

## **ICT Competence and Use of Digital Resources among Lecturers in Michael and Cecilia Ibru University (MCIU), Agbarha-Otor, Delta State, Nigeria**

\* Oghenetega Ivwighrehweta #

\*\* Oghenevbaire Efevberha-Ogodo

\* Western Delta University, Oghara, Delta State, NIGERIA; Email: anthonyoghenetega@yahoo.com

\*\* Lecturer, College of Computing, Western Delta University, Oghara, Delta State, NIGERIA

# Corresponding author.

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### **Abstract**

*This study investigated the ICT competence and use of digital resources among lecturers at Michael and Cecilia Ibru University, Agbarha-Otor, Delta State. Four research objectives with congruent research questions guided the study. The study adopted a descriptive research design. The population of the study consists of one hundred and ten lecturers. The total enumerative and accidental sampling method was adopted in selecting the lecturers. The instrument for data collection was a structured questionnaire with the title "ICT competence and the use of digital resources questionnaire (ICTCUDRQ)". The data was analyzed using frequency and percentage. Findings revealed that e-journals, OPAC, and e-books were being utilized by the lecturers for the purposes of carrying out their research and preparing their lecture notes for effective teaching. This study showed that there was a high level of ICT competency among the lecturers at MCIU. They had ICT competence in computer and smart phone operations, spreadsheets (Excel), visual presentations (PowerPoint), word processing (Microsoft Word), and internet operations. However, some of the obstacles that may induce ICT ineptitude among lecturers include an epileptic electrical power supply, sluggish bandwidth from network providers, and a concern about addiction to usage. The study discovered that insufficient energy supply discourages efficient use of digital resources and proposes that this be rectified in order to encourage the frequent use of ICT in the utilization of digital resources. University administrators should seek out ICT-savvy instructors throughout the hiring process.*

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**Keywords:** Digital Resources, Electronic Resources, ICT competence, Information and Communication Technology, Michael and Cecilia Ibru University (MCIU), Agbarha-Otor, Delta State.

### **1. Introduction**

Digital resources are a result of information and communication technology (ICT), and their successful incorporation into the educational system is dependent on the proficiency gained from the development of ICT skills over time. In recent years, there has been a dramatic increase in the demand for access to online materials. The spread of knowledge has gotten much easier with the advent of ICT, and the world has really become a global village. The developed world is currently the frontrunner in bringing information to the masses (Olufunke & Adegun, 2014) and (Ojeniyi & Adetimirin, 2016).

Access to digital information has expanded greatly in recent years because of technological advances. These materials are continuously updated, typically more visually appealing and inventive, and generally more cost-effective than traditional books (Musharrat & Chowdhury, 2020). Digital resources give information that is correct, up-to-date, and continuous, making it much simpler to get vast volumes of data for use in instruction, research, and study. This leads to vastly improved educational achievements (Ebiefung & Ohah, 2021). For university libraries to be able to provide the information requirements of the twenty-first century, it is essential for these resources to be readily available. As a result of the broad adoption of digital resources, both teachers and students in Nigerian schools now have easier access to contemporary and relevant material, and they are better able to make use of it (Kehinde & Folorunsho, 2019).

Work, education, and research have all benefited from the widespread availability of digital information resources. As reported by Ivwighreghweta and Oyeniran (2013), people are gaining easier access to these materials, as a result, there has been an increase in the variety of means of communication, the capacity for storing and retrieving data, the needs of library patrons, and the sophistication of library-wide information management systems. The vast majority of their respondents use online resources when conducting research, as shown by their poll.

To make the most of digital assets, you need people with knowledge and skills in ICT (Nwosu, John, and Akorede 2018). This facilitates easy access to digital resources, which in turn maximizes the effectiveness of their use. The study also stated that competent and skilled use of ICT is necessary for lecturers so that they can determine when information is needed, locate it, evaluate it, and put it to good use in the classroom. This will aid them in locating and making use of digital resources that can be accessed remotely via the internet or locally on the instructor's computer or smartphone, ultimately improving the quality of education provided. In addition to indexing and abstracting databases, popular electronic research tools include e-journals, e-books, full-text databases, e-newspapers, and electronic databases.

## **2. Review of Literature**

Since the dawn of the digital age, our daily routines have undergone dramatic changes. Since this change has occurred, lecturers' roles have expanded to include those of a function of a facilitator and coach in the development of educational contexts and activities. In order to successfully integrate ICT into the classroom, educators need to develop their own set of skills and competencies connected to ICT, such as the ability to think creatively and locate relevant digital content online.

The emergence of digital resources has significantly altered the methods in which information is handled and managed in the academic sector, with far-reaching effects on all aspects of education and scholarship (Nwosu, John & Akorede, 2018). Several studies have looked at how well-versed tertiary lecturers are in ICT and how often they make use of digital resources. Kehinde and Folorunsho (2019) found that in Ilorin metropolitan, there is a strong correlation between teachers' ICT skills and their utilisation of online materials. The selected e-resource and the reason for utilising it are related in this way. Kehinde and Folorunsho discovered a correlation between teachers' ICT fluency and their utilisation of online materials in Ilorin city. Olatoye, Nekhwevha, and Muchaonyerwa (2021) assessed the employees' familiarity with and facility with ICT and the quality of their work using digital resources. Several different academic centres in the Eastern Cape of South Africa played host

to this study. The research shows that wasteful use of electronic resources is caused by a lack of personnel skill and experience with information and communications technology (ICT).

Faculty members in the Ilorin metropolitan region have a high level of ICT competence, and there is a significant correlation between ICT competence and the use of electronic resources, according to the conclusions of a study by Kehinde and Folorunsho (2019). Another study by Ogunsanya and Olayinka's (2021) indicated that the average person is quite familiar with and comfortable using digital tools. According to a study conducted by Nwosu, John, and Akorede (2018), 80% of undergraduates at TASUED and BU had at least a basic understanding of how to use various forms of digital media. One of these skills is the ability to locate and make effective use of a wide range of informational resources in service of one's research projects. In addition, this study's findings demonstrated that students' overall academic performance improved when they utilised ICT. Ivwighreghweta and Eireyi-Fidelis (2022) found that both lecturers and graduate students at Western Delta University, Oghara were familiar with and made extensive use of electronic academic database resources for conducting research, composing seminar/conference papers, completing coursework, and staying abreast of developments in their chosen fields. The fact that it was used in class and in homework assignments by both professors and students was proof of this.

According to multiple studies (including those by Ivwighreghweta and Igere, 2014; Ivwighreghweta, 2012; Ogbomo and Ivwighreghweta, 2013; and Ivwighreghweta and Onoriode, 2012), library staff and patrons face difficulties when attempting to use open electronic resources due to a lack of reliable electricity. In all four trials, these results were replicated. Thus, this study set out to assess the degree to which lecturers at Michael and Cecilia Ibru University in Agbarha-Otor, Delta, were able to apply their knowledge of ICT in the usage of digital resources.

### **3. Statement of the Problem**

The utilisation of knowledge that is reliable, up-to-date, and easily accessible at all times is the cornerstone of academic achievement in the modern day. This is made possible by the abundance of digital resources that are already available (Ebiefung&Onah, 2021). However, the vast majority of the pertinent literature, such as the works of Olatoye, Nekhwevha, and Muchaonyerwa (2021) remarked that lecturers do not make appropriate use of these instruments. The basic information and communications technology (ICT) skills, such as the ability to search for and access information resources to ensure that they are used in the most effective way possible for training, may or may not be related to this phenomenon. Therefore, this study investigated the ICT competence and use of digital resources among lecturers in Michael and Cecilia Ibru University, Agbarha-Otor, Delta. The outcomes of the study will serve as the foundation for our recommendations for how to make better use of these assets.

### **4. Purpose of the Study**

The purpose of this study is to investigate ICT competence and use of digital resources among lecturers in Michael and Cecilia Ibru University, Agbarha-Otor, Delta State. The specific objective of the study is to:

1. know the diverse digital resources used by the lecturers in Michael and Cecilia Ibru University, Agbarha-Otor, Delta State;
2. know the purpose of using digital resources by lecturers in MCIU;
3. find out the level of ICT competence possessed by lecturers in MCIU;
4. to identify the challenges that may cause ICT incompetence among lecturers in MCIU?

## 5. Research Questions

To guide this investigation, the following research questions were posed:

1. What are the various digital resources used by the lecturers in Michael and Cecilia Ibru University, Agbarha-Otor, Delta State?
2. What is the purpose of using digital resources by lecturers in MCIU?
3. What is the level of ICT competence possessed by lecturers in MCIU?
4. What difficulties might lead to ICT incompetence among MCIU lecturers?

## 6. Method

In order to achieve the goals of this investigation, a descriptive survey design was implemented. There were a total of 110 unique academics who participated in the research project as part of the population of the study. All of the people who make up this group hold teaching positions at Michael and Cecilia Ibru University, which is located in Agbarha-Otor, state of Delta in Nigeria. In order to conduct this research, the researchers had devised their own questionnaire, which they referred to as the "ICT Competence and Use of Digital Resources (ICSUDQ) survey." For the purposes of this analysis, the research instrument that was used was this questionnaire. One hundred and ten questionnaires (a total of 110) were dispatched, and nine-five (95) of those surveys were received back with a response. Throughout the entirety of the course of the investigation, both comprehensive enumeration and accidental sampling were employed as investigative strategies. The information needed for the study was gathered with the assistance of a questionnaire as the instrument of collection. In order to conduct the analysis on the data, statistics were utilised, specifically those based on frequency and percentage.

## 7. Findings

The findings of this study are presented in the following tables with a brief summary.

**Research Questions 1:** What are the various digital resources used by the lecturers in Michael and Cecilia Ibru University, Agbarha-Otor, Delta State?

**Table 1: Digital Resources Used by Lecturers in MCIU**

Digital Resources	Used	Unused
E-journals	64 (67.37)	31 (32.63)
OPAC (Online Public Access Catalogue)	61 (64.21)	34 (3.79)
E-books	51 (53.68)	44 (46.32)
Search engines such as Google	54 (56.84)	41 (43.16)
CD-ROMs	16 (16.84)	79 (83.16)
Online Databases	16 (16.84)	79 (83.16)
Online Magazines	12 (12.63)	83 (87.37)
E-news	9 (9.47)	86 (90.53)

Note: Numbers given in parentheses represent percentage.

Table 1 displays information on the digital resources utilised by MCIU lecturers. There are eight digital resources that are being considered and out of them, four were significantly used by respondents. It is evident that e-journals 64 (67.37%) ranking top as the most commonly

used e-resource by the majority of the respondents. In that sequence, OPAC 61 (64.21%) followed next in use.

**Research Questions 2:** What is the purpose of using digital resources by lecturers in MCIU?

**Table 2: Purpose of using digital resources**

Purpose	Number	Percentage
Research	32	33.68
Preparing lecture notes	26	27.37
To update knowledge/keep abreast of latest development	22	23.16
Seminars/ Conference	15	15.79

The purpose for which MCIU lecturers make use of digital resources is outlined in Table 2. A total of 32 (33.68%) of the respondents indicated that they made use of it for research. Preparing lecture notes 26 (27.37%) came next.

**Research Questions 3:** What is the level of ICT competence possessed by the lecturers in MCIU?

**Table 3: ICT competence possessed**

Lecturers ICT Competence	Yes (%)	No (%)
<b>Computer /Smart Phone Operation</b>		
I can start up, login and shut down a computer system properly	87 (91.58)	8 (8.42)
I can use a mouse and a keyboard	87 (91.58)	8 (8.42)
I can print documents	78 (82.11)	17 (17.89)
On my computer, I am able to create and organize new files and folders.	71 (74.74)	24 (25.26)
Ability to use necessary computer applications	67 (70.53)	28 (29.47)
I have the ability to install and uninstall applications on my computer	65 (68.42)	30 (31.58)
I can protect my computer from virus	43 (45.26)	52 (54.74)
<b>Processing Word Documents (using Microsoft Word), Spreadsheets (using Microsoft Excel), and Presentations (using Microsoft PowerPoint)</b>		
I am able to create, save, and exit documents.	89 (93.68)	6 (6.32)
I have the ability to make modifications to a document (Bold, italicize and underline, change font color, Cut, copy and paste text or graphics)	79 (83.16)	16 (16.84)
I can use shortcut icons	23 (24.21)	72 (75.79)
I can change slide design	76 (80.0)	19 (20.0)
I use power point for my presentations	71 (74.74)	24 (25.26)

<b>Internet Operation</b>		
I have internet searching skill	89 (93.68)	6 (6.32)
When I need to look anything up, I have access to a variety of search engines.	91 (95.79)	4 (4.21)
I am able to create and send email messages, as well as attach files to emails and send them.	91 (95.79)	4 (4.21)
I can search for information using google, databases and other search engine	85 (89.47)	10 (10.53)

Note: Numbers given in parentheses represent percentage.

According to Table 3, the majority of respondents possessed ICT competence in the areas of, spreadsheet management (Microsoft excel), word processing (Microsoft word) presentation management (Microsoft Power Point), and Internet operations.

**Research Questions 4:** What difficulties might lead to ICT incompetence among MCIU lecturers?

**Table 4: difficulties that may cause ICT incompetence among lecturers**

<b>Difficulties that may cause ICT incompetence among lecturers</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
Epileptic electrical power supply	39 (41.05)	23 (24.21)	20 (21.05)	13 (13.69)
Slow bandwidth of my network provider	27 (28.42)	31 (32.63)	15 (15.79)	22 (23.16)
Lack of finance to subscribe or purchase Data for browsing	31 (32.63)	9 (9.47)	41 (43.16)	14 (14.74)
insufficient funds to acquire necessary ICT equipment	22 (23.16)	20 (21.05)	51 (53.68)	7 (7.37)
Poor/inadequate training programme in the university	34 (35.79)	23 (24.21)	8 (8.42)	30 (31.58)
Fear of Addiction	9 (9.47)	20 (21.05)	61 (64.21)	5 (5.26)

Note: Numbers given in parentheses represent percentage.

Table 4 shows the difficulties that may cause ICT incompetence among lecturers. Majority (41.05%) indicated strongly agree and (24.21%) indicated agree with epileptic electrical power supply. This was followed by slow bandwidth of network provider 27 (28.42%) and 31 (32.63%) of the respondents were respectively strongly agree and agree.

## **8. Discussion of Findings**

The respondents indicated that e-journals and OPAC were the most utilized digital resources. The findings are congruent with the findings of Iwighrehweta and Oyeniran (2013), who discovered that lecturers at two Nigerian universities used e-journals for research purposes.

The study also found that MCIU lecturers made use of digital resources for research purposes and for preparing lecture notes. It's possible that this is so because the respondents are academic staff members who are still very active in research, which they use when publishing academic articles and papers. This finding is in line with the findings of the research

conducted by Ivwighreghweta and Eireyi-Fidelis (2022), which showed that lecturers and postgraduate students at Western Delta University, Oghara made use of e-resources for their research work, writing of seminars/conference papers, assignments, and getting up to date information with subject areas.

Furthermore, the results showed that the respondents possessed ICT competence in the areas of, spreadsheet management (Microsoft excel), word processing (Microsoft word) presentation management (Microsoft power point), and Internet operations. Based on the results of this investigation, it was determined that the lecturers working at MCIU have a high degree of expertise about ICT. This conclusion is consistent with that of Nwosu, John, and Akorede (2018), whose research found that the majority of students attending Babcock University have a very high level of information and communication technology (ICT) competence. In a similar vein, the research that was conducted by Kehinde and Folorunsho (2019) revealed that there was a high level of ICT competence among the faculty members in the metropolis of Ilorin, and as a result, there was a significant relationship between ICT competence and the utilisation of electronic resources.

Meanwhile, the results of the study also showed that epileptic electrical power supply and slow bandwidth of network provider are the difficulties that may cause ICT incompetence among MCIU lecturers This study is in conformity with Ivwighreghweta and Igere (2014), Ivwighreghweta (2012), Ogbomo & Ivwighreghweta (2013) and Ivwighreghweta & Onoriode (2012) those studies revealed that power supply was a barrier to both staff and students in the effective use of open access electronic resources in libraries.

## **9. Recommendations**

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

1. University staff should be properly enlightened on the need to acquire ICT and digital skills. This can be achieved by organizing seminars/webinar on the value and importance of digital skills in a global scale.
2. The University authority should ensure that they provide frequent ICT training to their lecturers in order to enhance the usage of digital resources for effective teaching and research. This can be achieved by constant workshop and conferences on ICT and digital skills.
3. ICT facilities should be made available for lecturers in their offices in order to access a wide range of digital resources. This can be achieved by the provision of devices such as laptops and free internet services.
4. ICT-competent lecturers should be engaged by universities. This can be achieved by ensuring that recruited staff are ICT compliant and possess the necessary required ICT and digital skills.
5. To stimulate ICT use in teaching and learning, poor electricity supply should be rectified. A standby generator or inverter solar energy system can provide this.

## **10. Conclusion**

The purpose of this study was to investigate both the degree of ICT expertise possessed by MCIU lectures and their utilization of digital resources. It was determined that academics, on average, have a high degree of ICT proficiency and made effective use of digital resources. E-journals and the Online Public Access Catalogue were the two forms of digital information that were utilised majority of the time. They were well-versed in the operation of a wide variety of information and communications technologies, including the Internet, word

processing (using Microsoft Word), spreadsheets (using Microsoft Excel), presentations (using Microsoft PowerPoint), and the utilisation of smart phones. However, problems with the electrical power supply, slow bandwidth from the network provider, and worries about growing dependent on the internet are some examples of potential impediments that might be contributing to the lecturers' lack of competency in information and communications technology.

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