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Awareness and usage of online journal publishing systems by university academic staff

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Abstract

The extent to which academic staff and researchers are aware of and use online journal publishing systems to publish their work is not very well known. The present study examines awareness and use of online journal management and publishing systems by University of Dar es Salaam academic staff. A cross-sectional descriptive research design alongside a mixed research approach (i.e. quantitative and qualitative) was used to examine awareness and use of online journal publishing systems by the UDSM academic staff. Data gathered through questionnaires and interviews. Descriptive statistics such as frequencies and percentages helped to organise and summarise research data. The study findings suggest that awareness of online journal publishing systems does not match with frequency of using the systems. Occasionally use of the systems is an indication of ineffective usage. The findings also reveal diverse barriers that undermine the effective use of online journal publish system. The study recommends that the UDSM has to take deliberate measures to enhance internet services through increasing bandwidth, internet cables and network systems alongside increasing training on the use of online journal systems, writing, referencing and citation skills.

Keywords: awareness, use, online journal publishing systems, university academic staff.

1. Introduction

Online journal publishing systems have been established over several decades for easing publishers and authors with clerical activities involved in journal publishing services. Such systems came due to increased number of publishers and authors who moved from the traditional system of publishing journal articles through print media to electronic systems. The introduction of such systems therefore came due to the move by publishers from tradition publishing system to the so-called scholarly publishing. Scholarly publishing is a worldwide phenomenon whose purpose is to promote research undertakings by researchers who wish to publish their articles online. The type of publications that are supported by such systems include journal articles, research reports, conference papers, and books, and in this case earlier research is used as a point of departure but is critically investigated and developed further.

One among the online journal publishing systems used is the open journal system (OJS). This system came about, in one way, to counter the challenges facing publishers in publishing scholarly and other works in a way that they could reach wider audiences world widely. Such and many other challenges prompted publishers and authors to opt for open access mechanisms so as to reach wider audiences with low or no costs. Open access publishing aimed at making sure that there is unrestricted online access to articles published in scholarly journals. However, such systems have moved parallel with the traditional subscription-based models whereby a journal might charge authors for submissions or rely on advertising revenue as a source of income(Laakso et al., 1993). All the same both models have moved away from the traditional print mode whereby circulation and consumption of articles by readers became a challenge.

In Tanzania, online journal publishing systems have undergone a series of challenges, one of them being lack of awareness of the advantages of adopting such systems to promote scholarly works. Publishing articles online started with such initiatives like open access repositories whose aim have been to keep scholarly works of academicians and researchers in a respective institution for the purpose of making such available to wider communities. This saw the development of a number of repositories in academic and research institutions including IHI-Ifakara Health Institute, MUHAS-Muhimbili University of Health and Allied Sciences, OUT-Open University of Tanzania, SUA-Sokoine University of Agriculture and SAUT-Saint Augustine University of Tanzania (Mgonzo & Yonah, 2014). Further developments enabled many scholars to start using online journal publishing systems such as the OJS as well as the traditional subscription-based systems. What is still not very well known is the extent to which academic staff and researchers are aware and using such systems to publish their work. Due to the advantages recognized from using such systems as well as the consequences of their poor usage, hence this study intended to find out whether academic staff at the University of Dar es Salaam have taken such advantages.

1.1 Study objectives

This study was driven by the following objectives namely:
1. To find out whether or not academic staff at the University of Das res Salaam were aware and used online journal publishing systems
2. To solicit the importance of using the systems.
3. To examine the challenges of using online journal publishing systems by academic staff.

2. Review of related literature

Online journal publishing systems have so much assisted to relieve academicians from the task of publishing their research articles to various publishers wherever they are located. Whereas it took someone long time and efforts to publish academic work on a traditional print journal, online journal publishing systems have made such an endeavor simple and efficient (Ndungu, 2020). Due to advances in ICTs, the journal publishing industry has seen the increase in published works by academic staff and researchers. This increase has been due to the fact that publishing online is cheaper than the traditional print mode. Many academic institutions have therefore encouraged authors to publish along these models. In addition, authors find it convenient to publish online where they are able to follow the entire journal processing activities from submission to acceptance or rejection and the eventual publishing of the same. Furthermore, online publishing promote wider access of articles by readers wherever they are located. This has further enabled libraries to subscribe to such journals for the purposes of promoting scholarly publishing and wider access of electronic resources by their users (Grech, 2002).

A number of studies have been carried out to find out the extent to which users are aware and use online journal publishing systems. For example, a study by Manchu and Vasudevan (2018) reveal that many researchers are aware of the use online journal publishing systems to communicate their research findings. Similarly, studies on the awareness and use of such systems are reported by Schroter et al., (2020) as well as others who argue that the awareness

and use of such systems is greatly contributed by the need for academicians to publish their work to be accessed by wider user communities. Most academicians become aware of the systems when they want to publish their work and the fact that due to academic requirements, there is a need for them to find a journal system where they could publish their work. While the aspect of awareness of such systems is obvious in many academic institutions in developed countries, academic institutions in developing countries are still struggling to become aware for the same. Thanks to various initiatives by academic libraries in such countries who have taken greater initiatives to create awareness among academicians on the need and benefits of publishing their work in such systems. Such efforts have been fruitful due to working relations between online publishers and organizations such as AJOL and INASP who have taken much initiatives to create awareness to academicians on the benefits of using online journal publishing systems to publish their academic work (Ndungu, 2020).

Literature has revealed the benefits of using online journal publishing systems. One among others include the fact that open journal systems encourage authorship; the urge to publish becomes more motivated since web-based resources are easy to access. With the available ICT facilities, authors are able to access and publish through these systems much easier than it was with the traditional print publishing system. Due to easy access to online journal publishing systems, authors are motivated to publish more articles and this encourages younger researchers to do the same as well (Rowley et al., 2017). In addition, publishing online provides the opportunity for wider access to articles by readers across the globe. In this way, scholars can communicate their research findings to more readers online. By publishing their work online, academicians are sure about reusing their work due to its continued availability online. Publishing journals online have the potential for financial gains by both publishers as well as authors who may wish to engage in publishing business as well as the potential for being promoted to higher ranks. In addition, research has revealed the advantage of using such systems towards generating online citation index as well as making it easy for authors to cite works written online with the help of various reference management systems (Tennant et al., 2016).

However, the challenges of publishing journal articles using these systems are numerous. For one, authors who are not computer literate find the process of accessing and using such systems as being a myth. Coupled with limited access to internet facilities and the need to have electricity power supply in place, authors in many African countries face the challenge of using such systems by not being able to comply with journal publishing requirements such as setting layouts and formats for articles they have to submit to the journal systems. In addition, several authors find difficulties in understanding journal interfaces and their controls as well as the submission procedures. In addition to the above, a number of authors find it difficult to follow on what has already been published online due to their inability to use such systems on regular basis (Johnson, 2018). Other associated challenges include the fact that authors who speak English as a second language face challenges in publishing online as they struggle to comply with specific academic genres and formatting requirements to satisfy journal editors and peer reviewers (Lane & Tang, 2016). These and other challenges are a handicap in promoting awareness and use of online journal publishing systems by various authors, particularly those in developing countries.

3. Study design and methods

3.1 Design and approach

A cross-sectional descriptive research design alongside a mixed research approach (i.e. quantitative and qualitative) was used to examine awareness and use of online journal publishing systems by the UDSM academic staff. The use of descriptive research design allows the integration of a wide variety of research methods to examine different variables of the population. According to Sue and Ritter (2012), design help to describe the characteristics of the population or phenomenon that is being studied. Descriptive design tends to be quantitative and qualitative in nature that has the ability of obtaining more information on phenomena within a particular research problem by describing them (Tavakoli, 2012).To achieve the study objectives, the study mainly used quantitative approach to examine awareness, importance, and challenges of using online journal publishing systems. Partly, the study used qualitative approach to explore the opinions on the use of online journal publishing systems. A combination of quantitative and qualitative approaches help researcher to generate evidence about the research under investigation

3.2 Study settings, population and sampling

The study was conducted at the University of Dar es Salaam (UDSM) main campus and its constituent colleges, schools, and institutes between March-September 2020. The UDSM was mainly chosen due to the fact that it is one of the universities in Tanzania introduced Online Journal Systems to enhance the visibility of its scholarly publications. In addition to the above, the choice of UDSM considered the fact that it was among the first institutions to embrace the application of the Open Journal System (OJS), which came through a project by African Journals Online and the International Network for the Availability of Scientific Publications (INASP). In this regard, UDSM and other selected institutions in Africa paved the way towards promoting the use of online journal management systems for making local journals available to prospective user communities. Regarding population, the study included academic staff from these settings. These were included because play a key role in diverse research activities. One of important research activities includes dissemination of research outputs such like publishing in print or online. A sample size involved 153 academic staff from different colleges, schools, institutes and units. From this sample size, about 148 academic staff were conveniently while 5 key informants (i.e. journal editors and journal managers) were purposively chosen. Convenience sampling was used to select academic staff who were available at a given time and willing to participate. Accordingly, the purposive sampling as a judgment sampling technique was used to select journal editors and managers. Table 1 summarises sample size drawn from different colleges, schools, institutes and units.

Table 1: Sample size

College/School/Institute/Unit	Frequency	Percent
IMS	4	2.7
DUCE	14	9.5
IDS	5	3.4
SoED	5	3.4
CoAF	8	5.4
CoSS	23	15.5
CoICT	9	6.1

MUCE	19	12.8
SJMC	4	2.7
MCHAS	7	4.7
UDBS	18	12.2
CoET	13	8.8
CoNAS	15	10.1
Information Studies Unit	4	2.7
Total	**148**	**100**

Table 1 indicate that noticeable percent (> 10%) of respondents were from CoSS, CoNAS, MUCE and UDBS while very few respondents were from Information Studies Unit, IMS, IDS, SoED, MCHAS and SJMC. This might be attributed by the number of staff members who are found from respective colleges, schools, institutes and units. Besides, the respondents were asked to indicate their sex, age, academic qualification and professional rank as presented in Table 2.

Table 2: Socio-demographic characteristics of the respondents

Characteristics (n = 148)	Frequency	Percent
Sex of respondents		
Female	35	23.6
Male	113	76.4
Age of respondents		
20-29	15	10.1
30-39	57	38.5
40-49	64	43.3
50-59	11	7.4
60+	1	0.7
Academic qualification		
PhD	96	64.9
Master degree	42	28.4
Bachelor degree	10	6.8
Professional rank		
Professor	2	2.4
Senior Lecturer	31	20.9
Lecturer	63	42.6
Assistant Lecturer	42	28.4
Tutorial Assistant	10	6.8

Regarding sex of respondents' composition, Table 2 show that majority (76.4%) were male while female composed less than a quarter (23.6%). This is attributed to the ratio of male to female staff members at UDSM. Apart from that, more than a half of (>50%) academic staff participated in the present study their age ranged between 30 to 49 years. There were very few respondents aged between 20 to 29 and 50 to 59 while only one respondent aged above 60 years. Regarding level of education, it was found that more than half (64.9%) were PhD holder followed by Masters (28.4%) while very few (6.8%) were those with Bachelor degree. The results on professional rank also reveal that moderate percent (42.6%) were lecturers followed by assistant lecturers and senior lecturers while tutorial assistant and professors were very few.

3.3 Data collection methods, instruments and protocol

To collect the descriptive data, both primary and secondary data were collected through cross-sectional survey methods. Specifically, primary data were collected through questionnaires and semi-structured interviews.The questionnaire used to collect data had two main sections. Section A was on the demographic information of the respondents while section B covered issues related to awareness, importance and challenges of using online journal publishing systems. In general, self-administered questionnaires comprised both open and close ended questions. Scales such like nominal and ordinal (Likert scale) were used. Accordingly, interview guides were prepared in the semi structured manner and administered during face to face interviews session by the researchers to the key informants. Whereas questionnaire administered to smallholder farmers lasted 20-25 minutes, interview with key informants lasted 15-20 minutes.

3.4 Data processing and analysis

Upon completion of the data collection, qualitative and quantitative data were analysed separately. Prior to analysis, quantitative data were organized, verified, compiled, coded, and analysed by using Statistical Product for Service Solutions (SPSS) version 21. Descriptive statistics such as frequencies and percentages helped to organise and summarise data. On the other hand, qualitative data from the open–ended questions and semi-structured interview were analysed by thematic method. This was done through transcription, classification and reorganization of different sub themes, as well as identification of similar and dissimilar aspects of the study in the interview. Finally, quantitative and qualitative results were reported concomitantly in such a way that the qualitative results were used to elaborate and validate the quantitative findings. In short, qualitative data analysis was integrated into the study to explain quantitative results.

4. Results

4.1 Awareness of online journal management and publishing systems

To gain understanding on awareness of online journal management and publishing systems, the questions on awareness were asked to academic staff involved in the present study. Their responses are summarised in Table 3:

Table 3: Awareness of online journal management and publishing systems

Profession rank (n = 148)		Awareness		Total
		Aware of	Not aware of	
Professor	Count	2	0	2
	%	100	0.0	100
Senior Lecturer	Count	31	0	31
	%	100	0.0	100
Lecturer	Count	56	7	63
	%	88.9	11.1	100
Assistant Lecturer	Count	26	16	42
	%	61.9	38.1	100
Tutorial Assistant	Count	3	7	10
	%	30	70	100
Total	Count	118	30	148

%	79.7	20.3	100

Chi-square result [X^2 = 35.219; df = 4; p-value = .000]

In general, the results in Table 3 suggest that significant percent (79.7) of the academic staff were aware of while only one fifth (20.3%) were not aware of online journal publishing systems. In particular, all professors and senior lecture found to be aware of the systems. Accordingly, majority of lecturer (88.9%) and assistant lecturer (61.9%) were also aware of the publishing systems. The results further indicate that majority (70%) of the tutorial assistants participated in the present study were not aware of the online journal publishing systems.

4.2 Sources of awareness of online journal management and publishing systems

The question on the sources of awareness of online journal publishing systems was also deemed important. Understanding the sources of awareness of the systems was crucial as it entails on where respondents came to know them. A summary of the sources of awareness is presented in Table 4.

Table 4: Sources of awareness of online journal publishing systems

Sources of awareness (	Frequency	Percent
Attended a training programme	58	38.9
Seminar/workshop	75	50.3
Friend/colleague	35	23.5
I saw about it on the internet	47	31.5
Through journal publishers	80	53.7
When I submitted a paper	48	32.2
Social media	16	10.7

The results show that journal publishers and workshops were important sources of awareness of the systems as cited by most of the academic staff (>50%). Also, the results inform that moderate percent (30-49) of the academic staff cited training, process of submitting articles, internet as sources of awareness. Furthermore, the results reveal that close to a quarter (23.5%) of the academic staff indicated friends and colleagues as sources of awareness. Besides, insignificant percent (10.1%) of academic staff mentioned social media. These results might be due to the fact that through journal publishers and workshop respondents are likely to be oriented and perform some practical's and sometimes guided with manuals as opposed with other sources such as social media.

4.3 Becoming aware of online journal management and publishing systems

Apart from that, academic staff drawn for the present study were also asked to mention for how long had become aware of online journal management and publishing systems. Table 5 presents the results:

Table 5: Becoming aware of online journal publishing systems

Becoming aware	Frequency	Percent
One to two years ago	14	9.4

Three to four years ago	15	10.1
Five to six years ago	22	14.8
Seven to eight years ago	27	18.1
Nine to ten years ago	28	18.8
More than ten years ago	13	8.7
Total	119	79.7
Not aware	30	20.3
Total	**148**	**100**

In specific, the results disclose that 28 (18.8%) of the academic staff became aware of online journal management and publishing systems for past nine to ten years while 27 (18.1%) for seven to eight years ago. Accordingly, 22 (14.8%) became aware for five to six years ago, and 15 (10.1) between three to four years ago. The results further show that less than 10% of the academic staff became aware of the systems between one to two years ago and more than ten years ago. On the whole, the results show that majority of respondents became aware of online journal management and publishing systems in recent years.

4.4 Use of Online Journal System

Respondents were asked by the researchers to indicate the usage of online journal system and their roles in the system. This question was important so as to understand the usage trend and the role played by each respondent in the online journal systems. Table 6 summarizes the results:

Table 6: Use of OJS

Use and role in the system (n = 148)	Frequency	Percent
Use of OJS		
Use	96	64.9
Not use	52	35.1
Total	148	100
Role in the system		
Reader of articles posted to the system	95	64.2
Author who upload articles to the system	82	55.4
Chief Editor who manage the editorial process	1	0.7
Reviewer of articles uploaded to the system	39	26.4
Journal manager who manages the setup of the system	1	0.7
Layout editor who typesets article layout	1	0.7
System administrator who manages the journal system	2	1.4

Generally, the results disclose that majority (64.9%) of the academic staff agreed to use online journal system while moderate percent (35.1%) disagree. Also, the results show that significant percent (64.2%) of the surveyed academic staff were readers of articles posted to the system, authors who upload articles to the system (55.4%), reviewers of articles uploaded to the system (26.4%) and system administrator who manage the journal system (1.4%). Accordingly, the results disclose that least (0.7%) of the academic staff were chief editor who manage the editorial process, journal manager who manages the setup of the system and layout editor who typesets article layout.

4.5 Frequency of using the systems to publish journal articles

In order to understand the extent of usage of online system at the University of Dar es Salaam, the respondents were asked to indicate their frequencies of using the online journal system to publish their journal articles. To gauge this Likert scale (i.e. 1 = Weekly, 2 = Monthly, 3 = Bimonthly, 4 = Every three months, 5 = Every six months, 6 = Every year, 7 = Occasionally, 8 = I am not sure, 9 = Not use).Table 6 summarizes the results:

Table 6 : Frequency of using the system

Frequency (n = 148)	Frequency	Percent
Weekly	2	1.4
Monthly	10	6.8
Bimonthly	1	.7
Every three months	4	2.7
Every six months	13	8.8
Every year	19	12.8
Occasionally	44	29.7
I am not sure	3	2.0
Never used	52	35.1
Total	**148**	**100**

The results in Table 6 show that moderate percent (35.1) of the responding academic staff never used the online journal system to publish journal articles, 44 (29.7%) reported to use the online system occasionally, 19 (12.8%) every year, 13 (8.8%) cited after every six months and 10 (6.8%) indicated monthly. Also, the study results further show that 4 (2.7%) of the respondents indicated to use the online journal system after every three months, 2 (1.4%) indicates weekly and only 1 (0.7%) reported bimonthly. In all, large percent of responding academic staff were found to use online journal systems to publish articles.

4.6 Frequency of using online journal publishing systems

To understand the frequency of use of online journal publishing systems, the respondents were asked by the researchers to indicate the frequency of using online journal management and publishing systems. Their responses are summarised in Table 7:

Table 7: Frequency use of the system

Frequency use of system (n= 96)	Very frequently	Frequently	Not frequently
African Journal Online (AJOL)	14 (14.6%)	39 (40.6%)	43 (44.8%)
Springer Publishing	2 (2.1%)	19 (19.7%)	75 (78.1%)
Sage Publishing	12 (12.5%)	24 (25%)	60 (62.5%)
Wiley Online	7 (7.3%)	26 (27.1%)	63 (65.6%)
Taylor and Francis	10 (10.4%)	29 (30.2%)	57 (59.3 %)
Emerald Publishing	2 (2.1%)	30 (31.2%)	64 (66.7%)
UDSM Open Journal System	8 (8.3%)	29 (30.2%)	59 (61.4%)

Generally, the study results in Table 6 suggest that majority (>50%) of the academic staff were not frequently using online system to publish with springer, Sage, Wiley, Taylor and Francis, Emeralds and UDSM Open journal system. Specifically, the results further show that about two fifth (40.6%) of the academic staff affirmed to use the online system frequently to publish with African Journal Online (40.6%) while close to one third indicate to use Taylor and Francis system (30.2%), Emeralds (31.2%) and UDSM OPEN Journal system (30.2%). Besides that, the results suggest that insignificant percent (<20) of the responding academic staff indicate to use online system to publish with AJOL, Sage and Taylor and Francis very frequently.

4.7 Importance of using online journal publishing systems

Questions on what the academic staff perceive on the importance of online journal publishing systems were quite important. This was asked in order to understand the importance of online journal publishing systems. Three aspects including how online journal publishing systems facilitate journal management and publishing help authors and facilitate scholarly communication were considered. To explore the importance on online journal publishing systems, the responding academic staff were asked to rate their level of agreement by using five points Likert scales (i.e. 1 = Strongly Agree [SA], 2 = Agree [A], 3 = Neutral [N], 4 = Disagree [D], 5 = Strongly Disagree [SD])

4.7.1 Importance of the systems on facilitating online journal publishing process

Basing on the results, academic staff participated in the present study agreed that online journal publishing as a tool facilitated publishing process. Table 8 clearly summarises their results:

Table 8: Importance of online system as a tool for facilitating journal publishing

Importance (n = 96)	SA	A	N	D	SD
It promotes academic development of individual authors	63(65.6%)	27(28.1%)	5(5.2%)	1(1.0%)	0(0.0%)
It promotes reputation of the institution	56(58.3%)	35(36.5%)	3(3.1%)	1(1.0%)	1(1.0%)
It promotes research process	41(42.7%)	52(54.2%)	2(2.1%)	0(0.0%)	1(1.0%)
It aids in building researchers	38(39.6%)	49(51.0%)	6(6.3%)	1(1.0%)	2(2.1%)

communities	)	)	)	)	)
It promotes institutional research profile	51(53.1%)	43(44.8%)	1(1.0%)	0(0.0%)	1(1.0%)
It promotes scholarly publishing for countries and their respective institutions	69(71.9%)	21(21.9%)	4(4.2%)	2(2.1%)	0(0.0%)

On the whole, the study results suggest that majority of the respondents (>50%) agreed that online journal publishing systems is very important while least (<7%) were either neutral, disagree or strongly disagree. These results clearly inform that respondents were aware on the importance of online publishing systems. For example, a significant percent (71.9) of the respondents strongly agreed that online journal publishing systems is important due to the fact that it promotes scholarly publishing for countries and their respective institutions, promotes academic development of individual authors (65.6%), reputation of the institution (58.3%) and promotes institutional research profile (53.1%). Besides, the results further agreed that the systems is important because it promotes research process (54.2%) and aid in building researchers communities (51.0%).

4.7.2 Importance of online system in facilitating journal management

In order to gain more insight on the importance of online system on journal management, the academic staff involved in the present study were asked to rate their level of agreement by using the five points Likert scale. Table 9 summarizes the results:

Table 9: Importance in facilitating online journal management

Importance (n= 96)	5	4	3	2	1
It brings together authors and reviewers working in the same fields	54(56.3%)	37(38.5%)	4(4.2)	1(1.04%)	0(0.0%)
It promotes cooperation among editors working in online systems	61(63.6%)	33(34.4%)	2(2.1%)	0(0.0%)	0(0.0%)
It minimizes journal management costs	49(51.04%)	44(45.8%)	2(2.1%)	0(0.0%)	1 (1.04 %)
It facilitates communication between authors, reviewers and editors	81(84.4%)	13(13.5%)	2(2.1%)	0(0.0%)	0 (0.0%)
It reduces clerical activities as the case with print journal publishing process	65(67.7%)	27(28.1%)	3(3.1%)	0(0.0%)	1 (1.04 %)
It helps in facilitating dissemination & sharing of journal articles worldwide	77(80.2%)	16(16.7%)	2(2.1%)	1 (1.04 %)	0(0.0%)
It saves the time of processing and publishing journal articles	48(50%)	36(37.9%)	2(2.1%)	7(7.3%)	3 (3.1%)
It assists in minimizing plagiarism	61(63.5%)	29(30.2%)	3(3.1%)	1 (1.04 %)	2(2.1%)
It aids journal indexing	31(32.3%)	17(17.7%)	9(7.4%)	23(23.9%	16(16.8%)

process				)	

Basing on the results presented in Table 9, it is clear that most (>80%) of the respondents agreed that the online publishing systems is important in facilitating online journal management. For example, large proportion of the academic staff reported that the system facilitates communication between authors, reviewers and editors (84.4%), helps in facilitating dissemination and sharing of journal articles worldwide (80%), reduces clerical activities as the case with print journal publishing process (67.7%) and assists in minimizing plagiarism (63.5%). Also, the study results further disclose that a half (50%) of the respondents agreed that the online publishing systems saves time of processing and publishing journal articles while very few of the study respondents were either neutral or disagree.

4.7.3 Importance of online journal publishing systems to the authors

Another question asked was to find out how online journal publishing systems were important to authors. The question was asked due to the fact that authors are important part on online journal publishing systems and industry. Table 10 summarizes the results:

Table 10: Importance of online journal publishing systems to the authors

Importance (n = 96)	5	4	3	2	1
When published, my work will be more highly cited	72(75%)	19(19.8%)	3(3.1%)	2(2.1 %)	0(0.0%)
When published, my work will be read by more people	79(82.3%)	15(15.6%)	1(1 %)	1(1 %)	0(0.0%)
When published, my work will reach more people outside of my field	58(60.4%)	35(36.5%)	2(2.1%)	0(0.0%)	1(1%)
When published, my work will have a greater impact	65(67.7%)	22(22.9%)	1(1.04 %)	5(5.2%)	3(3.1%)
It will help me secure grant funding for my research in future	16(16.7%)	20(20.8%)	18(18.8%)	27(28.1%)	15(15.6%)
It will help me to get a promotion	85(88.5%)	11(11.5%)	0(0.0%)	0(0.0%)	0(0.0%)
It will promote my research profile	69(71.9%)	17(17.1%)	5(5.2%)	3(3.1%)	2(2.1%)

In all, the study results show that the majority (> 90%) of the respondents agreed that online publishing systems is important to them as authors because it helps their work to be cited by other scholars, to be read by many people worldwide, published online work reaches more people outside the authors field and had greater impact. Besides, the online published enabled authors to secure grant funding for their future research as well as for promotion purposes. Actually, these results entails that online publishing systems have numerous advantages to authors as key stakeholder in publishing industry.

4.7.4 Importance of the systems in facilitating the access to scholarly works

Apart from that, the researchers were eager to know if the online journal management and publishing systems is also, a tool in facilitating the access to scholarly works. Table 11 summarizes the results:

Table11: Importance of online journal systems in facilitating publishing process

Importance (n = 96)	5	4	3	2	1
It is easier to access online journal systems for article publishing	54(58.3%)	31(32.3%)	8(8.3%)	1(1.04%)	2(2.1%)
It is easy to use the systems to publish articles	62(64.6%)	27(28.1%)	1(1.04%)	6(6.3%)	0(0.0%)
It is possible to follow on the entire process of publishing an article	49(51%)	43(44.8%)	4(4.2%)	0(0.0%)	0(0.0%)
It is possible to seek for help in case of difficulties in using the systems	41(42.7%)	53(55.2%)	2(2.1%)	0(0.0%)	0(0.0%)
Communicating with journal editors through the system is easy	58(60.4%)	30(31.3%)	2(2.1%)	5(5.2%)	1(1.04%)
It is easy to retrieve articles once published	74(77.1%)	19(19.8%)	2(2.1%)	1(1.04%)	0(0.0%)
Author's profile can be linked with other online systems such as ORCID	33(34.4%)	51(53.1%)	7(7.3%)	4(4.2%)	1(1.04%)
Articles can be indexed by journal indexing systems e.g. Google Scholar	55(57.3%)	29(30.2%)	4(4.2%)	6(6.3%)	2(2.1%)
The systems can notify authors on current and future issues	49(51.1%)	43(44.8%)	3(3.1%)	1(1.04%)	0(0.0%)
It is possible to access and retrieve articles published in back issues	67(69.8%)	24(25%)	2(2.1%)	3(3.1%)	0(0.0%)

Basing on the results presented in Table 11, it is clear that majority (>50%) of the respondents agreed that the online journal systems is important in facilitating the access of scholarly works. In specific, the results disclose that the system makes easy to retrieve articles once published (77.1%), enhances access to and retrieve of articles published in back issues (69.8%). Accordingly, the other majority (60.4%) of them affirmed that communicating with journal editors through the system is easy. Apart from that, the results further disclose that more than a half (53.1%) of the respondents reported that through the online system, author's profile can be linked with other online systems such as ORCID while 52.2% of them reported that it is possible

to seek for help in case of difficulties in using the systems. On the other hand, results signify that less than a half (<50%) agreed that the systems can notify authors on current and future issues and articles can be indexed by journal indexing systems.

4.8 Reasons for not using online journal publishing systems

As indicated in Table 6, noticeable proportion (52; 35.1%) of the responding academic staff indicated not using online journal publishing systems to publish articles. In order to understand the reasons behind as to why these academic staff were not using the online journal publishing system, the researchers asked the respondents to cite the reasons for not using the online system. The summary of the reasons for not using online journal publishing systems are presented in Table 12:

Table 12: Reasons for not using online journal publishing systems

Reasons (n = 52)	Frequency	Percent
Lack of awareness	29	55.8
Inadequate skills and knowledge to apply the systems	41	78.8
Unreliable internet services	44	84.6
Fear of plagiarism	9	17.3
It is not my preference	17	32.7
Not started publishing journal articles	9	17.3
I'm newly employee	5	9.6
It is difficult and time consuming to upload the articles	35	67.3
I prefer print journal publishing system	7	13.5

The results in Table 12 show that majority (84.6%) of the responding academic staff established that they were not using online systems due to unreliable internet services followed by 78.8% respondents who indicated inadequate skills and knowledge to apply the systems. On the same note, the results reveal that other majority (>50%) cited difficulties and time consuming to upload the articles (67.3%) and lack of awareness (55.8%) as the reasons inhibit the use of online journal publishing systems . On the other hand, few of them said fear of plagiarism and not started publishing journal articles (17.3%) and print journal system as a preference than online journal systems (13.5%). It is also appears that lack of experience (9.6%) among newly employ undermine the usage of online journal publishing systems.

4.9 Barriers of using online journal publishing systems

The responding academic staff in surveyed colleges, schools, institutes and units were also asked to indicate the barriers undermine their efforts to effectively use online systems to publish their articles. The aim of this question was to explore factors that affect the academic staff in using online journal publishing systems. Table 13 presents data outputs:

Table 13: Barriers of using online journal publishing systems

Barriers (n = 96)	Frequency	Percent
Low Internet bandwidth	69	71.9
Low usage skills	48	50.0
Online publishing process is difficult and time consuming	51	53.1
Lack of expertise in establishing and managing the systems	62	41.9
Difficult to sustain online systems due to insufficient resources	38	39.6
Electricity problems	15	15.6
Lack of awareness about the available systems	41	27.7
Unclear policies, procedures and guidelines to publish online	39	26.4
Reluctance by institutions to use the systems	17	17.7
Technophobia	19	17.3

The study results in Table 13 indicate that majority (71.9%) of the academic staff involved in the present study mention low internet bandwidth as the main barrier to publish with online systems. This is followed by those who cited that the process of publishing online is difficult and time consuming (53.1%) and inadequate publishing skills and knowledge (50%). Besides, the results further suggest that moderate percent (41.9) of the academic understudy reported lack of expertise in establishing and managing the systems and difficult to sustain online systems due to insufficient resources (39.6%). Furthermore, the results inform that few academic staff mention lack of awareness about the available systems (27.7%), unclear policies, procedures and guidelines to publish online (26.4%), reluctance by institutions to use the systems (17.7%), technophobia (17.3%) and electricity problems (15.6%) as the factors to undermine effective usage of online journal publishing systems.

Discussion

This study aimed at finding the extent of awareness and use of online journal publishing systems among academicians at the University of Dar es Salaam. It gathered data on the awareness of online journal management and publishing systems available, the importance of online journal management systems, barriers to use the systems as well as best ways by which academic staff could effectively access and use the systems. The study findings reveal high awareness of online journal publishing systems among professors, senior lecturers, lecturers and assistant lecturers. This is not true to the majority of tutorial assistants who have been found to be unaware of the systems. High awareness is also documented by extant studies (e.g. Schroter et al., 2020; Manchu & Vasudevan, 2018). For example, Manchu and Vasudevan (2018) reveal that many researchers are aware of online journal publishing systems. This is contrary to what has been reported by Ndungu (2020) that awareness of online systems is obvious in many academic institutions in developed countries while academic institutions in developing countries are still struggling to become aware for the same. High awareness among lecturers and professors is mainly attributed to the interaction established through journal publishers. Online journal publishing workshops are also influential factors for the awareness. Along that, internet search, friends and colleagues are considered as important sources of awareness of the online systems. Expectedly, social media was not considered as a main source for the awareness of online journal

systems. Unlike the findings of the present study, the findings by Manchu and Vasudevan (2018) reveal that most academicians become aware of the systems when they want to publish their scholarly works.

Along that, it appears that high awareness tally with the usage of the journal management and publishing systems. Significantly, academic staff respondents used OJS when uploading articles to the system, reading articles posted to the systems and reviewing articles uploaded in the system. Surprisingly, when asked on frequency use of different types of online publishing systems, the findings disclose that publishing systems such like Springer, Sage, Taylor and Francis, and Wiley and Emerald were not used frequently. This implies that usage of these systems is not substantially promising as large proportion of academic staff seems to use the systems occasionally. On different note, African Journal Online (AJOL) management and publishing system have been used moderately. The main explanations are twofold. Firstly, most of the Tanzania journals are hosted by AJOL system. Secondly, most of the academic staff members at UDSM publish their articles in AJOL system. It is important to note that awareness raised by AJOL and INASP have made most of academic staff members to be familiar with AJOL system (see Ndungu, 2020).

Moreover, low usage of online journal publishing systems does not imply that the academic staff from the UDSM perceive negatively. Generally, the findings disclose that majority of the academic staff participated in the present study perceived that online journal management and publishing systems are important to journal managers, reviewers, editors and authors. For authors, the system found to increase citations of their works, reach wide scholarly communities, increase publication impact, support promotions, and promote research profile. Regarding journal management support, the systems appear to increase online collaboration among editors, bring together authors and reviewers, minimise journal management costs, facilitate communication between authors, reviewers and editors, reduce clerical activities such as printing, and facilitate dissemination and sharing of journal articles globally. Along these, the systems found to save time for processing and publishing journal articles, assist to minimise plagiarism and aids journal indexing process. Other academic staff members perceived that the use of online journal systems promote academic development of authors, reputation institution, research process, institutional research profile, scholarly publishing for countries and their respective institutions and aid in building research communities. Let alone that, large proportion of the academic staff agreed that online journal systems enhance easy access, publication of journal articles, communication, linkage with other systems such as ORCID, and help in journal indexing. These findings tally with numerous prior studies (e.g. Rowley et al., 2017; Tennant et al., 2016).

Furthermore, the findings inform that online journal management and publishing systems are resistant to factors undermining its usage. In other words, numerous factors such like unreliable internet services, inadequate usage skills and knowledge, difficulties of publishing process and time consuming and difficult in sustaining online systems due to insufficient resources were cited as the main factors undermining effective usage of online journal publishing systems. Other weakly associated with ineffective usage of the systems include unreliable electricity, lack of awareness, unclear publication policies, procedures, and guidelines, reluctance of institutions to use the systems and technophobia related to online publication systems. In support, Johnson (2018) in examining the challenges of journal publishing in the Arab World, found that limited access to internet facilities and electricity power supply were considered as major barriers that hold back the efforts of online publishing. While computer illiterate was also

considered as the factor to undermine online journal publishing in the Arab World (Johnson, 2018), the findings from the present study do not validate as the factor to inhibit the usage of online system by academic staff at UDSM.

Study implications

The present study expands existing knowledge on online journal management and publishing systems. It is worth noting that studies to examine awareness and usage of online journal management and publishing systems have not been conducted in Tanzania. The findings of the present study are important to inform the university on the usage and the trend of using online systems in managing and publishing university journals. Also, the study findings will help the university to improve the publication policies, guidelines and procedures so as to match with current publication industry.

Conclusion and recommendations

Data gathered through questionnaires and interviews revealed that a significant number of staff were aware of the systems. This is due to the fact that a significant number of academicians used the systems to submit their articles while several of them worked with the systems as journal editors and reviewers. Study findings further disclose that awareness of online journal publishing systems does not match with frequency of using the systems. Occasionally use of the systems is an indication of ineffective use the system. The findings reveal diverse barriers to undermine the effective use of online journal publish system. The significance of using the systems was realized by academic staff as being contributing factors for promoting their academic development, their institutions as well as the country at larger. A number of challenges, however, made it somewhat difficult for staff to use the systems. These included such as low usage skills, low internet bandwidth, the tiring and time consuming process of publishing using online systems as well as unclear policies, guidelines and procedures to publish online using the systems. It appears that one of the barriers to effectively use of online journal management and publishing systems is inadequate skills and knowledge.

Due to these findings, much as there were challenges of using the systems, it was clear that staff were aware and used online journal management systems to publish their work, with significant results. Members of staff were enthusiastic with regard to the importance of using the systems and realized the need to use the systems to promote their academic career, their institutional profiles as well as the reputation of their professions in the country.

In order to make the above factors a reality, a number of recommendations are put forward:

- More members of staff especially of lower ranks should be encouraged to develop interests in publishing using online journal management systems. This will eventually motivate them to publish more articles owing to the effectiveness of the systems.
- Regular training should be carried out among staff of all levels to acquaint them on new developments as found in the online systems. Regular training on writing, referencing and citation skills are important in enabling staff to appraise their skills. For example, training on the usage of referencing and citation styles such like Mendeley, Zotero and EndNote are necessary.

- In a way to sustain the systems, institutions should be encouraged to work in collaboration among units as well as with other institutions so as to maximize the available resources.
- Access to internet services also found to hamper the usage of online journal publishing systems. The UDSM has to take deliberate measures to enhance internet services through increasing bandwidth, internet cables and network systems. In addition, other ways of maintaining resources such as internet bandwidth and electric power supply be explored so as to optimize the usage of online systems.
- Acquisition and installation of automatic generators to enhance the reliability of electricity should be taken into consideration by the university management.
- Furthermore, other means of creating awareness of the available resources should be explored in order to capture the interest of more staff to use the systems.

These and other possible measures, if taken into account will assist to maximize access and usage of the systems with the ultimate results towards making journal articles available to users across the globe.

References

Grech, V. (2002). The legitimacy and advantages of electronic publication. *Images in Paediatric Cardiology*, *4*(1), 1–3. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/22368607

Johnson, I. M. (2018). Challenges in Journal Publishing in the Arab World. *Journal of Information Studies & Technology (JIS&T)*, *2018*(1), 1. https://doi.org/10.5339/jist.2018.1

Laakso, M., Welling, P., Bukvova, H., Nyman, L., Bjö rk, B.-C., & Hedlund, T. (1993). The Development of Open Access Journal Publishing from. *PLoS ONE*, *6*(6), 20961. https://doi.org/10.1371/journal.pone.0020961

Lane, T., & Tang, J. (2016). Publishing challenges faced by authors with English as a second language. European Science Editing, 42(2), 36-38.

Manchu, O. ., & Vasudevan, T. (2018). Awareness of Institutional Repositories and Open Access Publishing Among Researchers in University of Calicut - ProQuest. *International Research : Journal of Library and Information Science*, *8*(1), 43–51. Retrieved from https://search.proquest.com/openview/f9962eceff7194e4dbf32cf824b2dc00/1?pq-origsite=gscholar&cbl=1246355

Mgonzo, W. J., & Yonah, Z. O. (2014). *A Review of Open Access Publication in Tanzania*. (8159), 8159–8165. Retrieved from http://digitallibrary.ihi.or.tz/2889/1/Wasiwasi_J._Mgonzo.pdf

Ndungu, M. W. (2020). Publishing with Open Journal Systems (OJS): A Librarian's Perspective. *Serials Review*, *46*(1), 21–25. https://doi.org/10.1080/00987913.2020.1732717

Rowley, J., Johnson, F., Sbaffi, L., Frass, W., & Devine, E. (2017). Academics' behaviors and attitudes towards open access publishing in scholarly journals. *Journal of the Association for Information Science and Technology*, *68*(5), 1201–1211. https://doi.org/10.1002/asi.23710

Schroter, S., Montagni, I., Loder, E., Eikermann, M., Schäffner, E., & Kurth, T. (2020). Awareness, usage and perceptions of authorship guidelines: An international survey of biomedical authors. *BMJ Open*, *10*(9), 36899. https://doi.org/10.1136/bmjopen-2020-036899

Tennant, J. P., Waldner, F., Jacques, D. C., Masuzzo, P., Collister, L. B., & Hartgerink, C. H. J. (2016). The academic, economic and societal impacts of Open Access: An evidence-based review. *F1000Research*, *5*. https://doi.org/10.12688/f1000research.8460.1

Sue, V.M. & Ritter, L.A. (2012). Conducting Online Survey. DOI: https://dx.doi.org/10.4135/9781506335186.n1