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COMPARATIVE ANALYSIS OF LIBRARY SERVICES AND RESOURCE USAGE AMONG BIOLOGY EDUCATION UNDERGRADUATES IN STATE AND FEDERAL UNIVERSITIES IN BENUE STATE

[1]AGBO Kate PhD. (CLN)
Medical Libarary, Benue State University, Makurdi, Benue State, Nigeria

[2] TSENONGU Charles Terwuese (CLN)
Department of Library and Information Science,
Federal Polytechnic Wannune Benue State, Nigeria
tsenongucharlesfeb14@gmail.com

&

[3]OBANDE Bonnie Obeka (CLN)
E-Librarian, Igbinedion University Medical Library, Okada, Edo State
Email: unclebons@gmail.com
https://orcid.org/0009-0001-3068-3055

Abstract

This study investigated the availability and usage of library resources and services among undergraduate Biology Education students in two Benue State universities. Using a survey research design, the study sampled 292 respondents from Benue State University and Federal University of Agriculture Makurdi. Findings revealed that some library resources and services were available and utilized, but challenges like power failures and lack of current awareness hindered usage. Significant differences were found between state and federal university respondents' perceptions. Recommendations include providing current resources, improving library services, installing standby generators, and organizing orientation programs.

Keyword: *Library resources, Biology education, Undergraduates, University libraries and Information access.*

*Corresponding author(s) Agbo, K. et al (2026) agree that this article remain permanently open access under the terms of the Creative Commons Attribution License 4.0 International License

Introductions

Libraries play a vital role in the academic success of students by providing access to a wealth of information resources, study spaces, and research support services. However, the extent to which students utilize these services is influenced by various factors, including accessibility, awareness, availability of resources, and individual preferences. Understanding these factors is crucial for improving library service delivery and ensuring that students maximize the benefits of these resources (Aina, 2018).

Biology education undergraduates, in particular, require access to specialized materials such as textbooks, journals, and research databases to support their studies and research projects. Despite the importance of library services, studies have shown that many students underutilize them due to challenges such as inadequate resources, lack of digital tools, or insufficient orientation on library usage (Ezeani & Igwesi, 2019).

In Benue State Universities, the situation is no different. Preliminary observations suggest that while libraries remain a central part of the academic environment, there are variations in how biology education undergraduates engage with these services. Factors such as socioeconomic background, technological advancements, and the

quality of library facilities may play a role in shaping their usage patterns (Okonkwo, 2020).

This study aims to explore the key factors affecting the utilization of library services among biology education undergraduates in Benue State Universities. By identifying these factors, the research seeks to provide actionable recommendations for improving library service delivery and fostering greater engagement among students.

Research Questions

1. What is the level of availability of library resources in University libraries in Benue State?
2. What is the extent of availability of library services in University libraries in Benue State?
3. What is the level of usage of library resources by undergraduate students of biology education in University libraries in Benue State?
4. What are the factors hindering the usage of library services in two University libraries in Benue State?

Literature Review

Assessing the factors affecting library service usage among Biology Education undergraduates in Benue State Universities requires an understanding of various academic, infrastructural, and personal influences. One significant factor is the accessibility and availability of library resources. According to Adewale and Okoro (2023), students are more likely to utilize library services when there is a wide range of up-to-date academic materials, including textbooks, journals, and digital resources. The study highlights that inadequate resources often discourage students from frequenting the library.

Another critical factor is the integration of technology in library services. With advancements in digital tools, libraries that offer online catalogs, e-books, and research databases have seen increased patronage. For instance, a study by Musa et al. (2024) revealed that over 70% of Biology Education undergraduates preferred libraries with robust digital infrastructures, as these facilitate easier access to academic content.

The physical environment of the library also plays a role. Libraries that provide comfortable seating, proper lighting, and quiet study areas are more appealing to students. In their research, Terkula and Ijeoma (2022) found that poorly maintained library facilities in some Benue State Universities discouraged students from using these services regularly.

The role of library staff cannot be overlooked. Librarians who are approachable and willing to assist students with research inquiries significantly enhance the user experience. As noted by Eze and Abah (2025), students often rely on librarians for guidance on navigating complex academic databases or locating specific materials.

Personal factors such as time management and academic workload also influence library usage. Many students struggle to balance their schedules, leading to reduced visits to the library. A study by Ogbu and Adamu (2023) suggested that flexible library hours could address this issue, enabling students to access resources at their convenience.

The usage of library services among Biology Education undergraduates in Benue State Universities is shaped by a combination of resource availability, technological integration, physical infrastructure, staff support, and personal circumstances.

Integration of Theories

The Information Needs Theory and TAM can be integrated to understand how Biology Education undergraduates' information needs influence their acceptance and usage of library services. According

to the Information Needs Theory, users seek information to satisfy specific needs. TAM suggests that users' acceptance of technology is influenced by perceived usefulness and ease of use.

1. **Information Needs and Perceived Usefulness:** Biology Education undergraduates' information needs may influence their perception of the usefulness of library services. If library services meet their information needs, they are more likely to perceive them as useful.

2. **Information Seeking Behavior and Ease of Use:** Undergraduates' information seeking behavior may be influenced by the ease of use of library services. If library services are user-friendly and easily accessible, undergraduates are more likely to use them to satisfy their information needs.

3**. Satisfaction of Information Needs and Usage**: The satisfaction of information needs through library services may influence undergraduates' continued usage of these services. If library services consistently meet their information needs, undergraduates are more likely to continue using them.

Methodology

The methodology employed for the study, focusing on survey research design. The study was conducted in two university libraries in Benue State, Nigeria, chosen due to the availability of Biology Education programs and library resources. The population comprised 1,075 undergraduate Biology Education students from Federal and State Universities, with a sample size of 292 selected using proportionate stratified random sampling.

Data collection relied on a structured questionnaire titled "Assessment of Availability and Usage of Library Resources and Services by Undergraduate Students' Questionnaire (AAULRSQ)," validated by experts and tested for reliability with a Cronbach Alpha coefficient of 0.88. The questionnaire explored library resources, services, usage extent, and inhibiting factors.

Data was collected with the help of trained research assistants and analyzed using descriptive statistics like mean and standard deviation, alongside t-tests for hypothesis testing at a 0.05 significance level. Decision-making thresholds were established based on mean ratings, with a benchmark of 2.50 for agreement. The methodology ensures objective assessment of library resource availability and usage among students in the selected universities.

Results and Discussion

Research Question 1

What is the level of availability of library resources in two University libraries in Benue State?

To answer the research question, data were collected on opinions of respondents relating to availability of library resources in the two university libraries in Benue State. The collected data were analysed and presented in

Table 1.

Table 1: ***Descriptive Statistics of Responses on Availability of Library Resources in the Two University Libraries in Benue State***

Descriptive Statistics

SN	Items	N	Mean	Std. Deviation	Remarks
1.	Text books	292	3.3973	.90421	**Available**
2.	Journals	292	3.1027	.93595	**Available**
3.	Encyclopedias	292	2.6747	.78231	**Available**
4.	Maps	292	3.5000	.89481	**Highly Available**
5.	Yearbooks	292	2.9863	.86144	**Available**
6.	Dictionaries	292	2.7089	.99872	**Highly Available**
7.	Magazines	292	3.6507	.68956	**Highly Available**
8.	News papers	292	3.7089	.70408	**Highly Available**
9.	Brailed books	292	1.2418	1.32126	**Not Available**
10.	Almanac	292	3.4863	.61187	**Available**
11.	DVD Player	292	2.6404	1.26985	**Available**
12.	Television	292	2.9932	1.31079	**Available**
13.	Projects, Dissertations & Theses	292	2.9829	.85938	**Available**
14.	Computers	292	2.6986	1.00425	**Available**
15.	Internet	292	3.6644	.69140	**Available**
16.	Grand Mean	292	3.0758	.25830	**Available**
Valid N (listwise)		292			

From Table 1, it can be seen that the mean rating scores of all the items are above 2.50 except item 12; with the grand mean of 3.0758 and standard deviation of 0.25830. This implies that Text books, Journals, Encyclopedias, Maps, Yearbooks, Dictionaries, Magazines, Newspapers, Almanac, DVD Player, Television, Projects, Dissertations & Theses, Computers, and Internet are available while Brailed books are not available.

Research Question 2

What is the extent of availability of library services in two University libraries in Benue State?

To answer the research question, data were collected on opinions of respondents relating to extent of availability of library services in two University libraries in Benue State. The collected data were analysed and presented in

Table 2.

Table 2: ***Descriptive Statistics of Responses on Extents of Availability of Library Services in Two University Libraries in Benue State***

Descriptive Statistics

SN	N	Mean	Std. Deviation	Remarks
1. Circulation Services	2. 292	3. 3.5068	4. .85552	5. **Very High Extent**
6. Reference Services	7. 292	8. 3.8014	9. .39965	10. **Very High Extent**
11. User Education Services	12. 292	13. 3.5651	14. .49660	15. **Very High Extent**
16. Audio Visual Services	17. 292	18. 3.3253	19. .97405	20. **High Extent**
21. Internet Services	22. 292	23. 3.2192	24. 1.07769	25. **High Extent**
26. Cataloguing and Classification Services	27. 292	28. 3.7089	29. .70408	30. **Very High Extent**
31. Bindery Services	32. 292	33. 3.7945	34. .40475	35. **Very High Extent**
36. Lending Services	37. 292	38. 3.5479	39. .49855	40. **Very High Extent**
41. Inter Library Loan	42. 292	43. 2.9760	44. 1.36580	45. **High Extent**
46. Printing	47. 292	48. 3.6712	49. .47057	50. **Very High Extent**
51. Photocopying	52. 292	53. 3.0171	54. 1.33279	55. **High Extent**
56. Membership Registration	57. 292	58. 3.3116	59. 1.17336	60. **High Extent**
61. Abstracting and Indexing Services	62. 292	63. 3.3356	64. 1.14139	65. **High Extent**
66. Bibliographical Services	67. 292	68. 2.5582	69. 1.27089	70. **High Extent**
71. Referral services	72. 292	73. 3.4281	74. .90719	75. **High Extent**
76. Grand Mean	77. 292	78. 3.3845	79. .19557	80. **High Extent**
Valid N (listwise)	292			

From Table 2, it can be seen that the mean rating scores of all the items are above 2.50 with the grand mean of 3.3854 and standard deviation of 0.19557. This implies that the availability of library services such as circulation services, reference services, user education services, audio visual services, internet services, cataloguing and classification services, bindery services, lending services, inter library loan, printing, photocopying, membership registration, abstracting and indexing services and bibliographical

services in two university libraries in Benue is to a high extent.

Research Question 3
What is the level of usage of library resources by undergraduate students of biology education in two University libraries in Benue State?

To answer the research question, data were collected on opinions of respondents relating to level of usage of library resources by undergraduate students of biology education in two University libraries in Benue State. The collected data were analysed and presented in Table 3.

Table 3: ***Descriptive Statistics of Responses on Level of Usage of Library Resources by Undergraduate Students of Biology Education in Two University libraries in Benue State***

Descriptive Statistics				
SN	**Items**	**N**	**Mean**	**Std. Deviation**	**Remarks**
1.	Text books	2. 292	3. 3.0890	4. .91510	5. **Used**
6.	Journals	7. 292	8. 2.7055	9. .78795	10. **Used**
11.	Encyclopedias	12. 292	13. 3.5377	14. .89402	15. **Highly Used**
16.	Maps	17. 292	18. 2.9829	19. .85938	20. **Used**
21.	Yearbooks	22. 292	23. 2.6678	24. 1.02340	25. **Used**
26.	Dictionaries	27. 292	28. 3.7089	29. .59856	30. **Highly Used**
31.	Magazines	32. 292	33. 3.4452	34. .87760	35. **Used**
36.	News papers	37. 292	38. 3.8014	39. .39965	40. **Highly Used**
41.	Brailed books	42. 292	43. 1.4315	44. .97323	45. **Not Used**
46.	Almanac	47. 292	48. 2.9452	49. 1.19438	50. **Used**
51.	DVD Player	52. 292	53. 2.8185	54. 1.17151	55. **Used**
56.	Television	57. 292	58. 2.7911	59. 1.25490	60. **Used**
61.	Projects, Dissertations & Theses	62. 292	63. 3.3562	64. .89856	65. **Used**
66.	Computers	67. 292	68. 3.4726	69. .74331	70. **Used**
71.	Internet	72. 292	73. 3.3219	74. .81173	75. **Used**
76.	Grand Mean	77. 292	78. 3.0717	79. .33542	80. **Used**
Valid N (listwise)		292			

From Table 3, it can be seen that the mean rating scores of all the items are above 2.50 except item 42; with the grand mean of 3.0717 and standard deviation of 0.33542. This implies that Text books, Journals, Encyclopedias, Maps, Yearbooks, Dictionaries, Magazines, Newspapers, Almanac, DVD Player, Television, Projects, Dissertations & Theses, Computers, and Internet are used by undergraduate students of biology education in two University libraries in Benue State while Brailed

books are not used.

Research Question 4

What are the factors hindering the usage of library services in two University libraries in Benue State?

To answer the research question, data were collected on opinions of respondents relating to factors hindering the usage of library services in two University libraries in Benue State. The collected data were analysed and presented in Table 4.

Table 4: ***Descriptive Statistics of Responses on Factors Hindering the Usage of Library Services in Two University Libraries in Benue State***

Descriptive Statistics

SN	Items	N	Mean	Std. Deviation	Remarks
1	Limited Operational Hours	292	3.5479	.49855	**Strongly Agree**
2	Power (electricity) Failure	292	2.7329	.98296	**Agree**
3	Poor Reference Services	292	3.0274	1.00134	**Agree**
4	Poor User Education	292	2.8493	1.30209	**Agree**
5	Unavailability Audio Visual Services	292	2.8288	1.20343	**Agree**
6	Poor Internet Services	292	3.6096	.80696	**Strongly Agree**
7	Poor Bindery Services	292	3.4452	.62073	**Agree**
8	Inadequate Equipment for Printing Downloaded documents	292	3.2329	1.08118	**Agree**
9	Not Allowing Photocopying Whole or Part of needed Material	292	2.6747	.97051	**Agree**
10	Lack of Current Awareness Services	292	3.3733	.91627	**Agree**
11	Lack of Selective Dissemination of Information Services	292	3.7945	.45283	**Strongly Agree**
12	Inconsistency in Abstracting and Indexing Services	292	3.4452	.62073	**Agree**
13	Poor Bibliographical Service System	292	3.7226	.53255	**Strongly Agree**
14	Grand Mean	292	3.6526	.42304	**Strongly Agree**
	Valid N (listwise)	292			

From Table 4, it can be seen that the mean rating scores of all the items are above 2.50 with the grand means of 3.65 and the deviation value of .42304. This implies that Limited Operational Hours, Power (electricity) Failure, Poor Reference Services, Poor User Education, poor Audio Visual Services, Poor Internet Services, Poor Bindery Services, Inadequate Equipment for Printing Downloaded documents, Not Allowing Photocopying Whole or Part of needed Material, Lack of Current Awareness Services, Lack of Selective Dissemination of Information Services, Inconsistency in Abstracting and Indexing Services and Poor Bibliographical Service System are the factors hindering the usage of library services in two University libraries in Benue State.

Conclusion

The study assessed the availability and usage of library resources and services among undergraduate Biology Education students in two universities in Benue State, Nigeria. Key findings include:

1. Library resources such as textbooks, journals, and internet services are available, while Braille books are not.
2. Library services like circulation, reference, and internet services are available to a high extent.
3. Students use library resources like textbooks, journals, and internet services.
4. Factors hindering resource usage include outdated materials, lack of reading spaces, and poor internet services.
5. Factors hindering service usage include limited operational hours, power failure, and poor reference services.

Recommendations

Based on the study's findings, the following recommendations are made:

1. Provide current information resources in the libraries.
2. Improve library services for students and user communities.
3. Install standby generators to avoid power outages.
4. Seek support from individuals and non-governmental agencies to equip libraries.
5. Organize regular library orientation workshops and seminars.
6. Provide comprehensive tools and retrieval devices for easy access to resources.
7. Enhance library security to prevent material mutilation and theft.
8. Publicize library resources and services to undergraduate students through media advertising and education.

Conclusion

This study successfully assessed the availability and usage of library resources and services among undergraduate Biology Education students in two Benue State university libraries. Our findings indicate that while various resources and services are available, their usage is hindered by specific challenges. To address these issues, we provide targeted recommendations. Implementing these suggestions can enhance resource availability and effective utilization, ultimately supporting undergraduate students' academic success.

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