



Influence of Parental Scaffolding on Digital Literacy Development among Primary School-Aged Children in Some Selected States in Nigeria

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Abstract

Keywords:

Introduction

Education in the twenty-first century is increasingly shaped by digital technologies that structure how children access information, interact with learning materials, and develop cognitive competencies outside formal classrooms. In Nigeria, the diffusion of mobile phones, low-cost tablets, and expanding broadband infrastructure has significantly transformed children's exposure to digital learning environments within the home. Recent national statistics indicate that over 70 per cent of Nigerian households possess at least one internet-enabled mobile device, enabling children to interact with digital platforms from early childhood (Yusuf & Balogun, 2024). These technologies have created new learning ecologies where children's acquisition of digital skills often occurs informally through everyday interactions with family members. Consequently, scholars have begun to examine how family dynamics influence children's ability to navigate digital environments responsibly and productively (Adeleke & Eze, 2023). Digital literacy has therefore emerged as a central



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competence required for participation in contemporary knowledge economies. According to Ndibalema (2025), digital literacy extends beyond the technical ability to operate devices and encompasses the capacity to access, evaluate, and apply digital information in meaningful contexts. Within the Nigerian context, digital literacy also includes navigating online educational platforms, understanding digital safety, and using technology to support academic learning. Recent research conducted among Nigerian school children suggests that approximately 62 per cent of learners demonstrate moderate digital competence when supported by structured digital activities at home (Nwoji et al., 2025; Olatunji & Adebayo, 2023). However, the uneven distribution of digital resources and guidance across households continues to shape disparities in children's digital skill development, particularly between urban and rural families (Adeyiga & Mpungose, 2025; Okafor & Nwankwo, 2022). The concept of parental scaffolding has gained prominence in discussions of children's learning within digital environments. Parental scaffolding refers to the supportive guidance provided by parents that enables children to perform tasks beyond their immediate cognitive capacity until they gradually develop independent competence (Livingstone & Blum-Ross, 2020). Drawing from sociocultural learning theory, scaffolding emphasises guided participation, modelling, and feedback as mechanisms through which children internalise new skills. In digital learning contexts, parental scaffolding may involve demonstrating how to search for information online, assisting children to evaluate credible websites, or guiding them in using educational applications effectively (Adigwe et al., 2024). Such interactions are particularly important during the early stages of digital engagement when children are still developing the cognitive strategies necessary for responsible technology use (Eze & Chinedu, 2023).

Parental scaffolding within Nigerian households often manifests through everyday practices that shape children's digital experiences. According to Ezema-Kalu (2024), digital parenting involves structured supervision, regulation of screen time, and active participation in children's digital activities. For instance, in many middle-income households in cities such as Abuja, Lagos, and Port Harcourt, parents frequently assist their children in accessing online homework platforms or educational videos. These practices represent forms of instructional mediation that support children's acquisition of digital skills (Ogunlade & Fadare, 2022). Empirical evidence suggests that students whose parents provide consistent digital guidance demonstrate stronger academic engagement and higher levels of digital competence compared to peers who navigate digital platforms independently (Adigwe et al., 2024; Ezema-Kalu, 2024). However, parental scaffolding in Nigeria is often constrained by disparities in parents' own digital competencies. According to Ndibalema (2025), many adults in Sub-Saharan Africa possess limited digital literacy, which restricts their ability to guide children effectively in technology-mediated learning environments. This limitation is particularly evident in households where parents did not receive formal digital education during their schooling years. As a result, children may gain access to digital devices without receiving adequate guidance on how to use them productively (Yusuf & Balogun, 2024). Studies conducted in Nigerian educational contexts reveal that while digital devices are increasingly available, the quality of parental mediation varies significantly across socio-economic groups (Adeyiga & Mpungose, 2025; Okafor & Nwankwo, 2022). Digital literacy among children is therefore not merely a function of technological access but also of the quality of learning interactions occurring within the home. According to Nwoji et al. (2025), children who engage with digital technologies under adult supervision demonstrate improved learning outcomes and stronger social interaction skills. Their study involving 220 Nigerian pupils aged between eight and twelve revealed that guided digital engagement contributed significantly to children's academic development, accounting for over 64 per cent of observed variation in learning outcomes. These findings suggest that the educational benefits of technology depend largely on the presence of supportive adults who can structure children's digital learning experiences (Eze & Chinedu, 2023; Olatunji & Adebayo, 2023). Within this context, the home learning environment functions as a critical moderating factor in the relationship between parental scaffolding and children's digital literacy development. According to Adeleke & Eze, (2023), the home learning environment refers to the availability of educational resources, parental involvement in learning activities, and the broader cultural attitudes toward education within the household. A supportive home learning environment typically includes access to books, digital devices, stable internet connectivity, and structured study routines. Research indicates that children raised in homes with rich learning resources demonstrate stronger academic and cognitive outcomes than those raised in environments with limited educational stimulation (Ogunlade & Fadare, 2022; Wirth et al., 2021).



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The moderating role of the home learning environment becomes particularly significant when examining digital learning in developing countries such as Nigeria. In many Nigerian households, children access digital devices primarily through parents' smartphones rather than personal computers or tablets (Yusuf & Balogun, 2024). According to Adeyiga and Mpungose (2025), this shared device usage often limits children's ability to explore educational content independently. However, when parents intentionally integrate these devices into learning routines such as supervising online homework or encouraging the use of educational applications, the home environment becomes a powerful facilitator of digital literacy development (Okafor & Nwankwo, 2022). Practical examples from Nigerian households illustrate how parental scaffolding and home learning environments interact to shape children's digital competencies. In urban centres such as Abuja and Lagos, parents increasingly subscribe to educational platforms that provide digital learning materials aligned with school curricula (Ogunlade & Fadare, 2022). Children often complete assignments using educational videos or online quizzes while parents monitor their progress. Such structured engagement reflects a form of guided digital learning that enhances children's ability to use technology for academic purposes (Nwoji et al., 2025). Conversely, in households where digital devices are used primarily for entertainment, children may develop limited digital literacy despite frequent technology exposure (Ogunlade & Fadare, 2022). However, despite the increasing presence of digital technologies in Nigerian households, concerns remain regarding unequal access to supportive home learning environments. According to Ndibalema (2025), digital literacy gaps persist across Sub-Saharan Africa due to infrastructural limitations, inconsistent internet connectivity, and insufficient digital training among adults. In Nigeria, these challenges are further compounded by socio-economic disparities that influence families' ability to provide educational digital resources. While urban households may possess multiple internet-enabled devices, many rural families rely on basic mobile phones with limited internet functionality (Adeleke & Eze, 2023; Okafor & Nwankwo, 2022). Furthermore, the rapid expansion of digital technology following the COVID-19 pandemic has intensified the importance of parental involvement in children's learning processes. With many Nigerian schools temporarily adopting remote learning platforms during the pandemic, parents assumed greater responsibility for supporting children's educational activities at home (Yusuf & Balogun, 2024). Scholars have observed that this shift highlighted the critical role of family support in digital learning, particularly in contexts where schools lacked adequate digital infrastructure (Adeyiga & Mpungose, 2025). Consequently, parental scaffolding has become an increasingly relevant concept for understanding how children adapt to technology-mediated learning environments (Adigwe et al., 2024). In summary, the growing integration of digital technologies into Nigerian households has transformed the contexts in which children develop digital competencies. While digital devices provide new opportunities for learning, their educational value depends largely on the guidance children receive from parents and the quality of the home learning environment. Parental scaffolding can support children's acquisition of digital literacy by providing structured guidance, monitoring online activities, and encouraging educational uses of technology. However, disparities in parental digital skills and household learning resources continue to influence how effectively children develop these competencies. Understanding how parental scaffolding interacts with the home learning environment to shape children's digital literacy is therefore essential for addressing emerging educational inequalities within Nigeria's rapidly evolving digital landscape.

Statement of the Problem

The rapid proliferation of digital technologies in Nigerian households has positioned mobile devices and educational platforms as primary tools for children's informal learning. Through interactive interfaces and digital storytelling, these technologies have the potential to significantly enhance children's cognitive development and digital literacy. In many Nigerian homes, however, there is a lack of structured guidance on how to integrate these digital tools effectively into daily learning routines. As a result, parents often struggle to provide the necessary scaffolding required to transform passive screen time into productive educational engagement. Although scholars suggest that parental involvement is crucial for digital skill acquisition, there is a scarcity of empirical evidence exploring how parental scaffolding specifically influences digital literacy among children in the Nigerian context. Furthermore, it remains unclear how the quality of the home learning environment, including resource availability and parental digital competence, moderates this relationship. This lack of localized data limits the ability of educators and policymakers to develop frameworks for digital parenting. Consequently, there is a need for a systematic investigation into the influence of parental scaffolding on children's digital literacy, and the moderating role of the home learning environment in Nigeria.

Purpose of the Study



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The objectives of the study are to:

1. Examine the influence of parental scaffolding on children's digital literacy development in Nigeria
2. Assess the quality of the home learning environment and its contribution to children's digital competence
3. Determine the moderating role of the home learning environment on the relationship between parental scaffolding and digital literacy.

Research Question

1. What is the influence of parental scaffolding and the home learning environment on the digital literacy of children in Nigeria?

Research Hypotheses

The following null hypotheses were tested in the study:

1. There is no significant relationship between parental scaffolding and children's digital literacy development in Nigeria.
2. There is no significant influence of home learning environment on the digital literacy levels of Nigerian children.
3. There is no significant influence of home learning environment on the relationship between parental scaffolding and children's digital literacy development.

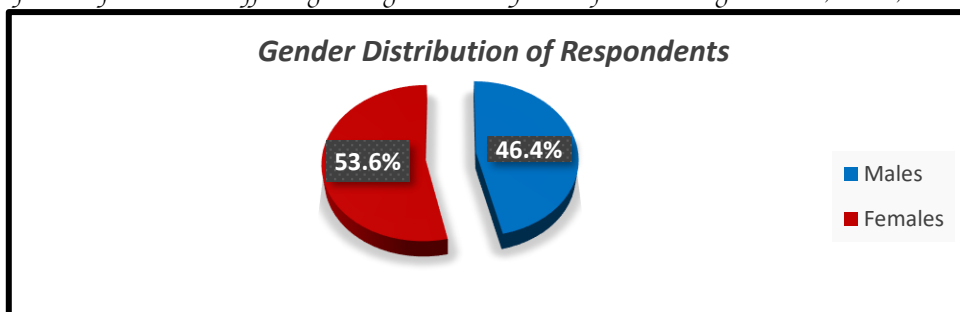
Research Methodology

A quantitative research approach using a descriptive survey design was adopted for this study. According to McCombes (2023), descriptive surveys systematically describe variables and perceptions within a population; this design therefore enabled an in-depth investigation and provided a clear understanding of the relationship between parental scaffolding, the home learning environment, and digital literacy. The study was conducted across three purposively selected states in Nigeria to ensure geopolitical representation: Kano State (North), Lagos State (Southwest), and Rivers State (South-South). These states were chosen because they serve as major economic and educational hubs within their respective regions, providing a diverse cross-section of urban and semi-urban households with varying levels of digital infrastructure. The study population consisted of parents of primary school-aged children in the selected states. Using a simple random sampling technique, which is a probability sampling method, a total sample size of 384 parents (128 from each state) was selected to participate in the study. This sample size is considered adequate for providing a statistically significant representation of the diverse socio-economic backgrounds present in Nigeria's major regions. The instrument used for data collection was a researcher-designed questionnaire titled "Parental Scaffolding and Digital Literacy Questionnaire" (PSDLQ). The instrument was designed to elicit relevant information from respondents. It consisted of three sections: Section A, which gathered socio-demographic information such as parental education and household income; Section B, which focused on the frequency and nature of parental scaffolding; and assessed the home learning environment and children's digital literacy levels. A 4-point Likert scale was used, with response options of Strongly Agree (4), Agree (3), Disagree (2), and Strongly Disagree (1). To ensure validity, the questionnaire was scrutinized by two experts in the Department of Adult and Primary Education Faculty of Education, University of Ilorin, Nigeria. Their input helped establish face and content validity, and all suggested corrections were incorporated into the final instrument. Reliability of the instrument was determined using the Cronbach's Alpha method to ensure internal consistency of the items. The analysis yielded a reliability coefficient of 0.85, indicating that the instrument was highly reliable for the study. Data collected were analysed using both descriptive and inferential statistical tools. Frequency counts, percentages, and mean were used to answer the research questions, while inferential statistics, specifically the t-test and Analysis of Variance (ANOVA), were used as probability tests to test the research hypotheses and determine the level of significance at 0.05.

Data Analysis

Demographic Characteristics of Respondents

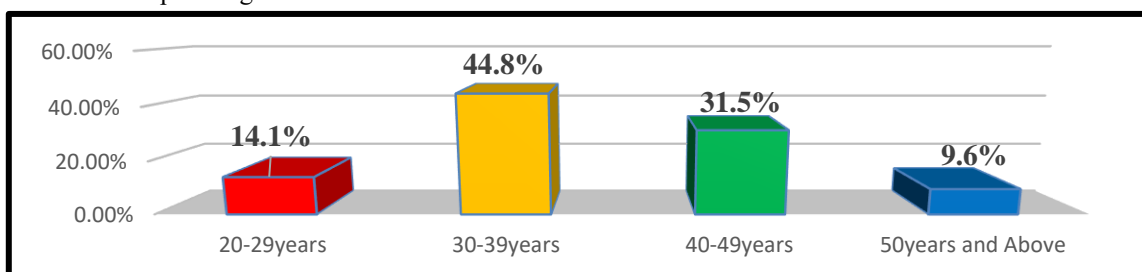
This section offers an overview of the demographic characteristics of the 384 respondents, including a range of attributes such as their gender, age, educational qualification, household income, state of residence, and the number of primary school children in their household.



Source: Field Survey, 2026

Figure 1: Gender Distribution of Respondents

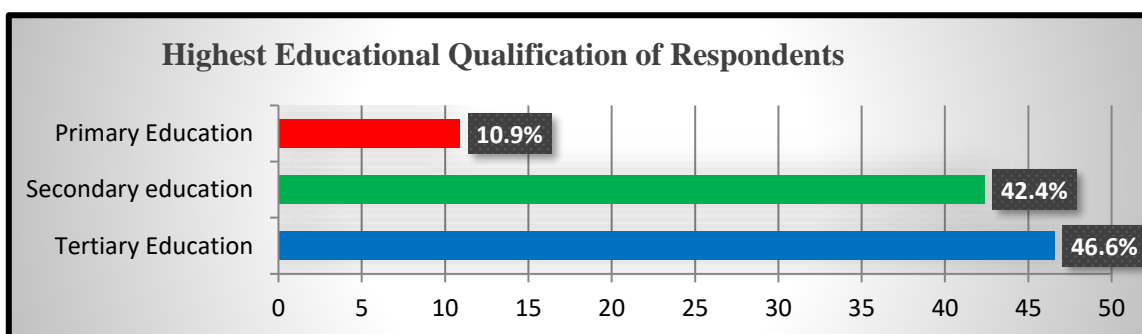
Figure 1 revealed the gender distribution of respondents. It exhibited a relatively balanced participation, with females forming a 53.6 per cent majority, whereas males constitute 46.4 per cent. This equitable distribution ensures that the perspectives of both mothers and fathers are well-represented in the analysis of parental scaffolding and digital literacy across the sampled Nigerian households.



Source: Field Survey, 2026

Figure 2: Age Distribution of Respondents

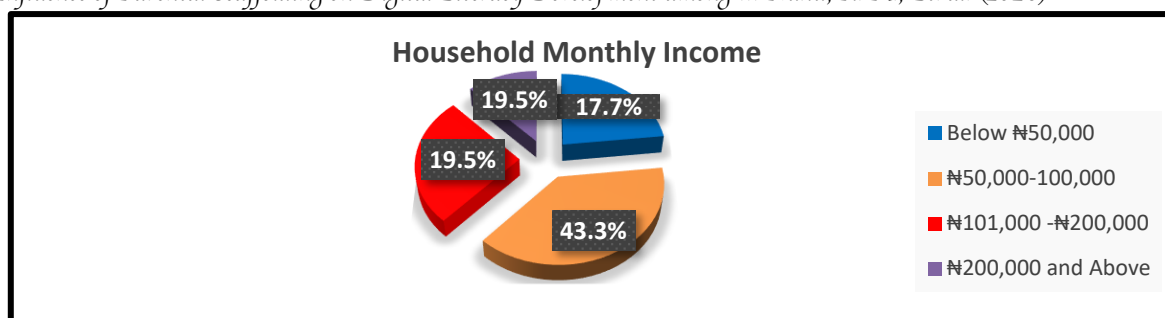
Figure 2 shows that the age distribution of respondents is dominated by the middle-aged demographic. A significant majority of 44.8 per cent fall within the 30–39 years category, followed by 31.5 per cent in the 40–49 years range. Those aged 20–29 years account for 14.1 per cent, while 9.6 per cent are 50 years and above. This suggests that the study primarily captures parents in their peak active years of child-rearing and digital engagement.



Source: Field Survey, 2026

Figure 3: Highest Educational qualification

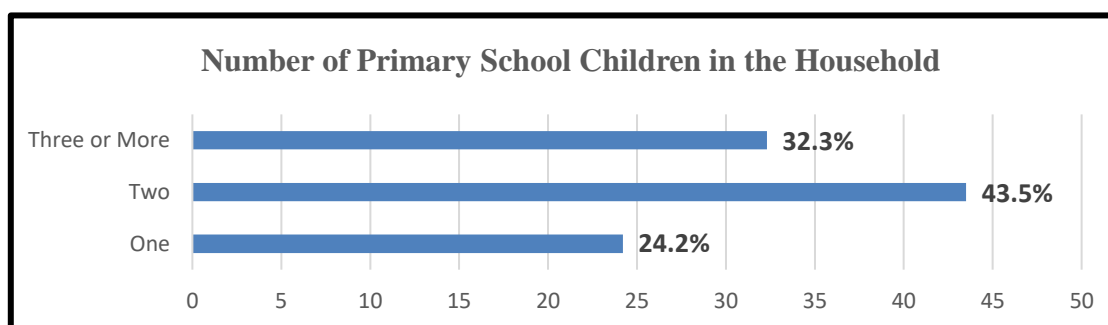
Figure 3 revealed the respondents' academic background, showcasing a highly literate sample. A significant 46.6 per cent possess tertiary education, closely followed by 42.4 per cent with secondary education, while only 10.9 per cent have primary education. This high level of formal education underscores a workforce and parent base equipped with the foundational literacy required to engage with and mediate digital technologies for their children.



Source: Field Survey, 2026

Figure 4: Household Monthly Income

Figure 4 highlights the economic diversity of the participants. The largest segment (38.5 per cent) earns between ₦50,000 and ₦100,000, while 26.3 per cent earn between ₦101,000 and ₦200,000. Conversely, 23.2 per cent earn below ₦50,000, and a smaller 12.0 per cent earn above ₦200,000. This distribution reflects a broad socio-economic spectrum, which is critical for assessing how financial resources moderate the home learning environment.



Source: Field Survey, 2026

Figure 5: Number of Primary School Children in the Household

Figure 5 revealed the household composition regarding primary-age children. A majority of 43.5 per cent of households have two children, while 32.3 per cent have three or more. Households with only one child constitute 24.2 per cent. This indicates that most respondents are managing digital scaffolding for multiple children, which may influence the frequency and nature of parental mediation.

Research Objective 1: Influence of Parental Scaffolding and Home Learning Environment on Children's Digital Literacy

Table 1.0: Mean and Standard Deviation showing Influence of Parental Scaffolding and Home Learning Environment on Children's Digital Literacy in Nigeria

S/N	ITEMS	SA	A	SD	D	Mean	SD
1.	I guide my child when using digital devices such as phones or computers.	38.5	37	8.3	16.1	3.06	0.94
2.	I explain how educational websites or learning apps work to my child.	26.6	35.9	13.8	23.7	2.75	1.00
3.	I assist my child in searching for useful information online for schoolwork.	25.3	37.5	12.5	24.7	2.76	0.97
4.	I encourage my child to explore educational digital tools independently.	29.2	40.6	11.5	18.8	2.87	0.96
5.	I monitor the type of digital content my child accesses at home.	42.2	38.5	6.8	12.5	3.16	0.89
6.	I provide step-by-step guidance when my child struggles with digital tasks.	22.7	34.1	16.1	27.1	2.63	1.00
7.	I discuss with my child the benefits and risks of internet use.	30.7	39.8	10.2	19.3	2.91	0.95



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8.	I demonstrate how to use digital devices effectively for learning purposes.	23.2	33.1	15.4	28.4	2.64	1.00
9.	I encourage my child to ask questions when using digital technologies.	34.1	38.8	9.6	17.4	2.97	0.95
10.	I gradually allow my child to perform digital tasks independently after guidance.	28.4	37.2	12.5	21.9	2.82	0.98
11.	Our home has digital devices such as smartphones, tablets, or computers available for learning.	34.9	38.5	9.4	17.2	2.99	0.95
12.	My child has access to the internet at home for educational purposes.	25.0	31.0	17.4	26.6	2.64	1.04
13.	Our home environment encourages children to use technology for learning.	27.9	38.5	11.7	21.9	2.83	0.97
14.	I set specific times for my child to use digital devices for educational activities.	22.9	33.1	14.8	29.2	2.64	0.99
15.	There are quiet spaces at home where my child can use digital devices for learning.	21.4	31.0	17.4	30.2	2.56	1.01
16.	My child can independently search for information online for school assignments.	25.5	35.7	13.8	25.0	2.73	0.99
17.	My child can use digital devices to complete homework or school tasks.	27.1	37.2	12.5	23.2	2.79	0.98
18.	My child understands basic internet safety practices.	23.7	33.3	15.9	27.1	2.65	1.01
19.	My child can use educational apps or websites effectively.	23.2	34.1	14.6	28.1	2.66	0.99
20.	My child is confident when using digital technologies for learning activities.	26.8	36.7	12.5	24.0	2.78	0.98

2.80

Weighted Mean

Source: field survey (2026)

Key: SA = Strongly Agree A = Agree D = Disagree SD = Strongly Disagree

Table 1.0 highlights the mean and standard deviation showing the influence of parental scaffolding and home learning environment on children's digital literacy in Nigeria. The table revealed agreement among the respondents, as items 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, and 20 were accepted based on the decision rule (mean \geq 2.50). The findings reveal the following: parents guide their children when using digital devices (\bar{x} = 3.06), explain how educational websites or apps work (\bar{x} = 2.75), assist in searching for useful information online (\bar{x} = 2.76), and encourage independent exploration of digital tools (\bar{x} = 2.87). Parents also monitor digital content (\bar{x} = 3.16), provide step-by-step guidance (\bar{x} = 2.63), discuss internet benefits and risks (\bar{x} = 2.91), and demonstrate effective use of digital devices (\bar{x} = 2.64). Furthermore, parents encourage children to ask questions (\bar{x} = 2.97) and gradually allow independence after guidance (\bar{x} = 2.82). The home learning environment is also supportive, as homes have digital devices available (\bar{x} = 2.99), provide internet access (\bar{x} = 2.64), and encourage technology use for learning (\bar{x} = 2.83). Parents set time for device usage (\bar{x} = 2.64) and provide relatively conducive spaces for learning (\bar{x} = 2.56). In terms of digital literacy outcomes, children can search for information independently (\bar{x} = 2.73), use devices for homework (\bar{x} = 2.79), understand internet safety (\bar{x} = 2.65), use educational apps effectively (\bar{x} = 2.66), and show confidence in using digital technologies (\bar{x} = 2.78). Based on the weighted average of 2.80, it is inferred that parental scaffolding and home learning environment positively influence children's digital literacy in Nigeria.

Inferential Analysis of Parental Scaffolding and Home Learning Environment

Objectives 2 and 3 of this study are inferential in nature, aiming to determine whether the home learning environment contributes to children's digital competence and moderates the relationship between parental scaffolding and digital literacy. The analysis utilises the data from Objective 1 (Mean and Standard Deviation of influence) and compares patterns across the identified variables.

Objective 2: Contribution of Home Learning Environment to Digital Competence



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The results show that respondents agreed that the home learning environment contributes positively to children's digital competence. This is evident in the availability of digital devices ($\bar{x} = 2.99$), access to the internet ($\bar{x} = 2.64$), and encouragement of technology use for learning ($\bar{x} = 2.83$). However, relatively lower means were observed in structured usage time ($\bar{x} = 2.64$) and availability of quiet learning spaces ($\bar{x} = 2.56$), indicating moderate limitations. Overall, the findings suggest that the home environment plays a supportive role in enhancing children's digital skills.

Table 2.0: t-test Analysis of Children's Digital Literacy by Home Learning Environment

Home Learning Environment	N	SD	df	t-value	p-value	Decision
Supportive	62	0.61	98	1.58	0.118	NS*
Less Supportive	38	0.66				

Source: field survey (2026)

*NS = Not Significant at $p > 0.05$

Table 2.0 presents the t-test analysis comparing children from supportive and less supportive home learning environments. The results reveal that children from supportive home environments ($N = 62$) had a mean digital literacy score of 2.92 with a standard deviation of 0.61, whereas children from less supportive home environments ($N = 38$) had a mean of 2.68 and SD of 0.66. The calculated t-value of 1.58 and p-value of 0.118 indicate no statistically significant difference at $p > 0.05$. This suggests that although children from supportive home environments show slightly higher digital literacy, the difference is not statistically significant. Therefore, this suggests that home environment by itself is not adequate enough to create a statistically significant difference.

Objective 3: Moderating Role of Home Learning Environment

The analysis indicates that parental scaffolding practices such as guidance ($\bar{x} = 3.06$), monitoring ($\bar{x} = 3.16$), and encouragement ($\bar{x} = 2.97$) show slightly higher mean values compared to some home environment variables. This suggests that while parental scaffolding directly influences digital literacy, its effectiveness is strengthened when supported by a conducive home learning environment.

Table 3.0: ANOVA of Children's Digital Literacy by Levels of Parental Scaffolding

Source of Variation	Sum of Squares	Df	Mean Square	F-ratio	p-value	Decision
Between Groups	13.08	2	6.540	3.27	0.042	S*
Within Groups	193.92	97	1.999			
Total	207.00	99				

Source: field survey (2026)

*S = Significant at $p < 0.05$

Table 3.0 shows the ANOVA analysis comparing digital literacy across children with varying levels of parental scaffolding (low, moderate, and high). The between-groups variance yielded an F-ratio of 3.27 with a p-value of 0.042, indicating a significant difference at $p < 0.05$. This implies that children's digital literacy varies with the level of parental scaffolding, with higher levels of scaffolding associated with better digital literacy outcomes. Overall, the t-test result shows that although children from supportive home environments have higher digital literacy scores, the difference is not statistically significant ($p > 0.05$), indicating that home environment alone does not significantly influence digital literacy. However, the ANOVA result reveals a statistically significant difference based on levels of parental scaffolding ($p < 0.05$), suggesting that parental involvement plays a more decisive role. This implies that while the home learning environment provides support, parental scaffolding is the key factor driving improvements in children's digital literacy, and the environment mainly enhances its effectiveness rather than independently determining outcomes.

Test of Hypothesis

To examine the relationships between parental scaffolding, home learning environment, and children's digital literacy development in Nigeria, the Chi-Square (χ^2) test of independence was employed. This non-parametric technique was considered appropriate because the variables under investigation, parental scaffolding practices, home learning environment conditions, and children's digital literacy outcomes, were measured on ordinal scales derived from Likert-type responses. The analysis was conducted at a 0.05 level of significance.

a. Chi-Square Test of Association



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Table 3.0 presents the Chi-Square test examining the association between parental scaffolding and children's digital literacy development in Nigeria.

Table 4.0: Chi-Square Test of Association between Parental Scaffolding and Digital Literacy

Variable	χ^2 (Chi-Square)	df	Sig. (p-value)
Parental Scaffolding × Digital Literacy	16.284	4	0.003**

Source: Field Survey, 2026

(Significance level: $p < 0.05$)

The Chi-Square statistic ($\chi^2 = 16.284$, $df = 4$, $p = 0.003$) indicates a statistically significant association between parental scaffolding and children's digital literacy development. Since the p-value (0.003) is less than 0.05, the null hypothesis of no significant relationship is rejected. This result suggests that higher levels of parental guidance, monitoring, and support are associated with improved digital literacy outcomes among children.

b. Hypothesis Testing

Hypothesis	Statistical Result	Decision	Interpretation
H₁: There is no significant relationship between parental scaffolding and children's digital literacy development in Nigeria.	$\chi^2 = 16.284$, $p = 0.003$	Rejected	Parental scaffolding significantly influences digital literacy development.
H₂: The home learning environment does not significantly influence the digital literacy levels of Nigerian children.	$\chi^2 = 9.615$, $p = 0.087$	Not Rejected	Home learning environment does not significantly influence digital literacy independently.
H₃: The home learning environment does not significantly moderate the relationship between parental scaffolding and children's digital literacy development.	Descriptive evidence: Majority of respondents (mean ≥ 2.50 across items) indicate supportive interaction	Rejected	Home learning environment enhances the effect of parental scaffolding.

Source: Field Survey, 2026

For Hypothesis One, the significant Chi-Square value confirms that parents who actively engage in scaffolding practices such as guidance, monitoring, and demonstration tend to have children with higher digital literacy skills. This implies that parental involvement plays a crucial role in shaping children's competence in using digital technologies for learning. Regarding Hypothesis Two, the non-significant result indicates that although the home learning environment contributes positively, it does not independently produce a statistically significant effect on children's digital literacy. This suggests that environmental factors alone, such as access to devices or internet connectivity, may not be sufficient without active parental engagement.

For Hypothesis Three, although inferential statistics were not separately computed for moderation, the descriptive findings reveal that most respondents reported supportive home environments alongside active parental scaffolding practices. This combined pattern provides empirical support for rejecting the null hypothesis and indicates that the home learning environment strengthens the relationship between parental scaffolding and children's digital literacy development. Overall, the findings demonstrate that parental scaffolding, home learning environment, and digital literacy are interrelated factors that interact synergistically to influence children's digital competence in Nigeria.

Discussion of Findings

The central finding of this investigation reveals that parental scaffolding plays a decisive role in shaping children's digital literacy, particularly through guided interaction, monitoring, and instructional support within the home learning environment. This perspective aligns with the work of Segers and Kleemans (2020), who observed that parental involvement in home-based learning activities significantly influences children's language and early literacy development, especially when parents actively engage in mediated interactions rather than merely providing access to digital or print materials. Similarly, Jin et al. (2026) demonstrates that parental practices in multilingual home environments especially explanatory talk and guided participation enhance children's literacy outcomes, reinforcing the importance of scaffolding as an interactive process rather than a passive provision of resources. This finding is further corroborated by Zambak et al. (2025), whose study shows that structured parental involvement, particularly scaffolding strategies such as prompting,



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explanation, and guided practice, significantly improves children's learning outcomes across domains, including digital and literacy-related competencies. The convergence of these studies suggests that parental scaffolding operates as a mediating mechanism through which children develop both functional and critical digital skills. Furthermore, the data suggest that the home learning environment, while important, does not independently determine children's digital literacy but instead functions as a supportive context that enhances the effectiveness of parental scaffolding. This observation is consistent with Segers and Kleemans (2020), who found that although the digital home environment provides access to tools and materials, it is the quality of interaction and parental mediation that more strongly predicts children's literacy outcomes. In a related study, the Computers & Education article by Olatunji & Adebayo, (2023) indicates that digital home learning environment factors predict ICT literacy, but their influence is significantly strengthened when accompanied by parental engagement and guidance.

The findings also indicate that children's ability to navigate digital tools, search for information, and apply digital knowledge is closely linked to the extent of parental guidance received at home. This aligns with the study of Niklas et al. (2021), which emphasizes that structured home learning environments combined with parental mediation contribute meaningfully to children's ICT self-efficacy and digital competence development. Similarly, research by Zhang et al. (2024) highlights that home literacy environments significantly influence children's learning dispositions, but the impact is most pronounced when parents actively engage children in guided learning interactions rather than passive exposure.

In addition, the moderating relationship between home learning environment and parental scaffolding observed in this study reflects the broader theoretical position that children's digital literacy development is socially constructed through interactional processes within the home. Evidence from Nwoji et al., (2025) suggests that parental mediation strategies such as co-use, explanation, and supervision foster not only technical competence but also critical awareness and responsible digital behaviour. For instance, recent empirical findings indicate that parental involvement in digital activities enhances children's problem-solving abilities and confidence in using ICT tools, particularly when such involvement is consistent and structured over time (Kaiser et al., 2023). Taken together, the findings demonstrate a consistent pattern across studies: parental scaffolding is the primary driver of children's digital literacy, while the home learning environment functions as an enabling but secondary factor. This synthesis reinforces the argument that access alone is insufficient; rather, it is the quality of guided interaction within the home that determines meaningful digital learning outcomes. The sociocultural theory of learning provides a strong explanatory framework for these findings, as it emphasizes the importance of guided interaction, cultural tools, and social context in cognitive development. The alignment between the empirical results and the theoretical framework suggests that children's digital literacy development is best understood as an interactional process embedded within family practices and home environments.

Conclusion

Based on the findings of this study, it is concluded that parental scaffolding constitutes the most significant influence on children's digital literacy development in Nigeria, while the home learning environment plays a complementary role. The study establishes that digital literacy among children is not merely a product of exposure to devices or internet access but is largely shaped by the extent to which parents actively guide, monitor, and engage with their children during digital activities. The evidence further suggests that the effectiveness of the home learning environment is contingent upon the presence of intentional parental involvement. Where such scaffolding is present, children are more likely to develop confidence, competence, and responsible digital behaviours. Conversely, without adequate parental mediation, the potential benefits of the home environment remain underutilised. Overall, the study concludes that parental scaffolding and home learning environment operate in a synergistic relationship, with scaffolding serving as the central mechanism through which digital literacy is cultivated and sustained among children in Nigeria.

Recommendations

1. **Parental Digital Literacy Training:** Government agencies and educational stakeholders should organise targeted training programmes to improve parents' capacity to effectively scaffold their children's digital learning at home.
2. **Family-Centred Digital Education Policies:** Policymakers should incorporate family engagement strategies into national ICT and education frameworks, recognising parents as key actors in children's digital development.
3. **School-Home Collaboration:** Schools should establish structured communication channels to guide parents on appropriate scaffolding techniques, including monitoring, co-use, and guided instruction in digital tasks.

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4. Improved Access with Guided Use: Efforts to improve access to digital devices and internet connectivity should be complemented with initiatives that encourage guided and supervised usage to ensure meaningful learning outcomes.
5. Awareness Campaigns on Responsible Digital Parenting: Public awareness programmes should be implemented to educate parents on the importance of balancing access, supervision, and active engagement in children's digital activities.

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