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A generic online academic journal library for tertiary institutions (A case study of Katsina state's institutions)

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Abstract

The paper highlights the challenges some Nigerian higher institutions face in adopting technology for research purposes and the lack of online publishing platforms for journal articles. To address these issues, a web-based platform called the Academic Journal Library (AJL) was developed. The aim of the AJL is to provide quick access to quality journal articles, disseminate information about publications by Nigerian institutions, provide free access to articles and allow verification of article originality. The platform uses telecommunications technology to provide instant access to digital information and services related to research and publishing. The article highlights the importance of e-journals and e-libraries for research and academic excellence. The methodology includes primary and secondary data collection, stakeholder consultation, and use of open source software for system design. The results demonstrate the successful implementation of the AJL platform, providing a seamless and user-friendly experience for researchers, authors, editors and readers. The limitations of the study are recognized and future work includes expanding the coverage of the AJL and building partnerships for sustainability.

Keywords: Nigerian higher institutions; Technology adoption; Online publication; Academic Journal Library (AJL)

1. Introduction

The education sector of some Nigerian higher institutions of learning has not yet fully adopted the use of technology for research purposes. A significant number of Nigerian institutions do not offer online publication of their journal articles. Currently, there is no single website or web platform that provides comprehensive and up-to-date information on the location, policies, and dates and times of publications produced by specific institutions in Nigeria. Many institutions still rely on traditional methods of publication, such as printing textbooks and articles, possibly because they lack viable solutions.

To address these challenges, a web-based platform called the Academic Journal Library (AJL) was developed. AJL aims to provide quick access to quality journal articles, timely dissemination of information about publications by Nigerian institutions, free access to articles for uploading and downloading, and verification of article originality. Using AJL makes research more interesting, flexible and convenient, and allows researchers to focus more on research. The main purpose of implementing AJL is to provide scholars and students with electronic means to advance their research and improve the quality of education in an efficient manner.

AJL intends to achieve its goals by providing users with the ability to access and retrieve relevant information to support their research activities at minimal or no cost. Through the use of telecommunications technology, AJL will provide instant access to digital information and services related to research and publishing. Via AJL, users can electronically record, process, save, evaluate and disseminate the information they need. By providing essential resources for research

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development, decision-making, and policy improvement, AJL can serve as a catalyst for national research and community development.

Rather than just digitizing physical objects, AJL goes beyond that by offering library and information resources in electronic formats, enhancing the searchability of dispersed electronic collections across networks. AJL functions as a library containing only collections accessible through computer-related devices and stored in digital formats and not in printed, microform or other media. A content of this nature can be easily accessed locally or remotely [1, 2].

1.1. Study Justification

In the midst of a technological revolution, it is vital that all information is accessible digitally and globally to ensure proper referencing and routing. Journal articles play a crucial role in advancing research. However, current levels of access, dissemination and use of scholarly journal articles are not sufficient to enable effective research development in Nigeria. In addition to the paramount importance of scientific articles, there are several problems related to accessing high-quality and diverse scientific and non-scientific content. Associated problems include:

- A significant number of Nigerian institutions lack the resources to publish online.
- There is no dedicated website or web platform that provides comprehensive and up-to-date information on publications in Nigerian institutions.
- Many institutions still rely on traditional publishing methods, such as textbook printing.
- Offline publishing allows individuals to download a published article and change the owner's personal information to unlawfully claim ownership as there is no way to verify originality.

Study Objectives

The main goal of this project is to create a versatile web platform that can include articles from different institutions for wide access. In addition, the study aims to achieve the following objectives:

- Provide quick access to up-to-date information on online publications across the country.
- Offer free access to all published articles.
- Facilitate verification of article originality for publishing purposes.
- Reduce publishing costs.
- Speed up the paper review process.
- Ensure quick access to feedback on reviewed work.

2. Literature Review

The role of scholarly journals in research activities has been widely recognized through various research papers. However, due to limited funds, libraries have been forced to reduce subscriptions to major journals, making journal budget management difficult [3]. To bridge the gap between demand and supply of current literature in Nigerian, our proposed work aims to enable wider access and promotion of e-journals inside and outside the country. E-journals are increasingly in demand as they offer quick desktop access to current research materials and access to previous volumes. According to Collins and Berge in [4], "One can fantasize endlessly about electronic 'journals,' but without active authorship and readership, there is nothing". E-journals must also be used successfully in addition to being employed. "Use" entails building on the results given, in addition to reading and contributing to online journals. This further suggests that research published in e-journal articles affects academics and researchers in the particular discipline the e-journal represents.

An "e-library" is a library that can be accessed by anybody, anywhere, at any time, utilizing a personal computer, laptop, or mobile device to connect to the Internet [5, 6]. A vital information source, an e-library satisfies the prerequisites for academic activities. It includes a range of data and services that help people deal with information items that are directly or indirectly accessible through digital or electronic devices. The capabilities of an e-library system include ordering and buying books, discovering and downloading e-books and e-journals, among other things. Easy tracking of digital resources, fair remote access to e-library collections, and the ability to use search engines to find desired resources are just a few of the significant benefits of an e-library over a traditional library [6, 7]. Researchers and students find using an electronic library more convenient, saving time in the process. Students and other users can benefit greatly from the development of e-libraries as they progress through their educational careers [5-7].

The computerized feature of e-libraries lessens the workload associated with material organization, book check-ins and check-outs, and book shelving after usage. Additionally, it makes it easier for students to find their favourite resources. Additionally, user-friendly interfaces are a characteristic of e-libraries to make it simpler for students to use the system. Within academic institutions, many departments and faculties typically share an e-library system. To access and use the features or services provided by an e-library, staff and students each have their own accounts. E-books, e-journals, and online electronic resources are all available via e-libraries. Students can use online databases to read and download e-books and e-journals, utilize the search feature of an e-library to look for and save preferred items in a cart, and check the status of their requests [8].

2.1. Related work

In Barker's [9], a thorough analysis of the tools and services that successfully support libraries of various sorts and sizes is offered, along with an assessment of their e-journal holdings. According to the guidelines, users can access certain e-journals using online listings, the library catalog, and linking procedures. Glossaries, example collection procedures, a guide for standardizing names for web listings, advice for building an electronic journal spreadsheet, and more are notable elements of this manual. You can make the most of the e-journal resources at your library by using this thorough guide.

An investigation into how Aligarh Muslim University (AMU) scholars use e-journals was done by Raza and Upadhyay in [10]. All AMU scholars are aware of electronic journals, according to the poll. The analysis also found that many research researchers use electronic journals to broaden their knowledge as well as for research. But the report also points out a number of problems, such as inadequate training and slow download rates. The opinions of the researchers on the value of both print and electronic journals are also discussed.

The effect of the e-library on the use of library resources at Northern Caribbean University was the subject of Knight's [11] research. The goal was to establish whether investing in electronic resources is still worthwhile in light of shrinking library budgets and the accessibility of electronic resources via the internet. The study finds that as long as patrons continue to use both print and electronic resources, the availability of e-library resources has resulted in an overall rise in the consumption of library items. The study also discovered that electronic library resources are helpful to users and are essential for improving access to the materials required for excellent research papers and academic excellence in general.

Academic journals are essential for research, but limited funds have led to reduced subscriptions in libraries. Our proposed work aims to enhance access to e-journals in Nigerian academia. E-journals provide quick access to research materials and should be actively utilized for maximum impact. E-libraries, accessible online, offer numerous advantages such as easy resource tracking and remote access. They benefit researchers and students, saving time and improving the learning experience. Barker's work provides guidance for effective library support, while Raza and Upadhyay highlight the benefits and challenges of e-journal usage. Knight's research demonstrates the positive impact of e-libraries on resource usage at Northern Caribbean University. Embracing e-journals and e-libraries is crucial for research and academic excellence.

3. Methodology

To ensure desirable results, both primary and secondary data were utilized in this work. The research methodology employed a two-pronged approach. Firstly, appointments were made to consult relevant stakeholders in the selected institutions of study for data collection purposes. Secondly, during the system design phase, an open-source software platform was employed, along with various editing plugin tools, to enhance flexibility and user engagement. All necessary website features, including domain names, plugins, add-ons, and privacy and security solutions, were outsourced in compliance with the ISO 27000 family security standard (ISO/IEC 27001 Information Security Management).

The Academic Journal Library (AJL) was designed to be adaptable, allowing for future improvements and facilitating seamless research development. The ultimate goal of this research is to consolidate all journals from higher institutions in Nigeria onto a single platform, thereby simplifying access and publication of online academic resources. The developed site was tested using two journal articles from the selected institutions (Ilmi Journal of Federal College of Education Katsina and the Science Teachers Association of Nigeria (STAN)).

4. Results and Discussion

In this study, data collection and analysis is of two-fold; Firstly, appointments were made with relevant stakeholders in the target institutions to gather primary data. The purpose of these consultations was to obtain firsthand information from key individuals involved in the research development process, including administrators and journal editors. By engaging with these stakeholders, valuable insights, perspectives, and feedback were gathered, which played a crucial role in shaping the design and functionality of the Academic Journals Library (AJL) platform.

Secondly, during the system design phase, an open-source software platform was utilized, along with a range of editing plugin tools. This approach allowed for the creation of a flexible and dynamic website that could cater to the specific needs and requirements of academic journal publication. The open-source nature of the platform provided numerous advantages, such as cost-effectiveness, customization options, and a supportive developer community. The integration of editing plugin tools further enhanced the user experience, enabling authors and editors to easily format and present their research articles. A one year dedicated hosting was used to provide uninterrupted access to AJL. The primary data collected through stakeholder consultations were qualitative in nature and focused on gathering insights, suggestions, and preferences related to the design, features, and usability of the AJL platform. The data were analyzed through thematic analysis, identifying common themes and patterns that emerged from the stakeholders' feedback.

The results of the study demonstrated the successful implementation of the AJL platform, incorporating the feedback and suggestions provided by the stakeholders. The platform was designed to provide a seamless and user-friendly experience for researchers, authors, editors, and readers. It incorporated features such as advanced search capabilities, article categorization, metadata indexing, article submission and review workflows, and access controls. The use of domain names, plugins, add-ons, and adherence to the ISO 27000 family security standard ensured the privacy and security of the platform, aligning with industry best practices.

The successful implementation of the AJL platform signifies a significant advancement in the field of academic journal access and publication in Nigeria. By consolidating various journals onto a single platform, the AJL streamlines the process of accessing and disseminating academic resources, benefiting both researchers and readers. The flexibility and adaptability of the platform allow for future improvements and changes to be seamlessly incorporated, ensuring the continuous enhancement of the research development process. The AJL web platform can be accessed using the following url address: <https://journals.com.ng/>

Limitations

Despite the success achieved in the implementation of the AJL, there are some limitations that should be acknowledged. Firstly, the study focused on a limited number of institutions and journals for testing purposes, which may limit the generalizability of the findings. Future research should aim to expand the scope to include a wider range of institutions and academic journals, ensuring a more comprehensive representation of the Nigerian higher education landscape. Furthermore, the reliance on primary data from stakeholder consultations may introduce some biases or subjective perspectives into the research development process. It is important to recognize that their opinions may not fully represent the broader academic community. Therefore, future studies should strive to include a more extensive and diverse range of stakeholders to capture a wider range of perspectives.

5. Conclusion

The Academic Journal Library for tertiary institutions was designed purposely to provide a seamless and user-friendly platform for researchers, authors, editors, and readers. This will in turn provides easy access to published research/journal articles and improve academic research activities. The implementation of the AJL platform represents a significant step towards creating a centralized repository for academic journals in Nigeria. The successful integration of various features, coupled with stakeholder consultations, has led to the development of a user-friendly and adaptable system. The findings of this study provide a solid foundation for future research and improvement in the field of online academic resources. Ultimately, the goal of the AJL is to create a comprehensive and accessible platform that facilitates the dissemination of knowledge, fosters academic research, and enhances scholarly communication in Nigeria. By addressing the limitations and building on the strengths identified in this study, the AJL has the potential to revolutionize the way academic journals are accessed, published, and shared in the Nigerian higher education landscape.

Future Work

Future works for this research include expanding the coverage of the AJL to encompass a broader range of institutions and academic journals. This will involve engaging with more stakeholders, gathering their feedback, and incorporating their suggestions to further enhance the platform. Continuous engagement with stakeholders will ensure that the AJL remains responsive to the evolving needs and preferences of the academic community. However, ongoing collaboration with relevant institutions, publishers, and scholarly societies will be crucial for the successful implementation and sustainability of the AJL platform. Partnerships can help ensure the broad adoption of the platform, encourage the submission of high-quality research articles, and promote the visibility and impact of Nigerian academic journals on a global scale.

Compliance with ethical standards

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Disclosure of conflict of interest

No conflict of interest to be disclosed.

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