VISIBILITY AND ACCESSIBILITY OF PERIODICALS AMONG LIBRARY AND INFORMATION SCIENCE POSTGRADUATE STUDENTS IN FEDERAL UNIVERSITY LIBRARIES IN NIGERIA

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Abstract: The study investigated visibility and accessibility of periodicals among library and information science postgraduate students in federal university libraries in Nigeria. The descriptive survey design was adopted for the study. The population and sample size of 404 respondents was drawn from seven Federal University libraries in Nigeria through the use of purposive sampling technique. A self-designed questionnaire was used for data collection which was analysed using frequency, statistical mean and standard deviation. The study found that periodicals can be made visible through: institutional repository, self-archiving, catalogue and periodical stand and postgraduate students' access periodicals by using subject, title and keywords. The study recommended that: more attention should be paid in the areas of visibility and accessibility tools; and efforts should be made to augment print and electronic periodicals for use by postgraduate students.

Keywords: Periodicals,Visibility and accessibility, pedagogy, self-archiving

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1.0 Introduction: The expectations of graduate students have revolutionalised the responsibilities of librarians, thus, imposing pressure on them. Librarians are faced with growing demands from postgraduate students for better access and visibility of periodicals. Periodicals are information resources with distinctive titles and appear at regular or irregular interval without a prior decision on when the next issue shall appear (Isa, Abu, Bala & Abdulhamid, 2017).

The number of Postgraduate students in federal universities are likely to climb as Generation X ages according to Sentance (2016), making catering for them even more important and demanding to any other group of students targeting the baby boomer generation. In no other context, would it make sense to overlook such a significant group of students? Yet making periodicals and other information resources visible and accessible is far too often seen as a tedious and pointless exercise, but any librarian who pays attention to postgraduate students and optimizes their resources is already part of the way there.

A good rule of thumb for visibility and accessibility is making sure that periodicals are used and delivered to the users at any point in time. The value of visibility and accessibility in university libraries and its impact on postgraduate students cannot be understated. When students can see themselves competing with their counterparts in society, they realize they belong.

University libraries are vital resource center for students, and pedagogy revolving round the development has emphasized the need for a comfortable environment that will allow academic pursuit. The importance of making periodicals visible and accessible to postgraduate students became apparent to university libraries when the demand became so high in the throes of information in recent years. There is the need for students to know that serial librarians are on their sides in information seeking and discovery. There are several ways to display periodicals to the students to ensure that they are 'safe' in the library.

Visibility is assured when libraries have widely distributed and well established channels of periodicals that can be used by their user community. The essence of periodicals is to increase their usefulness by making them visible to the information seekers.

2.0 Review of Other Literature

2.1 Visibility of Periodicals in Libraries: The successful use of periodicals depends on their visibility level. The visibility of periodicals amongst researchers [postgraduate students] and policymakers is crucial to increasing the possibilities of getting more funds for periodicals acquisition thereby, leading to proper usage (Singh, Shah & Gul, 2014). Visibility seeks to attract the attention of the university user community who are already aware of their existence and can access, read and use them. However, Ebrahim (2016) affirmed that, visibility broadly facilitates and enables librarians to identify, collect, organise, analyse, visualise and publicise the intellectual output of the university. This is because, knowledge is power and universal access to information is a hallmark of freedom in a library. Periodicals, as asserted by Cabonero and Dolendo (2013), are useless when they cannot be visible and accessed by users. This infers that good visibility portrays good librarianship.

However, visibility is often understood to play a significant role in the use of periodicals. Robust visibility means not only just up-to-the-minute access but, should be available to the appropriate users, no matter where they are or how they are trying to access them (Serenic Software, 2019). Users of university libraries need access to periodicals, to complement their research activities. The visibility of periodicals in university libraries would, therefore, improve their accessibility which is the bedrock for usage motivation necessary for individual accomplishment.

The essence of periodicals is to increase their usefulness by making them visible to the information seekers. Lawton (2015, p.215) used five questions to ascertain the level of visibility of periodicals in the library:
- Are the periodicals recognised as information paths by name?
- Is it clear for users to get to the serials section of the library?
- Do users know where periodicals are located/ displayed?
- Do users understand what the library has to offer?
- Do users value periodicals as an information resource?

This literally means that, for a librarian or university library to make boast of being visible, the above questions must be answered in order to ensure a better access to the various types of periodicals such as journals, magazines, newsletters, newspapers, etc and electronic formats must be made visible to students for an informed decision and quality research through various tools in place.

Most university libraries in Nigeria subscribe to some of these databases with the help of Tertiary Education Trust Fund (TETFUND) interventions to make periodicals visible, thereby, meeting the information needs of their university community. Visibility is a common term in defining management success in many management philosophies. In line with Crumpton's (2010) study, success stories clearly define management involvement, awareness of operational staff as cornerstones to providing a high level of service to users as well as serving as motivational tools for maintaining morale and productivity. Visibility of resources, according to Ibrahim (2014) referred to readily access to information. A key requirement for accessibility of periodicals is the visibility of periodicals which requires communication to explore the internal state of the library to the user community as it requires more financial resources. This is because students cannot explore the library without seeing what they intend to access and use to actualise their academic aim.

However, Ma and Romer (2014) asserted that, since resources are scarce in university library environment, a balance between a sufficient level of visibility and tolerable access to information needs to be found for users to define which state should be visible and the information needs to solve. Also, for a periodical to be visible, it means that it has some measure of impact in the global community and must have secured a reasonable impact in the growth of knowledge and this can be obtained when it is neither read nor cited by others (Zainab & Anwar, 2008). Therefore, it implies that for periodicals to be adequately and productively used by postgraduate students for high quality and good research, periodicals have to be seen not obscured and obstructive. It is not enough to have a wide range of periodicals without a proper tool for visibility to encourage access which breeds utilisation. If periodicals

are visible, if users can see periodicals, there will be high usage of periodicals. This relationship between visibility and usage is interdependent (Claartje, Hoeven, Stohl, Leonard and Stohl, 2019).

According to Scochi, Munar, Pedreria, Padilha and Marziale (2012), to make periodicals more attractive (visible), persons involved in organising information resources (periodicals) must be professionalised especially in the techniques used to select periodicals that have high information impact and indeed communicate novelties. They further averred that the availability of periodicals in a library system makes ample distribution and democratisation of the science a necessity, principally to give visibility to production and an intellectual output within the library for users to interact. This amplifies the flow of scientific communication. Developing periodicals visibility and becoming a member of networking libraries has been a principal trend noticed among higher education libraries and visibility is reached when a library has a well-articulated network of periodicals (Lor, 2016).

The finding of Nwachuku, Abdulsalami and Salami (2014) showed that, increase in visibility of materials (online resources, Online Public Access Catalogue, research gate presence, institutional repository, and publications) is beneficial for librarians. They categorically stated that, indeed, much research productions generated in Africa are highly under-utilised in the global scholarly community as a result of lack of global visibility, thus need proper organisation to increase their visibility and impact. University libraries should look at various preservation methods in making these rare publications visible and accessible to their immediate community (Ezema, 2011). The consequent lesser visibility presents some challenges not only to those undertaking research, but also those who publish periodicals. Lack of well-established and complete indexing systems for periodicals limits users' ability to identify relevant materials from their university libraries.

Punchihewa (2012) affirmed that libraries should provide a clear idea to users about the visibility of periodical tittles by designing a proper mechanism to provide access to the periodicals collection. The professionalisation of journals requires greater agility in publishing and communication with authors coupled with the adoption of standardised norms capable of being recognised by researchers throughout the world (Cabonero & Dolendo, 2013).

Sin (2014) conducted a survey on Malaysian library and information periodicals and avowed that, in terms of visibility, out of the ten periodicals sampled, only four were being indexed and abstracted by the library and information science abstract while others were not covered. According to him, the library and information science periodicals are not too attractive as they do not bring in many economic returns. The obvious advantage of having a serials division in any library is to manage periodicals to speed up the visibility and accessibility of up-to-date periodicals. Great and vibrant libraries are measured by the level of visibility of periodicals acquired or subscribed through reputable publishers as well as the quality of collections (Emeghara, 2018).

To increase the visibility of items, according to Bankole (2019), priority should be given to titles that are directly relevant to the needs curriculum of the university community. The titles selected should be appropriate to the level of study based on the perspective audience and use and should be evaluated within the context of existing library resources and projected library support for the purchase of other subject related materials. Overlapping titles should also be reviewed. Various measures could be adopted by a library to enhance periodicals visibility.

Lee, Burnett, Vandegrift, and Baeg (2015) argued that institutions can increase their visibility and prestige by centralising the intellectual work of their members, thus enabling researchers to find relevant materials more easily. The greater visibility of information provided to the user community via a shared database not only empowers users to consult periodicals more efficiently and effectively but also make them more visible to others within the institution (Rajan & Baral, 2015), since an increasing percentage of library budgets are spent on periodicals for effective global access and readership. Some of the approaches to enhance the visibility of periodicals may include but not limited to institutional repository/open access repositories, social networking tools, collaborative initiatives, etc. Mullen (2008) stated that, librarians should encourage faculties and departments to participate in the population of the institutional repository to enable access and wider usage.

Koelen, Shafack and Ngum (2009) undertook a study on "think big, start small" institutional repositories: policies, strategies, technological options, standards and best practices and revealed that most universities in Africa face challenges in developing institutional repositories due to fundraising and lack of up-to-date information and the difficulty to increase visibility and access to research output. They further affirmed that to enhance the visibility of periodicals in a typical library, policy should be developed on repositories in close cooperation with university

librarians. If institutional repositories are to fully realise their potentials, then it should be visible to their user community (Wells, 2009).

2.2 Accessibility of Periodicals in libraries

The goal of any university library, according to Harold and Wilma (2018), is to build and maintain information resources including periodicals in diverse formats to meet the information needs of users. This, therefore, means that due attention should be drawn to the accessibility of periodicals since libraries are established with the aim that everyone within the library deserves access to knowledge. Their usage as non-usage will automatically amount to the ineffectiveness of the library, thereby, defeating their primary aim of information provision. Ram (2015) posited that information cannot be separated from their use. Hence, the choice of information depends on its perceived accessibility. For postgraduate students to use periodicals in the library for scholarly communication, evidence of claim or quality research options, access is required to reap the essentials of periodicals based on their currency and accuracy.

Accessibility refers to the ease of locating, search, retrieval, and proximity to periodicals. It is about making periodicals obtainable to users at the quickest possible and convenient time. Accessibility modifications may be required to enable users to gain access to the periodicals collection because the aim of any university library has changed from ownership to accessibility (Fange & Iwarsson, 2018). Aina (2014) stated that accessibility determines the speed at which an information output in any format is obtained. Similarly, Cetina, Munthin and Radulescu (2012) opined that, access to relevant information is needed for the academic community to take an efficient decision in research. As averred by Research Information Network (2010), librarians need the support of senior managers across higher education sectors as well as publishers and other information providers in addressing the challenges as well as the opportunities they face. This statement connotes that users need access to periodicals that require the least effort to access.

Haliso and Aina (2012) advocated for quality service in the area of collection of current, relevant and adequate print and electronic information resources to achieve a standard that suits the needs of users. According to Nisha (2011), before adopting any of the standards, the following criteria must be relied on: the scope of the periodicals, the demand of users, whether the titles are easily available elsewhere and the financial status of the library. For libraries to assist in the promotion of access to knowledge, they must help to identify and deliver information sought by the researcher by creating some enabling channels (Ugah, 2008). Therefore, to facilitate the accessibility of periodicals in libraries, the library is expected to provide effective access such as directories, catalogues, bibliographies, guides, indexes, and abstracts. Ola and Osagie (2011) put it that nothing frustrates a researcher more than trying to retrieve an article, which seems right on target only to find out that the library does not own the journal (p. 3).

According to Ram (2015), users take on the role of librarians and gain access to a vast amount of information and it is provided with a set of tools and aids that will help in extracting the data needed in the manner that suits best. Ani, et al (2014) noted that access to information is imperative to the successful conduct of research in universities. With contemporary tools, libraries can manage their budgets and activities by continuing updating reports to have insight into revenue, purchase orders, invoices, and payments- processed as well as display periodicals for easy access. Libraries work toward providing formats accessible to individuals who have diverse needs and abilities and in developing accessibility standards that must be followed both in online environment and in the traditional library, such standards may include Open web platforms (OWP), Web content accessibility guides (WCAG) and Web accessibility initiative/accessible Rich Internet Applications (WAI-ARIA). _

Accessibility of resources may be conceptual, bibliographically identified and located. As noted by Ugbagir (2016), university libraries are a potential entity in the process of teaching and learning anywhere but for users to find the library resources (periodicals) useful. It must be visible and accessible for utilisation. Accessibility is the physical or virtual contact with the periodicals. Access is a general term used to describe the degree to which resources: services are accessible by users (Aminu, 2016). The more accessible periodicals are, the more likely the periodicals can be obtained for use. Stoianov and Tselkov (2010) maintained that the objective of any acquisition is to ensure users' access to the right information resources at any moment in any location. Libraries should endeavour to provide access to comprehensive and balanced collections that meet the needs of their users.

Anasi and Ali (2011) studied resource sharing for effective access and utilisation of information in Nigeria university libraries and revealed that majority of their respondents 63(66%) preferred the use of union catalogue for

effective access to periodicals, 62(88.6%) advocated for a need for a library to develop an in-house tool to aid access to their periodicals. According to Gruszczynka (2012), accessibility should be firmly embedded within an institution policy that focuses on current information to ensure access to users and strategies should be developed by serials librarians in creating periodicals accessibility. Periodicals can be accessed by using keywords, subject, title, author, etc.

2.2.1 Keywords: Keywords are ideas and topics that define what content is about. They are words or phrases that students enter into a search engine to obtain information.

2.2.2 Author: This is the name of the researcher (originator) or the corporate body responsible for the intellectual content of the publication.

2.2.3 Subject matter: It refers to the students' areas of the information material. It has to do with the coverage of a periodical.

2.2.4 The title of the periodicals can also be used to access them from the catalogue or database.

Classmark: It is a unique mark (a number) given to all processed periodicals in the library.

2.2.5 ISSN: an acronym for 'international standards serial number, given to every published periodical publication like journals, publisher or place of publication, etc.

Building on the idea of the creation of tools of value that could better reflect the university's concerns and making the most of the potential periodicals for the creation of access to users, they could achieve their values that arise from the usage of the periodicals acquired. Such tools could reduce the barriers that limit access to periodicals collection (Gray, 2010). Thus, Mourad, Hussein, Kamoun and Watta (2019) posited that there are many tools available to evaluate accessibility of periodicals such as; Achecker tool, Ulrich's international periodical directory, guide to current British periodical, Sears list, new periodical title display, Online Public Access Catalogue (OPAC), Abstracts and directories, catalogue and Union catalogue.

2.3 Accessibility checker tool and Accessibility of Periodicals
This tool achieves better in creating access to periodicals as it critically evaluates results other than other tools which can test all the conformance levels. It is a holistic tool used to access and evaluate the information content of a single periodical. It provides a personalised assessment methodology, allowing users to select between different sets of accessibility guidelines. The problem is that it requires a management decision before access can be created to users

2.4 Ulrich's Periodicals Directory and Accessibility of Periodicals
This is a standard library directory and database providing information regarding common and educational magazines, scientific journals, newspapers and other serial publications.

The directory shows the basic steps required to gain access to the library database. Users of this directory are required to provide their usernames and passwords after they must have registered to access the institution library of their choice. It helps in the provision of titles and previous titles, starting date, place of publication, and publisher, availability of electronic versions, subscription terms, and approximate circulation as estimated by the publisher, subject information, searchable as subject terms or approximate Dewey Classification, special features, and indexing information, indications of whether the publication is available on open access and indication of whether the publication is peer-reviewed, which is taken to include professional magazines with equivalent editorial control of quality. This tool is mostly used by librarians (Wikipedia, 2019).

2.5 Union Catalogue and Accessibility of Periodicals
It is a combined catalogue of holdings of books or periodicals or each mentioning location, edition, number of copies by accession numbers, volumes, etc. of varieties of consistent or heterogeneous collaborating libraries covering library materials in all fields or restricted by subject or type of material organised by subject, or author or in a chronological order maintained by a National Library, large reference library or a national bibliographic centre.

Other in-house tools may include but not limited to the following:
- Installation of periodical racks wherever there is a change
- Use of photocopier to duplicate issues
- Space expansion and
- Use of signs for newly acquired periodicals.

Ameen (2016) stated that periodicals are becoming very difficult to manage and this is causing a great concern to periodicals librarians and affirmed that periodicals can also be accessible to users using display rack, Current Awareness Services (CAS). He opined that an inquiry from staff and various strategies that can help in creating periodicals accessibility may include support from institutions to cover additional cost, guidance from professional bodies dealing with accessibility, guidance from accessibility specialist, guidance from colleagues experienced in accessibility creation, support from learning technologies and case studies of issues can help in making resources accessible. Access to the right periodicals is difficult because information contained in them are abundant, but users do not know whether it is available and where to locate it (Kumar, Singh and Yadave, 2011).

2.6 Research Questions
The following research questions guided this study:
   i.   What are the measures put in place for the visibility of periodicals in university libraries?
   ii.   What are the challenges with the visibility and accessibility of periodicals?
   iii. How do postgraduate students access periodicals?

3.0 Research Method
The study employed the descriptive survey design. The population of the study is 404 postgraduate students in the Department of Library and Information Science in federal university libraries in Nigeria. The libraries include: Kenneth Dike Library, Nnamdi Azikiwe Library, Festus Aghagbo Library, University of Calabar library, University of Uyo library, University of Ilorin library and Kashim Ibrahim library. The research instrument used for this study is a self-designed questionnaire with the title "Visibility and accessibility of periodicals among Library and Information Science Postgraduate students". The questionnaire was distributed and retrieved. The total enumerative sampling technique was adopted for this study. The questionnaire was the instrument used for data collection. Frequencies, statistical mean(x) and standard deviation was used to analyse the data.

4.0 Results and Discussion
This section discussed the various findings from the study, relating them to the aim of the study and research questions which the study sought to answer, as well as other previous works discussed.

4.1 Visibility of periodicals in university libraries
The respondents were asked about the measures put in place for the visibility of periodicals in university libraries. The findings showed that the measures put in place for the visibility of periodicals in university libraries are electronic format- institutional repository 307(79.1%), self-archiving 283(72.9), social networking tools like blog, etc. 278(71.6%), bibliometrics 258(66.5%) and consortia search engine 228(59.0%). For the print format, they include catalogue 340(87.6%), periodical stand 338(87.1%) and display rack 314(80.9%). This result implied that the measures put in place for the visibility of periodicals in the university libraries are in both electronic and print formats.

Table 1: Measures of visibility of periodicals in federal university libraries

Visibility of periodicals	Agree		Disagree		Total	
Electronic format:	No.	%	No.	%	No.	%
Institutional repository	307	79.1	81	20.9	388	100.0
Self-archiving	283	72.9	105	27.1	388	100.0
Bibliometrics	258	66.5	130	33.5	388	100.0
Consortia search engine	229	59.0	159	41.0	388	100.0
Social networking tools like blog	278	71.6	110	28.4	388	100.0
Print format:						
Display rack	314	80.9	74	19.1	388	100.0
Catalogue	340	87.6	48	12.4	388	100.0
Periodical stand	338	87.1	50	12.9	388	100.0

Results revealed that the measures put in place for the visibility of periodicals in university libraries are catalogue, periodical stands, display rack and institutional repository. Also a notable minority of the respondents disagreed that

catalogue and periodical stands were the measures put in place for visibility. Accordingly, other visibility measures postgraduate students cited are self-archiving, consortia search engine, social networking tools and bibliometrics. This implied that visibility of periodicals depends on the measures put in place by university libraries when it comes to using periodicals by postgraduate students. In this regard, the findings of the study are in line with the University of Maryland (2019) which suggested some in house measures for the visibility of periodicals as display rack, catalogue and periodical stands. The measures for visibility of periodicals were also those tailored towards meeting the information needs of postgraduate students in terms of research and academic pursuit. Independently, through preliminary observation, the researchers were able to confirm the measures used in the serials unit the respondents mentioned. In fact, visibility of periodicals is solely based on functionality and financial capability of the university's parent institution. This findings signifies that federal university libraries in Nigeria recognize the value of periodicals as information resource in complementing and supplementing Postgraduate students' research and scholarly communication.

4.2 Challenges with the visibility and accessibility of periodicals

Table 2: Challenges with the Visibility and Accessibility of Periodicals

Challenges	Agree	%	Disagree	%	Total	%
Management of research data	371	92	33	8.2	404	100.0
Low quality of texts	330	82.0	74	18.3	404	100.0
Inadequate fund	400	99.0	4	1.0	404	100.0
Functionalities	296	73.3	108	27.0	404	100.0
Non-attractiveness of titles	337	83.1	67	16.6	404	100.0

Table 2 showed the challenges with the visibility and accessibility of periodicals among Postgraduate students. Management of research data 371(92.0), low quality of texts 330(82.0), inadequate fund 400(99.0), non-attractiveness 337(83.1) and obscurity of periodicals 233(57.7). This result showed that the challenges with visibility and accessibility of periodicals in university libraries were as a result of inadequate fund and management of research texts. This finding is in line with Islam (2015) which postulated that students in developing countries are faced with problem of poor visibility and inaccessibility of periodicals due to inadequate fund and numbering problems.

4.3 Accessibility of Periodicals in university libraries
4.3.1 Research Question Three: How do postgraduate students access periodicals in the university libraries?

The postgraduate students were also asked how they access periodicals in the university libraries. The table 3 shows that postgraduate students strongly agreed that they have access to print periodicals in the university libraries by subjects 284(73.2%), title 260(67%), author 234(60.3%), date of publication 187(48.8%), publisher 175(45.1%), class marks 160(41.2%), while 149(%) of them agreed to have access to International standards serial number (ISSN). Under electronic format, 270(69.69%) of them strongly agreed to have access to keywords, title 262(52.1), author's name 202(52.1%), while 127(32.7%) respectively agreed to have access to the periodicals through username/password and uniform resource locator (url)/digital object identifier (doi). Therefore, the postgraduate students have access to both print and electronic periodicals in the university libraries through subjects, titles, authors, dates of publication, publisher, class marks, International standards serial number (ISSN), username/password and uniform resource locator (url)/digital object identifier (doi).

Table 3: Access to periodicals among postgraduate student in university libraries

Items	SA	A	D	SD	Mean
Print formats: **Accessibility by using :**					
Subjects	284	99	4	1	3.72
Title	260	114	11	3	3.63
Author	234	115	35	4	3.49
International standards serial number ISSN	115	149	104	20	2.93
Date of Publication	187	141	48	12	3.30
Publisher	175	123	67	23	3.16
Class Marks	160	118	84	26	3.06
Electronic formats: **Accessibility by using:**					
Keywords	270	93	19	6	3.62
Title	262	108	14	4	3.62
Author's name	202	141	42	3	3.40
Username/password	127	130	103	28	2.92
Uniform resource locator(url)/digital object identifier (doi)	127	138	79	44	2.90

Generally, the findings suggest that majority 284(73.2%) of the postgraduate students strongly agreed that they access periodicals with the use of subject, title and author's name in the university library. Also, the finding indicates that very few 1(0.3%) of the respondents strongly disagreed that they make use of subject to access periodicals in the library. This implies that some postgraduate students that can access periodicals with subject, keywords and title have good knowledge of the library and periodicals they are searching for. The finding of this study is in support of Ani *et al*(2014) Anasi and Ali (2011) which noted that access to information with the use of some developed in-house tools are imperative to the successful conduct of research in universities.

5.0 Conclusion

The visibility and accessibility of periodicals has become a must for postgraduate students for effective academic work. In as much as many students in Nigeria make use of periodicals, measures for the visibility and accessibility of periodicals must be provided or put in place. From the findings of this research which focused on the visibility and accessibility of periodicals, the following conclusion were made:

i. Students have knowledge in the measures for the visibility and accessibility of periodicals
ii. Many of the postgraduate students access periodicals by subject, title and keywords.
iii. Periodicals are made visible by institutional repository, etc.

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