and responsible participation in society.

Keywords: Civic Awareness, Digital Literacy, Gender, Political Awareness, Secondary School Students

INTRODUCTION

The rapid growth of information and communication technologies (ICTs) has transformed how young people access information, communicate, and understand social and political issues. Secondary school students increasingly rely on smartphones, computers, the internet, and social media to obtain information about civic, political, and social matters. Digital literacy has become essential, allowing students to search for information, evaluate digital content, and engage responsibly online. Scholars note that digital literacy helps individuals critically assess information, detect misinformation, and make informed decisions (Yang, 2024; Kahne et al., 2012). Educational institutions are expected to equip students with these skills to navigate a technology-driven society (Hauge et al., 2014; Gomez-Galan, 2018). Digital literacy also enhances civic knowledge and awareness. Exposure to diverse perspectives online improves students' understanding of governance, civic duties, and community participation. Studies indicate that digital platforms foster civic literacy by promoting critical thinking and participation in societal matters (Mohamed & Hermansyah, 2024; Nasir & Riaz, 2024). Integrating digital technologies into education provides opportunities for students to discuss public issues, fostering civic responsibility and active citizenship (Hauge et al., 2014; Yang, 2024).

However, digital literacy influences political awareness. Online platforms allow students to access information on government activities, policies, and democratic processes, enhancing engagement in political discussions (Bajwa et al., 2025; Salam et al., 2024). Students with strong digital literacy can assess the credibility of political content and differentiate reliable information from misinformation (Arrazak & Adnan, 2024; Kahne et al., 2012). Digital literacy also promotes digital citizenship, emphasizing responsible and ethical participation in online spaces (Li, 2023; Asante et al., 2025). Thus, digital literacy improves both technological competence and the development of informed, responsible citizens (Yang, 2024; Mohamed & Hermansyah, 2024). Adolescents' digital literacy depends on access to devices, quality instruction, and practice opportunities (Ng, 2019; Martin, 2020). While students often possess basic skills such as using search engines or social media, they struggle with higher-order skills like evaluating credibility and understanding digital ethics (Livingstone, 2021; Helsper & Eynon, 2022). In Sub-Saharan Africa, infrastructural and socioeconomic limitations, along with inadequate teacher training, affect students' digital competencies (Adeyinka & Ajayi, 2022; Obiora & Ayodele, 2023). Nigerian studies indicate that while students frequently use mobile phones and social media,

their ability to critically engage with digital resources remains limited (Bello & Musa, 2021; Oloruntola et al., 2024).

Civic and political awareness involves understanding rights, responsibilities, political processes, and participation in democratic practices. Educational experiences, family, media, and civic engagement opportunities shape students' awareness (Torney-Purta et al., 2020; Dijkstra et al., 2021). Schools that provide civic education and platforms for discussion improve students' understanding of civic values and democratic principles (Kahne & Middaugh, 2019; Watts et al., 2022). However, gaps exist in West Africa due to limited civic instruction and low engagement (Akpo & Ejike, 2023; Umar & Ibrahim, 2024). Nigerian studies suggest that while students show interest in national issues, their understanding of political institutions and democratic processes remains shallow (Lawal & Adekunle, 2021; Peter & Chukwu, 2023). Digital literacy also influences online civic and political engagement. Students with higher digital literacy critically evaluate political content, recognize bias, and participate in online civic discussions (Boulianne, 2020; Loader et al., 2021; Veseli et al., 2021; Kahne et al., 2023). Evidence from the US, Europe, and Africa shows that strong digital skills empower students to engage in civic activities and form informed political opinions (Montgomery & Focus, 2020; Valenzuela et al., 2022; Mensah & Agyei, 2023; Adebajo & Tunde, 2024). However, without critical skills, exposure to online content can result in misinformation and superficial engagement (Guess et al., 2020; Tandoc et al., 2021).

Statement of the Problem

While digital technologies provide opportunities for learning and civic participation, many students lack the skills to critically assess online content and engage responsibly. Limited access, inadequate guidance, and low digital competencies hinder students from benefiting fully from digital platforms. Understanding how digital literacy affects civic and political awareness among secondary school students in Gusau Educational Zone, Zamfara State, is crucial for promoting informed, responsible, and democratically minded citizens in the region.

Theoretical Framework

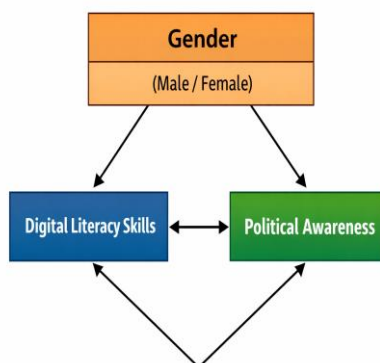
This study is anchored on Media Literacy Theory, proposed by Marshall McLuhan (1964), which emphasizes accessing, analyzing, evaluating, and interpreting information from media sources. The theory posits that individuals with strong media literacy can critically evaluate messages, identify misinformation, and make informed decisions. In today's digital environment, media literacy enables students to navigate complex information systems responsibly. The theory relates to this study because digital literacy allows students to access and interpret civic and political information online. Those with strong digital skills are more likely to understand democratic values, civic responsibilities, and political processes. Research indicates that media and digital literacy education strengthens students' civic engagement and political awareness by fostering critical thinking and informed participation (Hobbs, 2020; Mihailidis, 2022; Kahne et al., 2023). Therefore, Media Literacy Theory provides a solid

foundation for examining how digital literacy influences civic and political awareness among secondary school students in Gusau Educational Zone, Zamfara State.

Conceptual Framework

The conceptual framework of this study illustrates the relationship between gender and two key outcomes: digital literacy skills and political awareness among secondary school students in the Gusau Educational Zone. Gender, as the independent variable, is hypothesized to influence students' levels of digital literacy and political awareness. Additionally, the framework shows that digital literacy skills and political awareness are interrelated, suggesting that higher digital literacy may enhance students' understanding of civic and political matters. This framework guided the investigation of gender differences and the connection between digital literacy and political awareness.

Figure
Diagram of Conceptual Framework



The conceptual framework shows that gender (male/female) is considered the independent variable that influences both digital literacy skills and political awareness, which are the dependent variables. Additionally, it highlights that digital literacy skills and political awareness are related to each other, suggesting that higher digital literacy may be associated with greater political awareness among students.

Research Objectives

1. To determine whether there is a significant difference in digital literacy skills between male and female secondary school students in the Gusau Educational Zone.
2. To examine whether there is a significant difference in civic and political awareness between male and female secondary school students in the Gusau Educational Zone.
3. To investigate the differences in digital literacy skills and civic/political awareness between male and female secondary school students in the Gusau Educational Zone.

Research Questions

1. Is there a significant difference in digital literacy skills between male and female secondary school students in the Gusau Educational Zone?
2. Is there a significant difference in political awareness between male and female secondary school students in the Gusau Educational Zone?
3. What are the differences in digital literacy skills and political awareness between male and female secondary school students in the Gusau Educational Zone?

Research Hypotheses

1. H_{01} : There is no significant difference in digital literacy skills between male and female secondary school students in the Gusau Educational Zone.
2. H_{02} : There is no significant difference in civic and political awareness between male and female secondary school students in the Gusau Educational Zone.
3. H_{03} : There is no significant difference in digital literacy skills and political awareness between male and female secondary school students in the Gusau Educational Zone.

RESEARCH METHODS

This study adopted a descriptive survey design to examine gender differences in digital literacy skills and political awareness among secondary school students in the Gusau Educational Zone, Zamfara State. The design enabled a systematic description of existing conditions while allowing for hypothesis testing. The population comprised all SS2 students in public schools within Gusau and Tsafe LGAs, totaling 8,753 students. A stratified random sampling technique was used to ensure proportional representation of male and female students, and a sample of 365 students was selected based on the Research Advisors (2006) table. Data were collected using the Digital Literacy and Civic/Political Awareness Questionnaire (DLCPAQ), which included sections on demographics, digital literacy skills, and civic/political awareness, measured on a five-point Likert scale. The instrument was validated by experts in educational technology and social studies, and a pilot study yielded a Cronbach's alpha of 0.86, indicating high reliability. Questionnaires were administered during school hours with voluntary participation, confidentiality, and ethical approval from the Zamfara State Ministry of Education. Data were analyzed using IBM SPSS, employing independent samples t-tests and MANOVA to test the hypotheses at a 0.05 significance level.

RESULTS AND DISCUSSION

Table 1: Independent Sample t-test of Digital Literacy Skills by Gender

Gender	N	Mean	SD	t	df	p - value	Decision
Male	195	78.5	8.2	2.31	353	0.022	Reject
Female	160	75.1	9.0				

The result in Table 1 presents the independent sample t-test conducted to determine whether there is a significant difference in digital literacy skills between male and female secondary school students in the Gusau Educational Zone. The t-test result produced a t-value of 2.31 with 353 degrees of freedom and a p-value of 0.022. Since the p-value (0.022) is less than the 0.05 level of significance, the difference between the two groups is statistically significant. Therefore, the null hypothesis stating that there is no significant difference in digital literacy skills between male and female secondary school students in the Gusau Educational Zone is rejected. This implies that gender plays a significant role in the digital literacy skills of secondary school students in the Gusau Educational Zone, with male students demonstrating slightly higher digital literacy levels than their female counterparts.

Table 2: Independent Sample t-test of Political Awareness by Gender

Gender	N	Mean	SD	t	df	p - value	Decision
Male	195	70.2	7.6	1.87	353	0.063	Retained
Female	160	68.5	8.1				

The result in Table 2 presents the independent sample t-test conducted to determine whether there is a significant difference in political awareness between male and female secondary school students in the Gusau Educational Zone. The t-test result produced a t-value of 1.87 with 353 degrees of freedom and a p-value of 0.063. Since the p-value (0.063) is greater than the 0.05 level of significance, the observed difference between the two groups is not statistically significant. Therefore, the null hypothesis stating that there is no significant difference in political awareness between male and female secondary school students in the Gusau Educational Zone is retained (accepted). This implies that gender does not significantly influence the level of political awareness among secondary school students in the Gusau Educational Zone.

Table 3: MANOVA of Digital Literacy Skills and Political Awareness by Gender

Dependent Variable	Gender	N	Mean	SD	F	p - value	Decision
Digital Literacy Skills	Male	195	78.5	8.2	5.32	0.022	Reject
	Female	160	75.1	9.0			
Political Awareness	Male	195	70.2	7.6	3.41	0.065	Retained
	Female	160	68.5	8.1			

Table 3 presents the results of the MANOVA conducted to examine the differences in digital literacy skills and political awareness between male and female secondary school students in the Gusau Educational Zone. The analysis shows that digital literacy skills have an F-value of 5.32 with a p-value of 0.022. Since the p-value is less than the 0.05 level of significance, the null hypothesis is rejected. This indicates that there is a significant difference in digital literacy skills between male and female students. However, for political awareness, the analysis produced an F-value of 3.41 with a p-value of 0.065. Since the p-value is greater than the 0.05 level of significance,

the null hypothesis is retained. This implies that there is no significant difference in political awareness between male and female secondary school students in the Gusau Educational Zone.

Discussion of Findings

The findings of this study revealed that there is a significant difference in digital literacy skills between male and female secondary school students in the Gusau Educational Zone, with male students demonstrating higher digital literacy levels. This result aligns with the observations of Adeyinka and Ajayi (2022), who noted that gender disparities in digital competencies often exist due to differential access to digital resources and opportunities for skill development. Similarly, Bello and Musa (2021) found that male students in Nigerian secondary schools tend to have greater familiarity with technology tools and online platforms, which may account for higher digital literacy scores. Ng (2019) emphasized that exposure and quality of instruction are critical determinants of digital literacy, which could explain why male students in the study exhibited slightly higher proficiency. The result also supports the assertion of Martin (2020) that students often possess basic digital skills but differ in higher-order skills like evaluating credibility, which may vary by gender. Furthermore, Livingstone (2021) and Helsper and Eynon (2022) noted that socioeconomic and infrastructural factors disproportionately affect female students' engagement with digital tools, potentially limiting their digital literacy development.

The finding that gender does not significantly influence political awareness among students is consistent with previous studies indicating that access to political information does not always translate into gender-based differences in awareness. Lawal and Adekunle (2021) observed that Nigerian students, regardless of gender, show moderate understanding of civic duties and political processes. Akpo and Ejike (2023) similarly highlighted that limited civic education and low engagement in West African schools contribute to minimal gender disparities in political awareness. Kahne et al. (2023) further emphasized that digital literacy enhances political awareness, but when overall literacy levels are moderate across genders, differences may not be significant. Veseli et al. (2021) noted that exposure to online political content fosters engagement, but without critical skills, both male and female students may engage similarly at a superficial level. Additionally, Mohamed and Hermansyah (2024) argued that digital platforms improve civic understanding for all students, irrespective of gender, which may explain the non-significant differences in political awareness observed in this study.

The MANOVA results reinforced these findings, confirming that while digital literacy skills differ significantly between male and female students, political awareness does not. This supports the assertion of Yang (2024) that digital literacy is a distinct skill set influenced by access, practice, and confidence, which can vary by gender, whereas political awareness is more broadly shaped by school experiences, media exposure, and civic instruction (Torney-Purta et al., 2020; Dijkstra et al., 2021). The results underscore the need for targeted interventions to bridge digital literacy gaps among female students while promoting equal opportunities for civic and political engagement.

CONCLUSION

The study concluded that gender significantly influences digital literacy skills among secondary school students in the Gusau Educational Zone, with male students demonstrating slightly higher proficiency than their female counterparts. However, no significant gender difference was observed in political awareness, indicating that both male and female students have similar levels of understanding regarding civic and political matters. These findings suggest that while access to and engagement with digital tools may vary by gender, exposure to civic and political information is more evenly distributed among students.

RECOMMENDATIONS

1. Schools should implement targeted digital literacy programs to support female students in developing higher-order digital skills.
2. Teachers should integrate digital tools into classroom activities to provide equal opportunities for all students to enhance their digital competencies.
3. Government and educational authorities should ensure equitable access to digital devices and internet resources in schools.
4. Civic and political education should be strengthened through practical activities, discussions, and online resources to maintain balanced awareness across genders.
5. Regular training and workshops for teachers on digital literacy and civic engagement should be conducted to improve instructional effectiveness and student outcomes.

BIBLIOGRAPHY

- Adebanjo, A., & Tunde, O. (2024). Digital engagement and youth political awareness in Nigeria. *Journal of African Media Studies*, 16(1), 58–74.
- Adeyinka, A., & Ajayi, T. (2022). Digital literacy challenges among secondary students in Sub-Saharan Africa. *International Journal of Education & Development*, 7(2), 101–115.
- Akpo, P., & Ejike, C. (2023). Teaching civic education and student participation in West African secondary schools. *Education and Society*, 12(4), 225–239.
- Arrazak, M., & Adnan, M. (2024). Digital literacy and political awareness among youth in the digital era. *Journal of Digital Society Studies*, 8(2), 115–129.
- Asante, K., Boateng, R., & Osei, S. (2025). Digital citizenship and youth participation in democratic processes in developing countries. *Journal of Information Technology and Society*, 12(1), 45–59.
- Bajwa, R., Khalid, A., & Shah, M. (2025). Social media exposure and political awareness among secondary school students. *International Journal of Social Sciences and Education*, 15(1), 66–78.
- Bello, S., & Musa, H. (2021). Mobile phones and digital learning: Usage patterns of Nigerian secondary students. *Education and Information Technologies*, 26(3), 3099–3118.

- Boulianne, S. (2020). Social media use and civic engagement: A meta-analysis. *Journal of Communication*, 7(3), 274–291.
- Dijkstra, A., et al. (2021). School experiences and youth civic attitudes. *Youth & Society*, 53(5), 703–723.
- Gomez-Galan, J. (2018). Media education as theoretical and practical paradigm for digital literacy: An interdisciplinary analysis. *E-Learning and Digital Media*, 15(4), 173–189. <https://doi.org/10.1177/2042753018786515>
- Guess, A., et al. (2020). Misinformation and digital literacy. *Journal of Information Technology & Politics*, 17(2), 159–174.
- Hauge, T. E., Lund, A., & Vestøl, J. M. (2014). Preparing teachers for digital competence in education. *Nordic Journal of Digital Literacy*, 9(4), 243–258.
- Helsper, E. J., & Eynon, R. (2022). Digital skills and inequality. *Social Science Computer Review*, 40(1), 3–20.
- Hobbs, R. (2020). *Media literacy in the digital age*. Oxford University Press.
- Kahne, J., Lee, N., & Feezell, J. T. (2023). Digital media literacy education and youth civic and political participation. *Journal of Media Literacy Education*, 15(2), 45–60.
- Kahne, J., & Middaugh, E. (2019). Citizenship education in digital age schools. *Educational Researcher*, 48(1), 34–45.
- Kahne, J., et al. (2023). Digital competence and political engagement. *Journal of Media Literacy Education*, 15(2), 50–68.
- Lawal, D., & Adekunle, F. (2021). Civic awareness among Nigerian secondary students. *African Journal of Education Studies*, 9(2), 88–96.
- Li, Y. (2023). Digital citizenship education and students' civic engagement in the digital age. *Journal of Educational Technology and Society*, 26(2), 98–109.
- Livingstone, S. (2021). Critical digital literacies. *Learning, Media and Technology*, 46(3), 294–307.
- Marshall McLuhan. (1964). *Understanding media: The extensions of man*. McGraw-Hill.
- Mensah, M., & Agyei, E. (2023). Digital platforms and youth civic awareness in Ghana. *Journal of African Youth Studies*, 5(3), 77–94.
- Mihailidis, P. (2022). Civic media literacies: Re-imagining engagement for civic intentionality. *Journal of Media Literacy Education*, 14(1), 1–10.
- Mohamed, S. H., & Hermansyah, S. (2024). The role of digital media in developing civic literacy among high school students in the era of social transformation. *SMART: Journal of Multidisciplinary Educational Research*, 2(2), 45–54.
- Montgomery, K., & Focus, L. (2020). Youth digital engagement and civic participation. *Political Communication*, 37(4), 410–433.
- Nasir, M., & Riaz, S. (2024). Digital literacy and civic participation among youth in developing societies. *Journal of Social and Educational Research*, 11(3), 120–134.
- Ng, W. (2019). Teachers' and students' digital literacy in schools. *Computers & Education*, 135 (40), 85–97.
- Obiora, G., & Ayodele, J. (2023). Constraints to digital learning in Nigerian secondary schools. *Information Technology Education Journal*, 19(1), 27–42.

- Oloruntola, V., et al. (2024). Evaluating digital competencies of Nigerian students. *Journal of Educational Technology Review*, 10(1), 12–28.
- Peter, M., & Chukwu, U. (2023). Social studies and civic engagement in Nigerian schools. *Journal of Curriculum Studies*, 18(2), 101–118.
- Salam, A., Hussain, T., & Ali, Z. (2024). Social media use and political engagement among adolescents. *Journal of Political Communication Studies*, 9(1), 33–47.
- Tandoc, E. C., Lim, Z. W., & Ling, R. (2021). Defining “fake news.” *Journalism*, 19(5), 557–569.
- Torney-Purta, J., et al. (2020). *Civic education and political socialization*. Routledge.
- Umar, S., & Ibrahim, M. (2024). Civic knowledge gaps among Nigerian secondary students. *Educational Research Quarterly*, 47(3), 129–146.
- Valenzuela, S., et al. (2022). Youth online participation and political knowledge. *Journal of Computer-Mediated Communication*, 27(1), 160–178.
- Veseli, B., et al. (2021). Digital literacy and political engagement of youth. *Information, Communication & Society*, 24(14), 2048–2066.
- Yang, J. (2024). Exploring the integration of media literacy into civic and political education in the digital era. *Applied Mathematics and Nonlinear Sciences*, 9(1), 1–12. <https://doi.org/10.2478/amns-2024-0801>