

Awareness, Access and Use of Locally Published Journals among Researchers in the Tanzanian Universities

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Abstract

This is a baseline study of researchers' awareness, access and use of locally published academic journals. Specifically the study addressed the following research questions: to what extent researchers in Tanzanian public universities awareness of the available indexed and non-indexed scholarly journals? What problems do researchers encounter when accessing local journals? And what are the researchers' usage patterns of locally published journals? The study was conducted in five universities, which are: University of Dar es Salaam, Ardhi University, Sokoine universities of agriculture, Open University of Tanzania and Muhimbili University of health and allied sciences. The findings show that majority of researchers in higher learning institutions are aware of the available locally published journals within and outside areas of specialization. The findings further show that researchers, to large extent, use articles published from these journals to support their researches. Irregular publication of journals, lack of electronic versions for some journals and missing journal volumes and issues are among the factors that restrict access and use of local journals. It is recommended that for the journals to be published regularly, journal publishers with the support of their parent organizations should find ways of making them both sustainable and cost-effective, including adopting new models of journal publication. Libraries are also argued to improve the visibility of the journals by providing abstracting and indexing services.

Keywords: *Scholarly journals, information use, Tanzania*

INTRODUCTION

Use of any information sources depends largely on the sufficient knowledge of the information users, access and availability of information sources. Awareness, access and availability of information sources therefore are important factors that determine the use of information sources. The quality of research output in any academic discipline depends largely on availability, access and use of current information. Awareness and availability of information by itself do not guarantee use. On the contrary, information has to be accessible. While there are different levels of access to information such as physical access, intellectual access and social access (Burnett and Jaeger, 2008), most of the time the focus has been on physical access or degree to which the individual can acquire information from different locations.

There are several sources of information that are important in research; and among these are scholarly journals. Academic journals are essential sources of information among researchers as they are the major platforms for the dissemination of primary research findings (Nwangnu, 2010). Scholarly journals play an important role, including building and archiving knowledge base (Solomon, 2007), validating the quality of research findings (Meadows, 1980; Solomon, 2007), communicating research findings (Solomon, 2007; Meadows, 1980; Altbach, 1998), distributing rewards and building scientific communities (Solomon, 2007).

In Africa, there are a number of initiatives for providing access to metadata and full text of locally published scholarly journals. The main goal is to improve visibility, access and eventually use the African research outputs written by scholars within and outside Africa. There are a number of regional and institutional initiatives with different models such as NISC, AJOL and African Open Access Repository Initiatives.

In Tanzania, there are seven scholarly journals that have been indexed in online indexing services. These journals are Tanzania Veterinary Journal, Tanzania Journal of Health Research, Tanzania Journal of Science, African Journal of Finance and Management, University of Dar es Salaam Library Journal, Tanzania Dental Journal, Western Indian Journals of Marine Science, Huria Journal of the Open University of Tanzania, East African Journal of Public Health, Tanzania Medical Journal, Tanzania Journal of Forestry and Nature Conservation, Journals of Building and Land Development, Tanzania Journal of Development Studies and Kioo cha Lugha.

For many years, scholars from the Universities and Colleges in Tanzania have been publishing a number of scholarly journals and use them as platforms for disseminating and communicating research findings within and outside the research community. Some initiatives have also been taken within different universities to improve the visibility of these journals. These initiatives, include creating online abstracting services of some local journals, as well as creating full text online database of journals published in Tanzania.

Despite the fact that there are a number of scholarly peer reviewed journals that are published by different academic units in Tanzania Mainland, some initiatives have been taken to promote their visibility and use. However, the access and use patterns of these journals by researchers of the respective institutions is not known. It is therefore, the intention of this study to collect baseline data on the awareness, access and use of selected indexed and non-indexed 10 peer reviewed journals from the University of Dar es Salaam, Muhimbili University of Health and Allied Sciences, Open University of Tanzania, Ardhi University and Sokoine University of Agriculture. The purpose of the study is to gather data on the current level of awareness, access and usage. Then use the data to evaluate the impact on researchers' awareness, accessing and use of scholarly journals after the introduction of online databases of research and scholarly journals in Tanzania. The study therefore addressed the following research questions: to what extent are researchers in Tanzanian public universities aware of the available indexed and non-indexed locally academic journals? What problems do researchers encounter when accessing local journals? What are the researchers' usage patterns of locally published journals?

The study has enabled the collection of baseline data that may be used in future to examine changes in the researchers' information behavior, particularly the way they access and use locally published scholarly journals. The findings also provide an insight to both researchers and information service providers on the way researchers access and use locally published journals, and hence inform stakeholders in journal publishing industries and the academia on measures that need to be taken to improve visibility, accessibility and usage of scholarly journals in Tanzania.

This is a baseline study on the awareness, access and use of locally published journals among members of the research community in five public Tanzanian universities. In terms of focus, the study is limited to the public universities. There are different information sources that are used by researchers to accomplish their researches. The current study is limited to the use of local journals and therefore excludes other journals published outside the country. The findings of the study may therefore not reflect the actual use of scholarly journals as it excludes the use of journals in other academic undertakings such as teaching and consultancies.

LITERATURE REVIEW

Studies on the awareness, access and use of scholarly journals for research are plenty (Jean, 2008; Kortelained, 2004; Bothron, 2003; Llewellyn, Pellack, and Shonrock, 2002). Most of these studies have focused on use of peer reviewed electronic journals with few studies focused on access and use of print or print and electronic journals all together (Sathe, et al 2002; Afaq and Mahmood, 2005; Angrosh, 2005).

Studies have identified a number of ways in which researchers are made aware of available journals and journal articles. Afaq and Mahmood, (2005) analyze the use of library and information science journals, in Malaysia and Pakistan, with the purpose of determining the nature and extent of the use of the journals. The findings revealed that the majority (45.9%) of the respondents became aware of the available scholarly journals in their libraries through the library journals current issues display and references found in another publication. The findings implied that both libraries and researchers have an important role to play in creating awareness about the available scholarly journals in a particular area of specialization.

Access to scholarly journals has been also a topic of concern among researchers (Ouya, 2006; Murray and Crampton, 2007). Generally, researches have shown that despite several initiatives to improve access and use of local journals, African researchers face a number of challenges when accessing scholarly journals (Murray and Crampton, 2007). Studies have identified a number of challenges that the users encounter when accessing local journals. These challenges include invisibility of journals to the research communities due to the fact that very few journals have been indexed in the international commercial indexing services. The majority of journals are produced in print only, hence not accessible to wider user communities (Ouya, 2006). With regard to accessing electronic journals, studies show that there are a number of challenges that researchers from Africa encounter, including insufficient number of internet-connected computers (Association of Commonwealth Universities, 2011). Unlike in print journals, in electronic environment accessibility of scholarly journal entails three aspects which are; availability, visibility and usability (Murray and Crampton, 2007).

The ultimate goal of improving availability and visibility of scholarly journals is to ensure that journals are used. Ascertaining the use of scholarly journals is rather a complicated exercise based on the fact that it is sometimes difficult to draw a line between access and use. In actual sense, accessing a journal from a shelf does not imply that the journal has been used. Despite these challenges, researchers have developed different quantitative methods that are used to assess the use of information sources including scholarly journals. These methods include citation analysis, circulation statistics and transaction logs. Using citation analysis and focusing on the general use of library information sources, Yeap and Kaur (2007) examine the use of information resources among the postgraduate students of Masters in Library and Information Science at the University of Malaya. The study found that journals and books are the most used information sources with 49.59% and 18.84% respectively. Msagati (2014) examined the level of awareness and use of electronic journals among the teaching staff of the Dar es Salaam University College of Education. The findings show a low level of use of electronic journals, which was caused by lack of awareness.

RESEARCH METHODOLOGY

The study was conducted in five universities which are: University of Dar es Salaam (UDSM), Ardhi University (ARU), Sokoine Universities of Agriculture (SUA), Open University of Tanzania (OUT) and Muhimbili University of Health and Allied Sciences (MUHAS). The choice of these universities is based on the fact that they are among the established universities in Tanzania and also have both indexed and non-indexed journals, which they have been publishing for many years.

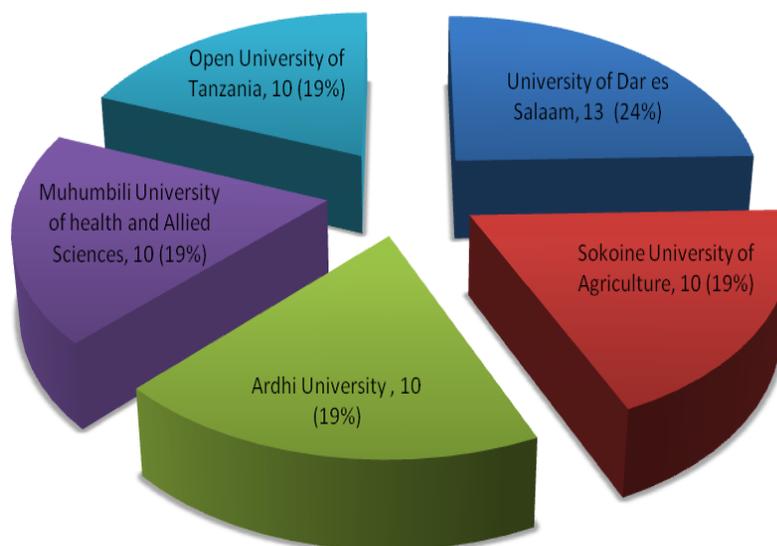
This study employed quantitative approach. The study population constitutes of academic members of staff from five universities. The population also includes journals published in the selected universities between 2006 and 2011. The sample size for the study includes 53 faculty members and 10 journals. Convenient sampling technique was used to select researchers while purposive sampling techniques was used to select journals. The selected journals include; Tanzania Journal of Science, Tanzania Journal of Forest Conservation, Huria: Journal of Open University, Tanzania Journal of Health Science, Journal of Building and Land Development. Other journals are; Tanzania Journal of Engineering and Technology, Utafiti, East African Law Review, Journal of Agricultural Sciences (TAJAS) and Tanzania Journal of Agricultural Engineering. The first four journals have been indexed in various online indexing services, while the last four are not indexed yet. Data were collected using both self-administered questionnaire and citation checklist. The use of multiple data collection instruments intend to enhance the quality, reliability and validity of data. Review of related literature was done for the purpose of collecting secondary data. Data were analyzed quantitatively using both SPSS and Microsoft Excel spreadsheet.

RESULTS

Researchers' institutional affiliation

Out of 53 respondents, 13 were from the University of Dar es Salaam and Ardhi University; Open University of Tanzania, Sokoine University of Agriculture and Muhimbili University of Health and Allied Sciences has 19 respondents each. Figure 1 presents the findings of the study on the respondents' institution affiliations:

Figure 1: Researchers' Institutional Affiliations



Source: Field survey, 2012

Sex and age distribution

Researchers were also asked to indicate their age group and sex. Table 1 and figure 2 show the findings of sex and age distribution.

Table 1: Sex Distributions

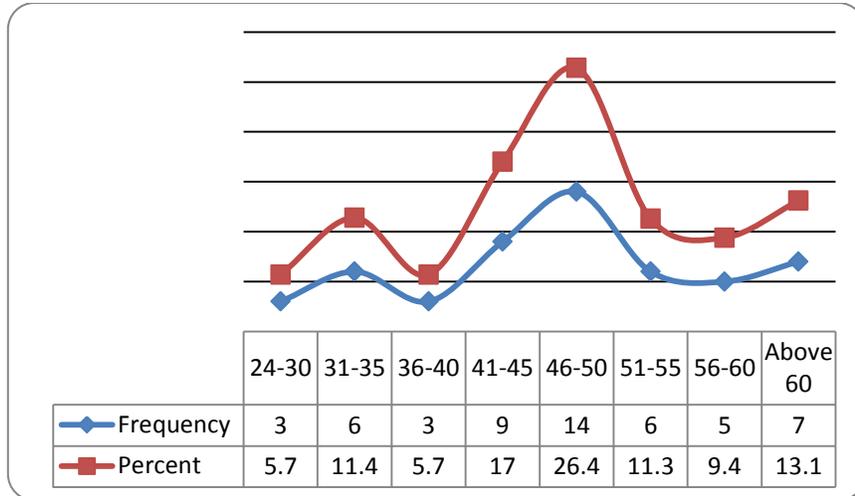
Sex	Frequency	Percent
Male	35	66
Female	18	34

Sources: Field survey, 2012

The findings show that the majority of the respondents 35 (66%) were males, while only 18 (34%) were females. The fact that male researchers outnumbered female researchers might be the reflection of male dominance in the academic institutions in Tanzania. It was also found

that most of the researchers were 41-45 (17%) and 46 to 50 (26.7%) years of age. Figure 2 summarizes the findings on age distribution of the respondents.

Figure 2: Age Distribution of the Respondents



Source: Field survey, 2012

Researchers’ broader areas of specialization

Researchers were also asked to indicate their areas of specialization. The findings of the study showed that there were 16 (30.2%) researchers from the social sciences, 13 (24%) from engineering and technology, 10 (19%) from health and allied sciences, 8 (15.2%) from agriculture science and 6 (11.3%) from natural and allied sciences. See the summary of research findings on table 2:

Table 2: Researchers' Broader Areas of Specialization

Area of specialization	Frequency	Percent
Health and allied sciences	10	19
Engineering and technology	13	24
Social sciences and humanities	16	30.2
Agricultural and allied sciences	8	15.2
Natural and allied sciences	6	11.3

Source: Field survey, 2012

Respondents' academic positions

The academic positions of the respondents show that most of the researchers who were involved in the survey were lecturers 18 (33.9%), followed by assistant lecturers 16 (30.2%). Other respondents were senior lecturers 10 (19%) and professors 9 (17%). The findings are presented on table 3.

Table 3: Academic positions

Academic Position	Frequency	Percent
Assistant lecturer	16	30.2
Lecturer	18	33.9
Senior lecturer	10	18.9
Professor	9	17.0

Source: Field survey, 2012

Researchers' Awareness of Scholarly Journals Published in Tanzania

One of the objectives of the survey was to examine the extent to which the researchers are aware of the available indexed and non-indexed local academic journals within and outside their areas of specialization. The findings of the study show that all 53 (100%) respondents indicated that they were aware of the available locally published journals.

Table 4: Awareness of locally published journal

Responses	Frequency	Percent
Yes	53	100
No	0	0

Source: Field survey, 2012

Furthermore, the respondents were asked to identify a maximum of five journals that they are aware of. The findings revealed that researchers are highly aware of scholarly journals that are locally published in Tanzania. A total of 18 journals were identified. Table 5 below shows the journal titles identified by the respondents listed in the order of frequency of identification.

Table 5: List of journals identified by researchers

No	List of local journals	Frequency	Percent
1	Tanzania Journal of Science	39	73.6
2	Business Management Review	21	39.6
3	Tanzania Journal of Engineering And Technology	16	30.2
4	Papers in Education	13	24.5
5	Tanzania Economic Trend	12	22.6
6	Tanzania Journal of Health Science	12	22.6
7	Journal of Building and Land Development	11	20.8
8	Journal of Agriculture Business	10	18.9
9	Huria: Journal of Open University	10	18.9
10	Tanzania Veterinary Journal	9	17.0
11	Tanzania Medical Journal	9	17.0
12	Journal of Rural Planning	8	15.1
13	Uongozi	7	13.2
14	Journal of Law	7	13.2
15	Mulika	6	11.3
16	Utafiti	6	11.3
17	University of Dar Es Salaam Library Journal	5	9.4
18	Tanzania Journal of Forest Conservation	4	7.5

Source: Field survey, 2012

Furthermore, the findings show that researchers are aware of journals published both within and outside their areas of specialization. Tanzania Journal of Science 39 (73.6%), Business Management Review 21 (39.6%), Tanzania Journal of Engineering and Technology 16 (30.25) and Papers in Education 13 (24.5%) were among the most identified journals. The findings further indicated that Tanzania Journal of Forest, University of Dar es Salaam Library Journal, Utafiti and Mulika were among the least listed journals. The high level of awareness of local journals among the researchers could probably be due to the fact that these journals are published within their institutions.

Researchers were asked to list ways in which they became aware of specific articles published within the journals. It is evident from the findings that all the researchers 53 (100%) indicated that they usually browse the journal's table of content when identifying specific journal

articles. Other methods include use of bibliography or references of previous works 7 (13.2%), use of libraries accession list, indexing and abstracting services 4 (7.5%) and recommendations from friends, peers or supervisors 7 (13.2%). The findings of the study are presented in table six below:

Table 6: Ways in which researchers become aware of articles within journals

Identification of journal articles within journals	Frequency	Percent
Browsing current and previous issues	53	100
Use bibliography and/ or reference of previous works	7	13.2
Use library accession list, indexing or abstracting services	4	7.5
Recommended by friends, peers or supervisors	7	13.2

Source: Field survey, 2012

Access to Locally Published Journals

Despite the fact that there are different forms of access to information, including physical access, intellectual access and social access (Burnett and Jaeger, 2008), this study focuses only on physical access of journals. Respondents were asked to rate the level of access to local journals. The findings of the study show that the majority of the respondents are of the view that access to locally published journals is good 26 (49%), while 18 (34%) indicated that the level of access to local journals is moderate. Table 7 summaries the findings:

Table 7: Rating level of access

Level of access	Frequency	Percent
Excellent	3	5.7
Good	26	49
Moderate	18	34
Poor	4	7.5
Very poor	2	3.8

Source: Field survey, 2012

Problems facing researchers when trying to access journals

This study identified a number of problems that researchers encounter when accessing local journals. These problems include, missing journal articles and journals issues in the libraries 17 (32%), journals not regularly published 9 (17%) and invisibility of journals as some of them have not been indexed online 7 (13%). Other problems mentioned also include, journals not being freely available 10 (19%), and 10 (19%) respondents saying they have no problem when accessing local journals. Table 8 shows the summary of the findings.

Table 8: Problems in accessing journals

Problem facing researchers when trying to access journals	Frequency	Percent
Journal issues are not physically available in shelves	17	32
Journals not regularly published	9	17
Full text articles are not available online	7	13
Journals which have been made online are not free	10	19
There are no problems in accessing journals	10	19

Source: Field survey, 2012

Use of Journals in Research

The study also sought to understand researchers' use pattern of locally published journals. Questions which intended to collect data on the respondents' views on the relevance of the locally published journals in their researches and actual use of local the journals were asked.

Respondents' views on the relevance of locally published journals in research

First, the respondents were asked to provide their opinions about the relevance of local journals in supporting their research activities. From the findings it was noted that the majority of the respondents 50 (94.3%) indicated that local journals are important in providing a platform for presenting current research findings that are relevant to the local context. The majority of the researchers 42 (79.2%) are of the view that journals are essential in enabling researchers to share information and knowledge on their areas of specialization. Other researchers 31(58.5%) indicated that journals contribute to the generation and achieving of knowledge and 25 (47.2%) held that journals improve visibility of researchers within and outside their research community. The findings are shown on table 9.

Table 9: Researchers' views on the relevance of locally published journals in research

Relevance of journals in research	Frequency	Percent
They present current research findings that are relevant to the local context	50	94.3
They are important in sharing information and knowledge on their areas of specialization	42	79.2
Contribute to the generation of knowledge	31	58.5
They increase the visibility of researchers to	25	47.2

the wider research community		
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Source: Field survey, 2012

Actual use of local journals in research

In order to examine the actual use of local journals, a citation analysis method was used. A total of 674 citations were identified from the selected 10 journals. Table 10 presents the findings of the study.

Table 10: Usage pattern of indexed and non-indexed locally published journals

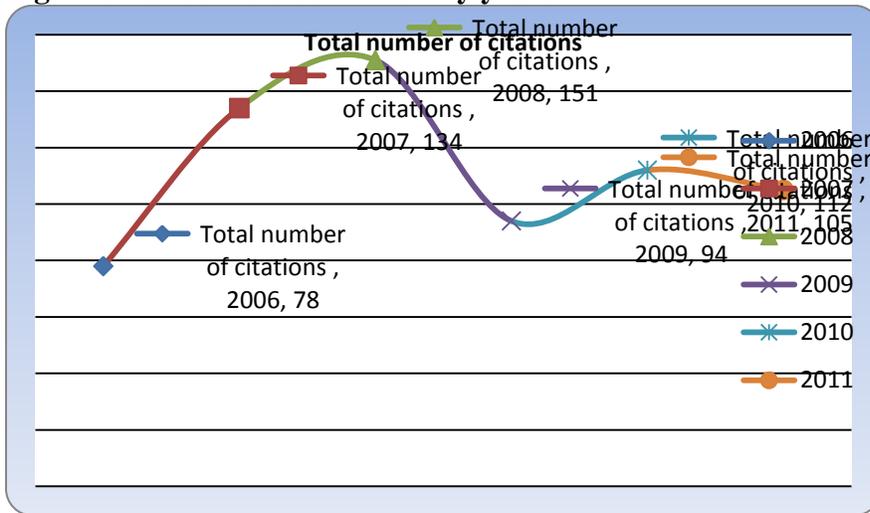
Local online indexed journals	Frequency of usage	Percent
Tanzania Journals of Science	174	25.8
Tanzania Journal of Forest Conservation	70	10.4
Huria: Journal of Open University	53	7.7
Tanzania Journal Of Health Science	42	6.3
Journal of Building and Land Development	22	3.2
Local Journals Non-Indexed	Frequency of usage	Percent
Tanzania Journal of Engineering And Technology	123	18.4
Utafiti: Journal of The CASS, UDSM	68	10.1
East African Law Review	56	8.3
Tanzania Journal of Agricultural Engineering	38	5.6
Journal of Agricultural Sciences (TAJAS)	28	4.2

Source: Field survey, 2012

It is clear from the findings that there are some variations in the use of locally published journals, whereby Tanzania Journal of Science and Technology 174 (25.8%), Tanzania Journal of Engineering and Technology 123 (18.4%), Tanzania Journal of Forest Conservation 70 (10.4%) and Utafiti 68 (10.1%), are among the heavily used journals. Generally, the usage patterns between indexed and non-indexed journals do not seem to vary greatly.

The study confined itself to the period of six years from 2006 to 2011. The results on the usage pattern by year indicated variations in the use of journal articles across the years, with the year 2008 recording the highest 151 citations. Figure 3 summarizes the findings:

Figure 3: Citations distribution by years



Source: Field survey, 2012

The usage pattern by researchers broader areas of specialization show that the majority of the citations 218 (32.3%) were from natural and applied sciences articles, followed by engineering and technology 174 (25.8%), social sciences and humanities 104 (15,5%) and agriculture 52 (7.7%).

Table 12: Number of citation from different research areas of specialization

Areas of specialization	Total number of citations	Percent
Natural and allied sciences	218	32.3
Engineering and technology	174	25.8
Social sciences and humanities	126	18.7
Health and allied sciences	104	15.5
Agricultural and allied sciences	52	7.7

Source: Field survey, 2012

DISCUSSION AND RECOMMENDATIONS

The findings of the study show that the majority of researchers in higher learning institutions are aware of the available locally published journals within and outside the areas of specialization. These findings are not in conformity with those of the previous studies (Msagati, 2014) which found low level of awareness among journal the users. High level of awareness could be caused by the fact that these journals are published within the universities. Despite the high level of awareness among the researchers, it is evident from the research findings that they face problems when accessing and using the journals. The problems are attributed to the fact that most of the journals are still in print format and also they are not published on regular basis. Compared to the number of journals surveyed and the years

covered, it is evident from the findings that there is relatively low levels of use of local journals in research. There is a need for publishers and parent organizations to make local journals available online so as to improve their visibility and usage.

Based on the findings, it is recommended that journal publishers, with the support of their parent organizations, should find ways of making their journals both sustainable and cost-effective. This will ensure that the research produced by the local scholars is disseminated and reach the targeted audiences. The traditional publishing industry is undergoing rapid changes because there are different journal publishing models that are now used to support dissemination of research findings. It is therefore recommended to the stakeholders in the journal publishing industry to make use of open access model in increasing the visibility. Academic libraries in respective universities should be responsible in promoting accessibility and visibility of journals by creating abstracting services and current awareness services. Also researchers should be encouraged to publish and read the articles published in the local journals.

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