Abstract: The wider a research result is communicated the higher its impact and benefits. Online journals are today the most effective means of communicating research results. In addition, open access publishing models are entrenched in online journal publishing. However, the majority of Nigerian journals are still available in print only. This study collected data from Nigerian universities that are the leading journal publishers in the country in order to assess online journal publishing in the country. A semi-structured questionnaire was sent to all the universities; 29 responses were found to be valid for the analysis. In addition, the researcher analyzed the content of African Journals OnLine (AJOL) and the Directory of Open Access Journals (DOAJ) as well as data from Open Journal Systems (OJS) developers in order to discover the evidence for online and open access publishing among Nigerian university-based journals. The study discovered that the majority of university-based journals in Nigeria are available in print only. The journals do not leverage the supporting services from AJOL, DOAJ, or OJS to improve their global visibility. Thus, it is recommended that all stakeholders needs to recognize the importance of and make use of online as well as open access publishing platforms in order to improve the global visibility of Nigerian journals.

Introduction

Research is very important to individual and societal development, as it informs policy and decision making. Realizing this, governments as well as private organizations fund researchers and research institutions. To encourage research undertaking, universities are today based on the principle of “publish or perish.” This implies that recruitment, tenure, and promotion of researchers are pegged to a large extent on the evidence of their research undertaking (Babalola, Jaiyeoba, and Ojelabi 2016; Bogoro 2015). Researchers can only have evidence for their research undertaking if they communicate the results of the work to their community and the general public. The major channel through which researchers communicate their results is journal (publishing) platforms.
As a means of communication, journals wasted no time to leverage recent advances in information and communication technology (ICT) to improve the efficiency and effectiveness of the communication. Today, most journals publish their content online in order to have wider circulation and visibility (Mabe 2007; Onyancha 2009).

However, many Nigerian journals couldn’t seize the potential in online journal publishing, despite support from development partners such as the African Journals OnLine (AJOL), Directory of Open Access Journals (DOAJ), and Open Journal Systems (OJS) projects. This limits the journals’ visibility and impact as well as making them ineffective and expensive (Fatoki and Obinyan 2005; Ndumbaro and Wema 2016). It is evident that some of the journals are poorly composed and edited; however, even the good ones are not always aggregated in the major aggregating and indexing services, which is important to their global visibility (Egbetokun et al. 2022; Ndumbaro and Wema 2016; Nwagwu 2008). In many instances, local African researchers find the foreign journals more readily available than the African journals because the former are published mainly online (Alemna 2005). In addition, researchers publishing in print-only journals cannot take advantage of innovative publishing models such as open access (OA). Kirilova (2021) particularly observes that journals that exist only in print are very susceptible to journal hijacking, in which unauthorized people host a fraudulent website in the name of the journal.

Against this background is the need to study the journal publishing environment in Nigeria in order to forge ways toward increasing global visibility of the journals. The premise of this study is to open the Nigerian research literature to global communities. Nigerian journals need to take advantage of innovative publishing practices, especially the variant models of open access. However, the first step toward that goal is to entrench online publishing in journal publishing. Thus, this article estimates how many scholarly journals are published in Nigerian universities and the proportion of the journals that are online, whether toll access or open access. The work also measures the extent to which Nigerian university-based journals leverage opportunities provided by AJOL, DOAJ, and OJS to improve their online and global visibility.

Literature Review

Journals are the vehicles through which results of research are communicated to far and near, and this dissemination determines researchers’ visibility and impact. The major functions of journals include the registration of research, dissemination of research results, and certification and archiving of research reports (Johnson, Watkinson, and Mabe 2018; Yahaya 1993). Today, there are various types of journals of varying scope and demarcations, with new ones emerging every day. Although university academics are the major producers of research reports, few commercial publishers dominate the publishing business (Butler
et al. 2022), leaving a niche to professional societies, university presses (Mabe 2007), and emerging library publishers (Lippincott 2017). The International Association of Scientific, Technical and Medical Publishers in its 2018 report estimated the number of scholarly journals to be more than 42,000 titles globally (Johnson, Watkinson, and Mabe 2018).

The intense need to communicate and access research reports among research communities made commercial journal publishing a viable and very profitable venture, especially after the Second World War. Publishers leverage technologies to disseminate research reports to an as wide as possible audience and to attract the patronage of the contributing scholars whose major concerns are visibility and impact. These are the drivers that made the journal publishing system more effective and efficient (Binfield et al. 2008; Tótösy de Zepetnek and Jia 2014). Journal publishing has wasted no time in taking advantage of advancements in the area of ICT. These advancements have engendered the emergence of electronic journal publishing, in which journal content is issued in digital or electronic format. Further ICT development has allowed for all stages of publishing—from content development to dissemination and archiving—to be achieved via computer networks, especially the Internet (Edewor and Ejitagha 2019; Fjällbrant 1997; Mgobozi and Ocholla 2002). The dissemination of electronic content via computer networks continues to be called electronic publishing or sometimes is dubbed as online journal publishing. The development widens the scope of research circulation at arguably a reduced cost, coupled with ease of use (Binfield et al. 2008; Johnson and Luther 2007).

Nigeria has recently witnessed an increase in the number of journal titles mainly from universities. In 2008, Nwana observed that a study that attempted to survey Nigerian journals only captured 211 journals, less than 40% of Nigerian university journals at the time. Nwana’s observation also indicates that the number of journal titles in Nigeria exceeded the 400 titles estimated by Smart (2007). The increase is a result of the need to widen access to university education, which propelled the increase in the number of universities in the country. Furthermore, the great emphasis placed on research publication for recruitment, retention, and promotion of academic staff within the Nigerian university system played a role in the emergence of new journal titles (Adomi and Mordi 2003; Smart 2007). Despite the fact that Nigerian researchers produce some quality research (Gray, Trotter, and Willmers 2012), the research doesn’t form part of the global pool because the majority of the researchers find it difficult to publish in the well-known journals of Europe and North America, although very few for the sake of tenure and promotion do get a chance to publish in the journals. In addition, the country’s academic publishing sector is still largely focused on print. Thus, Nigerian journals lack global visibility and impact as a result of limited circulation and discoverability, thereby denying the global community access to the research contained in the journals (Fatoki and Obinyan 2005; Rosenberg 2000). Researchers in Nigeria also lack funds and facility to access research literature products of the Global North. This makes the Nigerian research environment an
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island not forming part of the global pool of knowledge. Although many scholars look at such a situation through the lens of epistemic injustice—such as Albornoz, Okune, and Chan (2020), Babini (2020), Nkoudou (2020), Raju and Badrudeen (2022), and Raju et al. (2020)—there is need to look at the situation from within to assess the commitment of the Global South toward opening its research literature to the global audience.

With the popularity of online journal publishing, Nigerian research irrespective of its quality remains obscured if published through traditional print journals. This is evident in the result of citation analysis studies, which showed lack of citation from within and outside of the region (Gbaje 2009; Nwagwu 2008; Onyancha 2009; Salisu and Oyewale 2020). Making the issue more complex is the absence of effective discovery tools for Nigerian journals. The National Bibliography of Nigeria is still published in print format, and it has not been consistent and is always belated. Also, the Nigerian Periodicals Index (NPI), a project of the Association of University Librarians of Nigerian Universities (AULNU), could only issued its maiden edition in 1986, and the scope of the work was not comprehensive (Ifidon 2016).

Yet almost all the major international journals are published either simultaneously online and print or only online. Mabe (2007), however, has argued that electronic publishing disrupted publishing without corresponding reduction in the cost of operation. Nevertheless, electronic journal publishing is increasingly becoming global as many journals in both developed and developing countries are now online (Rogers 2016), which led Fatoki and Obinyan (2005) to predict the demise of print journals. Against this background, Mohammed (2016) observed that online journal publishing is the surest way for journal sustainability in Nigeria. However, the majority of the journals in Nigeria are still available in print only (Smart 2007).

It is pertinent to note that support is available to African journal publishers in order to bridge the gap between the Global South and Global North in the area of access and dissemination of research literature (Murray and Clobridge 2014). Two prominent initiatives providing support are AJOL and OJS. AJOL has become the most prominent project supporting African journals’ visibility on the internet (Ezema 2010; Fatoki and Obinyan 2005). Journal publishers in Nigeria can leverage on such initiatives to publish their journals online or even as open access in order to improve their global visibility and impact (Cumming 2006; Edgar and Willinsky 2010). However, a survey conducted by Dawha (2005) discovered that many journal editors in Nigeria were not aware of the AJOL project. This might explain the huge difference between the number of journals from Nigeria hosted on the AJOL platform and the number of journals that actually exist especially in the Nigerian universities, despite the fact that Nigeria continued to be the leading contributor of journals to the AJOL platform (Cumming 2006).

The sluggishness in the implementation of online publishing among the Nigerian journal publishers may be attributed to lack of research and scholarship in the area as obtainable elsewhere. There are many journal titles that have been consistent in covering online publishing
development, such as *Learned Publishing* by John Wiley, the *Journal of Electronic Publishing* by Michigan Publishing, *Journal of Scholarly Publishing* by the University of Toronto Press, *Journal of Librarianship and Scholarly Communication* by Iowa State University Digital Press, and the *Serials Librarian* by Taylor and Francis. In addition, the International Conference on Electronic Publishing consistently met mainly in European cities for 24 years until 2020. But in Nigeria, as in other developing countries, publishing is not receiving enough attention of researchers (Zakaria 2009). The researchers are not adequately interested to conduct and report research that may guide and motivate practitioners, unlike in the United Kingdom, where *Learned Publishing* is published. In contrast, commercial publishing in Nigeria only flourishes in the area of educational publishing to satisfy the need of primary and secondary school curriculum, but academic publishing suffers from lack of innovation (Olukoju 2002). Thus, academic publishers lack preparedness to integrate innovative OA publishing. University presses that ought to be flexible in order to support the publishing needs of their parent institutions (Brand 2018; Luescher and van Schalkwyk 2018) are also battling with problems such as lack of funding, expertise, and infrastructure as well as a weak market, making them unable to harbor any hope for innovative publishing (Darko-Ampem 2003; Luescher and van Schalkwyk 2018; Smart 2007).

Moreover, no journal in Nigeria focuses specifically on publishing. A cursory look at the articles published in a notable African library and information science (LIS) journal, *African Journal of Library, Archives & Information Science*, in the last 20 years finds very few articles on the area of publishing and no article on online publishing. Similarly, reviewing several issues of *Nigerian Libraries*, a well-known LIS journal in Nigeria, showed that publishing as an area of research doesn’t attract the attention of LIS researchers. Furthermore, there is no consistent conference that covers publishing in the country, and the activities of the Nigerian Publishers Association have more to do with promotion and selling of printed books than serving as a platform for reporting developments in the area of publishing. The proceedings of a stakeholders’ conference organized at the University of Ibadan with sponsorship of the International Network for the Availability of Scientific Publications in 2005 still serves as the seminal work with regard to journal publishing in Africa (Aina, Alemna, and Mabawonku 2005). Therefore, literature about publishing in Nigeria as in other African countries is scattered in periphery journals, publishers’ reports, and other unpublished documents (Esseh 2011). As a result, very little is reported about the theory and practice of publishing in Nigeria. But it is obvious that journal publishing in the country is centered within universities that are increasing in number, especially since the 2000s after the country reformed its policies for universities to be run as private ventures.

Online journal publishing has also brought new possibilities and innovations into journal publishing that made research communication more efficient and effective (Grgić 2015). For instance, online publishing has provided the context in which libraries emerge as publishers in order to mitigate the adverse effect of the publishing market and to make knowledge more
open and available (Lippincott 2017; Vandegrift and Bolick 2014). Furthermore, almost all the various models of open access publishing are contextualized on the online publishing environment (Eve 2014; Suber 2012; Suber et al. 2003; Weller 2014). Against that background, Pearce (2022) amplified Suber’s (2012) dream that envisaged OA to be the default of publishing in the near future. Wilson et al. (2020) stated that OA publishing has the potential to open the African research literature to global communities. Many authors have envisaged OA publishing to mitigate the epistemic imbalances between the Global North and the Global South in the area of access and dissemination of research literature (Albornoz, Okune, and Chan 2020; Alordiah et al. 2020; Babini 2020; Egbetokun et al. 2022; Igwe 2014; Nkoudou 2020; Raju and Badrudeen 2022; Raju et al. 2020; Raju, Smith, and Gibson 2013; Roh, Inefuku, and Drabinski 2020; Wilson et al. 2020). These are the major factors that propelled the proliferation of online journals (Mohammed 2016). However, it may be a leap to talk of open access publishing in Africa without addressing the issue of format availability. Online availability is not an end in itself but “at the least, one barrier removed” (Raju and Pietersen 2017, 3), as the European Commission digital libraries initiatives were predicated on making scientific information available to all online (Simon and Prato 2012, 64–65). Just as the evolution of OA practices has always been gradual even among advanced economies (Ferwerda, Pinter, and Stern 2017), it need also not be abrupt in Africa. Development of OA practice in Africa may be easier if it is established in online publishing rather directly within the print environment. Thus, the major quest of this article is to examine the journal publishing industry in Nigeria in order to forge a way forward toward global visibility.

Recently, Egbetokun et al. (2022) reported a small increase in OA publishing among social science researchers in Nigeria; however, the majority of researchers, as in many countries of the Global South, are still publishing research behind toll access or even in exclusively print journals. Thus, the researchers are unable to reap the rewards of innovative publishing models. In most cases, the researchers tend to be passive users of open access resources, accessing the resources without publishing in them (Ayeni 2017; Iton and Iton 2016; Okore, Anaehobi, and Haliru 2015; Olubiyo and Fagbemi 2021; Otolo and Saibakumo 2021; Shuva and Taisir 2016; Ukwoma and Onyebinama 2020; Uzuegbu 2011). However, Butler et al. (2022) submitted that the oligopoly of commercial publishers manipulates the initial OA principles with article processing charges for profit-making, which places a barrier for Africans to publish. Also, the chances for the researchers to utilize Green OA, which has no associated charges, are slim as very few open access repositories were launched in Nigeria (Adewole-Odeshi and Ezechukwu 2020). According to the listing of the Directory of Open Access Repositories, as of July 2022, only 30 open access repositories were aggregated from 24 Nigerian universities and one from the Central Bank of Nigeria, making a total of 31 open access repositories from Nigeria.

Another innovation that ought to strengthen academic publishing in Africa could be found in library publishing services. Academic as well as public libraries around the
world are widening their scope of publishing services to the extent of serving as publishers in whole or in collaboration with other units (Boatright et al. 2015; Lippincott 2017). The idea of the library as publisher was thought to open a new line for online visibility of African research, especially because most library publishing services aim at making the literature open access (Raju and Pietersen 2017). But libraries in Africa are still battling to provide traditional custodial services, hence the library as a publishing service is far from their ability (John 2018; Lynch et al. 2021; Monu et al. 2022; Odili 2021; Shehu, Singh, and Oyiza 2020). Thus, the few cases of the library as publisher in Africa are restricted to South Africa. Nigeria with more than 200 university libraries did not report a single case of a library as publisher to the 2022 edition of the Library Publishing Directory (Library Publishing Coalition 2022).

### Nigerian University System

The foundation of the Nigerian university system was laid during the colonial period with establishment of the University College Ibadan in affiliation with the University of London in 1948. The need to widen access to university education in order to produce the manpower for post-independence Nigeria culminated in the establishment of more universities in the country. Educational reforms of the 1990s that opened the higher education sector to private investors propelled an unprecedented increase in the number of universities (Saliu 2014). As of July 2022, there were 217 universities in the Nigerian university system according to the National Universities Commission (https://www.nuc.edu.ng). The universities are categorized on different themes as shown in Table 1.

The National Universities Commission is the agency that regulates universities in Nigeria. More important, it is the only agency that awards licenses to operate and ensure quality control in the universities. Basically, universities in Nigeria award four-year degrees, and the majority of the universities offer postgraduate programs. All university programs in Nigeria require students to undertake a research project before completion. Also, evidence of research publishing is one of the important metrics for recruitment, retention, and promotion of academic staff in universities. This implies that a lot of research is being undertaken in the universities (Babalola, Jaiyeoba, and Ojelabi 2016; Nwana 2008; Okebukola 2014; Rasheed 2020; Yusuf 2012).

<table>
<thead>
<tr>
<th>Ownership</th>
<th>Generation</th>
<th>Disciplinary orientation</th>
</tr>
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<tbody>
<tr>
<td>Federal universities</td>
<td>First generation (established between 1940s and 1960s)</td>
<td>Conventional universities</td>
</tr>
<tr>
<td>State universities</td>
<td>Second generation (established between 1970s and 1980s)</td>
<td>Science and technology universities</td>
</tr>
<tr>
<td>Private universities</td>
<td>Third and new generation (established from 1990s to present)</td>
<td>Specialized universities</td>
</tr>
</tbody>
</table>
One of the important features of Nigerian universities is the dwindling funding that leads to workers’ strikes and frequent closures of public universities. In order to contain the crisis, the Federal Government of Nigeria created the Tertiary Education Trust Fund (TETFUND) in 2011 to support, among other things, research undertaking and infrastructure in public tertiary education. The agency is today the major financer of research in Nigerian public universities, although there is still outcry for insufficient funding of research in the universities (Yusuf 2012).

Methodology

The present study is part of the PhD research the researcher is undertaking in the Department of Library and Information Sciences, Bayero University Kano, Nigeria. The work was conducted based on qualitative research methodology. The primary population of the study comprised all Nigerian universities, while the secondary population comprised all the university-based journals in Nigeria. As a result of the absence of a comprehensive and updated listing of the Nigerian journals that could serve as the sample for the study, the researcher opted to send a data request to all the universities operating in the Nigerian university system. The request was sent through the respective vice chancellors of the universities due to the fact that Nigerian universities have no uniform structure that controls journal publishing in the universities (Rasheed 2020). A semi-structured questionnaire (see appendices I and II) was used to solicit a comprehensive list and details of journals published by various organs of the universities. The questionnaire requested an exhaustive list of journals published in or on behalf of the university (see appendix I). For this piece of research, only responses with an exhaustive list are included; responses with a partial list were not included. Consequently, responses from 29 universities could be used for analysis. Two universities that reported having no journal title at the time were included in order to calculate the average number of journals among the universities because there are many new universities in the Nigerian university system. The request was first sent in February 2020 but was obstructed by the COVID-19 pandemic lockdown later that year; then a reminder was sent in 2021 after the lockdown. Although the researcher required the responding universities to indicate if a journal is either in print or online, the researcher also attempted to verify the information by searching the open web for confirmation.

In addition, the researcher analyzed the journal listing of DOAJ using Nigeria as the search term in order to extract the Nigerian journals that were aggregated by the service. Also, the journal listing on the AJOL platform was analyzed to assess the prevalence of Nigerian journals on the platform. Although OJS official statistics indicated that only 151 Nigerian journals were actively using the platform for the year 2021 (Open Journal Systems 2021), a dataset from OJS web masters (Khanna et al. 2021) was analyzed to rate its overall
acceptance among the Nigerian university-based journals. OJS was the most popular journal publishing system used by journal publishers in low-income countries (Esseh 2011), but DOAJ was used for the fact that it is today the largest and most renowned open access journals aggregator, and journal inclusion in the database is free of charge (Chakravarty and Diksha 2020; Morrison 2017). The researcher triangulated the data to get insight on the rate of online availability and open access among Nigerian university-based journals.

Result

Fifty-one universities responded to the request irrespective of the level to which they supplied the required data. Considering the impact of the COVID-19 pandemic as well as the tight schedule and workload of Nigerian university workers, the response is considered good. The researcher screened out all the responses and found that 29 were qualified to be included in the data analysis for the present study. The responses can serve as a good representation of Nigerian universities because they cut across all categories of the universities. The list of the universities included in the analysis with their details is shown in Table 2. Two out of the five first-generation universities in the country are included. These universities set and influence systems and processes in the later generation universities, especially within their catchment areas (National Universities Commission 2014). Student enrollment as well as the number of academic staff of the universities are shown on the list in order to provide an insight to the quantum of research undertaking in the universities (Babalola, Jaiyeoba, and Ojelabi 2016; Nwana 2008).

The result shows a total of 258 journal titles from 29 universities that were included in the analysis. This translates to an average of nine titles per university. However, the result indicates that the number of journal titles is dependent on the size, population, and age of the university, as first- and second-generation universities happen to be of larger size and population and to have more journal titles than later generation universities. Based on that finding, the number of university-based journals in Nigeria can be estimated to be about 2,000. The result as shown in Table 2 indicates that only less than half (100, 38.75%) of the titles in the study were online.

Content analysis of the AJOL database revealed that, as of August 1, 2022, out of the 610 journals aggregated within the AJOL database, 249 were from Nigeria. This number includes titles from commercial publishers, learned and professional societies, research institutes, universities, and many independent journal publishers. Although there are a good number of university-based journals on the list, it couldn’t be possible to determine the actual number because there is no consistency in the listing, making it impossible to identify publishers of many journals. However, it was discovered that 103 (41.37%) titles were tagged as inactive; that is, they no longer contribute content to the platform. However, 127
<table>
<thead>
<tr>
<th>S/N</th>
<th>University</th>
<th>Generation</th>
<th>Ownership</th>
<th>Disciplinary orientation*</th>
<th>Student enrollment</th>
<th>Number of academic researchers*</th>
<th>Journals</th>
<th>Journals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total</td>
<td>Online</td>
</tr>
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<td>First</td>
<td>FGN</td>
<td>General</td>
<td>50,673</td>
<td>2,632</td>
<td>45</td>
<td>12</td>
</tr>
<tr>
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<td>New</td>
<td>FGN</td>
<td>Specialized</td>
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<td>308</td>
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<td>1</td>
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<tr>
<td>3.</td>
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<td>Privately owned</td>
<td>General</td>
<td>NR</td>
<td>NR</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4.</td>
<td>Bayero University</td>
<td>Second</td>
<td>FGN</td>
<td>General</td>
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<td>1,548</td>
<td>41</td>
<td>8</td>
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<td>New</td>
<td>Privately owned</td>
<td>General</td>
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<td>188</td>
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<td>4</td>
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<td>6.</td>
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<td>New</td>
<td>Privately owned</td>
<td>General</td>
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<td>282</td>
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<td>General</td>
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<td>11</td>
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<td>8.</td>
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<td>New</td>
<td>Privately owned</td>
<td>General</td>
<td>1,362</td>
<td>99</td>
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<td>2</td>
</tr>
<tr>
<td>9.</td>
<td>FUD-Dutse</td>
<td>New</td>
<td>FGN</td>
<td>General</td>
<td>9,107</td>
<td>550</td>
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<td>10.</td>
<td>FUD-Gusau</td>
<td>New</td>
<td>FGN</td>
<td>General</td>
<td>NR</td>
<td>NR</td>
<td>536</td>
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<tr>
<td>11.</td>
<td>FUD-Kashere</td>
<td>New</td>
<td>FGN</td>
<td>General</td>
<td>5,531</td>
<td>932</td>
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<td>12.</td>
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<td>FGN</td>
<td>General</td>
<td>NR</td>
<td>816</td>
<td>42</td>
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<td>13.</td>
<td>FUTA</td>
<td>Third</td>
<td>FGN</td>
<td>Science and technology</td>
<td>487</td>
<td>NR</td>
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<td>7</td>
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<td>4</td>
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<td>16.</td>
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<td>New</td>
<td>State government</td>
<td>Science and technology</td>
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<td>State government</td>
<td>General</td>
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<td>689</td>
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<td>5</td>
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<td>Lagos State University</td>
<td>Third</td>
<td>State government</td>
<td>General</td>
<td>24,938</td>
<td>636</td>
<td>16</td>
<td>3</td>
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<td>19.</td>
<td>LAUTECH</td>
<td>New</td>
<td>State government</td>
<td>Science and technology</td>
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<td>525</td>
<td>6</td>
<td>7</td>
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<td>20.</td>
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<td>New</td>
<td>Privately owned</td>
<td>General</td>
<td>848</td>
<td>822</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>21.</td>
<td>Michael Okpara University of Agriculture</td>
<td>Third</td>
<td>FGN</td>
<td>Specialized</td>
<td>24,310</td>
<td>910</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>22.</td>
<td>Nigerian Army University</td>
<td>New</td>
<td>FGN</td>
<td>Specialized</td>
<td>2,326</td>
<td>236</td>
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<tr>
<td>23.</td>
<td>Redeemer’s University</td>
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<td>Privately owned</td>
<td>General</td>
<td>2,382</td>
<td>173</td>
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<tr>
<td>24.</td>
<td>Samuel Adegbeyiga University</td>
<td>New</td>
<td>Privately owned</td>
<td>General</td>
<td>282</td>
<td>54</td>
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</tr>
<tr>
<td>25.</td>
<td>Tai Solarin University of Education</td>
<td>New</td>
<td>Privately owned</td>
<td>Specialized</td>
<td>26,141</td>
<td>387</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>26.</td>
<td>UNIUYO</td>
<td>Third</td>
<td>FGN</td>
<td>General</td>
<td>29,295</td>
<td>1,184</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>27.</td>
<td>Federal University of Petroleum Resources</td>
<td>New</td>
<td>FGN</td>
<td>Specialized</td>
<td>5,065</td>
<td>220</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>28.</td>
<td>University of Nigeria</td>
<td>First</td>
<td>FGN</td>
<td>General</td>
<td>42,688</td>
<td>2,690</td>
<td>39</td>
<td>14</td>
</tr>
<tr>
<td>29.</td>
<td>Yusuf Maitama Sule University</td>
<td>New</td>
<td>State government</td>
<td>General</td>
<td>42,688</td>
<td>2,690</td>
<td>39</td>
<td>14</td>
</tr>
</tbody>
</table>

Source: Rasheed 2020.

FGN = Federal Government of Nigeria; NR = not reported.
(51%) of the journal titles from Nigeria were tagged as open access. The result indicates that Nigeria remains the largest contributor to the project, although, considering the overall number of Nigerian scholarly journals, it also indicates a wide gap between the available journals and the number of journals aggregated. This is because, according to the data collected by the researcher, the amount of journals hosted in Nigerian universities alone is estimated at 2,000. The estimate doesn’t cover journal titles from other journal publishers. This wide gap may not be unconnected with the fact that the majority of the Nigerian journals are still available in print only. Overall, the result indicates that Nigerian journals generally have not leveraged opportunities and support in order to improve their global visibility.

Similarly, analyzing the content of the DOAJ database revealed that as of August 10, 2022, out of the 18,117 journals aggregated from 130 countries, only 23 were from Nigeria, 13 of which were university-based journals. This may indicate the reluctance of Nigerian university-based journals to leverage the open access initiative in order to achieve global visibility.

Finally, analyzing recent data from the OJS’s developers (Khanna et al. 2021) indicates that 458 Nigerian journal titles were hosted on the system either from Nigeria or somewhere else. Of those, 241 (52.62%) were university-based journals, and the remaining 217 (47.38%) were not university based, those published by professional societies, commercial publishers, research institutes, independent publishers, and other educational institutions. Thus, the number of Nigerian university-based journals on OJS is insignificant when compared to the estimated 2,000 titles that exist, although OJS is the most popular journal publishing system among low-income countries. Further look at the data reveals that there is need for another study to look at the journal performance parameters. For example, some installation appeared to be a trial as the content was superficial. Some installations also do not represent any particular journal but are collections of articles by a particular scholar.

Discussion

The result of this study shows that Nigerian universities are important stakeholders in the journal publishing business as observed by Olukoju (2002). Although there has been noticeable improvement in the use of web platforms to increase the global visibility of the journals, the majority of the journals are still available in print format only; thus, they couldn’t be accessed by other researchers outside of the country or included in the major global indexes. Moreover, the journals are not keen to take advantage of the available support services such as AJOL, OJS, or DOAJ. This may hamper the impact of the Nigerian journals as well as the Nigerian researchers (Alemna, Chifwepa, and Rosenberg 2000; Onyancha 2009; Rosenberg 2000). Therefore, it can be implied that a reasonable portion is missing in the global pool of knowledge as great contributions from Nigeria are obscured as only available in print.
Evidences from DOAJ, AJOL, and OJS of online publishing of Nigerian journals are not encouraging. Only an insignificant number of Nigerian journals were aggregated by DOAJ, while a great percentage of the journals were not aggregated by AJOL. Although OJS was reported to be very popular among journal publishers in low-income countries, and an empirical study (Baker 2020) that assessed the sustainability of various open source journal management software confirmed that OJS has the highest sustainability, this work didn’t attempt to assess the use of OJS in comparison to other online journal publishing systems; however, the use of OJS among Nigerian university-based journals is low. Only about 240 of the estimated 2,000 titles have been hosted on the system. This may support a 2010 survey by Edgar and Willinsky that reported that only 7% of the journals using OJS were from Africa.

Conclusion and Recommendation

This study was conceptualized on the premise that despite the digital revolution that has driven innovative publishing, in addition to free support, to increase global visibility, many university-based journals in Nigeria are still available in print only. This limits the impact and visibility of the journals, the authors, and ultimately the research institutions. Thus, the global knowledge pool is missing a portion of the research emanating from Nigeria. Although a lot of research is conducted in Nigerian universities, the majority is obscured by being only available in print journals. And the journals are reluctant to seize the opportunities and potential of online and OA publishing. In order for the Nigerian journals to have an online presence, which is important to the Nigerian researchers as well as the global research environment, all stakeholders need to recognize and make use of innovative publishing practices that became possible with the emergence of the internet. Journals in Nigeria must also leverage the available support from projects such as AJOL, DOAJ, and OJS in order to improve their global visibility and contribute to the global pool of knowledge.

References


Nwagwu, Williams. 2008. “Online Journals and Visibility of Science in Africa: A Role for African Social Science Citation Index.” In *Putting African Journals Online: Opportunities, Implications and Limits*. Dakar-Senegal: CODESRIA.


Appendix I: Letter for Data Request

Sir,

REQUEST FOR RESEARCH DATA

I am a PhD student as indicated in my introduction letter here attached. I request the indulgence of your good office for the list and details of all the active scholarly (academic) journals that are published in or on behalf of your University or its organs. The information would serve as data for my PhD work. In addition, the data would be handled with utmost confidentiality and used for the sole purpose of scholarly work.

I believe the work when completed would be beneficial to the academics in your institution and the Nigerian University System in general, as presently there is no active database for the Nigerian scholarly journals.

Also find here attached a template that would assist in compiling the information.

I would be glad, if you may inform me the action taken about this letter via my personal email: abdu.alkasim@gmail.com. You may also respond to the request via the email.

I enthusiastically anticipate your cooperation.
Accept my warm felicitation.
Alkasim Hamisu Abdu (CLN)
## Appendix II: Template for Compiling the Details of Nigerian University-Based Journals

<table>
<thead>
<tr>
<th>S/N</th>
<th>Journal title</th>
<th>Discipline/subject</th>
<th>Base (e.g., department, faculty, center, institute, etc.)</th>
<th>Editor-in-chief/address</th>
<th>URL (web address), if online</th>
<th>Other important information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Northwest Multidisciplinary Journal</td>
<td>Arts and Social Sciences</td>
<td>Faculty of Humanities</td>
<td>Prof. Umar Labdo, Dean's Office, Faculty of Humanities, Yusuf Maitama Sule Uni. P.M.B. 3220, Kano. Phone: 080xxxxxxxx Email: <a href="mailto:name@yahoo.com">name@yahoo.com</a></td>
<td>Not online</td>
<td>1.</td>
</tr>
</tbody>
</table>