

## **An Investigative Analysis on the Utilization of the Essential Electronic Agricultural Library (TEEAL) by Researchers: A Case Study of National Centre for Agricultural Mechanization (NCAM) Library.**

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### **Abstract:**

This research work seeks to investigate the rate of utilization of electronic library and in particular, The Essential Electronic Agricultural Library (TEEAL) by researchers. While analysing the data in this research work, it was discovered that although 99% of the respondents have heard about TEEAL and the usefulness, only very few of the respondents actually utilize the electronic library. This poor utilization was however linked to several points such as poor power supply, inadequate computer systems in the library and limitations in the accessibility of the library due to working hours. The researchers of this work however discovered that researchers still prefer other means of sourcing research information such as Google search and periodicals, which can be easily accessed via the mobile telephone and related devices.

**Keywords:** TEEAL, Researchers, E-library, NCAM, Library

### **Introduction:**

According to Wikipedia, The Essential Electronic Agricultural Library, TEEAL is a full-text and searchable database of articles from more than 450 high-quality research journals in agriculture and the related sciences. TEEAL was launched in 1999 with full-text articles and graphics of over 200 major agricultural journals. TEEAL is a project of Cornell University's Albert R. Mann Library in cooperation with over 60 major scientific publishers, societies and index providers. Initial financial support has been provided by Rockefeller Foundation and currently by other foundations and donors.

The idea of TEEAL arose in the 1980s and was created by Wallace Olsen, former senior Research Associate and Jan Olsen, former Director of Mann Library. During travels to developing countries, the Olsen saw underfunded and out-of-date journal collections. TEEAL was born in order to effect long-term improvements in food security and agricultural development by giving scientists better access to current research.

TEEAL was initially formed as a database of citations, linking to articles stored on hundreds of CD-ROMs. In 1999, the TEEAL Project sold its first "Library in a Box" – 130 journals with 600,000 pages of articles, stored on 100 compact discs to the University of Zimbabwe. Now that local area networks are more common in institutions and libraries in the developing world, Lan TEEAL, the network based variant of TEEAL, has been released to over 260 institutions. Annual updates to journals in TEEAL are produced by Mann Library using revenue from sales of sets. TEEAL is delivered on a small footprint computer that can run on one computer workstation or be made available to multiple computers via an institution's local network or intranet. Mann staff work with the South Africa based Information and Training Outreach Centre for Africa (ITOCA) to provide training on its use. The latest version contains over 375 journals as well as research materials from Bill & Melinda Gates Foundation.

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## Literature Review

In the last decade, there has been a huge investment in research and education in the developing world. The goal has been to make the research and education programs in these countries self-sustaining. In spite of the monumental strides made in improving these programs, little has been accomplished in bringing these countries access to the world's scholarly publishing.

According to Mary Anderson Ochs (1999), TEEAL (The Essential Electronic Agricultural Library) is a self-contained library of the core journals in the field of agriculture. It is available at cost ONLY to research institutions in the developing countries. It is a system being produced at Mann Library at Cornell University with the cooperation of many scientific publishers, database producers and the Rockefeller Foundation. She further opined that in the larger sense, however, TEEAL (The Essential Electronic Library) is the solution to a problem. Without access to scientific literature, researchers in the developing countries cannot know that the solutions to the problems they are struggling with have already been found by others.

Nico Dauphine (2003) stated that The Essential Electronic Agricultural Library (TEEAL) is an indexed library of key agricultural, environmental and related science periodicals created to help institutions in developing countries significantly expand their journal collections despite the prohibitive cost of journal subscriptions.

Gracian Chimwaza (2017) et al. in their submission believe that TEEAL (The Essential Electronic Library) is a digital collections of scientific agricultural literature for the developing world. Through it, the agricultural circle in the developing world functions more effectively, including areas where access to internet is limited, slow or unreliable, thanks to TEEAL offline access.

According to Gracian Chimwaza (2013) in an interview he granted, opined that TEEAL (The Essential Electronic Agricultural Library) is a digital library that has revolutionized agricultural research in developing world ranging from Asia and Africa to Latin America. He further stated that TEEAL has spread through Africa largely through the efforts of the Information Training and Outreach Centre for Africa (ITOCA) which has served as a marketing and support agency for Mann in Africa.

Joy Paulson (2017) on Research4life acknowledged that TEEAL is a database that provides access to peer-reviewed, research journals in agriculture and related sciences without the need of internet connectivity. She also stated that currently TEEAL provides access to 450 research journals. Additionally, TEEAL also begun to provide access to non-journal research material that can be difficult find and access.

Olivia Vent (2005) sees TEEAL (The Essential Electronic Agricultural Library) as a program that will provide low-income countries with access to agricultural journal literature that advances their agricultural research and education objectives. She also stated that TEEAL is a self-contained agricultural research library with full-text articles and graphics of 140 major journals related to agriculture from 1993 through 2003, stored and indexed on over 400 CD-ROMs. She also claimed that in mid-2005, most of the collection also became available for use over local area networks.

## Statement of the Problem

### a) NCAM Library

The National Centre for Agricultural Mechanization Library is a Research Library that is responsible for providing reference literature and other information services in-line with the mandate and objectives of her parent body. The library acquires information (published and unpublished) in General Agriculture, Mechanization, Engineering, Social Sciences, Management and other related fields. The library has various collections ranging from Textbooks, Journals, Magazines, Manuals and many other print and non-print materials. The collections in NCAM Library are classified using in-House classification scheme, which covers areas such as Farm Power and Machinery, Processing and Storage, Land and Water Engineering, General Agriculture, Mechanics, Social Sciences, Post-Harvest Engineering etc

### a. Objective of the Study

The main objective of the study is to investigate the utilization of TEEAL (The Essential Electronic Agricultural Library) in NCAM Library. While the specific objective is to:

- a) Identify the importance of TEEAL to research
- b) Identify the challenges facing the Utilization of TEEAL in Ncam Library by researchers

c) Proffer possible solutions for adequate utilization of TEEAL

**d) Findings And Discussion**

Chart 1 below reveals the gender distribution of respondents. The chart shows that 81% of the respondents are male while only 19% are female. This result corroborates with the submission of Oyeniyi et.al (2014) that there exists a notable gap between male researchers and their female counterpart.

**Chart 1: Gender of Respondents**

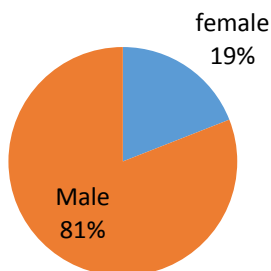
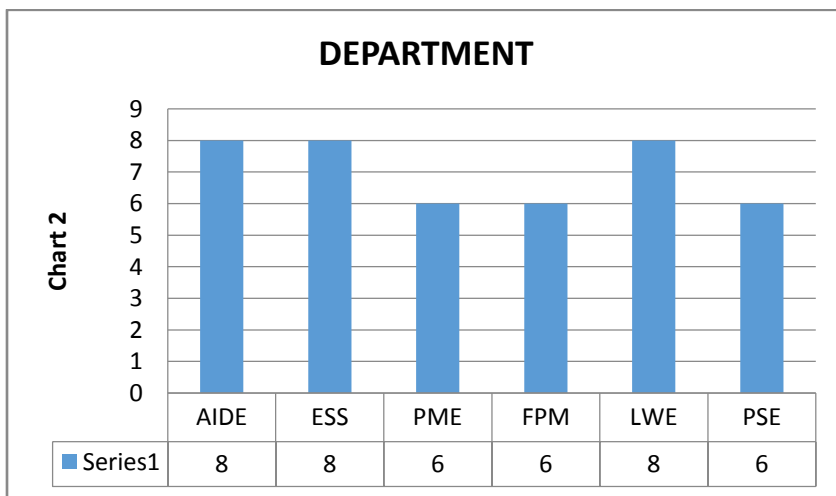


Chart 1 above shows the distribution of the respondents though gender. The chart showed that 81% of the respondents are male while only 19% are female. This results points to an indication that there are more male researchers than their female counterparts. The result also corroborates with the findings of Oyeniyi et.al (2014)



**Chart 2:** Chart 2 represents the departmental analysis of the author. The chart reveals that the respondents were selected across the research departments in NCAM. A total number of 42 respondents comprising of both male and female researchers were used.

| Table 1: Have you heard about TEEAL? |    |
|--------------------------------------|----|
| YES                                  | 41 |
| NO                                   | 1  |

Table 1 above answered the question whether the respondents have heard about TEEAL before. The question is necessary so as to ascertain the basis for further questions relating to experiences gathered in the course of using TEEAL. The table revealed that 41 respondents/researchers contacted have heard about TEEAL before, while only 1 respondent has not heard about TEEAL before.

| <b>Table2: Have you used TEEAL before?</b> |    |
|--|----|
| YES  | 12 |
| NO   | 30 |

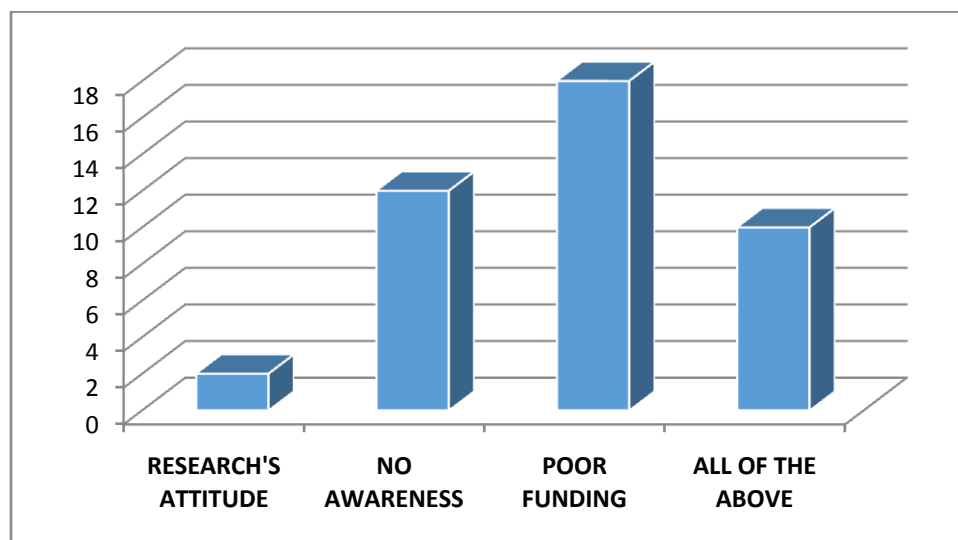
In table 2 above, a question was asked whether the respondents have used TEEAL before. In their response, only 12 respondents have used TEEAL before while the majority of the respondents (30) have not used TEEAL. The result from this table questions the utilization and consistency of the use of TEEAL in NCAM library.

| <b>Table 3: Do you think TEEAL contribute anything to research on Agricultural development</b> |    |
|--|----|
| YES  | 41 |
| NO   | 1  |

Table 3 above provided answers to the question whether TEEAL contribute to research development or not. 41 respondents accepted that TEEAL have a significant contribution to research development while only 1 respondent opined negatively. This opinion agrees to Gracian Chimwaza (2013) in an interview he granted, opined that TEEAL (The Essential Electronic Agricultural Library) is a digital library that has revolutionized agricultural research in developing world ranging from Asia and Africa to Latin America.

| <b>Table 4: Do you think TEEAL should spread to other related institution or within NCAM only</b> |    |
|---|----|
| YES   | 39 |
| NO  | 3  |

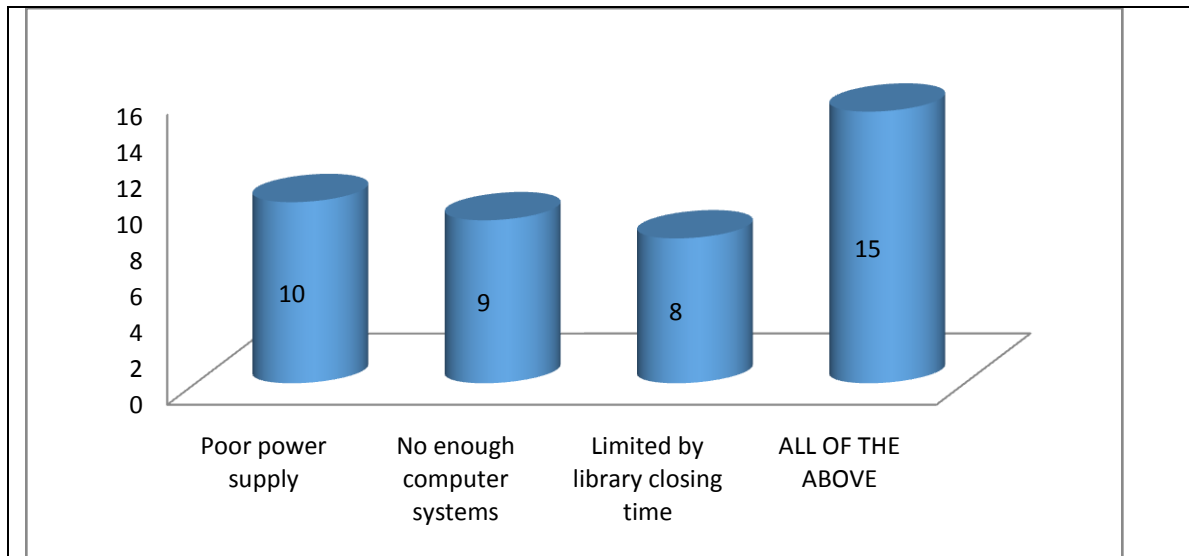
The question was asked if it is better to spread TEEAL to other related institutions or not. Table 4 above shows that 39 respondents are of the opinion that TEEAL should not only circulate within an institution but should be spread to other related institutions. 3 respondents however declined to this opinion. This further aligns with Nico Dauphine (2003) who stated that The Essential Electronic Agricultural Library (TEEAL) is an indexed library of key agricultural, environmental and related science periodicals created to help institutions in developing countries significantly expand their journal collections despite the prohibitive cost of journal subscriptions.



**Chart 3:** Chart 3 reveals what is thought to be responsible for the non-utilization and in-consistency in the use of TEEAL by NCAM researchers. The chart revealed that 18 respondents believed that the challenges are due to no awareness of TEEAL as a research solution solver.

This opinion agrees with Mary Anderson Ochs (1999) that in the larger sense, however, TEEAL (The Essential Electronic Library) is the solution to a problem. Without access to scientific literature, researchers in the developing countries cannot know that the solutions to the problems they are struggling with have already been found by others.

This further proves beyond doubt that awareness of any kind is very important in human endeavours. 12 respondents also pointed at research attitudes, while 2 respondents choose all of the above is responsible for the non-utilization and inconsistency of the use TEEAL in NCAM.



**Chart 4** above revealed more specific reasons why NCAM researchers are not utilizing the TEEAL set already installed in the library. As shown in the result, the largest percentage of the researchers believe all the raised challenges such as poor power supply, inadequate computer systems, and library closing time influences their inability to utilize the TEEAL set. Out of the 42 respondents, 10 were of the opinion that they are unable to utilize the TEEAL Set in the library due to poor power supply to the library. 9 respondents opined that there are not enough computer systems in the library to enable them access the TEEAL Set. 8 respondents however opined that they are limited by the library closing time. This points to the fact that since the library is not opened 24hours, but only between the hours of 9am-4pm (official hours), some researchers would have love to utilize the TEEAL Set even after the closing hours of the library.

### Conclusion and Recommendation

This research work has successfully exposed the hidden fact about e-library and its utilization. It is very unfortunate to note that although researchers are well aware of the role of e-library packages such as TEEAL Set, Agora, Hinari etc, they still find it difficult to utilize it. This research work has identified that even though TEEAL Set stands as a well-known information gadget, researchers that have identified the importance still don't utilize it. The low utilization is however connected to some salient factors which have been identified in this research.

Some of these factors affecting the utilization of the TEEAL Set by researchers in the National Centre for Agricultural Mechanization Library are poor power supply, inadequate computer systems in the library and limitations in the accessibility of the library due to working hours. Considering the above identified challenges, the researchers are hereby concluding with the following recommendations:

In other to address the challenges pose by low power supply, there may be need to power our libraries with solar systems as alternative power source. It is believed that if the challenges of power supply are addressed, library closing hours will no longer affect the usage of TEEAL set. Since the TEEAL set is an intranet device that needs power source, it can therefore be powered-on for twenty four hours so that researchers can access the usage at any time. It is also highly recommended that the coverage of the TEEAL intranet should be boosted to cover more space

especially outside the comfort of the library alone. It is believed that if these recommendations are considered, it will improve the utilization of TEEAL Set and other E-library resources.

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