Assessing Availability, Awareness, Participation, and Barriers to Library Programs In Academic Libraries across North Central Nigeria

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Abstract

This research investigates the availability, awareness, participation, and barriers to library programs and their influence on student learning outcomes (SLOs) in higher education institutions in North Central Nigeria. Descriptive survey design was employed, and data were gathered from 356 students across universities and colleges using a validated 25-item questionnaire. Descriptive statistics and Pearson correlation analysis indicated that programs like library orientation, digital literacy workshops, and research skills training are widely available but inconsistently implemented. Students demonstrated high awareness (M = 4.07) and moderate participation (M = 3.72), with barriers such as inadequate promotion and limited digital access impeding engagement. A significant positive correlation existed between awareness and participation (r = .621, p < .001). The study advocates for improved promotional strategies and investments in digital infrastructure to enhance program effectiveness and student engagement.

Keywords: Library programs, student learning outcomes, awareness, participation, academic libraries, Nigeria

Introduction

Education is a cornerstone of personal and societal advancement, cultivating knowledge, skills, and competencies critical for the 21st century. Student learning outcomes (SLOs) serve as key indicators of academic achievement, with frameworks like Bloom's (1956) taxonomy organising these outcomes into cognitive, affective, and psychomotor domains to guide educational planning (Biggs & Tang, 2011). Vygotsky's (1978) sociocultural theory further emphasises the importance of structured learning environments in fostering cognitive growth. In higher education, institutions are tasked with developing critical thinking, research

proficiency, and problem-solving skills to prepare students for global challenges (Anderson et al., 2016). Academic libraries, as pivotal components of these institutions, play a vital role in supporting SLOs by providing resources and structured programs tailored to enhance academic success and holistic development.

In Nigeria's North Central region, academic libraries are integral to supporting SLOs amidst diverse educational challenges. Beyond serving as repositories of knowledge, these libraries offer programs such as library orientations, digital literacy training, and scholarly writing workshops to bolster information literacy and academic performance (Mustapha, 2023a). However, their impact is often curtailed by low student utilisation, driven by factors such as limited awareness, inadequate publicity, and infrastructural deficits (Adeyinka & Aina, 2018). These challenges highlight the need for a deeper understanding of how library programs are structured, promoted, and accessed to maximise their contribution to student success in the region.

Academic libraries in North Central Nigeria also extend their role beyond academic support to foster holistic student development through diverse initiatives. Community engagement activities, such as literacy outreach and public lectures, promote civic responsibility and lifelong learning, aligning with the principles of inclusive education (Aniogbolu *et al.*, 2022). Cultural and recreational programs, including book clubs, art exhibitions, spelling bees, essay writing competitions, and storytelling sessions, encourage creativity, social interaction, and personal growth (Ojedokun & Lumande, 2019). Additionally, open access advocacy programs enhance research skills by promoting equitable access to scholarly resources, creating inclusive learning environments that resonate with Vygotsky's (1978) socially mediated learning theory (Amuda & Tella, 2019).

This study investigates the availability, awareness, participation, and barriers to library programs in academic libraries across North Central Nigeria, evaluating their contributions to SLOs. By addressing a critical gap in regional library research, the study aims to provide insights into how these programs can be optimised to support both academic achievement and holistic student development.

Statement of the Problem

Despite the presence of library programs in North Central Nigerian higher institutions, students' participation remains low. Challenges such as inadequate awareness, ineffective publicity, inconvenient scheduling, and limited digital infrastructure hinder program utilisation (Mustapha, 2023a; Adeyemi & Adeyemi, 2022). These issues are particularly pronounced in North Central Nigeria, where resource disparities exacerbate educational inequities. The disconnect between program availability and engagement raises concerns about academic libraries' ability to enhance SLOs. This study investigates program availability, student awareness, participation levels, and barriers to optimise library contributions to academic success.

Objectives of the Study

The primary aim is to assess the impact of library programs on student learning outcomes in North Central Nigeria. Specific objectives include:

1) identifying available library programs in higher institutions in North Central Nigeria;

2) evaluating students' awareness of these programs;

3) examining the extent and frequency of student participation in these programs and;

4) identifying barriers to effective program utilisation.

Research Questions

The study addresses the following questions:

1) What library programs are available in higher institutions in North Central Nigeria?

2) What is the level of student awareness of these programs?

3) To what extent do students participate in these programs?

4) What barriers restrict effective program utilisation?

Research Hypothesis

H_{01}: There is no significant relationship between students' awareness of library programs and their participation.

Literature Review

Student learning outcomes (SLOs) represent measurable achievements in knowledge, skills, and attitudes gained through academic programs. Biggs and Tang (2011) highlight SLOs as critical for aligning curriculum design with educational goals, while Bloom's (1956) taxonomy categorises outcomes into cognitive, affective, and psychomotor domains to guide comprehensive learning objectives.

Academic libraries have transformed into dynamic learning hubs. In Nigeria, Adeagbo and Mabawonku (2020) demonstrated that library resource use significantly predicts undergraduate academic performance, underscoring the value of library engagement. Ojobor and Nwachukwu (2023) found that user education programs, such as library orientations, enhance students' access to digital resources. Globally, Bruce (2019) emphasises that information literacy programs foster critical thinking and lifelong learning, while Anderson *et al*. (2016) note that structured library programs equip students with essential research skills.

Awareness is pivotal for program participation. Unuabor and Oseghale (2018) observed that low awareness limited undergraduates' use of library resources at the University of Ibadan, despite available user education courses. Philip (2015) reported that library instruction at the University of Uyo improved knowledge but did not fully translate to effective resource use. Mustapha (2023a) found that students with greater awareness were more likely to engage in

digital literacy and writing programs, while Nwosu and Chikwendu (2021) linked library orientation to increased library usage.

Impact of Library Programs on Student Learning Outcomes

Nigerian academic libraries offer diverse programs, including information literacy workshops, research support services, citation training, book circulation, reference desks, digital resource training, and academic writing support, to promote independent research and lifelong learning (Mustapha, 2023b). Adeagbo and Mabawonku (2020) established that library resource use predicts academic success, while Bruce (2019) globally highlights information literacy programs' role in enhancing critical evaluation skills.

However, challenges persist. Inadequate funding limits library development in Nigeria (Daniel, 2013), while shortages of skilled staff, poor orientation, technological constraints, and insufficient training hinder program delivery (Adeyemi & Afolabi, 2020; Ibrahim, 2021; Nkamnebe *et al.*, 2015). Similar global challenges include resource limitations and the need for ongoing professional development (Bruce, 2019).

Methodology

A descriptive survey design was employed, targeting students from public and private universities and colleges of education in North Central Nigeria. Using proportional stratified random sampling, 356 students were selected, with institutions stratified by type (public/private, university/college) and student population. Data were collected via a 25-item closed-ended questionnaire, validated through pilot testing with 20 students (Cronbach's alpha = 0.85), covering demographics, program availability, awareness, participation, and barriers. Ethical approval was secured, informed consent obtained, and participation was voluntary. Data were analysed using SPSS version 25, with descriptive statistics (mean, standard deviation) and Pearson correlation. Mean scores ≥ 3.5 indicated high awareness/participation, and < 3.5 indicated moderate levels.

Data Analysis

Demographic Characteristics

Table 1: Demographic Characteristics of Respondents by Gender and Institution Type (N = 356)

Variable	Category	Frequency	Percentage
Gender	Male	187	52.5%
	Female	169	47.5%
Institution Type	Public University	138	38.8%
	Private University	97	27.2%
	Public College of Education	74	20.8%

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	Private College of Education	47	13.2%

Table 1 reveals that the 356 student respondents are nearly evenly distributed by gender, with 187 males (52.5%) and 169 females (47.5%), ensuring equitable representation. It also shows a diverse institutional spread, with 138 students from public universities (38.8%), 97 from private universities (27.2%), 74 from public colleges of education (20.8%), and 47 from private colleges of education (13.2%). This balanced demographic and institutional profile indicates that the study's findings are broadly representative of North Central Nigeria's higher education context.

Research Question 1: Available Library Programs

Table 2: Availability of Library Programs in North Central Nigerian Institutions

S/N	Library Programs	Available (Yes)	Not Available (No)	Mean	SD
1	Library Orientation	310 (87.1%)	46 (12.9%)	4.28	0.74
2	Book Circulation Services	327 (91.8%)	29 (8.2%)	4.35	0.67
3	Academic Writing Support	278 (78.1%)	78 (21.9%)	3.98	0.81
4	Research Skills Training	292 (82.0%)	64 (18.0%)	4.10	0.76
5	Digital Literacy Workshops	261 (73.3%)	95 (26.7%)	3.85	0.88
6	Reference Help Services	248 (69.7%)	108 (30.3%)	3.72	0.91
7	Information Literacy Seminars	234 (65.7%)	122 (34.3%)	3.64	0.93

Table 2 shows that library programs are quite accessible, with book circulation services taking the lead at 91.8% (327 respondents, M = 4.35). Following closely is library orientation at 87.1% (310, M = 4.28). Research skills training (82.0%, 292, M = 4.10) and academic writing support (78.1%, 278, M = 3.98) are also commonly offered. However, digital literacy workshops (73.3%, 261, M = 3.85), reference help services (69.7%, 248, M = 3.72), and information literacy seminars (65.7%, 234, M = 3.64) are a bit less frequent. This indicates that while basic programs are widely available, there's a bit of inconsistency in the implementation of specialised ones, especially in areas with limited resources.

Research Question 2: Awareness of Library Programs

Table 3: Students' Awareness of Library Programs (N = 356)

Awareness Items	Mean	SD	Interpretation
I am aware of the library orientation program.	4.21	0.83	High awareness
I know about the academic writing support services provided by the library.	4.05	0.89	High awareness
I am aware of digital literacy workshops organised by the library.	3.92	0.94	High awareness
I know about the research skills training offered in the library.	4.11	0.78	High awareness
I know the library provides reference help for academic work.	4.16	0.81	High awareness
I am aware of book circulation services and how to access them.	4.18	0.80	High awareness
I am informed about the schedule and publicity of library programs.	3.85	0.92	Moderate awareness
Overall Mean	4.07	0.84	High awareness

According to Table 3, students exhibit high overall awareness of library programs (M = 4.07), with the strongest awareness for library orientation (M = 4.21), book circulation services (M = 4.18), and reference help (M = 4.16). Awareness is slightly lower for research skills training (M = 4.11), academic writing support (M = 4.05), and digital workshops (M = 3.92), and moderate for program schedules and publicity (M = 3.85). These findings indicate effective communication of core programs but highlight promotional gaps for specialised programs and scheduling information.

Research Question 3: Participation in Library Programs

Table 4: Student Participation in Library Programs (N = 356)

Participation Items	Mean	SD	Interpretation
I have attended the library orientation session.	3.92	0.97	High participation
I have used the academic writing support services provided by the library.	3.68	0.91	Moderate participation
I have participated in digital literacy workshops.	3.45	1.04	Moderate participation

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I have taken part in research skills training sessions.	3.71	0.89	High participation
I have used the library's reference help for my academic work.	3.83	0.82	High participation
I regularly borrow and return books through the circulation desk.	3.88	0.87	High participation
I have attended multiple library-organised academic programs.	3.59	0.91	Moderate participation
Overall Mean	3.72	0.91	High participation

Table 4 shows that students are generally quite active in library programs, with an average participation score of 3.72. The highest levels of engagement are seen in library orientation (M = 3.92), book circulation services (M = 3.88), and reference help (M = 3.83). Research skills training also sees good participation (M = 3.71), while academic writing support (M = 3.68), attending multiple programs (M = 3.59), and digital literacy workshops (M = 3.45) have more moderate involvement. This indicates that while students are making good use of the available programs, they seem to engage less with the specialised ones, possibly due to challenges like scheduling conflicts or access issues.

Research Question 4: Barriers to Program Utilisation

Table 5: Barriers to Effective Utilisation of Library Programs

S/N	Barrier Item	Mean	SD	Interpretation
1	Inadequate awareness of available library programs	3.89	0.91	Major barrier
2	Poor scheduling of library programs	3.52	0.97	Moderate barrier
3	Limited access to digital resources	3.65	0.93	Major barrier
4	Insufficient publicity and promotion of programs	3.74	0.90	Major barrier

According to Table 5, major barriers to library program utilisation include inadequate awareness (M = 3.89), insufficient publicity (M = 3.74), and limited access to digital resources (M = 3.65), all classified as significant obstacles. Poor scheduling is a moderate barrier (M = 3.52). These findings highlight that awareness, publicity, and digital access significantly impede program engagement, while scheduling issues pose a lesser but notable challenge.

Hypothesis Testing

Table 6: Pearson Correlation Between Students' Awareness and Participation in Library Programs.

Variables	Mean	SD	r	p-value	Remark
Awareness of Library Programs	3.81	0.85			
Participation in Library Programs	3.67	0.79	.621	< .001	Significant (p < .05)

Table 6 shows a strong positive relationship between awareness (M = 3.81, SD = 0.85) and participation (M = 3.67, SD = 0.79) in library programs (r = .621, p < .001), rejecting the null hypothesis that no significant relationship exists. This indicates that higher awareness is closely linked to increased participation, though moderate participation in some programs (e.g., digital literacy workshops) suggests additional barriers beyond awareness.

Discussion of Findings

This study examines the role of library programs in enhancing student learning outcomes (SLOs) in higher education institutions in North Central Nigeria. The findings address the availability, awareness, participation, and barriers to library programs, with a significant correlation between awareness and participation (Table 6). This section synthesises the results, situating them within theoretical frameworks (e.g., Vygotsky, 1978; Bloom, 1956), and prior literature, while highlighting their implications for academic libraries, policymakers, and educators.

Availability of Library Programs

Table 2 reveals that library programs such as book circulation services (91.8%, M = 4.35) and library orientation (87.1%, M = 4.28) are nearly ubiquitous across North Central Nigerian institutions, underscoring academic libraries' role as critical educational hubs, as conceptualised by Bruce (2019). These programs align with Bloom's (1956) cognitive domain, equipping students with foundational skills for accessing resources and navigating academic environments. However, the lower availability of information literacy seminars (65.7%, M = 3.64) and reference help services (69.7%, M = 3.72) points to uneven implementation, particularly in colleges of education (34% of respondents, Table 1). This disparity reflects regional challenges, including limited funding and staffing in rural institutions (Daniel, 2013), which prioritise basic services over specialised programs.

Compared to urban-focused studies, such as Adeagbo and Mabawonku (2020), which report robust program availability in southern Nigerian universities, the North Central region's resource constraints highlight a need for targeted interventions. For instance, the high availability of book circulation services suggests a focus on traditional library functions, while the lower prevalence of digital literacy workshops (73.3%, M = 3.85) indicates a gap in addressing 21st-century skills like digital navigation, critical for Anderson *et al*.'s (2016) emphasis on research competencies. This finding suggests that while libraries are well-

positioned to support SLOs, their capacity to deliver advanced programs is limited by infrastructural and human resource deficits, particularly in smaller institutions.

Awareness of Library Programs

Table 3 indicates high overall awareness of library programs (M = 4.07), with strong recognition of library orientation (M = 4.21), book circulation services (M = 4.18), and reference help (M = 4.16). This suggests effective communication of core programs, likely due to mandatory orientations or integration into academic routines, as noted by Mustapha (2023b). Vygotsky's (1978) sociocultural theory supports this, positing that awareness is fostered through structured interactions within students' learning environments. However, moderate awareness of program schedules and publicity (M = 3.85) and slightly lower awareness of digital literacy workshops (M = 3.92) reveal promotional gaps.

The demographic breakdown (Table 1) shows that public university students (38.8%) report higher awareness than those in private colleges of education (13.2%), likely due to better-funded library systems in larger institutions. This contrasts with Unuabor and Oseghale's (2018) findings of low awareness in urban universities, suggesting that North Central institutions may benefit from localised orientation efforts but struggle with broader outreach. The moderate awareness of digital literacy workshops, despite their relevance to modern academic demands, indicates a need for enhanced marketing strategies, such as social media campaigns or faculty-led promotions, to reach diverse student populations. This finding aligns with Philip's (2015) observation that awareness alone does not guarantee engagement, underscoring the need for proactive communication strategies.

Student Participation in Library Programs

Table 4 demonstrates high overall participation in library programs (M = 3.72), with library orientation (M = 3.92), book circulation services (M = 3.88), and reference help (M = 3.83) showing strong engagement. This supports Vygotsky's (1978) theory that structured, accessible programs within students' zones of proximal development foster active participation. These programs directly contribute to Bloom's (1956) cognitive and psychomotor domains, enhancing students' ability to locate resources and conduct research. However, participation in digital literacy workshops (M = 3.45) and academic writing support (M = 3.68) is moderate, despite their availability (73.3% and 78.1%, respectively, Table 2).

This discrepancy suggests barriers beyond awareness, such as scheduling conflicts, perceived irrelevance, or technological limitations, as noted by Adeyemi and Adeyemi (2022) in Nigerian polytechnics. The balanced gender distribution (52.5% male, 47.5% female, Table 1) indicates equitable participation, but lower engagement in private colleges (13.2%) points to access issues in smaller institutions, possibly due to limited staff or digital resources. Compared to Ojobor and Nwachukwu's (2023) findings of high participation in urban libraries, the North Central region's rural context introduces unique challenges, such as unreliable internet or fewer program sessions. The moderate participation in digital literacy workshops is particularly concerning, given their role in fostering 21st-century skills (Anderson *et al.*, 2016), suggesting that libraries must better align these programs with students' academic priorities.

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Barriers to Effective Utilisation

Table 5 identifies inadequate awareness (M = 3.89), insufficient publicity (M = 3.74), and limited digital access (M = 3.65) as major barriers, with poor scheduling as a moderate barrier (M = 3.52). These findings align with Mustapha's (2023a) observation of infrastructural deficits in Nigerian libraries, particularly in rural North Central institutions, where digital resources are scarce. The high mean scores for awareness and publicity barriers create a feedback loop: low visibility reduces participation, perpetuating underutilization. Anderson *et al*. (2016) argue that students prioritise curriculum-integrated services, which explains the lower engagement in digital literacy workshops (Table 4), as these may be perceived as supplementary rather than essential.

The regional context is critical, as colleges of education (34% of respondents, Table 1) face greater technological and staffing constraints than public universities (38.8%). This contrasts with urban studies (Adeyemi & Afolabi, 2020), where staffing issues are less pronounced. Limited digital access is particularly detrimental, as it restricts access to online resources and virtual workshops, undermining efforts to develop information literacy (Bruce, 2019). Poor scheduling, though a moderate barrier, suggests that program timing conflicts with academic commitments, a challenge exacerbated in institutions with rigid timetables. These barriers collectively hinder libraries' ability to support SLOs, particularly in fostering advanced skills like critical thinking and digital proficiency.

Relationship Between Awareness and Participation

Table 6 confirms a strong positive correlation between awareness and participation ($r = .621$, $p < .001$), rejecting the null hypothesis. This finding supports Igwesi's (2020) assertion that awareness is a prerequisite for library engagement, as informed students are more likely to perceive programs as relevant to their academic goals. The mean awareness (M = 3.81) and participation (M = 3.67) scores indicate a robust relationship, particularly for highly visible programs like library orientation and book circulation (Tables 3 - 4). However, the moderate participation in digital literacy workshops (M = 3.45, Table 4) despite high awareness (M = 3.92, Table 3) suggests additional barriers, such as technological access or scheduling, as highlighted in Table 5.

This nuanced finding differentiates the study from urban-focused research (e.g., Nwosu & Chikwendu, 2021), which reports stronger awareness-participation linkages. In North Central Nigeria, contextual factors like rural infrastructure and resource disparities complicate the translation of awareness into action. The strong correlation underscores the potential for increased participation through enhanced awareness campaigns, but it also highlights the need to address structural barriers to ensure equitable access across institution types.

Implications

The findings have far-reaching implications for academic libraries, institutional leaders, policymakers, and educators in North Central Nigeria, offering actionable insights to enhance the impact of library programs on SLOs.

1. Strengthening Program Availability: The high availability of basic programs (e.g., orientation, circulation) provides a strong foundation for supporting SLOs, but the lower prevalence of specialised programs like information literacy seminars (Table 2) indicates a missed opportunity to develop advanced skills. Policymakers should allocate targeted funding to rural colleges, where resource constraints are acute (Daniel, 2013), to ensure equitable access to diverse programs. Partnerships with international organisations or urban universities could facilitate resource sharing, enabling smaller institutions to offer digital literacy and research skills training.

2. Enhancing Awareness and Publicity: The high awareness of core programs (Table 3) reflects effective orientation strategies, but moderate awareness of schedules and digital literacy workshops suggests promotional deficiencies. Libraries should adopt digital marketing strategies, such as social media campaigns or mobile app notifications, to reach diverse student populations, particularly in private colleges (Table 1). Faculty involvement in promoting programs, as suggested by Bruce (2019), could further bridge awareness gaps, leveraging Vygotsky's (1978) emphasis on collaborative learning environments.

3. Boosting Participation: The high participation in orientation and circulation services (Table 4) demonstrates student demand for accessible programs, but moderate engagement in digital literacy and writing support highlights structural barriers. Integrating these programs into curricula, as Anderson *et al*. (2016) advocate, could increase participation by aligning them with academic requirements. Flexible scheduling, such as evening or weekend sessions, would address the moderate barrier of poor scheduling (Table 5), particularly for students with rigid timetables.

4. Addressing Barriers: The major barriers of inadequate awareness, limited digital access, and poor publicity (Table 5) require multifaceted interventions. Investments in digital infrastructure, such as high-speed internet and computer labs, are critical to overcoming technological limitations, especially in rural colleges. Staff training programs, as recommended by Adeyemi and Afolabi (2020), would enhance librarians' ability to promote and deliver programs effectively. Collaborations with academic departments could embed library programs into coursework, reducing publicity barriers by making programs more visible and relevant.

5. Leveraging Awareness-Participation Link: The strong correlation between awareness and participation (Table 6) suggests that increasing awareness could significantly boost engagement. Libraries should prioritise targeted outreach, such as workshops tailored to specific disciplines or student groups, to maximise participation. However, the moderate participation in digital literacy programs despite high awareness indicates that

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awareness alone is insufficient without addressing access and scheduling issues. A holistic approach, combining awareness campaigns with infrastructural improvements, is essential.

6. Theoretical Alignment: The findings align with Bloom's (1956) taxonomy, as library programs support cognitive (e.g., research skills) and psychomotor (e.g., resource navigation) outcomes. Vygotsky's (1978) theory underscores the importance of structured, accessible programs in fostering engagement, suggesting that libraries should design programs within students' proximal learning zones, with clear guidance and support.

These implications collectively call for a strategic overhaul of library program delivery in North Central Nigeria. By addressing availability, awareness, participation, and barriers, institutions can maximise libraries' contributions to SLOs, fostering critical thinking, information literacy, and academic success. The findings also contribute to global library science discourse, highlighting the interplay of awareness, access, and engagement in resource-constrained settings.

Conclusion

Library programs in North Central Nigerian higher institutions are widely available, with high student awareness, but participation varies due to barriers such as inadequate publicity and limited digital access. Programs like library orientation and book circulation are well-utilised, while specialised workshops are under-engaged. The strong correlation between awareness and participation underscores the need for enhanced visibility and curriculum integration. Addressing these challenges through targeted outreach, infrastructure investment, and staff training can boost engagement and enhance SLOs.

Recommendations

i. Mandate library orientation for first-year students and ensure regular research skills and digital literacy programs.

ii. Launch digital marketing campaigns to increase program visibility.

iii. Invest in digital infrastructure to enable remote resource access.

iv. Align program schedules with academic timetables and train staff for student-centred delivery.

v. Collaborate with academic departments to integrate library programs into curricula.

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