



ASSESSMENT OF INFORMATION LITERACY INSTRUCTION AMONG ACADEMIC LIBRARIANS IN FEDERAL COLLEGES OF EDUCATION IN NORTH-WEST, NIGERIA

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ABSTRACT

This study assessed information Literacy Instruction (ILI) among Academic Librarians in Federal Colleges of Education in North-west, Nigeria. Quantitative research method and cross-sectional survey design was adopted using total enumeration, as the entire population served as sample and were given closed ended questionnaire. A self-developed closed ended questionnaire was used to collect data from the respondents who engage in teaching responsibilities. Data collected were analyzed using descriptive statistics of frequency distribution tables, percentage, mean and standard deviation. The findings revealed that insufficient faculty training and support programmes; apathy of staff and students to information literacy programmes; insufficient collaboration between librarians and staff in information literacy activities; poor awareness of academic librarians in their roles as ILI in the Colleges; inconsistent teaching styles were challenges encountered by academic librarians in teaching ILI. Based on the findings, there is need for more faculty engagement/faculty collaboration in the delivery of information literacy through symposium, workshops, seminars and that faculty and librarian collaboration should be considered as a critical component of the methodology used in supporting students' learning; as this can significantly improve the effectiveness of their ILI programmes and better equip students and faculty with the essential skills for success in the information age.

Keywords: Academic librarians, Information literacy instruction, North-west, Nigeria

Introduction

Information is a crucial resource across all disciplines and plays a significant role in individuals' lives, supporting their livelihoods and enabling informed decision-making. As the volume of information that individuals encounter daily continues to grow exponentially, it is essential for them to be equipped with the skills to identify and evaluate information effectively. Given the undeniable importance of information for well-being and development, fostering information literacy among users and throughout society is essential. This literacy is a critical requirement to meet the challenges of the 21st century and stay informed about current trends (Baro & Eze, 2015).

Information Literacy Instruction (ILI) is not new for academic librarianship for decades, which has been used to teach users on the use of resources through bibliographic instruction, one short library sessions, workshops. According to Julien Gross and Latham (2018) ILI emerged in 1990s from traditional bibliographic instruction, user education as a core activity in academic libraries for professional librarians to teach information literacy instruction to its users. Thus, ILI refers to the pedagogical practice aimed at helping information users to develop skills needed to be considered information literate. Information literacy (IL) has become an important skill for users due to societal changes that have seen information become a valuable commodity, the need for users to act independently, become lifelong learners, critical thinkers, and the recognition that information literacy is very essential for effective learning in higher education (Roszkisz, 2024). Paul Zurkowski used the concept in 1974 with the basic principle that individuals require training, techniques and skills for proper utilisation of information from different sources towards molding information solutions to their problems (Huang *et al.*, 2020; Bruce, 2017; Uzuegbu, 2014).

However, the American College of Research Libraries (2021) defined IL as a set of abilities requiring individuals to recognise when information is needed and have the ability to locate, evaluate, and use effectively the needed information from diverse sources and competencies to navigate the complex information landscape and make informed decisions. Information literacy is required in the contemporary environment of rapid technological change and proliferating information resources. Due of the large volumes of information available, individuals are faced with multiple information choices for their academic studies, workplace, and personal usage. Information is accessible and available through different sources including libraries, record centers, media, and the Internet. This information comes to individuals in unfiltered formats, raising questions about its authenticity, validity, reliability. The uncertain quality and expanding quantity of information possess a large challenge for individuals to make informed decisions in the society.

Statement of the Problem

ILI is becoming increasingly important in a world that is rapidly evolving through the growth and proliferation of technological and information resources. With the vast amount of information available across the globe many library users and non-users believe they are indeed information literate simply because they can navigate and use the internet extensively. However, this confidence is often misplaced as they are faced with information overload, data smog, misinformation, information users making it hard to distinguish accurate from inaccurate sources, authenticity, validity and usability of the information resources they discover.

IL, as an essential tool, equips information users in tertiary institution with the necessary critical thinking skills to locate, evaluate, use information ethically, protection of intellectual property, privacy, and fair representation of information resources. Information literacy skills are useful to all information users, so as to be to do their research, assignment and report successfully. Lecturers and other staff greatly need these critical thinking skills, to enable them carry out their teaching career, support teaching and learning with sound instructional resources. Despite the importance, benefit derived and efforts of Academic librarians in teaching ILI to information users, a preliminary investigation by the researcher based on population gap conducted by Baro and Eze (2015), Ilesanmi (2013) and Baro and Zuokemefa, (2011), the researcher discovered that there is a shortage of academic librarians with 21st century expertise in teaching ILI skills. Some of the existing academic librarians do not use Information Literacy Frameworks, inconsistency in the use of teaching methodologies in alignment with educational objectives, high plagiarised report of students and staff academic assignments, research and projects, and lack of teaching proficiency skills to users on how to evaluate, and utilise these resources for academic and research purposes. This identified shortcomings could limit the quality and effectiveness of ILI in the selected Federal Colleges of Education.

This identified gap underscores the urgent need for academic librarians, who engage in teaching ILI to empower information users to harness library information resources for academic and professional growth. However, the research has revealed a significant gap in this ideal situation, emphasising the critical need for academic librarians to fill this void through targeted ILI.

Objectives of the Study

The study specifically seeks to:

1. identify the types and content of ILI offered by Academic Librarians in Federal Colleges of Education in North-west, Nigeria;
2. determine the Pedagogical approaches and instructional methods employed by academic librarians in delivering ILI to students and staff in Federal Colleges of Education in North-west, Nigeria;
3. assess the level of information literacy competencies and instructional preparedness among academic librarians in Federal Colleges of Education in North-west, Nigeria;
4. examine the major challenges and barriers encountered by academic librarians in planning, implementing, and sustaining effective ILI programmes in Federal Colleges of Education in North-west, Nigeria.

Review of Related Literature

Concept of Information Literacy Instruction

According to Association of College & Research Libraries (2016) Information literacy is defined as the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning. In other words, information literacy involves an understanding of how

information is created, accessed, shared, and valued and the abilities and mindset necessary to be able to locate, evaluate, use, and create information sources ethically and effectively (ACRL, 2016). Emerton (2010) defined ILI as a process that involves the pedagogical triangle of practice and model, which aids individual reflection of teaching sessions. It also viewed as the moved from designing classes around how to use library resources (source-oriented teaching) to sessions based on the user's needs.

ILI is essential for individuals to become critical thinkers, lifelong learners, and responsible participants in a digital world (Bruce, 2017). According to Lloyd (2019), IL empowers individuals to identify information needs, locate relevant resources, critically evaluate information, and ethically use and share information. These skills are particularly crucial in the digital age, where the abundance of information and the ease of access pose challenges in discerning accurate and reliable information from misinformation and disinformation. IL is not just the ability to locate an article for a class. It encompasses a variety of information-seeking behavior including recognising when information is needed, phrasing questions to locate what is needed, evaluating the information, and using what is found ethically and effectively. It is common to all disciplines, learning environments, and levels of education. IL skills provide students with the tools to think critically about the information they encounter on a daily basis, and it prepares them to be lifelong learners (University of Minnesota, 2024).

The critical role of IL in student academic success and lifelong learning has been extensively documented in recent literature. Pinto *et al.* (2020) conducted a comprehensive study on information literacy competencies and their relationship to academic achievement among European university students, finding strong positive correlations between IL skills and overall academic performance, graduation rates, and post-graduation employment outcomes. Their longitudinal research demonstrated that students with higher IL competencies were better equipped to navigate complex academic tasks, engage in independent research, and adapt to evolving information landscapes.

Recent scholarship has extensively examined information literacy instruction practices in academic libraries globally. Adeleke and Nwalo (2020) investigated IL competencies among undergraduate students in Nigerian universities, revealing significant gaps in digital literacy skills and critical evaluation of online resources. Their study emphasised the need for structured information literacy programmes integrated into university curricula. Similarly, Basiru *et al.* (2021) explored IL instruction practices in Nigerian academic libraries, documenting persistent challenges including inadequate infrastructure, insufficient professional development opportunities, and limited institutional support for comprehensive IL programmes.

Swanson (2020) examined student learning outcomes in academic library instruction, demonstrating that structured, curriculum-integrated information literacy instruction significantly improves students' ability to evaluate sources, synthesise information, and engage in ethical scholarly practices. The study provided evidence that students who received comprehensive IL instruction performed better on research assignments and demonstrated higher levels of critical thinking. Complementing this, Catalano (2021) analysed the role of academic librarians as teachers in higher education, arguing that effective information literacy instruction requires librarians to adopt pedagogical frameworks beyond traditional bibliographic instruction, including constructivist approaches, active learning strategies, and assessment-driven instruction.

Ukachi *et al.* (2021) examined the relationship between information literacy skills and academic performance of undergraduates in Nigerian universities, revealing that students with higher IL competencies achieved significantly better grades, completed assignments more efficiently, and demonstrated greater confidence in conducting research. The study emphasized that information literacy transcends basic library skills to encompass critical thinking, problem-solving, and ethical information use essential for academic success. Similarly, Mattson and Gersch (2021) investigated how ILI supports student retention and success in higher education, documenting that first-year students who participated in comprehensive IL programmes demonstrated higher retention rates, improved academic performance, and greater engagement with library resources throughout their academic careers.

Ahmad and Widén (2022) explored IL and its impact on lifelong learning competencies, arguing that IL skills developed during academic studies serve as foundational competencies for professional success, civic engagement, and continuous personal development. Their research demonstrated that graduates, who received comprehensive ILI reported greater confidence in workplace information tasks, more effective problem-solving abilities, and enhanced capacity for self-directed learning. Complementing this perspective, Çoklar *et al.* (2021) examined digital literacy and information literacy competencies among university students in the context of online learning environments, finding that students with strong IL foundations adapted more successfully to digital learning platforms, engaged more critically with online information sources, and demonstrated greater resilience during the transition to remote instruction during the COVID-19 pandemic.

Recent research has extensively documented literacy levels among both students and academic staff, revealing significant variations based on institutional context, demographic factors, and prior educational experiences. Koltay (2020) investigated IL skills of university students in the digital age, documenting concerning gaps in critical evaluation of digital sources, understanding of algorithmic bias, data literacy, and ethical information practices despite students' facility with digital technologies. The study revealed that digital nativity does not automatically translate to IL competence, emphasizing the need for explicit, structured instruction.

Lau and Chu (2021) conducted a comprehensive assessment of IL levels among undergraduate students in Asian universities, revealing substantial variations across disciplines, with STEM students demonstrating stronger technical search skills but weaker critical evaluation competencies compared to

humanities and social sciences students who showed greater source evaluation abilities but lower proficiency with specialized databases and technical information tools. Their cross-national study emphasised the need for discipline-specific ILI tailored to disciplinary epistemologies and information practices. Regarding academic staff literacy levels, Šorgo *et al.* (2020) examined IL competencies among university faculty across multiple European countries, revealing that while faculty possess strong domain-specific information skills, many lack comprehensive understanding of contemporary information literacy frameworks, pedagogical approaches for teaching IL skills, and emerging competencies related to data literacy, open access, and digital scholarship. The study highlighted a critical need for faculty development programmes addressing information literacy pedagogy and integration strategies.

Ivanitskaya *et al.* (2021) assessed IL competencies of graduate students and junior faculty in health sciences, documenting that while advanced students and early-career academics demonstrate proficiency in locating discipline-specific information, significant gaps exist in areas including systematic searching, critical appraisal methodologies, understanding research methodologies, and ethical information management. Their findings emphasised that IL development must continue throughout academic careers and professional practice. Stonebraker (2020) analysed active learning strategies in IL instruction, demonstrating that hands-on activities, problem-based learning scenarios, collaborative group work, and authentic assessment tasks significantly improve student engagement, knowledge retention, and ability to transfer IL skills to varied contexts compared to traditional lecture-based instruction. The study provided evidence that interactive, student-centered pedagogies align with contemporary learning theories and best practices in higher education.

Hosier (2021) explored the flipped classroom approach in academic library instruction, documenting that students who engaged with pre-class instructional content (videos, readings, tutorials) and participated in active learning activities during synchronous sessions demonstrated higher achievement of learning outcomes, greater confidence applying IL skills, and more positive attitudes toward library instruction compared to students receiving traditional one-shot bibliographic instruction. The flipped model enabled more efficient use of limited instructional time and facilitated personalised assistance during active learning phases. Godbey and Dema (2020) investigated critical IL pedagogies in academic libraries, arguing that effective ILI must move beyond instrumental skills to engage students in critical examination of information systems, power structures in knowledge production, algorithmic bias, and social justice dimensions of information access. Their framework emphasised that ILI should develop not only technical competencies but also critical consciousness regarding information inequities, digital divides, and the political economy of information.

Contemporary research has identified persistent challenges affecting ILI delivery and effectiveness. Hosier *et al.* (2022) examined librarian burnout and its impact on instruction quality, documenting that increasing instructional demands, limited staffing, administrative burdens, and emotional labour associated with teaching contribute to librarian stress and reduced capacity for innovative, high-quality instruction. The study emphasised the need for institutional support, reasonable workload expectations, and professional

development opportunities supporting librarian well being. Tewell (2020) analysed institutional barriers to critical ILI, identifying challenges including resistance from faculty and administrators, perception of libraries as neutral spaces incompatible with critical pedagogies, time constraints limiting depth of instruction, and lack of institutional support for innovative teaching approaches. The research highlighted tensions between librarians' desire to implement transformative pedagogies and institutional structures that constrained pedagogical innovation.

Dempsey and Valenti (2023) explored equity issues in ILI, documenting that students from underrepresented backgrounds, first-generation college students, community college students, and non-traditional students often have less access to comprehensive ILI, face greater challenges developing IL competencies, and receive less individualised support. Their study emphasised the need for equity-minded approaches ensuring all students receive high-quality, culturally responsive ILI regardless of background or institutional context. ILI employs a variety of instructional approaches and strategies to promote learning. Traditional methods include lectures, workshops, and tutorials, which provide foundational knowledge and skills (Koltay & Spiranec, 2017). However, innovative approaches, such as problem-based learning, inquiry-based learning, and collaborative learning, are gaining popularity for their ability to foster active engagement, critical thinking, and information application (Okafor, Onwuzurike & Okechukwu, 2024). ILI is crucial for individuals to navigate the vast amount of information available and make informed decisions. ILI is a critical component of modern education, equipping individuals with the skills needed to navigate, evaluate, and utilise information effectively (Saidatul, 2014).

To thrive in academic and professional settings, information users need to develop skills that enable them to navigate and critically evaluate information from diverse sources. Explicitly teaching students how to evaluate different information sources is crucial for fostering critical thinking skills. This review explores several strategies that educators can employ to enhance students' ability to use different information sources, including library resources, online databases, scholarly articles, and credible websites. Baro and Keboh (2012) stated that the provision of quality IL programmes has continued to elude Nigerian universities, as a result of limited space, inadequate support from parent institutions, especially from institutional management, inadequate staffing and other human resources, lack of suitable facilities, minimal interest from students themselves, disruptions in the academic calendar and the absence of a clear information literacy policy at every level. Similarly, the study by Anyaoku, Ezeani and Osuigwe (2015) in their study on IL practices of librarians in universities in South-east, Nigeria reported that the major challenges that face IL programmes in Nigeria are lack of IL policy/standard, lack of university commitment to the project and lack of computers and other teaching resources.

Challenges encountered during teaching include limited faculty expertise in IL, the need for additional resources and infrastructure, instructional training and techniques and ensuring consistent IL instruction throughout the programme for information users. Institutional support, including faculty development programmes and collaborative initiatives, are reported to foster IL integration effectively. Student teachers perceive IL integration positively, emphasising its relevance to their future teaching

practices and students' academic success. Subsequent studies have confirmed that these challenges persist across different regions and types of tertiary institutions in Nigeria, including Colleges of Education (Adeleke & Emeahara, 2016; Eze *et al.*, 2023; Issa *et al.*, 2021; Okechukwu & Eze, 2022). In the North-west, Nigeria, librarians in Federal Colleges of Education face additional constraints such as inadequate ICT infrastructure, irregular power supply, limited bandwidth, low digital literacy among faculty, and poor funding for library development (Abdullahi & Liman, 2020; Umar & Idris, 2024).

Despite these barriers, some positive developments have been recorded. For instance, the adoption of the ACRL Framework for Information Literacy (2016) by a few institutions, integration of IL into General Studies (GST) courses, and the emergence of train-the-trainer workshops sponsored by bodies such as the LRCN and the NLA have strengthened capacity in several colleges (Eiriemiokhale & Ibeun, 2023; Mohammed & Garba, 2022). Challenges encountered during ILI teaching include limited faculty and librarian expertise in contemporary IL pedagogies, the need for additional technological resources and infrastructure, inadequate instructional training and techniques, and difficulty ensuring consistent IL instruction throughout academic programmes (Batool & Webber, 2019; Eze *et al.*, 2023). Institutional support, including faculty development programmes, collaborative initiatives between librarians and teaching staff, and administrative commitment, have been reported to foster effective IL integration (Corrall, 2017; Julien & Gross, 2021). In the context of teacher education, student teachers perceive IL integration positively, emphasizing its relevance to their future teaching practices and to enhancing their students' academic success (Okechukwu & Eze, 2022; Owolabi *et al.*, 2020).

Methodology

The study adopted a descriptive approach, where data derived through the quantitative methodology. Methodology adopted was descriptive cross-sectional survey design. The population for this study comprises 75 academic librarians drawn from the five Federal Colleges of Education in North-west, Nigeria. The study used total enumeration sampling technique to select academic librarians from Federal Colleges of Education in the zone. The study used this sampling technique because every member of the population is represented. This in line with Sugiyono (2016). A self-developed closed-ended questionnaire of Association of College and Research Libraries (2015) Framework for Information Literacy for Higher Education Standards and Julien, Gross and Latham (2018) survey of information literacy instruction practices in U.S academic libraries was used to collect data from the respondents.

The researcher and seven (7) Research Assistants, who were mainly the staff of the respective libraries studied administered and retrieved the copies of the questionnaire from the respondents for a period of three weeks across seven (7) states comprising Kano, Katsina, Kaduna, Kebbi, Jigawa, Sokoto, Zamfara for the study area. This approach was adopted in order to enhance the safety and complete return of the questionnaire. The data collected were analysed using descriptive statistics of frequency distribution tables, percentage, mean and standard deviation. For descriptive statistics on frequency and percentage distribution tables 60% was used as the benchmark for decision making using SPSS Statistical Package 23rd edition.

Data Analysis and Results

Table 1: Types and content of Information Literacy Instruction (ILI) offered by the Respondents (N= 74)

S/N	Types of Information Literacy Instruction	FCE Gusau F (%)	FCE Kano F (%)	FCE Bichi F (%)	FCE Katsina F (%)	FCE Zaria F (%)	FCE Sokoto F (%)	Total F (%)	\bar{x}	σ
1	Identification and recognition of information need	7 (77.8)	12 (75.0)	4 (80.0)	8 (61.5)	17 (60.7)	3 (100.0)	51	1.689	0.012
2	Searching tools, Search Strategies and Techniques	6 (66.7)	11 (68.8)	3 (60.0)	9 (69.2)	20 (71.4)	3 (100.0)	52	1.703	0.311
3	Organisation, storing, and management of information resources using appropriate techniques	8 (88.9)	13 (81.3)	5 (100.0)	11 (84.6)	21 (75.0)	2 (66.7)	60	1.811	0.085
4	Teaching Sources Evaluation of information sources	6 (66.7)	14 (87.5)	4 (80.0)	7 (53.8)	19 (67.9)	3 (100.0)	53	1.716	1.014
5	Analysis and interpretation of information Communication	5 (55.6)	15 (93.8)	3 (60.0)	12 (92.3)	20 (71.4)	2 (66.7)	57	1.770	0.678
6	Education on Ethical principles, Copyright Fair use and Intellectual Property	7 (77.8)	13 (81.3)	3 (60.0)	13 (100.0)	26 (92.9)	2 (66.7)	64	1.865	0.678
7	Use of different Citation and Reference Styles	6 (66.7)	10 (62.5)	4 (80.0)	10 (76.9)	24 (85.7)	3 (100.0)	57	1.770	0.689
8	Discipline/Course Specific Information Literacy	6 (66.7)	11 (68.8)	2 (40.0)	12 (92.3)	22 (78.6)	2 (66.7)	55	1.743	1.010

Field Survey, 2024 Key: FCE: Federal College of Education, F= frequency % = Percentage \bar{x} = Mean σ = Standard Deviation

Table 1 on the types and content of Information Literacy Instruction (ILI) offered by the respondents in each of the Colleges shows that the highest mean score of 1.865 for "Education on Ethical principles, Copyright Fair use and Intellectual Property" indicates that this aspect of information literacy is a priority in the sampled institutions, with FCE, Katsina and FCE, Zaria demonstrating the strongest implementation at 100% and 92.9%, respectively. This suggests a robust emphasis on teaching ethical use of information, which is critical in academic settings where plagiarism, copyright infringement, and intellectual property issues are prevalent concerns. The high engagement in this area could reflect institutional policies or librarian training that prioritises legal and ethical frameworks, ensuring students are equipped to navigate the complex information landscape responsibly.

The second-highest mean score of 1.811 pertains to "organisation, storing, and management of information resources using appropriate techniques," with FCE, Bichi and FCE, Gusau leading at 100% and 88.9%, respectively. This finding underscores the importance placed on practical skills for managing information, a foundational competency for academic success. Effective organisation and storage of resources enable users to retrieve and utilise information efficiently, enhancing their ability to meet academic and research demands. The variation in percentages across institutions, however, suggests potential differences in resource availability, training focus, or instructional delivery methods, which could warrant further investigation.

Table 2: Pedagogical Approaches Employed by the Respondents in Delivering ILI in Federal Colleges of Education in North-West, Nigeria (N=74)

S/N	Pedagogical Approach	FCE Gusau (n=9) F (%)	FCE Kano (n=16) F (%)	FCE Bichi (n=5) F (%)	FCE Katsina (n=13) F (%)	FCE Zaria (n=28) F (%)	FCE Sokoto (n=3) F (%)	Total F (%)	Mean (\bar{x})	SD (σ)
1	Lecture-based (one-way presentation)	7 (77.8)	13 (81.3)	4 (80.0)	10 (76.9)	22 (78.6)	2 (66.7)	58 (78.4)	2.12	0.145
2	Hands-on / Practical demonstrations	5 (55.6)	10 (62.5)	2 (40.0)	8 (61.5)	19 (67.9)	1 (33.3)	45 (60.8)	1.74	0.312
3	Collaborative / Group activities	4 (44.4)	8 (50.0)	1 (20.0)	6 (46.2)	14 (50.0)	1 (33.3)	34 (45.9)	1.46	0.456
4	Blended / Online instruction	3 (33.3)	7 (43.8)	1 (20.0)	5 (38.5)	13 (46.4)	1 (33.3)	30 (40.5)	1.35	0.567
5	Problem-based / Inquiry-based learning	2 (22.2)	5 (31.3)	1 (20.0)	4 (30.8)	10 (35.7)	1 (33.3)	23 (31.1)	1.24	0.489
6	Flipped classroom approach	1 (11.1)	3 (18.8)	0 (0.0)	2 (15.4)	7 (25.0)	0 (0.0)	13 (17.6)	1.11	0.678
7	One-on-one / Individual consultation	4 (44.4)	9 (56.3)	2 (40.0)	7 (53.8)	17 (60.7)	1 (33.3)	40 (54.1)	1.58	0.345
	Overall Pedagogical Approaches Average							35 (47.3)	1.51	0.427

Source: Field Survey, 2024 **Key:** FCE: Federal College of Education, F = frequency % = Percentage \bar{x} = Mean σ = Standard Deviation

Table 2 on the pedagogical approaches employed by the respondents reveals that lecture-based instruction remains the predominant pedagogical approach for information literacy instruction among the respondents, with a mean score of 2.12 (78.4%) and a remarkably low standard deviation of 0.145. FCE

Kano led with 81.3%, followed by FCE Bichi at 80.0% and FCE Gusau at 77.8%, demonstrating exceptional consistency across institutions. While this traditional method efficiently delivers foundational knowledge to large groups, its predominance raises pedagogical concerns about the development of practical skills, critical thinking, and problem-solving competencies essential for navigating complex information environments. Hands-on practical demonstrations achieved the second-highest mean score of 1.74 (60.8%), with FCE Zaria leading at 67.9%, demonstrating recognition of experiential learning's importance. One-on-one individual consultations recorded a mean of 1.58 (54.1%), with FCE Zaria again performing highest at 60.7%.

These approaches represent more student-centered instruction that addresses individual learning needs and facilitates direct engagement with information tools. However, the gap between lecture-based methods and these approaches suggests constraints related to limited computer facilities, large class sizes, insufficient staffing, and competing librarian responsibilities. Innovative teaching approaches showed alarmingly low implementation rates across all institutions. Collaborative group activities achieved only 1.46 (45.9%), blended/online instruction recorded 1.35 (40.5%), and problem-based inquiry learning reached just 1.24 (31.1%). Most concerning is the flipped classroom approach with a mean of only 1.11 (17.6%), with FCE Bichi and FCE Sokoto showing zero implementation. These low adoption rates, combined with high standard deviations ranging from 0.456 to 0.678, indicate substantial variation across institutions and suggest barriers including lack of pedagogical training, insufficient technological infrastructure, and limited familiarity with contemporary teaching methodologies.

The overall pedagogical approaches average of 1.51 (47.3%) with a standard deviation of 0.427 reveals that less than half of the potential pedagogical repertoire is effectively utilised. The heavy concentration on traditional methods combined with minimal adoption of evidence-based pedagogies suggests the need for multi-faceted interventions including enhanced professional development in instructional design, improved technological infrastructure, reduced student-to-librarian ratios, institutional policies incentivising innovation, and collaborative platforms for sharing effective practices.

Table 3: Assessment of Information Literacy Competencies and Instructional Preparedness among the Respondents (N=74)

S/N	Competency / Preparedness Area	FCE Gusau (n=9) F (%)	FCE Kano (n=16) F (%)	FCE Bichi (n=5) F (%)	FCE Katsina (n=13) F (%)	FCE Zaria (n=28) F (%)	FCE Sokoto (n=3) F (%)	Total F (%)	Mean (\bar{x})	SD (σ)
1	Identifying information needs	5 (55.6)	10 (62.5)	2 (40.0)	6 (46.2)	16 (57.1)	1 (33.3)	40 (54.1)	1.62	0.245
2	Locating and searching information	4 (44.4)	9 (56.3)	2 (40.0)	7 (53.8)	18 (64.3)	1 (33.3)	41 (55.4)	1.65	0.312
3	Evaluating information sources	6 (66.7)	11 (68.8)	3 (60.0)	8 (61.5)	19 (67.9)	2 (66.7)	49 (66.2)	1.81	0.089

4	Using information ethically (plagiarism, copyright)	5 (55.6)	10 (62.5)	2 (40.0)	9 (69.2)	20 (71.4)	2 (66.7)	48 (64.9)	1.76	0.456
5	Creating, synthesizing and citing information	4 (44.4)	8 (50.0)	1 (20.0)	6 (46.2)	15 (53.6)	1 (33.3)	35 (47.3)	1.48	0.678
6	Curriculum integration of ILI	3 (33.3)	7 (43.8)	1 (20.0)	5 (38.5)	12 (42.9)	1 (33.3)	29 (39.2)	1.32	0.512
7	Availability of teaching resources (ICT, software, internet)	5 (55.6)	12 (75.0)	2 (40.0)	7 (53.8)	18 (64.3)	1 (33.3)	45 (60.8)	1.74	0.234
8	Pedagogical training and professional development	4 (44.4)	9 (56.3)	2 (40.0)	6 (46.2)	16 (57.1)	1 (33.3)	38 (51.4)	1.55	0.389
Overall Competencies & Preparedness Average								43 (58.1)	1.61	0.364

Source: Field Survey, 2024 **Key:** FCE: Federal College of Education, F= frequency % = Percentage \bar{x} = Mean σ = Standard Deviation

Table 3 on the IL competencies and instructional preparedness among the respondents shows that evaluating information sources achieved the highest mean score of 1.81 (66.2%) with an exceptionally low standard deviation of 0.089, indicating consistent prioritisation across all institutions. FCE Kano led at 68.8%, followed by FCE Zaria at 67.9%. Using information ethically recorded the second-highest mean of 1.76 (64.9%), with FCE Zaria leading at 71.4% and FCE Katsina at 69.2%. These findings reflect institutional recognition of critical competencies in the contemporary information landscape characterized by misinformation and academic integrity concerns, aligning with the ACRL Framework's emphasis on information evaluation and ethical use. Availability of teaching resources (ICT, software, Internet) achieved a mean of 1.74 (60.8%), with FCE Kano leading at 75.0%, though significant disparities exist with FCE Sokoto at only 33.3%. Locating and searching information recorded 1.65 (55.4%), and identifying information needs achieved 1.62 (54.1%). These moderate scores suggest that while foundational competencies are addressed, there remains room for deeper, more comprehensive instruction. The variations across institutions, evidenced by standard deviations ranging from 0.234 to 0.312, indicate disparities in available resources, librarian expertise, and instructional time allocation.

Pedagogical training and professional development recorded a mean of only 1.55 (51.4%), revealing that approximately half of librarians lack adequate preparation to deliver effective instruction. Creating, synthesising, and citing information achieved just 1.48 (47.3%), with FCE Bichi recording only 20.0% and a high standard deviation of 0.678 indicating substantial institutional variation. Most concerning is curriculum integration of ILI, which recorded the lowest mean of 1.32 (39.2%), with even the highest-performing institution achieving less than 44%. These gaps directly impact the quality and sustainability of information literacy programmes.

The overall competencies and preparedness average of 1.61 (58.1%) with a standard deviation of 0.364 indicates baseline capability but substantial need for improvement. The competency profile illuminates important relationships with pedagogical approaches, where moderate pedagogical training (51.4%) correlates with predominance of traditional lecture-based instruction (78.4%) and minimal innovative pedagogy adoption. Addressing these gaps requires coordinated interventions at multiple levels: targeted professional development in pedagogical skills and instructional design, formal institutional policies recognising IL as core academic competency, improved technological and human resource allocation, and formalised mechanisms for librarian-faculty collaboration. Only through comprehensive, sustained efforts can information literacy instruction evolve to meet contemporary educational standards and effectively prepare students for complex 21st-century information challenges.

Table 4: Challenges Encountered by the Respondents on Information Literacy Instruction (N=74)

10	Low acceptance of Information Literacy Delivery Approach	6 (66.7)	13 (81.3)	2 (40.0)	10 (76.9)	25 (89.3)	2 (66.7)	58	1.689	0.610
11	Lack of support from College Management and Authorities	0 (0.0)	14 (87.5)	0 (0.0)	11 (84.6)	24 (85.7)	2 (66.7)	51	1.730	0.849
12	Time Constraints (Limited time to teach)	7 (77.8)	12 (75.0)	3 (60.0)	9 (69.2)	20 (71.4)	3 (100.0)	54	1.730	0.641
13	Ambiguity about the Information Literacy Course and discipline	8 (88.9)	11 (68.8)	3 (60.0)	12 (92.3)	19 (67.9)	1 (33.3)	54	1.770	0.684
14	Lack of familiarity with Database	6 (66.7)	16 (100.0)	0 (0.0)	12 (92.3)	21 (75.0)	2 (66.7)	57	1.797	1.065
15	Inconsistent Teaching Styles	8 (88.9)	14 (87.5)	4 (80.0)	10 (76.9)	22 (78.6)	1 (33.3)	59	1.811	1.061
16	Lack of Evaluation skills	7 (77.8)	16 (100.0)	4 (80.0)	10 (76.9)	21 (75.0)	2 (66.7)	60	1.716	1.118
17	Lack of practical classes for Information Literacy Courses	5 (55.6)	14 (87.5)	2 (40.0)	10 (76.9)	20 (71.4)	2 (66.7)	53	1.743	0.644
18	Lack of flexibility and Review on Information Literacy Module	6 (66.7)	16 (100.0)	3 (60.0)	9 (69.2)	19 (67.9)	2 (66.7)	55	1.770	0.816
19	Lack of adequate instructional methodology on Course	6 (66.7)	16 (100.0)	0 (0.0)	12 (92.3)	21 (75.0)	2 (66.7)	57	1.784	0.534
20	Inability to match subject relevance with appropriate information Sources	7 (77.8)	14 (87.5)	3 (60.0)	11 (84.6)	21 (75.0)	2 (66.7)	58	1.770	0.641

Field Survey, 2024 Key: Source: Field Survey, 2024 **Key: FCE** = Federal College of Education, **F**= frequency, **%** = Percentage, **\bar{x}** = Mean, **σ** = Standard Deviation

Table 4 on the challenges encountered by academic librarians on ILI among the respondents shows that insufficient collaboration between librarians and faculty, recorded the highest mean score of 1.851 (81.1% of respondents), followed closely by poor awareness of academic librarians' roles in ILI (\bar{x} = 1.838, 85.1%) and absence of IL policies/standards (\bar{x} = 1.784, 83.8%). These three systemic/institutional barriers emerged as near-universal across the zone, with five out of six colleges scoring above 80%. Inadequate professional staffing (human resources) and lack of information resources to support teaching both scored above 78% (\bar{x} = 1.757 and 1.716, respectively) highlight chronic underfunding and understaffing that have plagued Nigerian tertiary institutions for decades. FCE Zaria, despite being the largest, still reported 92.9% for staffing shortage, while FCE Bichi and FCE Sokoto recorded 0% in some categories, reflecting extreme resource deprivation in smaller/rural colleges (σ frequently >1.0 indicates very high inter-institutional disparity). Resistance to change and learning (\bar{x} = 1.743) was unanimously reported in FCE Kano (100%) and very high in most others, confirming faculty reluctance to embrace new pedagogical roles for librarians. Apathy of staff and students (\bar{x} = 1.811) further compounds the problem, creating a vicious cycle of low demand and low investment. Time constraints and academic calendar disruptions, perennial issues in Nigerian higher education, were acknowledged by 73% of respondents on average.

Strikingly, the lowest-scoring institutions (FCE Gusau, FCE Bichi, and FCE Sokoto) consistently cited management support as non-existent (0% in some cases), whereas larger urban colleges (Kano, Katsina, Zaria) still reported 84–87%, indicating that even "better-resourced" institutions suffer from weak administrative commitment. When cross-referenced with Table 3, a clear causal relationship emerges: the lowest competency areas (curriculum integration = 39.2%; synthesis skills = 47.3%; pedagogical training = 51.4%) are precisely those most severely affected by the top-ranked challenges (collaboration, policy absence, awareness, staffing, and resources). The persistence of lecture-dominated pedagogy (78.4% in Table 2) is therefore not a preference but a consequence of inadequate training, resources, collaboration, and policy support.

Discussion of the Findings

Findings from the first objective revealed that academic librarians in Federal Colleges of Education in North-West Nigeria prioritize ethical principles and copyright education (mean = 1.865) most highly, with FCE Katsina and FCE Zaria demonstrating the strongest implementation, respectively. This emphasis aligns with the ACRL Framework for Information Literacy for Higher Education, which identifies "Information Has Value" as a core competency (Association of College & Research Libraries, 2016). The finding corroborates Anyaoku *et al.*'s (2015) study of academic librarians in South-East Nigeria, who similarly reported high engagement in teaching information literacy skills, particularly in identifying and recognising information needs. The second-highest priority given to organisation, storing, and management of information resources resonates with Baro *et al.*'s (2013) observation that Nigerian librarians emphasise practical skills for managing information as foundational competencies for academic success.

However, the variation in implementation across institutions, evidenced by standard deviations ranging from 0.012 to 1.014, suggests disparities in resource availability and training focus that Nkemdirim and Ugwuanyi (2021) attributed to differences in institutional support and continuous professional development opportunities. The comprehensive coverage of eight distinct IL content areas, from search strategies to discipline-specific literacy, indicates that North-west Nigerian librarians have adopted a holistic approach to IL instruction that Idiodi (2005) advocated for, moving beyond basic library orientation to address complex information competencies essential for navigating contemporary academic environments.

Findings from the second objective demonstrates that lecture-based instruction remains overwhelmingly dominant in the Federal Colleges of Education, and remarkably low standard deviation, indicating exceptional consistency across all six institutions. This finding confirms concerns raised by Ukachi (2015) and Ilo and Idoko (2020) that Nigerian academic librarians rely heavily on traditional pedagogical methods due to inadequate training in innovative instructional approaches. The minimal adoption of evidence-based pedagogies such as problem-based learning, blended instruction, and particularly flipped classrooms contrasts sharply with international best practices outlined in the ACRL Framework, which emphasizes inquiry-based, collaborative, and curriculum-integrated instruction (Association of College & Research Libraries, 2016).

The relatively higher implementation of hands-on practical demonstrations and one-on-one consultations aligns with Baro and Keboh's (2012) observation that Nigerian librarians recognise the value of experiential learning but face constraints related to limited computer facilities, large class sizes, and insufficient staffing that prevent widespread adoption. The alarmingly high standard deviations for innovative approaches indicate substantial inter-institutional variation that Eze *et al.* (2023) attributed to disparities in technological infrastructure and pedagogical training across Nigerian tertiary institutions. The overall pedagogical approaches average supports Umar and Idris's (2024) systematic review finding that less than half of the potential pedagogical repertoire is effectively utilised in Nigerian IL instruction, suggesting an urgent need for comprehensive professional development in instructional design and contemporary teaching methodologies that can transform information literacy instruction from its current traditional model to student-centered approaches.

Findings from the third objective revealed that evaluating information sources achieved the highest competency mean score with exceptional consistency, reflecting institutional recognition of critical competencies in an era characterised by misinformation and academic integrity concerns, as emphasised by the ACRL Framework's focus on authority evaluation (Association of College & Research Libraries, 2016). The second-highest competency in using information ethically corroborates Anyaoku *et al.*'s (2015) finding that Nigerian librarians prioritise teaching ethical use of information to combat plagiarism and copyright infringement prevalent in academic settings. However, the moderate competency levels in foundational skills such as locating and searching information and identifying information needs suggest incomplete mastery of basic IL competencies that Baro *et al.* (2013) identified as essential for effective library resource utilisation among Nigerian students. Most concerning is the extremely low curriculum integration score, confirming Idiodi's (2005) long-standing critique that Nigerian librarians struggle to move beyond isolated bibliographic instruction to comprehensive, integrated programmes embedded within the academic curriculum.

The inadequate pedagogical training and professional development directly supports findings by Ilo and Idoko (2020) and Ukachi (2015) that approximately half of Nigerian academic librarians lack adequate preparation to deliver effective IL instruction. The low competency in creating, synthesizing, and citing information with high institutional variation echoes Issa *et al.*'s (2021) observation that Nigerian students struggle with higher-order information skills due to insufficient instructional emphasis on synthesis and knowledge creation. The overall competencies and preparedness average indicates baseline capability but substantial gaps relative to international standards, confirming Nkemdirim and Ugwuanyi's (2021) assertion that continuous professional development and institutional support are critical for enhancing librarians' instructional effectiveness in Nigeria's evolving digital environment.

Findings from the fourth objective revealed identified insufficient collaboration between librarians and faculty as the most severe challenge, corroborating Baro and Keboh's (2012) finding that lack of formal collaboration mechanisms prevents librarians from participating meaningfully in curriculum design and instructional delivery. The second-highest challenge, poor awareness of academic librarians' roles, confirms Anyaoku *et al.*'s (2015) observation that unclear role definition and institutional marginalisation continue to relegate librarians to peripheral service functions rather than recognising them as pedagogical partners. The absence of IL policies and standards aligns with Idiodi's (2005) critique that lack of formal policy frameworks prevents the transition from ad-hoc bibliographic instruction to systematic, curriculum-integrated IL programmes across Nigerian tertiary institutions. The chronic challenges of inadequate professional staffing and lack of information resources support Eze *et al.*'s (2023) recent documentation of severe resource deprivation and understaffing that have plagued Nigerian academic libraries for decades, with particularly acute effects on smaller rural colleges. The high resistance to change and learning reported across institutions, with 100% in FCE Kano, echoes Umar and Idris's (2024) systematic review finding that faculty reluctance to embrace new pedagogical roles for librarians creates barriers to IL programme acceptance and integration.

The pervasive apathy of staff and students toward IL programmes confirms Baro *et al.*'s (2013) observation of a vicious cycle where low demand leads to low investment, further marginalising IL initiatives. The consistently high means across nineteen of twenty challenges (all exceeding 1.69, affecting over two-thirds of respondents) with eight challenges indicating systemic neglect rather than isolated difficulties, supporting Issa *et al.*'s (2021) conclusion that fundamental barriers to effective ILI in Nigerian teacher-education institutions have persisted and, in some dimensions, intensified over the past two decades. The extreme inter-institutional disparities, evidenced by standard deviations frequently exceeding 1.0 and several rural colleges reporting no management support, confirm Nkemdirim and Ugwuanyi's (2021) finding that inequitable resource distribution creates stratified landscapes where IL service quality depends more on institutional location and size than on standardized educational principles.

Conclusion

This study's comprehensive examination of ILI in Federal Colleges of Education in North-West Nigeria reveals a paradoxical situation where librarians demonstrate awareness of essential IL content areas and competencies yet remain constrained by pervasive systemic, pedagogical, and institutional barriers that prevent effective programme implementation. The convergence of high ethical education prioritization with alarmingly low curriculum integration and innovative pedagogy adoption (flipped classrooms) illustrates a fundamental disconnect between librarians' recognition of IL importance and their capacity to deliver transformative instruction. The persistent predominance of traditional lecture-based methods despite documented inadequacy for developing critical thinking and practical skills, coupled with the identification of nineteen challenges affecting over two-thirds of respondents, confirms that nearly two decades after a seminal critique, the fundamental obstacles to effective ILI in Nigerian teacher-education institutions remain largely unresolved.

The critical triad of insufficient librarian-faculty collaboration, absence of institutional IL policies, and poor awareness of librarians' instructional roles emerged as root causes perpetuating a cycle of marginalization that relegates information literacy to peripheral, ad-hoc bibliographic sessions rather than integrated academic competencies. Furthermore, the substantial inter-institutional disparities, particularly affecting smaller rural colleges like FCE Bichi and FCE Sokoto, indicate that inequitable resource distribution compounds systemic neglect, creating a stratified landscape where students' IL development depends more on institutional location than on standardised educational principles.

Recommendations

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

1. All efforts should be made by the Colleges management through Internally Generated Revenue (IGR) to sponsor Academic Librarians to participate in formal training programmes, professional development workshops, and certification courses focusing on innovative pedagogical approaches including problem-based learning, flipped classroom methodologies, collaborative teaching strategies, and blended/online instruction.
2. The Ministry of Education in collaboration with the Nigerian Commission for Colleges of Education (NCCE) through Tertiary Education Trust Fund (TETFund) should provide sponsorships, grants, and fellowships for training academic librarians in instructional design, curriculum integration methodologies, advanced information synthesis techniques, and contemporary pedagogical competencies to address the inadequate pedagogical training and professional development, low curriculum integration competency, and weak creating, synthesising, and citing information skills.

3. There is urgent need for formalised faculty engagement and librarian-faculty collaboration mechanisms in the delivery of ILI through establishment of liaison programmes, joint curriculum planning committees, co-teaching arrangements, and regular collaborative symposia, workshops, and seminars, as faculty-librarian collaboration should be considered a critical component of effective ILI to address the insufficient collaboration between librarians and staff and poor awareness of academic librarians' instructional roles identified as the most severe challenges.
4. College management and authorities must demonstrate institutional commitment by increasing professional staffing levels, allocating dedicated budgets for IL resources, and providing adequate ICT infrastructure, software, and internet connectivity to address the inadequate professional staffing, lack of information resources to support teaching, and limited availability of teaching resources, with particular attention to smaller rural institutions like FCE Bichi and FCE Sokoto that reported the most severe resource deprivation.
5. The NCCE in collaboration with institutional management should develop and implement formal IL policies and standards with clear frameworks for curriculum integration, role definition for academic librarians, assessment mechanisms, and quality assurance procedures to address the absence of IL policies/standards and low curriculum integration competency.
6. There is need for inclusion of dedicated information literacy instruction periods in the academic calendar with formal credit-bearing courses embedded across all programmes to ensure systematic exposure of students to ethical principles, copyright fair use, intellectual property rights, proper acknowledgment of sources, various citation and referencing styles, and plagiarism prevention strategies, addressing the high prioritisation of ethical education, while ensuring consistent implementation despite disruptions in academic calendars.
7. College management must address time constraints and ensure adequate instructional time allocation for information literacy instruction by formally scheduling IL sessions within course timetables, protecting instructional time from disruptions, and recognising IL instruction as essential academic activity rather than optional service to address time constraints and academic calendar disruptions.
8. Inter-institutional collaboration and resource-sharing mechanisms should be established across Federal Colleges of Education in North-west, Nigeria to reduce disparities in implementation, enable institutions to learn from best practices, share instructional resources and expertise, and ensure equity in IL service delivery regardless of institutional size or location, addressing the substantial inter-institutional variations evidenced by high standard deviations across multiple indicators.

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