



THE ROLE OF LIBRARY TECHNICAL SERVICES IN ENHANCING INFORMATION RETRIEVAL AMONG STUDENTS OF THE COLLEGE OF EDUCATION, GINDIRI

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Abstract

This study investigates the influence of technical services on information retrieval by students of the College of Education, Gindiri (COE Gindiri). Technical services in libraries—particularly cataloguing, classification, acquisition, and processing of information resources—form the backbone of effective information organisation and access. Despite the growing emphasis on digital literacy and online access, many students still encounter challenges in retrieving needed information promptly and efficiently. Using a descriptive survey research design, data were collected from 200 randomly selected students across different departments of the college. A structured questionnaire was used to gather data on students' awareness, usage patterns, and perceptions of how technical services influence their ability to retrieve academic resources. Findings revealed that well-organised cataloguing and classification systems significantly enhance students' information retrieval experiences, while inadequacies in resource processing and outdated classification schemes pose barriers. The study further established a significant positive correlation between effective technical services and the ease of information retrieval. It concludes by recommending regular updating of library catalogues, staff training, and student orientation on library use to maximise the benefits of technical services. This research provides valuable insights for academic libraries aiming to improve access to information and foster academic excellence.

Keywords: Technical Services, Information Retrieval, Academic Libraries, Cataloguing, COE Gindiri, Students, Library Use

Introduction

In today's digital and information-driven academic environment, library technical services play a foundational role in ensuring that information resources are well organized, easily discoverable, and efficiently retrievable. Technical services—comprising acquisition, cataloguing, classification, indexing, and physical processing—form the backbone of library operations by systematically arranging knowledge resources for seamless access (Obi & Chukwu, 2022). In academic libraries, especially within Colleges of Education, these processes directly influence how students locate and use

information for assignments, research, and general academic inquiry.

Information retrieval in libraries encompasses the strategies, tools, and systems through which users identify, access, and obtain needed information. These include Online Public Access Catalogues (OPACs), manual card catalogues, shelf arrangement, indexing systems, and classification structures. When technical services are properly executed, these retrieval tools operate more efficiently, enabling students to find relevant materials with minimal effort (Eze & Ugwu, 2023). Conversely, inadequacies such as incorrect cataloguing, outdated

classification schemes, mis-shelved books, and backlogs of unprocessed materials can hinder access, frustrate users, and slow down the research process (Afolabi & Nwafor, 2020).

In many Nigerian tertiary institutions, the quality of technical services is a significant determinant of students' ability to retrieve information. Studies show that libraries with efficient cataloguing and classification systems record higher levels of user satisfaction, faster search outcomes, and more effective academic engagement (Ibrahim & Aliyu, 2021; Musa & Yakubu, 2022). On the other hand, poor technical operations often lead to information bottlenecks, limiting students' ability to consult necessary academic resources, which negatively impacts their academic performance (Olatunji, 2021).

At the College of Education, Gindiri (COE Gindiri), the library remains central to supporting teacher education by providing both print and digital resources. However, anecdotal evidence suggests persistent challenges in information retrieval among students. Complaints about difficulty locating books, insufficient orientation on catalogue use, disorganized shelves, and delays in processing new materials point to lapses in technical services. Such gaps restrict students' ability to access timely and relevant information, which may consequently affect their learning outcomes and overall academic achievement.

Despite the critical function of technical services in enhancing information retrieval and promoting academic excellence, there is limited empirical research examining their direct influence within Nigerian Colleges of Education. This study therefore seeks to investigate how the technical services of the COE Gindiri Library affect students' information retrieval processes. By analyzing the strengths and weaknesses of existing technical operations, the findings aim to provide evidence-based recommendations that can improve information access, enhance students' research experience, and ultimately contribute to improved academic performance.

Problem Statement

Technical services constitute the backbone of academic library operations by ensuring that information resources are systematically acquired, processed, organized, and made readily accessible for effective information retrieval. However, at the College of

Education, Gindiri (COE Gindiri), students continue to experience considerable challenges in locating and accessing needed academic materials. Anecdotal observations and preliminary reports reveal persistent issues such as improperly catalogued items, mis-shelved books, delays in the processing of newly acquired materials, inadequate indexing, and insufficient student orientation on catalogue use. These lapses limit the efficiency of the library's retrieval systems, resulting in information bottlenecks and user frustration. Existing literature indicates that ineffective technical services negatively affect student learning, research output, and academic performance. Despite the essential role of technical services in enhancing information retrieval, there is a scarcity of empirical studies focusing on their influence within Colleges of Education in Nigeria. This gap makes it difficult for administrators and policymakers to implement targeted improvements. Therefore, an empirical investigation into how technical services affect students' information retrieval at COE Gindiri is crucial to ensuring effective access to information and supporting academic excellence.

Research Objectives

The general purpose of this study is to examine the role of library technical services in enhancing information retrieval among students of the College of Education, Gindiri, Plateau State. Specifically, the study seeks to:

1. determine the extent to which cataloguing and classification practices in COE Gindiri Library influence students' ability to retrieve information.
2. assess how acquisition and processing of materials affect the accessibility of library resources to students.
3. evaluate the influence of indexing and abstracting services on the efficiency of students' information retrieval.
4. identify the challenges associated with technical services that hinder effective information retrieval among students.
5. establish the relationship between the quality of technical services and students' academic performance at COE Gindiri.

Research Questions

1. To what extent do cataloguing and classification practices in the COE

- Gindiri Library influence students' information retrieval?
2. How do acquisition and processing of library materials affect students' access to academic resources?
 3. What influence do indexing and abstracting services have on the efficiency of students' information retrieval?
 4. What challenges in the technical services department hinder effective information retrieval among students?
 5. What is the relationship between the quality of library technical services and students' academic performance?

Research Hypotheses

Null Hypotheses (Ho) will guide the study:

1. **Ho₁:** There is no significant relationship between cataloguing/classification practices and students' information retrieval in the COE Gindiri Library.
2. **Ho₂:** Acquisition and processing of materials do not significantly influence students' access to library resources.
3. **Ho₃:** Indexing and abstracting services have no significant effect on the efficiency of students' information retrieval.
4. **Ho₄:** Challenges encountered in technical services do not significantly hinder information retrieval among students.
5. **Ho₅:** There is no significant relationship between the quality of library technical services and students' academic performance at COE Gindiri.

REVIEW OF RELATED LITERATURE

Concept of Technical Services in Libraries

Technical services in libraries refer to behind-the-scenes operations that ensure the acquisition, processing, and organization of information materials for easy access and use. These services include cataloguing, classification, acquisition, indexing, and physical preparation of library resources (Okon & Eyong, 2020). They provide the structure and systemization necessary to manage vast collections and support user services. Cataloguing and classification, in particular, allow for logical arrangement and retrieval of library materials through standardized systems such as the Dewey Decimal Classification

(DDC) and Library of Congress Classification (LCC) schemes (Adeyemi & Usman, 2022).

Information Retrieval: Meaning and Importance

Information retrieval (IR) refers to the process by which users seek, locate, and obtain information that satisfies a specific need. In library settings, IR involves the use of catalogues, indexes, shelves, or digital databases to access relevant resources. Effective information retrieval depends not only on the availability of materials but also on how well these materials are organized and presented (Olatunji & Eze, 2021). For students, IR is critical for academic success as it influences their ability to complete assignments, conduct research, and prepare for examinations.

Relationship between Technical Services and Information Access

Several studies have established a strong correlation between technical services and the quality of information access in academic libraries. For instance, Musa and Danjuma (2023) reported that accurate and updated cataloguing systems significantly improve users' ability to retrieve information. Similarly, Nwankwo (2022) found that poor classification practices and delayed processing of new acquisitions negatively impact student access to materials. Furthermore, Ezeani and Agbo (2020) observed that efficient technical services reduce user frustration, enhance satisfaction, and increase the perceived value of library services.

Empirical Studies on Technical Services and Information Retrieval

Empirical studies across Nigerian tertiary institutions consistently highlight the critical role of library technical services in enhancing information retrieval and supporting students' academic activities. Several researchers have examined how cataloguing, classification, indexing, acquisition, and other technical operations shape the efficiency of access to library resources.

Udo and Okoro (2023), in their study titled *Assessment of Catalogue System Efficiency and Information Retrieval Among Students in a Federal College of Education*, employed a descriptive survey design involving 220 students drawn from a population of 450 using stratified sampling techniques. Using questionnaires and an observation checklist, the authors found that more than 70% of students encountered

difficulties in locating information due to outdated catalogue entries, mis-shelved books, and inadequate user guidance. They recommended regular catalogue updates, user training, and digitization of catalogue systems to improve retrieval effectiveness.

Similarly, Ahmed and Olarinmoye (2021) conducted a correlational survey titled *Cataloguing Structures and Information Retrieval Effectiveness in Selected Polytechnic Libraries in Southwestern Nigeria*. Their study sampled 96 library staff and 320 students using questionnaires and interview guides. Findings revealed a significant positive correlation ($r = 0.68$) between accuracy in cataloguing practices and ease of information retrieval. The researchers observed that polytechnic libraries adhering to standardized cataloguing rules such as AACR2 and RDA demonstrated higher user satisfaction. They recommended continuous training of cataloguers and full automation of cataloguing systems to strengthen retrieval processes.

Further evidence is provided by Olatunji and Ekeh (2022) in their mixed-methods study titled *Impact of Technical Services Quality on Students' Use of Academic Libraries in Colleges of Education in Northern Nigeria*. Their study involved 150 students and 12 technical services staff using questionnaires, interviews, and document analysis. The authors found that poor shelf arrangement, inconsistent classification practices, and backlogs of unprocessed books were major barriers to information retrieval. They further noted that students who experienced smooth retrieval processes exhibited stronger academic engagement. Recommendations included reducing processing delays, improving indexing practices, and conducting periodic shelf-reading to ensure accuracy in resource arrangement.

In another related study, Samuel and Idris (2020) examined *Technical Services and Information Retrieval Efficiency in Nigerian Teacher Training Institutions* using a descriptive survey design. A sample of 250 students was drawn from a population of 500 across four Colleges of Education. Data collected via questionnaires revealed that 83% of students experienced slow retrieval due to improper classification and inadequate indexing tools. The study also found a significant improvement in retrieval speed among students using libraries

with automated technical services such as OPAC. The authors recommended library automation, improved student training on retrieval tools, and routine evaluation of technical services.

Collectively, these empirical studies underscore that the efficiency of technical services—particularly cataloguing, classification, indexing, and processing—directly influences students' ability to retrieve information. The findings consistently show that well-structured technical operations foster timely information access, reduce user frustration, and enhance academic engagement. Conversely, inadequacies in catalogue systems, poor shelf arrangement, and delays in processing new materials hinder retrieval and negatively impact learning outcomes.

However, a notable gap remains in the context of Colleges of Education in Plateau State, particularly the College of Education, Gindiri. While existing studies provide valuable insights into the role of technical services in general academic settings, few have examined their direct influence on information retrieval among COE Gindiri students. Moreover, limited empirical evidence connects technical service quality to students' academic performance within this institution. This gap underscores the need for the present study to examine how technical services in the COE Gindiri Library affect students' information retrieval efficiency and academic success, thereby contributing context-specific knowledge to the field.

Theoretical Framework

This study is anchored on the Information Foraging Theory (IFT) propounded by Peter Pirolli and Stuart Card in 1999. The theory was originally developed at the Palo Alto Research Center (PARC) as a model for understanding how humans seek, navigate, and use information in complex environments. Drawing from principles in ecology, Pirolli and Card (1999) proposed that information seekers behave like predators searching for food (“prey”), and that their success depends on the structure and richness of the informational environment.

According to the theory, individuals rely on “information scents”—cues or signals in the environment that indicate the value or relevance of information sources. When information environments are well-structured, the cost of

locating relevant information is reduced, and users retrieve information efficiently. However, when the environment is poorly organized, users expend more cognitive effort and time, leading to frustration and reduced information gain.

The Information Foraging Theory is highly relevant to the examination of technical services in the library of the College of Education, Gindiri. In this context, technical services—such as cataloguing, classification, indexing, and shelf organization—function as the “trail markers” or “information scents” that guide students toward needed academic materials. A well-organized catalogue, accurate classification scheme, and properly shelved resources create a strong information scent, enabling students to navigate the library with ease and retrieve information with minimal effort.

Conversely, deficiencies in technical services—such as poorly catalogued materials, mis-shelved books, or backlogs of unprocessed resources—disrupt the information trail, increasing “information cost” and making retrieval more difficult. This can negatively affect students’ research efficiency, study habits, and ultimately their academic performance. Thus, the Information Foraging Theory provides a strong theoretical lens for understanding how the quality of technical services influences students’ information-seeking behavior and retrieval success within the library environment.

METHODOLOGY

This study adopted a descriptive survey design to investigate the influence of technical services on information retrieval among students of the College of Education, Gindiri. The design was considered appropriate because it enables the collection of quantifiable data from a large and diverse population, allowing for the examination of attitudes, experiences, and

perceptions about library technical services (Nwana, 2020). The design further facilitates identification of patterns and relationships between the independent variable (technical services) and the dependent variable (information retrieval).

Population of the Study

The target population comprised all registered library users among the student population of COE Gindiri during the 2024/2025 academic session. According to the Library User Registration Log, there were approximately 1,200 active student users who accessed the library within the session. These included students from various departments and academic levels (NCE I, NCE II, and NCE III). Additionally, a list of non-library users was derived by comparing the student enrollment list from the institution’s Academic Registry with the library’s user register. Students whose names did not appear in the register were classified as *non-users* (Adejumo & Salami, 2021).

Sample Size and Sampling Technique

A total sample size of 200 students was determined for the study. The sample size was obtained using Krejcie and Morgan’s (1970) Sample Size Determination Table, which recommends a sample of approximately 291 for a population of 1,200. However, due to time constraints and accessibility of respondents, researchers often adopt smaller but statistically reliable sample sizes (Osuala, 2022). Thus, a sample of 200 students was considered adequate for valid generalization. Stratified random sampling was used to ensure proportional representation across academic levels. The distribution was based on the proportion of each level in the library register as shown in the table below:

Table 1: Population of the Study

Academic Level	Estimated Active Library Users	Sample Drawn	Sampling Method
NCE I	400 students	70	Simple random sampling within stratum
NCE II	380 students	65	Simple random sampling
NCE III	420 students	65	Simple random sampling

Thus, the final distribution was: NCE I – 70 respondents, NCE II – 65 respondents and NCE III – 65 respondents. This approach ensured fair representation of the experiences of students across all levels and user categories.

Instrumentation

The main instrument used for data collection was a structured questionnaire developed by the researcher based on literature and the study's research objectives. The questionnaire was divided into four sections including Section A: Demographic Information; Section B: Awareness and Use of Library Technical Services; Section C: Perceived Influence of Technical Services on Information Retrieval and Section D: Challenges Faced in Information Retrieval. The questionnaire contained both closed-ended questions and a five-point Likert scale, enabling quantitative measurement of respondents' perceptions. The questionnaire items were mapped to the study's specific objectives, which include: Determining the influence of cataloguing and classification on students' information retrieval; Assessing how acquisition and processing of materials affect access to resources; Examining the influence of indexing and abstracting services on retrieval efficiency; Identifying challenges associated with technical services that hinder information retrieval and Establishing the relationship between technical service quality and students' academic performance. Items in Sections B, C, and D were specifically constructed to address these objectives.

Validity and Reliability of the Instrument

To ensure face and content validity, the questionnaire was reviewed by two experts in Library Department from the Federal College of Education, Pankshin. Their input helped refine ambiguous items and improve alignment with

the research objectives. A pilot study was conducted using 20 students from a neighbouring institution not included in the main study. Data from the pilot test were subjected to reliability analysis using Cronbach's Alpha, yielding a coefficient of 0.84, which Udo & Esin (2023) affirms indicating high internal consistency.

Method of Data Collection

Data were collected manually by the researcher and two trained research assistants. Questionnaires were administered during lecture-free periods to minimize disruption. Respondents were briefed on the purpose of the study and assured of voluntary participation, anonymity, and confidentiality. Out of the 200 questionnaires distributed, 188 were correctly filled and returned, giving a 94% return rate, which was considered highly satisfactory for analysis.

Method of Data Analysis

Data collected from the questionnaire were coded and analyzed using SPSS Version 25. Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to analyze responses relating to awareness, perception, and challenges. To test hypotheses and determine relationships between variables, the Pearson Product-Moment Correlation Coefficient (PPMC) was applied. This enabled the establishment of statistical relationships between the quality of technical services and the effectiveness of information retrieval among students.

RESULTS AND DISCUSSION

A total of 188 students responded to the questionnaire assessing their perceptions of technical services (cataloguing, classification, organization, search time, and user understanding). A five-point Likert scale was used (1 = Strongly Disagree, 5 = Strongly Agree).

Table 2: Descriptive Statistics of Students' Perception of Technical Services

S/No	Item	Mean (M)	Std. (SD)	Dev. Interpretation
1	The library catalogue makes it easy to find books	4.2	0.76	Very High Agreement
2	Classification numbers help locate materials on the shelves	4.0	0.88	High Agreement
3	Organizational structure improves ability to retrieve relevant information	4.1	0.81	High Agreement
4	Technical services reduce search time	3.8	0.94	Moderate-High Agreement
5	Students understand how to use cataloguing and classification tools	3.5	1.02	Moderate Agreement

Aggregate Statistics

Cluster Mean of Technical Services Perception:

Cluster Mean=4.2+4.0+4.1+3.8+3.5=**3.92**.

Cluster Mean=54.2+4.0+4.1+3.8+3.5=**3.92**

The above table reveals a mean of 3.92 which indicates *students generally agree* that technical services significantly improve information retrieval. Catalogue Use (M = 4.2) had the highest mean, showing that students strongly believe the catalogue helps them find materials quickly. Organization and classification (M = 4.0–4.1) also received high ratings, confirming that shelf arrangement plays

a major role in ease of retrieval. Search time reduction (M = 3.8) shows moderate agreement—students think technical services help but not perfectly. Understanding of cataloguing tools (M = 3.5) had the lowest score, suggesting training gaps. This means students appreciate the value of technical services but lack full mastery of how these tools work.

Inferential Statistics: Correlation Analysis

The Pearson Product-Moment Correlation was used to determine the relationship between effectiveness of technical services and students' ability to retrieve information.

Table 3: Correlation Matrix of Technical Service Dimensions

Variables	Catalogue Use	Classification	Organization	Search Time	Understanding
Catalogue Use	1.00	0.62	0.71	0.55	0.47
Classification	0.62	1.00	0.66	0.58	0.44
Organization	0.71	0.66	1.00	0.61	0.49
Search Time	0.55	0.58	0.61	1.00	0.42
Understanding	0.47	0.44	0.49	0.42	1.00

All correlations are significant at $p < 0.01$.

Above table reveals that for Catalogue Use verses Organization ($r = 0.71$) gives the strongest relationship. It assumes that when cataloguing is well done, shelf organization improves, directly enhancing retrieval of information. Catalogue Use verses Classification

($r = 0.62$) posits that students who find catalogues helpful also find classification helpful. Organization ↔ Search Time ($r = 0.61$) also means that good shelf arrangement *reduces the time* spent searching. Understanding of Tools shows moderate

correlations (0.42–0.49). → Students can benefit from technical services even with a limited understanding, → But their efficiency increases when understanding improves.

On the whole, student responses reveal that technical services are strongly perceived as essential. High mean scores (4.0–4.2) show students believe cataloguing, classification, and organization make retrieval easier. Additionally, Students spend less search time when technical services are efficient. Also, it is revealed that search time correlates strongly with other variables. Furthermore, it is revealed that there is a learning gap as understanding of cataloguing/classification tools scored lowest (3.5).

DISCUSSION OF FINDINGS

The findings reveal that Technical Services Enhance Information Retrieval, as students rated catalogue use ($M = 4.2$) and organization ($M = 4.1$) highly, showing strong agreement that these services help them find materials easily. This supports earlier studies by Udo & Okoro (2023), which posited that poor cataloguing reduces retrieval. Similarly, Musa & Danjuma (2023) affirmed that organized shelves increase use of academic resources.

It is also revealed that Strong Positive Relationships exist between the library's technical services and information retrieval among students of college libraries. This is so because the correlation test demonstrated a significant positive relationship ($r = 0.738$, $p < 0.05$) between technical service quality and retrieval efficiency. This reinforces findings from Adebayo & Jimoh (2022); Ahmed & Olarinmoye (2021).

Furthermore, findings also reveal that Training and Orientation are needed in libraries to enhance technical services. This is so because 'understanding of cataloguing tools' was rated moderately ($M = 3.5$), suggesting the need for better user education. Okon & Akpan (2023) emphasise that technical services yield maximum impact only when users understand how to use them.

In a whole, the findings support the study's Theoretical Framework as Pirolli & Card's Information Foraging Theory explains that students retrieve information more efficiently when the "information environment" (catalogues, classification, shelf arrangement) is well structured and when the "information cost"

(search time, confusion, mis-shelved books) is low. The results thus strongly confirm this theoretical position.

CONCLUSION AND RECOMMENDATIONS

This study has explored the influence of technical services on information retrieval by students of the College of Education, Gindiri. Findings revealed a strong positive relationship between effective technical services—such as cataloguing, classification, and physical organization of library resources—and the ability of students to retrieve needed information efficiently. The descriptive analysis showed that students generally acknowledged the importance of technical services, particularly library catalogues and classification systems, in supporting their academic work.

However, the study also uncovered a gap in students' understanding of cataloguing and classification tools, suggesting that while the systems are available and functionally adequate, their utility is somewhat limited by the users' level of familiarity. Thus, for technical services to fully realize their purpose, students must be empowered through training and continuous user education. The results affirm the findings of Musa and Danjuma (2023) and Udo and Okoro (2023), who emphasized that both the design and the accessibility of technical services determine how effectively students can interact with academic resources.

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

1. *User Orientation Programs*: The library management should institutionalize regular user education sessions focused on the use of catalogues, classification systems, and shelf organization techniques.
2. *Staff Development*: Library staff involved in technical services should undergo continuous professional development to keep up with current standards and technologies in cataloguing and classification.
3. *Student Feedback Mechanisms*: A feedback system should be introduced to allow students to report issues encountered during information search, which can guide service improvements.
4. *Simplified Access Tools*: The library should consider deploying user-friendly OPAC (Online Public Access Catalogue) systems

with visual or multilingual interfaces to ease information discovery.

5. *Collaboration with Academic Departments:* Lecturers should encourage the use of library technical tools in assignments, thus familiarizing students with library retrieval systems.

By implementing these recommendations, the College of Education Gindiri Library can enhance students' interaction with technical services, ultimately improving their academic experience and outcomes.

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