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THEME:

**EMERGING**  
TECHNOLOGY AND INNOVATIVE  
PEDAGOGY FOR ENTREPRENEURSHIP  
AND ECONOMIC DEVELOPMENT

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# PROCEEDINGS

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**FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA**

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## CONCEPTUAL FRAMEWORK ON THE INFLUENCE AND USE OF INSTITUTIONAL REPOSITORY AND CONTINUOUS PROFESSIONAL DEVELOPMENT ON ACADEMIC OUTPUT OF AGRICULTURAL LECTURERS

Mohammed, Zainab Suleiman<sup>1</sup>, Prof. J. A. Alhassan<sup>2</sup>, Dr. F. J. Abduldayan<sup>3</sup>, Dr. S.A. Salau<sup>4</sup>, & Dr. L. Y. Bello<sup>5</sup>

<sup>1, 2, 3, & 4</sup> Department of Library and Information Science, Federal University of Technology, Minna, Niger State.

<sup>5</sup>Department of Crop Science, Federal University of Technology, Minna, Niger State.

**Corresponding Author:** zainabmohammed001@gmail.com

**Phone No:** 08160086148

### Abstract

*This paper aimed at designing a conceptual framework of the influence and use of institutional repository and continuous professional development on academic output of agricultural lecturers. Through a conceptual analysis and by synthesizing existing literatures, the paper provided an overview of the concept of academic output, institutional repository, continuous professional development and agricultural lecturers. The paper argued that conceptual model posits that the use of institutional repository directly influences the academic output and continuous professional development of agricultural lecturers in Universities. In the context of the academic institutions, academic output entails ensuring that the lecturers make proper use of the academic resources for their continuous professional development. It also identified that the use of institutional repository in the universities is an essential aspect of creating an effective and efficient method that foster the continuous professional development, academic output and success of all agricultural lecturers. The paper concluded by emphasizing there is no significant relationship between use of institutional repository, continuous professional development and academic output among agricultural lecturers in universities. The study recommended among others that the management of universities should establish clear guidelines on the use of institutional repository to ensuring responsible and proper academic output of agricultural lecturers.*

**Keywords:** Academic output, Continuous professional development, institutional repository, Agricultural Lecturers

### Introduction

The university system is organized into either faculties or schools with members as academic staff also known as lecturers. Each faculty is made up of related programmes organized into departments. One of the earliest faculties in Nigerian universities is the Faculty of Agriculture with various programmes which according to Smith et al. (2020) comprised crop production, animal production, soil science, crop science, nutrition, agricultural engineering, pharmacology and the environment. The lecturers in the faculties of agriculture, like their counterparts in other faculties, are involved in teaching, research and Continuous Professional Development (CPD) which are the cardinal functions of any university. Agricultural lecturers are also involved in contributing to the academic output of their universities. These may be through journal articles, books, conference papers as well as participating in CPD programmes and activities. These academic outputs are usually stored and disseminated through the institutional repository (IR).

### The Concept of Academic Output

Academic output refers to the tangible results of academic work, including research publications, presentations, and other scholarly achievements (Kumar, 2021). It is a key

indicator of academic productivity and impact (Hicks, 2023). Kumar (2021) defined academic output as the measurable results of academic activities, including research publications, conference presentations, and other scholarly achievements. Hicks (2023) noted that academic output is a critical factor in evaluating academic performance and impact, as it reflects the tangible contributions of scholars to their field. Altbach (2024) stated that academic output is increasingly important in the global knowledge economy, as it drives innovation, collaboration, and societal impact. Oyediran (2022) highlighted the importance of academic output in promoting knowledge sharing and dissemination, stating that academic output is essential for advancing knowledge and understanding in various fields.

According to Simisaye (2019), academic output is critical in the appointment and promotion of lecturers as stated in the service schemes that govern their appointments and promotions. Aside from educational qualifications and relevant experience, they are expected to obtain appointments and promotions based on satisfactory academic output in renowned journals, conference proceedings, and seminar papers, research publications, teaching materials, research data, presentations, theses and dissertations, journal articles, book chapters, conference papers, technical papers to mention but a few as a condition of their job and positions. The number of academic outputs varies by academic rank at tertiary institutions, and a Ph.D. in a relevant field is required for lecturers, particularly university professors (Schimanski and Alperin, 2018).

### **The concept of institutional repositories**

Institutional repositories (IR) are digital platforms designed to collect, preserve, and disseminate the scholarly outputs of academic institutions. They provide a crucial service by offering open access to research outputs such as these, dissertations, journal articles, and datasets. The availability and effectiveness of Institutional repositories in universities can significantly impact the accessibility and visibility of academic research, contributing to enhanced scholarly communication and institutional reputation.

The concept of institutional repositories emerged in the late 1990s as part of a broader movement towards open access and digital preservation. According to Crow (2022), the establishment of Institutional repositories was driven by the need to provide unrestricted access to scholarly work and address issues related to the high cost of journal subscriptions. Initially, Institutional repositories were designed to manage and disseminate electronic theses and dissertations (ETDs), but their scope has since expanded to include a wide range of research outputs.

The development of Institutional repositories was supported by various initiatives and organizations, including the Digital Library Federation (DLF) and the SPARC (Scholarly Publishing and Academic Resources Coalition) (Lynch, 2023). Universities in different countries began adopting Institutional repositories in the early 2000s, driven by the desire to increase the visibility and accessibility of their research outputs. The growth of Institutional repositories was further supported by advancements in digital technologies and the increasing emphasis on open access and institutional accountability.

The availability of institutional repositories in universities has increased significantly over the past two decades. According to Pinfield et al. (2024), many universities have established institutional repositories to manage and disseminate their research outputs. This growth is part of a broader trend towards the digitalization of academic resources and the promotion of open

access. Universities have recognized the importance of Institutional repositories in enhancing research visibility and supporting academic communication.

### **Enhancing Academic Output using Institutional Repositories**

Academic output is a key to the growth and development of societies through the creation of new knowledge and use of existing knowledge in a creative way so as to generate new concepts, methodologies and understandings. In the academia, the concept of academic output is taken seriously in which the promotion of lecturers is dependent on the number of publications they have. This requirement makes it a mandate for them to be productive scholars and the extent to which this mandate is achieved is used to determine the level of productivity lecturers. Academic output is viewed as the measure of an academic's achievement viewed in terms of quantity or quality of publications over a given period of time and considered in terms of the totality of research activities performed by lecturers over a given period of time (Basiru, 2018). On the other hand, the measurement of the quantity of academic output of lecturers is viewed in terms of the numbers of publications in learned, globally accepted indexed databases, number of patents produced, number of chapters in books or books published locally or internationally which are believed to be accepted by high impact refereed or learned journal, publications in conference proceedings, research oriented books, staff bulletins, subject books, technical reports, articles in refereed journals, pamphlets and monographs (Gunawan et al., 2018).

Academic output can be measured using certain methodology and exercises such as the number of published works, chapter contributions in books, book publications including citations in web platforms and monographs. According to Cheng-Cheng Yang (2018), issues such as institutional-related, infrastructural-related, information resources-related and management-related and policy-related factors, among others have been observed and pointed out in other scholarly works as having the tendencies to influence academic output of lecturers in Nigerian universities. Meanwhile, this study is focusing on one of the sub-components of the factors highlighted which is the use of institutional repositories as a key determinant of academic output of lecturers. The use of institutional repositories is a key component of information-resources related factors relating to academic output of lecturers in Nigerian universities.

Institutional repositories (IRs), according to Bamigbola (2018) is an archive for the collection of intellectual outputs of an institution, recorded in a form that can be preserved, exploited and disseminated in a digital form. University libraries have overtime been involved in establishing institutional repositories to acquire, process, store, preserve and disseminate intellectual outputs of lecturers in digital forms to community members and the global community. It is usually an electronic store of web-based scholarly digital documents of theses, journals, books and conference papers owned by the institutions; hence it can be referred to as an extension of digital library which has now become a platform for sharing of knowledge (Bamigbola, 2018).

### **Extent of use of institutional repository by agricultural lecturers**

Institutional repositories (IR) are digital collections designed to capture, store, and disseminate the scholarly output of academic institutions. These repositories have become essential tools in enhancing the visibility, accessibility, and impact of academic research. For agricultural lecturers in universities, Institutional repositories offer an invaluable platform to share research findings on critical agricultural issues, improve accessibility to their work, and comply with open access mandates.

Institutional Repositories (IR) have become integral components of academic institutions, significantly transforming the landscape of scholarly communication. Emerging in the early 2000s, Institutional repositories were developed in response to the rising costs of journal subscriptions and the growing open access movement (Lynch, 2023). This literature review examines the extent of use of Institutional repositories by agricultural lecturers in universities, with a focus on Nigeria.

The concept of Institutional repositories originated as a solution to the crisis in scholarly communication. As journal subscription costs soared, access to academic publications became increasingly limited, prompting universities to seek alternative dissemination methods (Lynch, 2023). Early initiatives, such as DSpace at MIT and EPrints at the University of Southampton, were pioneers in this domain, setting a precedent for the development and adoption of Institutional repositories worldwide.

These early Institutional repositories aimed to provide open access to scholarly outputs, thus enhancing the visibility and impact of academic research. Over the past two decades, the proliferation of Institutional repositories has been notable, with a significant rise in their establishment globally. Developing countries, in particular, have embraced Institutional repositories to improve academic visibility and foster international collaboration (Johnson, 2022).

In Nigeria, the adoption of Institutional repositories has been a gradual yet impactful process. The Nigerian University Commission (NUC) has been instrumental in promoting the establishment of Institutional repositories across universities as part of their academic infrastructure (Adewumi, 2019). This initiative has led to a substantial increase in the number of Institutional repositories in Nigerian universities, facilitating better management and dissemination of scholarly outputs.

### **Concept of Continuous Professional Development (CPD):**

Continuous Professional Development (CPD) refers to the systematic maintenance, improvement, and broadening of knowledge, skills, and personal qualities necessary for professional practice (CPD Standards Office, 2020). It involves ongoing learning and development to enhance performance, stay updated with industry trends, and adapt to changing environments. That is to say, the decisions and actions of teachers in classrooms are influenced by their beliefs. Through CPD, teachers are exposed to new ideas and recent developments in the education field (Mann, 2021).

As such, it is essential to ensure teachers' CPD experiences are positive because then it is more likely that they will want to continue to learn and try new things out in their classrooms (Mann, 2021). The author further added that because effective CPD can positively impact learning gains, it is, internationally, viewed as vital and seen by many as one of the best ways to improve the quality of teaching. Many teachers who engage in CPD are more committed to the profession and to developing and extending their teaching skills.

### **Conceptual Framework**

In explaining the relationship of conceptual model in Figure 2.1, the arrow shows a natural flow among various indicators of the model. The phenomena of the constructs explain the relationship between the dependent and independent variables. Use of institutional repository and continuous professional development are the independent variables, while academic output is the dependent variable. A positive correlation between two variables is when an increase in

one variable leads to an increase in the other variable and a decrease in one variable sees a decrease in the other. Academic output which is the dependent variable should depend on all the independent variables, while the independent variables would positively impact the dependent variable. Each of the independent variable has direct relationship with the dependent variable because they would all enhance the academic output of agricultural lecturers in universities. The conceptual construct of this study is to examine the influence of use of institutional repositories and continuous professional development on academic output of faculty of agriculture lecturers

In Figure 2.1, the conceptual model shows linkages and relationship between influence of use of institutional repository and continuous professional development on the academic output of agricultural lecturers in universities.

The aim of this study is to conceptualise and design a framework on the influence and use of institutional repository and continuous professional development on academic output of agricultural lecturers in universities. Therefore the study will build on the following hypothesis:

- Ho1:** There is no significant influence of use of IR on academic output of Agricultural lecturers in universities
- Ho2:** There is no significant influence of CPDs on academic output of Agricultural lecturers in universities
- Ho3:** There is no composite influence of use of IR and CPDs on academic output of Agricultural lecturers in universities
- Ho4:** There is no relative influence of use of IR and CPDs on academic output of Agricultural lecturers in universities

Conceptual Model Illustrating the Relationship between use of institutional repositories, agricultural lecturers and academic output.

### **Recommendations**

Given the comprehensive analysis of the multifaceted influence that the use of institutional repository and continuous professional development on academic output of agricultural lecturers in universities have been undertaken in the evolution and enhancement of the dynamics of academic activities within the nation, it is imperative that the government undertakes concerted initiatives to host seminars, workshops, and conferences that ardently emphasize the necessity of lecturer's continuous education across all levels in universities. Additionally, robust financial support from the government is essential to incentivize agricultural lecturer's pursuit of educational attainment. It is an opportune moment for all agricultural lecturers in Nigeria to leverage their positions and successful academic pursuit across various agricultural sectors especially in the Nigerian universities to improve their academic output.

### **Conclusion**

In conclusion, the roles, statuses, and contributions of the use of institutional repository and continuous professional development of agricultural lecturers in universities to the advancement and development agricultural lecturers within the academic sector have significantly enriched the academic profession in Nigeria. Although the institutions repositories and resources used by agricultural lecturers in various capacities and the services they provide exhibit an effective result, which can only be authentically interpreted through a natural lens, the agricultural lecturers in universities have diligently endeavored to propel



academic progress. Consequently, agricultural lecturers in universities have harnessed their strengths and capabilities and achieved recognition not through positions but through the steady and quiet manifestation of actions that epitomize the essence of continuous professional development.

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