A Framework for the Usage of Open Access Journals
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Abstract:
The study aimed to develop a framework for the usage of open access journals and investigated the usage of open access journals by academicians in Ethiopian selected public higher learning institutions. Wolaita Sodo University and Haramaya University were the selected universities. The questionnaire was used to collect data from academic staff that was randomly selected using stratified simple random sampling from a population of academicians having academic rank above assistance lecturers in the two universities. Also, a semi-structured interview involving respondents among librarians was conducted. Descriptive statistics (frequencies, percentages, mean and standard deviation) and inferential statistics (t-test, one-way ANOVA, and Ordinary least square model) were used for data analysis. Data were interpreted and discussed with the support of appropriate statistics and in relation to the information in the literature review. The findings of this study revealed that the majority of the respondents have awareness about open access journals and most of them used open access journals to access scholarly information rather than disseminate their research output. The majority of the respondents were informed about open access journals informally through colleagues rather than institutionalized organs such as libraries, especially in WSU respondents. The findings of this study also revealed that the academicians in public universities involved in this study rated social influence, Internet self-efficacy, facilitating conditions, perceptions, and performance expectation of open access journals as strong determinants of their decisions to use open access journals. From the finding and general comments obtained from respondents many respondents highly welcomed the idea of open access publishing, OA policy, and the establishment of advanced institutional repositories as a way of improving the accessing and dissemination of research output originating from their respective universities. The study concluded that even though less publishing in open access journals by many academicians in the public universities in Ethiopia, the fact that majority of the respondents was expectant of publishing in such outlet in future implies good prospects for the future development of open access journal usage in such universities. To the end, the researcher recommended that implementing the developed Framework thoroughly will lead to the enhanced use of open access journals by academicians from local and worldwide disseminated research outputs.

KEYWORDS: Open access journals, Scholarly publications, open access publishing, Ethiopia.

1. INTRODUCTION

1.1. Background of the study

Scholarly communication is a broader term reflecting various processes through which scholars exchange information with each other in the course of knowledge creation (Dulle, 2010). As a communication, it is an important process in distribution of the scholarly kinds of literature by using rapidly growing technology, why because research outputs need to be more accessible to provide solutions to local and global problems (Yared and Ngulube, 2015).

The process of scholarly communication, as well as scholarly literature outputs and their publication, has shown a rapid increase since it came into existence. The present-day system of scholarly communication is said to have originated as an exchange of letters and lectures among scholars until 1665 when the first print journal known as Philosophical Transactions was launched by the Royal Society of London (Dulle, 2010). Nevertheless, with the emergence of the internet and Information and Communication Technologies (ICTs), the form of journals has been transformed into a digital version that saves physical storage, enhance different searching capabilities, and speed both access and delivery of articles to readers (Msagati, 2014; Radjagopal and Chinnasamy, 2012). This occurrence demonstrated the paradigm shift in scholarly communication, from printed journals access as the principal medium of communication to electronic journals accessing. In addition to advanced ICTs, rapidly increased scholarly output and magnified journal prices are also dramatically changed scholarly communication (Okendo and Elliah, 2014; De Beer, 2005). Therefore, economic and technological changes are cited as the major reasons contributing to the notable evolution of the current scholarly communication system (Yiotis, 2005; Moller, 2006; Dulle, 2010). Due to the rapid increase of scholarly output and increased journal prices, it is becoming basically difficult even for libraries in rich countries to subscribe to journals that are required by their clients (Obuh and Bozimo, 2012). As a response to frustrating journal prices and other accompanying restrictions, the scholarly community has sought alternative scholarly publishing and accessing systems, by using Information Communication Technology, aimed at the wider distribution of scholarly content without price or other copyright restrictions to...
end-users, which is called as open access model (Moller, 2006; Yiotis, 2005).

According to Budapest Open Access Initiative (BOAI), Open access means the free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited (Budapest Open Access Initiative, 2002). Due to that, scholars’ point of view in this new model is to access required information freely and open access (OA); have been familiar words in library literature for years (Yang and Li, 2015).

Open access is quite important for higher learning institutions, due to the fact that in the 21st-century research findings, teaching materials, and e-journals cannot easily be available on time and in the required standards without e-information (Yared and Ngulube, 2015). Open access has been acclaimed to have a greater impact on research, teaching, and learning in higher education through increased and easier access to scholarly research output. Through open access, the visibility and accessibility to research output from both developing and developed countries is made easy and without restrictions, and in teaching and learning open access provides a wide range of barrier-free information to teachers and learners (Suber, 2015; Kelemwork and Nsala, 2015). There are a number of open access titles available including open access journals. Recently, open access journals are the most frequently used sources of valued information for research and teaching purposes (Alshboul, 2016; Okoye and Ejikeme, 2010).

The benefit of open access journals to academicians in higher learning institutions is tremendous. Therefore, the debate on the importance of open access publication for publicly funded scientific output is now wondering how to get access to open access journals from the North and how to get local and regional research outputs to international users (Chan, et al., 2005). Open access journals provide the potential to foster partnerships and strengthen scientific cooperation among academic staff, however, the awareness and its usage were not adequately studied in developing countries such as Ethiopia. As mentioned by Yared and Ngulube (2015), Ethiopian university libraries are considering open access models as one of their options to increase the accessibility of e-journals and to better serve users, even though academicians’ attitudes towards open access journals have not yet been adequately studied.

The Ethiopian Government has embarked upon an ambitious effort to expand higher learning institutions throughout the country. Among existing universities in Ethiopia, two were selected for this study. Hamamaya University and Wolaita Sodo University were selected randomly from first and third-generation universities respectively. The overall purpose of this study is to look into the use of open access journals by academicians in relation to scholarly communication in Ethiopian selected public higher learning institutions. Specifically, the study investigated the awareness and usage of open access journals, benefits derived by using open access journals, and factors that affect accessing and dissemination of open access journals by academic staff.

**1.2. Statement of the Problem**

Open access is free to access to the scientific literature by any users without any restrictions and barriers unless internet connection is lost. Open access journal has become an increasingly important and potentially needed issue in recent years as a general increase in journal prices and fall in library budget to buy or subscribe journals. In addition to that open access promotes equity; that is by increasing scientists’ and academics’ capacity to both access and dissemination scientific findings to world science (Yared and Ngulube, 2015). Even though the capable potential of open access improves scholarly communication and knowledge sharing in developing countries (like Ethiopia), the new mode of open access journal usage and open access publishing is not yet widespread in such countries when compared to developed countries (Papin-Ramcharan and Dawe, 2013). The publication of open-access resources is tremendously increasing in all fields of knowledge, but the usage is not increased equally due to lack of awareness to open access and infrastructure facilities especially in developing countries (David, 2016). As far as research output publication and its visibility concerned, researchers from developing countries have contributed to some extent to the global scholarly literature (Dulle, 2010). Restricted access to scientific knowledge restricts the development of new innovation and has severe effects on the general development of both scholars and institutions. In addition to that, any scholarly communication system that is limiting both access and research outputs dissemination contribute to the slow progress of science development. It is real fact that without access to scholarly content it is difficult to conduct good research. For the advancement of knowledge, researchers in both developed and developing countries have a great role to play in the open-access scholarly communication process. That is why because knowledge is a base for sustainable development. According to Dulle (2010), if there is scholarly communication, there should be participation between both developed and developing countries. The process of open access scholarly communication is however more constrained in developing countries than in the developed countries (Wondimeneh, 2012; Iwighregewta and Onoriode, 2012; Nwagwu and Ahmed, 2009; Tise, 2010).

It is a real fact that as a developing country, Ethiopian University libraries are also having a limited budget to buy or subscribe to all required journals for users. The appearance of open access, a new form of scholarly communication based on Information Communication Technology, offers the potential for developing countries to alter the style in which scholars throughout the world can access and disseminate scholarly information. In Ethiopia, no such study has been adequately conducted that focuses on the use of open access journals by academic staff. The purpose of this study was to investigate the academics’ use of open access journals in selected public higher learning institutions of Ethiopia.
1.3. Objective of the study
The general objective of this study was to develop a framework and to examine the awareness and usage of open access journals by academicians in Ethiopian public higher learning institutions.

1.3.1. Specific objectives
The specific objectives of the study are to:
1. examine the awareness of academicians toward use of open access journals;
2. identify the way academicians informed about open access journals;
3. examine the benefits for academicians derived from using open access journals;
4. identify the factors that affect usage of open access journals;
5. Suggest a framework that may enhance the use of open access journals.

1.4. Research Questions
The study answers the following research questions:
1. Do academicians have awareness toward the use of open access journals?
2. What are the ways academicians informed about open access journals?
3. What are the benefits for academicians derived from using open access journals?
4. What are the factors that affect usage of open access journals?
5. What is the suitable framework that may enhance use of open access journals?

1.5. Significance of the Study
The findings of this study would provide direction indicating the growth of open access scholarly communication in Universities by indicating awareness and usage of open access journals by the academicians. The study could benefit University by awaring academicians about open access journals, their usage, and this may increase the teaching, and learning quality in the university. There is the visibility of the University for Whole the world when the academicians publish their research outputs in open access model. This study would serve as a pointer to what benefits derived for academicians by using open access journals so that steps can be taken to provide awareness to the non-users. For academical staffs, this study could provide a probability to connect with a global society more easily, benefit them by familiarizing with open access scholarly publication and providing the ability to access up-to-the-minute information to teaching and learning and for research purpose and this information can be obtained from around the world. In addition to that, it indicates the way in which their research output will be wider visible, and useable. This study also contributes a framework that may enhance academics’ use of open access journals.

1.6. Scope and Limitation of the Study
The study targeted academicians from the ranks of lecturers to professors. Junior academicians (Graduate Assistant I, Graduate Assistant II, and Assistant Lecturer) were not included in the study on the assumption that they were not experienced in research and scholarly communication and therefore their contribution to this kind of study would be low. In this study the term “Academicians” reveals academic staffs that participate in Universities teaching, research, and community services.

The study geographical area is restricted in two universities due to limited time and financial resources for undertaking this research in more than two universities. Haramaya University and Wolaita Sodo University are the selected study sites from first and third-generation universities. No single university participated from second-generation universities. Further research should be done on this topic that can bring three generations to Ethiopian public higher learning institutions. In addition to that further research may include private universities and research institutions at the national level. As the study was limited to the academic stuff and library managers at the Haramaya University and Wolaita Sodo University, a challenge may occur in terms of generalization of the results widely to other second-generation universities.

2. LITERATURE REVIEW
2.1. Open Access Journal Awareness
Awareness is a pre-requisite for all activities. This is also true for the usage of open access journals unless an individual uses them unknowingly. Open access journal awareness was investigated by requesting the respondents to indicate whether they had heard about open access journals.

The result of a research conducted by Dulle and Minishi-Majanja (2007) on Researchers' perspectives on open access scholarly communication which is aimed to assess open access awareness among researchers found that, among the 392 researchers, the majority of the researchers had heard about open access journals while the remaining had not. The study also resulted from the way researchers learn about open access journals. Based on this, most of the respondents learned of open access from their colleagues, followed by publishers' promotion and library promotion at workshops/conferences, by chance while surfing the Internet, and during postgraduate studies abroad.

A study done by Yared and Ngulube (2015) is entitled “Academics’ use and attitude towards open access in selected higher learning institutions of Ethiopia” which is aimed to judge the extent to which the current status of open access in HLIs of Ethiopia, by using a data collection tools questionnaires and semi-structured interviews revealed that most of the academics were aware of open access journals. On the whole, they have a perceived positive attitude towards open access journals and would like to use them in the future. One possible conclusion from the above studies is that they have been using open access journals as an alternative access model to the conventional journals subscription model; and yet to optimize the benefits of open access among academics, they expect university librarians to promote and enhance the accessibility of open access journals in their respective university libraries and Ethiopia in general. The study not covered all Ethiopian universities and finally the study recommended that further studies using a similarly rigorous approach to determine the generality of this finding.

A study done by Jayanthi (2012) revealed that the usage of Open Access Resources is varied among research Scholars due to the level of awareness, usage, and infrastructure facilities. A similar study is entitled “University Faculty Awareness and Attitudes towards Open Access Publishing and the Institutional Repository” by Yang and Li (2015) shown that the majority of the respondents are aware of open access journals in their field;
some of them have published their work in an open-access publication. The study indicates that there is a great willingness to publish in open access and they have also good awareness about open access resources and also disseminating their work for others free and without cost. The finding from Yang and Li suggests that increasing faculty awareness of newer open-access tools and resources might increase Institutional Repository participation rates.

The main possible reason for the increase in awareness for open access usage and publishing might be the funding agencies’ years of efforts to track research outputs and encourage open access to the literature (Dulle, 2010). As Dulle mentioned, even where open access awareness is reported, the level of understanding was not uniform for different open access terms. A study by Getaneh (2009) was conducted to examine the role of open access in fostering knowledge sharing and collaboration in Ethiopia. This study aimed at finding out the respondents’ awareness and the state of open access uptake at respective institutions involved in the study. The overall findings revealed that researchers and librarians involved in the study had very low awareness of open access and that this mode of scholarly communication was not practiced in the institutions under the study. The fact that this study targeted a small sample size that was purposively selected from among many research institutions in Ethiopia suggests the need for a more comprehensive study for a better understanding of open access in this country.

2.2. Open Access Journal Usage by Different Partners

Open access journals usage was examined to find the extent to which scholar’s accessed scholarly information and disseminated scholarly content through that mode of scholarly communication. Effective use of open access materials like open access journals is expected to enhance the quality of teaching and research in any institution. The use of open access resources varies by user’s purpose of searching.

The use of open access resources varies by user’s purpose of searching. A study was done by Yared and Ngulube (2015) shown that the majority of respondents reported that respondents used open access journals to access scholarly literature which are e-journals and other e-information resources and the remaining respondents reported that they used OAJs both to access e-information and to disseminate their findings. The study also shows that the researchers also have a good willingness to publish their work on the free accessible website to make their research output more accessible and to become good scholars.

A study done by Ivwighreghweta and Oyeniran (2013) on Usage and Awareness of e-resources by Lecturers in two selected Nigerian Universities which is aimed to known researchers purpose of using open access found that the majority of the respondents using e-resources is for research work, this is followed by paper writing for publication.

A study done by Obuh and Bozimo (2012) revealed that, a high level of usage of open access publications by both senior and junior Library and information science lecturers and that the awareness of open access concepts accounts for the tendency of library and information science lecturers in southern Nigeria to use open access publications. Based on the study, the author recommends that efforts should be geared towards training the awareness and use of open access especially through enabling infrastructure and enacting policies such as mandatory deposit of scholarly works in open access archives.

2.3. The Benefits Derived from Using Open Access Journals

Open access journals have offered many benefits to all groups of people. Suber (2015) clearly spelled out benefits presented by open access journals to various stakeholders: Open access journals give a worldwide audience for authors, larger than that of any subscription-based journals, no matter how prestigious or popular, and probably increases the visibility and impact of their work; Open access journals give barrier-free access to users that the literature needed for their research, not constrained by the budgets of the libraries where they may have access privileges; It increases their convenience, reach and retrieval power.

For Librarians open access journals solve the pricing crisis (serial crisis) and solve the permission crisis for scholarly journals; Open access is not only removing access barriers but also open access should be immediate, rather than delayed and should apply to full texts, not just abstracts or summaries (Okoye and Eijkeme, 2010; Jain, 2012). For Universities open access journals increase the visibility of their faculty and institution, reduces their expenses for journals, and advances their mission to share knowledge; Open access reduces Universities journal expenses and advances their mission to share knowledge (Jain, 2012; Suber, 2015).

The other advantage of open access journals is that the entire content is available to users everywhere regardless of affiliation with a subscribing library; open access article can be read by anyone, including professionals, researchers in different fields, media practitioners, politicians, civil servants (Ivwighreghweta and Onoriode, 2012). Open access journals provide free online access to the literature necessary for one’s research; articles can be accessed online free of charge, OAJs provides an increased citation to published scholarly work, and it increases the impact of researchers’ work and provides high-quality scholarly work (Ivwighreghweta and Onoriode, 2012; Dulle, 2010; Okoye and Eijkeme, 2010).

2.4. Factors that affect the Usage of Open Access Journals

The different studies identified several factors, which are identified as constraints challenging researchers’ usage of open access. Understanding and identifying those factors that affect scholars’ understanding regarding the awareness and usage of open access is very vital for the future development of scholarly communication.

A study by Dulle and Minishi-Majanja (2007) revealed that most respondents identified a lack of adequate skills for open access publishing as a major contributing factor militating against them. The result of a research conducted by Msagati (2014) on Awareness and Use of Scholarly Electronic Journals by Members of Academic Staff found that lack of awareness and limited searching skills were the main factors that were militating against effective use of scholarly published open access journals.

A study conducted by Dulle (2008) on Open Access Publishing the emerging opportunity for wider dissemination of scholarly output identified the basic factors that affect the usage of open access journals. As the study identified, slow internet connectivity and inadequate Internet search skills were reported.
as a factor that affects the usage of the open access journals by most respondents. A study also identified factors that hinder researchers in disseminating their research output through open access avenues. Results from this investigation revealed that close to three-quarters of respondents were answered that they are not familiar with open access publishing and the others raised that lack of skills to publish online, slow internet connectivity, publication charges by some publishers, and lack of appropriate sites to publish in open access. The investigator was also asked respondents about their general perspectives about open access. This aspect was assessed by determining how they perceived open-access publications they accessed and their attitudes towards the open-access concept in general. Concerning how the respondents valued open access publications they accessed, the majority of respondents answered that open access publication as original and presented high-quality research and those publications represented adequate standards of high-quality research. So this study reflects that open access publications were positively perceived by the respondents.

The result of research conducted by Singson et al. (2015) on Perceptions of Open Access Publishing by Faculty at Pondicherry University found that the majority of the respondents indicated negative perception to open access publishing. As the study indicated, the majority of the authors said open access journals lack quality, lack of reliability, lack of standards, and stated lack of awareness. In developing countries, internet and information and communication technologies (ICTs) due to the high cost of the availability of ICTs and connectivity and poor telecommunication infrastructure, inadequate funding to build, upgrade and maintain ICT infrastructure, lack of awareness and misconception of the existence and benefits of open access publishing, are identified as a barrier to open access (Jain, 2012; Getaneh, 2009). In addition to that developing countries are still struggling to achieve wide access to high-speed broadband services. This creates a digital divide between the developing and developed world. However, despite all these challenges and obstacles developing countries are still confronted with, there are positive indications to open access initiatives (Dulle, 2010; Jain, 2012).

The same study by Kumar and Reddy (2014) on Use of E-Journals by Research Scholars in University Libraries in Andhra Pradesh found that the major problems faced by respondents are: slow Internet connectivity, lack of familiarity in searching e-journals, inadequate information in the interesting subjects and no facility to get a print copy for a downloaded article. The result of a research conducted by Ivwighrehweta and Oyeniran (2013) on Usage and Awareness of e-resources by Lecturers in two selected Nigerian Universities which is aimed to find Purpose of Using e-resources and factors that hinders the use of the electronic resources found that, Majority of the respondents indicated slow internet services, followed by erratic power supply are identified as a basic factor. The majority of the respondents indicated that the major purpose of using e-resources is for research work; this is followed by paper writing for publication. To end, the above concept summarizes that the basic factories that may affect open access journals usage were basically originated from Internet self-efficiency of individuals, facilitating conditions, social influence, perception of open access journals, and performance expectancy of OAJs.

Those are the most acknowledged factors considered to play a key role in shaping individuals’ usage of open access resources (Bashorun, et al., 2016; Dulle, 2010).

The above conceptual framework of the study comprised of five main independent variables or factories (Internet self-efficiency, facilitating conditions, performance expectancy, perception, and social influence); one dependent variable use of open access journals and three control variables (academic discipline, academic rank, and experience using the internet) as illustrated in Figure 1. The conceptual framework depicted in Figure 1, it described that facilitating conditions, Internet self-efficiency, performance expectancy, perception, and social influence directly affected the use of open access journals while control variables are the conditions likely to shape the effect of the determinants. Determinants and control variables were added based on their validated effects in other studies that deal with the use of open access journals.

### 3. Research Methodology

This study was to investigate awareness and usage of open access journals by academicians in Ethiopian selected public higher learning institutions. The study was conducted at Haramaya University and Wolaita Sodo University.

#### 3.1. Research Design

Descriptive survey research was applied for this study. This study used mixed methods (QUAN-Qual) research approach; it is integrating both quantitative and qualitative data collection and analysis.

#### 3.2. Population of the Study

In this study, one university was randomly selected from first and second-generation universities which is Haramaya University and Wolaita Sodo University respectively. The study used lecturers and above as respondents. This study excluded junior academicians from both universities. The exclusion criterion of junior academicians was on the assumption that they were not experienced in research and scholarly communication and therefore their contribution to this kind of study would be minimum.

#### 3.3. Sampling Techniques

For this study stratified simple random sampling was employed. Purposive sampling methods were used to select respondents from library staff for interviews. Two Library managers participated as a respondent from both HU and WSU library.

#### 3.4. Sample Size Determination

The total population in this study is 1301 academic staff and two library managers. Among 1301 academic staff in both HU and WSU, 306 sample respondents are selected by using the following Yamane (1967) formula, with a 5% level of significance.

\[
\text{n} = \frac{N}{1 + Ne^2} \quad \text{Equation 1}
\]

Based on the above formula 155 respondents are selected from HU and 151 are selected from WSU.
3.5. Data Types and Data Sources and data collection tools

The researcher was used primary and secondary data to fulfill the objective of the study. Both quantitative and qualitative data were collected through data collection tools such as questionnaires and interviews. As the respondents were familiar with English languages, questions were prepared in the English language.

3.6. Data Analysis and Interpretation

Data analysis was made by using SPSS version-20 software. The choice of this software was based on its high descriptive statistical power for quantitative data analysis. This study applied both descriptive and inferential statistics. Multiple linear regression models (Ordinary least square model (OLS)) were applied to test how much independent variable influences a dependent variable. Pearson correlation coefficient (r) was used to determine the strength of the relationship between independent variables and Open access journal usage at the study area.

4. RESULTS AND DISCUSSION

The items measured on a five-point Likert scale were analyzed by using the mean value. According to Gojeh et al. (2013) and Tilahun and Worku (2015), a mean score within the range of 1.00 - 1.49 was considered strongly disagreed or very low, a mean score within the range 1.50 - 2.49 was taken as disagreed or low; a mean within the range 2.5 - 3.49 was considered undecided or neutral/medium, while a mean score within the range 3.5 - 4.49 was taken as agreed or High; and a mean score within the range 4.5 - 4.99 was considered strongly agreed or very high for positive items.

4.1. Awareness to Open Access Journals

In the case of Wolaita Sodo University, the Table below indicates that the majority of 78% of the respondents had awareness of open access journals, while 22% were not aware of it. From the Table, among 145 academicians from HU who responded to awareness to open access journals, the majority of 82% of the respondents had awareness of open access journals, while 18% were not aware of it. Analysis from the research findings indicated high awareness of open access journals among academicians. The study confirmed with to recent studies that were conducted in the seven selected Ethiopian public universities by Yared and Ngulube, (2015), which reported that high awareness (78%) with open access journals by the respondents.

<table>
<thead>
<tr>
<th>Awareness to open access journals</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WSU</td>
<td>111(78%)</td>
<td>32(22%)</td>
<td>143(100%)</td>
</tr>
<tr>
<td>HU</td>
<td>119(82%)</td>
<td>26(18%)</td>
<td>145(100%)</td>
</tr>
</tbody>
</table>

The way academicians informed about open access journals

<table>
<thead>
<tr>
<th>Options</th>
<th>WSU</th>
<th>HU</th>
</tr>
</thead>
<tbody>
<tr>
<td>From my colleagues</td>
<td>99</td>
<td>16.5%</td>
</tr>
<tr>
<td>Through our University library promotion</td>
<td>4</td>
<td>17.2%</td>
</tr>
<tr>
<td>Through Journals Websites</td>
<td>76</td>
<td>10%</td>
</tr>
<tr>
<td>Through Conference or Seminar/Workshop</td>
<td>2</td>
<td>16.2%</td>
</tr>
<tr>
<td>Through our university library Websites</td>
<td>17</td>
<td>16%</td>
</tr>
<tr>
<td>Through journal publishers' promotion</td>
<td>75</td>
<td>11.2%</td>
</tr>
<tr>
<td>During postgraduate studies</td>
<td>86</td>
<td>12.9%</td>
</tr>
</tbody>
</table>

Concerning how academicians informed about open access journals, 27.6% of respondents from WSU claimed to have heard about it from colleagues, 24.0% learned of it during postgraduate studies, 21.1% through journals Websites, 1.1% learn it through university library promotion, and 0.6% through conference/seminar/workshop. This finding partially confirmed with Yared and Ngulube (2015) imply that majority of respondents learned about OAJs by chance while searching the internet for other information and secondly from colleagues. The finding from WSU suggests that despite their potential, university libraries did not play a significant role in the promotion of open access journals.

In the case of HU respondents, 17.2% of them claimed to have heard about OAJs from university library promotion, 16.5% from colleagues, 16% learned of it through university library Websites, 12.9% learned it during postgraduate studies, 16.2% learned it through Conference/Seminar/Workshop, 11.2% learned it through journal publishers' promotion and 10% through Journals Websites. From this finding, we can learn that promoters of open access journals can use a combination of methods in promoting this mode of scholarly communication model to their users. From the Table above, it is found that the majority of academicians from the two universities were highly aware of open access journals but the way that academicians informed about it is different. The results of this finding and other studies by Moller (2006) and Sanchez-Tarrago and Fernandez-Molina (2009) imply that advocates of open access journals need to use a combination of methods in promoting this mode of scholarly communication so that it is widely known by academicians.
4.2. Usage of Open Access Journals

This section presents the usage to open access journals and in addition to that, academician’s publishing in open access journals in the future was also investigated.

From Table 4 below, we observe that majority of the respondents have positive answers for the given statements. The study findings show that the usage of open access journals is moderately positive with an aggregate mean of 3.41 (medium) and 3.53 (high) for WSU and HU respectively. The result as presented in Table 5 shows that most of the respondents from WSU agreed that they use open access journals to do their research work, for teaching purpose and to refer and cite open access journals in their research work with a mean value of 3.76, 3.69 and 3.73, with standard deviation 1.20, 1.14 and 1.10 respectively.

For HU respondents Table 5 notes that most of the respondents agree that they use open access journals to do their research work, for teaching purpose and to refer and cite open access journals in their research work with a mean value of 3.86, 3.76 and 3.51, with standard deviation 1.16, 1.14 and 1.13 respectively. From this finding, we can see that majority of respondents from both universities access OAJs to do their research work, for teaching purposes, and to refer and cite in their research work but they do not publish the same percentage via the same route. This study conforms to that of Okiki (2012) and Deoghuria and Roy (2007) who observed that the major reasons for using electronic information resources by respondents are research activity (for literature purpose) and for teaching purpose.

Table 2. Usage of open access journals by academicians

<table>
<thead>
<tr>
<th>WSU</th>
<th>Mean</th>
<th>StDev.</th>
<th>Decision</th>
<th>HU</th>
<th>Mean</th>
<th>StDev.</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>I use open access journals to do my research work</td>
<td>3.76</td>
<td>1.20</td>
<td>A</td>
<td>3.86</td>
<td>1.16</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>I use open access journals for teaching purpose</td>
<td>3.69</td>
<td>1.14</td>
<td>A</td>
<td>3.76</td>
<td>1.14</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>I publish my work in open access journals</td>
<td>2.48</td>
<td>1.32</td>
<td>D</td>
<td>2.83</td>
<td>1.35</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>I refer and cite open access journals in my research</td>
<td>3.73</td>
<td>1.10</td>
<td>A</td>
<td>3.51</td>
<td>1.13</td>
<td>A</td>
<td></td>
</tr>
</tbody>
</table>

Notes: SA = strongly agree; A = agree; N= Neutral/Undecided, D = disagree; SD = strongly disagree.

4.3. Academicians Future Plan of Publishing in Open Access Journals

It can be noted from Figure 2 that most 66.7% and 79.8% of the respondents from WSU and HU respectively are claimed that it was very likely or likely for them to publish in open access journals in the future. The remaining 27.9% and 16.8% from WSU and HU respectively indicated that they were unlikely or very unlikely to publish using open access journals in the future, while only 5.4% and 3.4% of the respondents were not sure or they were undecided to publish in open access journals.

This finding indicates that the majority of the academicians have a good willingness to publish in open access outlets in the future time. This indicates good prospects for the future development of open access in such Universities. This is confirmed with other studies in which the majority of their respondents were agreed to be in a position to publish in open access outlets in the future (Deoghuria and Roy, 2007; Dulle et al., 2010).
4.4. The Benefits Derived from Using Open Access Journals

The respondents were asked different questions concerning the benefit derived from using open access journals. The results presented in Table 8 shows that the responded academicians from WSU were agreed with the items open access journals provides free online access to the literature necessary for their research, open access journals helps to foster relationship among academics, open access journals improved their teaching ability and open access journals help the development of the education system with mean values (M=4.13, SD=0.72), (M=4.14, SD=1.01) and (M=4.28, SD=0.92) respectively. Correspondingly they were Undecided with open access journals helps their professional development, open access journals reduce publication delay, and open access journals provide increased citation to their scholarly work with a mean value of (M=3.36, SD=1.14), (M=3.27, SD=0.93) and (M=3.26, SD=0.83) respectively.

Respondents from HU were agreed with the items open access journals provides free online access to the literature necessary for their research work, open access journals help their professional development, open access journals helps to foster relationship among academics and open access journals improved their teaching ability with mean value (M=4.31, SD=1.0), (M=4.08, SD=0.88), (M=3.86, SD=0.98) and (M=3.65, SD=1.12) respectively. Similarly, the neutral or undecided on the items open access journals reduce publication delay, open access journals help the development of the education system, and open access journals provide increased citation to their scholarly work with mean value (M =3.30, SD=1.47), (M=3.18, SD=1.08) and (M=3.46, SD=0.66) respectively.

From this finding, it can be observed that the benefits derived for academicians by using open-access journals were different within the two study sites. This finding is in partial conformity with what Okoye and Ejikeme (2010) indicated that OAJs provides free online access to the literature necessary for one’s research, improved teaching-learning progress, and foster relationship among academics.
Table 3. Benefits for academicians derived from open access journals

<table>
<thead>
<tr>
<th>Options</th>
<th>WSU</th>
<th>HU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Access Journals provides free online access to the literature necessary for my research</td>
<td>4.13</td>
<td>0.72</td>
</tr>
<tr>
<td>Open Access Journals helps my profession development</td>
<td>3.36</td>
<td>1.14</td>
</tr>
<tr>
<td>Open Access Journals reduces publication delay</td>
<td>3.27</td>
<td>0.93</td>
</tr>
<tr>
<td>Open Access Journals helps to foster relationship among academics</td>
<td>4.16</td>
<td>0.74</td>
</tr>
<tr>
<td>Open Access Journals improved my teaching ability</td>
<td>4.14</td>
<td>1.01</td>
</tr>
<tr>
<td>Open Access Journals helps the development of the education system</td>
<td>4.28</td>
<td>0.92</td>
</tr>
<tr>
<td>Open Access Journals provides increased citation to my scholarly work</td>
<td>3.26</td>
<td>0.83</td>
</tr>
</tbody>
</table>

4.5. Results of Multiple Linear Regression Model

In this section, independent variables and the dependent variable were put in multiple linear regression models and at 95% level of confidence was used for analysis.

4.5.1. Results of Multiple Linear Regression Model of WSU Respondents

The following Table 13 shows the results of the Multiple Linear Regression Model results of WSU responses. The results provide that the explanatory variables such as internet self-efficiency, facilitating conditions, perception of open access journals, social influences, and performance expectation of open access journals have a statistically significant effect on open access journals usage at a 5% significant level.

Table 4. Results of Multiple Linear Regression Models of WSU Respondents

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unstandardized Coefficients(β)</th>
<th>t-value</th>
<th>P-value</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>0.501</td>
<td>1.34</td>
<td>0.181</td>
<td></td>
</tr>
<tr>
<td>Internet self-efficiency</td>
<td>0.150</td>
<td>2.00</td>
<td>0.048</td>
<td>1.434</td>
</tr>
<tr>
<td>Facilitating condition</td>
<td>0.163</td>
<td>2.23</td>
<td>0.028</td>
<td>1.216</td>
</tr>
<tr>
<td>Perception</td>
<td>0.259</td>
<td>3.18</td>
<td>0.002</td>
<td>1.732</td>
</tr>
<tr>
<td>Social influence</td>
<td>0.303</td>
<td>2.92</td>
<td>0.004</td>
<td>2.758</td>
</tr>
<tr>
<td>Performance Expectation</td>
<td>0.219</td>
<td>2.19</td>
<td>0.031</td>
<td>2.765</td>
</tr>
<tr>
<td>F Statistics = (F= 25.255)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R² (adj. R²) = 0.665 (0.638)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Dependent variable: Usage of open access journal
Alpha value is significant at 0.05 levels (2-tailed)

The result in Table 13 shows the coefficient of regression for internet self-efficiency (β = 0.150, P < 0.05), this can be interpreted as internet self-efficiency is a significant determinant of open access journal usage in WSU at a 5% significance level. This implies that a 15% tendency for academicians to use open access journals can be predicted or accounted for by their Internet self-efficiency when other variable remains constant and is significant at a 5% significance level.
level. That is an improvement in internet self-efficiency of individuals increases open access journal usage. These findings were, however, confirmed to the findings from Bashorun et al. (2016) and Dulle (2010) which demonstrating internet self-efficiency is a determinant factor that playing a key role in the usage of open access journals.

Another independent variable that is regressed in this model is facilitating conditions. Facilitating conditions results beta value of ($\beta = 0.163, P < 0.05$), this can be interpreted as facilitating condition is a significant determinant of open access journal usage in WSU at a 5% significance level. This is particularly important because a 16.3% improvement in open access usage will occur when the facilitating conditions are improved to support open access scholarly communication at their institution. The overall implication of this observation is the need for improvement of facilitating conditions in the study area for effective use of open access journals by academicians. These findings were, however, validated to the findings from Dulle (2010), Bashorun et al. (2016), and Schaper and Pervan (2007) which demonstrating facilitating conditions are a determinant factor that plays a key role in the usage of open access journals and new technology acceptance.

The data collected from WSU academicians refers that perception of open access journals is a significant determinant of open access journals usage ($\beta = 0.259, P<0.01$). The beta value (0.259) indicates that an individual’s perception of open access journals has a stronger contribution for open access journal usage next to social influence in WSU. Using Table 13 above, the beta value ($\beta = 0.259$) against the perceptions to open access journals usage means 26% chances of open access journal usage by individuals who had positive perceptions towards open access journals than those with negative perceptions. The academician’s positive responses as noted under section 4.7, therefore, imply good prospects for future usage of open access journals in the respective public universities in this study. In addition to that, it needs more awareness creation by using different promotion methods. The findings, therefore, support previous findings revealing respondents perceptions on open access journals are the determinant factors that affect actual usage of OAJs (Dulle, 2010; Shuva and Taisir, 2016; Bashorun, et al., 2016).

Another factor to be examined from the above Table 13 is social influences that affect usage of open access journals. From the Table 13 social influence ($\beta = 0.303, P < 0.01$) has a significant relationship with open access journals usage at 1% significant level. This implies that the 30% tendency for academicians to use open access journals can be accounted for when their close colleagues, leading academicians use OAJs and their institutions require them to publish in open access journals. In this situation, the academic staff who are working in Wolaita Sodo University perceived social influence as a more important factor for the usage of open access journals. This study has consistent with the study of Bashorun et al. (2016) and Dulle (2010) which demonstrated, social influence is the main construct that was found to be significant factors for effective open access journal usage.

The result in Table 13 shows that the coefficient of performance expectation of OAJs is ($\beta = 0.219, P<0.01$). This result indicates that there is a significant relationship between performance expectation of OAJs and usage of open access journals. Meaning that a 22% tendency for academicians to use open access journals was accounted for when the performance expectation of open access journals is positive. In this condition, the academicians from Wolaita Sodo University perceived the performance expectation of OAJs as an important factor for the usage of open access journals. This study has consistent with the study of Bashorun et al. (2016) and Dulle (2010) which reported that performance expectation of open access journal is the main determinant factories to use open access journals.

4.5.2. Results of Multiple Linear Regression Model of HU Respondents

The following Table 14 shows the results of the Multiple Linear Regression Model results of Haramaya University respondents.

Based on Table 14 below, the beta value of internet self-efficiency is ($\beta =0.169, p < 0.05$), which indicates that the internet usage skill of individuals in the study area is a significant determinant of open access journal usage at a 5% significance level. This implies that a 17% trend for academicians to use open access journals can be predicted or accounted for by their Internet self-efficiency when other variables remain constant. That means an improvement in internet self-efficiency of individuals will increase open access journal usage by 17% when other variables remain constant and are significant at 5% significance. These findings were, however, confirmed to the findings from Bashorun et al. (2016) and Dulle (2010) which demonstrating internet self-efficiency is a determinant factor that playing a key role in the usage of open access journals.

Next to Internet self-efficiency another independent variable that is considered as a factor that affects open access journal usage was facilitating conditions. From the Table below facilitating, conditions have a beta value of ($\beta = 0.212, P < 0.05$), this can be interpreted as facilitating condition is a significant determinant of open access journal usage in HU at 5% significance level. The beta value ($\beta =0.212$) indicates that facilitating conditions on open access journals have a stronger contribution for open access journal usage next to internet self-efficiency in the case of HU. The basic implication from this finding is that if there is an improvement in facilitating conditions in the study area there is also an improvement in open access journals usage by 21% when the other variables remain constant and at a 5% significant level. These findings were also confirmed to the findings from Dulle (2010), Bashorun et al. (2016), and Schaper and Pervan (2007) which indicating facilitating conditions are a determinant factor that plays a key role in open-access journal usage.
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The data collected from HU academicians refers that perception on the open-access journals is a significant determinant of open access journals usage ($\beta = 0.176, P < 0.05$) that is individual’s perception of open access journals has a stronger contribution for open access journal usage. Using Table 14 above, the beta value ($\beta = 0.176$) against the perceptions to open access journals usage means 18% chances of open access journal usage by individuals who had positive perceptions towards open access journals than those with negative perceptions. Based on the result, respondents with positive perceptions towards open access journals were 18% more likely to use open access journals than those with negative perceptions. However, the respondents’ positive perceptions as discussed under section 4.7 imply good prospects for future uptake of open access journal usage in the respective public universities in this study. In addition to that, it needs more awareness creation. The findings from this study, therefore, corroborate previous findings revealing respondents’ perceptions on open access journals are the determinant factors that affect actual usage of open access journals (Dulle, 2010; Shuva and Taisir, 2016; Bashorun, et al., 2016).

Using Table 14 above, the beta value against the social influence implies that social influence has a significant relationship with open access journals usage ($\beta = 0.297, P < 0.05$), at a 5% significant level. This implies that the 30% tendency for academicians to use open access journals can be accounted for when their close colleagues, leading academicians use OAJs and their institutions require them to publish in open access journals. This indicates that effective usage of open access journals by academicians was dependent when other colleagues use open access journals. The findings from this study, therefore, corroborate previous findings Bashorun et al. (2016) and Dulle (2010) which demonstrated social influence as the main constructs that were found to be significant factors for academicians’ open access journal usage.

Table 14, ($\beta = 0.208, P < 0.05$) against the performance expectation of open access journals factor implies that there is a significant relationship between performance expectation of OAJs and usage of open access journals. Meaning that the 21% tendency for academicians to use open access journals was accounted for when the performance expectation of open access journals is positive. In another word, if the items under the variable performance expectation of open access journals in this study get all positive responses, the usage of open access journals increased by 21% when the other variables remain constant. That means increase/decrease in performance expectation of open access journals increase/decrease open access journal usage by 21% when other variables remain constant and are significant at a 5% significance level. This study has consistent with the study of Bashorun et al. (2016) and Dulle (2010) which reported that performance expectation of open access journal is the main determinant factories to use open access journals.

The finding of this study from the two universities shows that all independent variables are contributing to positive open access journal usage. The degree to which independent variables contributed is determined with the value of beta. A factor with a high beta value is contributing a lot to open access journal usage compared to other factors having less beta value. Based on this, social influence has lots of contribution for effective usage of open access journals in the case of WSU, and social influence is followed by perceptions to open access journals, performance expectation of open access journals, facilitating conditions, and internet self-efficiency respectively. Meanwhile, academicians from HU believed that social influence has lots of contribution for effective usage of open access journals; and social influence is followed by facilitating conditions, performance expectation of open access journals, perceptions to open access journals, and Internet self-efficiency respectively.

In the main, academician’s internet self-efficacy, facilitating conditions, social influence, performance expectancy, the respondents’ perceptions about open access journals were identified as the possible factors likely to facilitate open access journal usage in public universities involved in the study.

### 4.6. Participants General Comment about Open Access Journals

The following paragraph is obtained from one respondent’s comment regarding access to open access journals in Ethiopia.

“Even if Ethiopian old universities had many subscriptions to open access journals, from different world areas, I had adequately of access to basically any article that I needed from foreign published scholarly outputs. However, problems were
faced when it came to having access to locally-produced research outputs (i.e. Ethiopian researcher’s scholarly outputs). Such works have not been openly disseminated internationally. As we know, the Ethiopian government funds public universities in research activities, and many articles have been written over the years. But the fact remains that these articles have not been published and also not seen at the national level. Those articles are put under shelf and after a few years they are disappearing because of improper management of the document”.

“Open access is something new and exciting it should be promoted for more advancement and accessibility; thanks to developed countries because that idea was originated from them.”

“When one researcher Publish in open access journals, it increases the visibility to a wide audience. Especially developing countries should speed up the acceptance to open access journal”.

“Researchers in developing countries should be encouraged to access and disseminate in open access journals so that their scholar works reach a wide audience”.

“To access or disseminate on open access, it depends on Internet connection, so connectivity should be improved for more academicians to benefit”.

“Establishment of advanced institutional repositories has a great role as a way of improving the accessing and dissemination of research outputs originating from our countries. So if it is possible universities should have to establish advanced institutional repositories within all Ethiopian public universities”.

“Open access is good but seeming low quality for online free journals. In addition to that poor internet connectivity was the main challenges to access online publications”.

4.7. **Suggested Framework to Enhance Use of Open Access Journals**

A framework provides the main set of concepts and processes and it reflects a model(Bashorun, *et al.*, 2016). The findings of this study concluded the following proposed framework which derived from relevant literature and research finding. The validations for this proposed framework are as follows: the usage of open access journals by academics in most studies indicates a high usage of open access journals to do their research activities but low experience publishing in the same route; lack of open access policy to encourage open access publishing by academic staff in universities in Ethiopia; increased serial crises in academic libraries and low access and poor visibility of research findings in Ethiopia.

Note: OA = Open Access, OAJs = Open Access Journals, OAP = Open Access Publication

Figure 2. Suggested framework to enhance OAJs usage
4.7.1. Explanation of the Framework

The above graphical represented proposed framework (figure 3) demonstrates the design and structure of the relationship among the set of variables that are from the relevant literature and research finding. The framework will serve as a research device to assist a researcher in developing awareness and use of open access journals in Ethiopian universities. Those variables are derived from regression analysis to show the relationship and existence of influence between dependent and independent variables. As indicated in the framework, the use of open access journals was taken as the dependent variable and social influence, facilitating conditions, Internet self-efficacy; performance expectancy, and perception on open access journals were taken as independent variables. Factors that affect the use of open access journals and their relationships, based on what was explained in the result of multiple linear regression analysis are summarized and presented in figure 3.

The proposed framework in Figure 3 analyzed the interactions between independent variables (social influence, facilitating conditions, Internet self-efficacy; performance expectancy and perception on open access journals) and open access policy, subscription to open access journals and awareness to OAJs interacts with the motivation to use OAJs that serves as an intermediating variable and influences the use of open access journals (dependent variable). Especially, the proposed framework analyzed the key variable connections and provided a useful viewpoint for examining variables that influenced the use of open access journals by academic staff. Based on that, motivation to use open access journals mediates the involvement of all independent variables that influence the use of open access journals by academic staff.

As represented in the framework, those variables have interacted with each other’s and multi-dimensional. These interactions can play a significant role in the decisions of academic staff either to use or reject open access journals. Based on the framework there is a link between facilitating condition and the support for open access publishing. That is if there is no support for open access journals, that is the unavailability of facilitating conditions like Internet connection and others, and this, in turn, influences Internet self-efficacy of individuals because the development of individuals skill on Internet self-efficacy depends on Internet facilities with availability and high Internet speed. If one cannot reach open access journals, this will in turn interact with perceptions on open access journals because academics may not have good willingness and perception to open access journals as a result of self-confidence in the ability to use the Internet with less difficulty. This sequence of relations influences academics to use or reject open access journals. Most of the time academic staff are interconnected or collaborated with each other’s like at the time doing research, they share their point of view with each other’s and if they have a negative perception about open access journals this influences the other's usage of open access journals. If they have a positive perception they are motivated to hear out the performance (performance expectancy) of open access journals and the performance expectancy, in turn, influences the ability to achieve the benefits of OAJs for academic staff. This will be fulfilled by the support of OAJ provider’s and they should have to do on quality, copyright, acceptance of open access journals, and peer review process which leads to motivation to use open access journals.

Academic staffs that are benefited from open access journals having to see their quality and other benefits will inevitably influence university management to formulate an open access policy that promotes awareness and usage of open access publications. Because open access policy will enhance the use of open access publishing by academic staff. Based on formulated policy university libraries subscribe needed information resources from relevant sources. In addition to that, each independent variable has a direct influence on motivation to use open access publishing as shown by the arrow, and motivation to use has a direct influence on the actual use of OAJs. Finally, following each step thoroughly will lead to the enhanced use of open access journals (outcome) as shown in Figure 3.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions

Based on the above finding the following conclusions were made. The overall result of this study indicates that many academicians were aware of the open access journals. It was also revealed that most of the academicians used open access journals to access scholarly information. As compared to studies done by other authors elsewhere, the findings from this study suggest a similar trend with respect to the awareness and open access journals usage.

There is an indication of there being little encouragement initiatives for open access publishing within the study area. This is due to the fact that the majority of the respondents were informed about open access informally through colleagues rather than institutionalized organs such as libraries, especially in WSU respondents. This scenario might have contributed to the low usage of this mode of scholarly publishing in the dissemination of research findings in those universities. The trends observed from both WSU and HU respondents revealed further that in cases open access journals usage in terms of dissemination of scholarly content was on the lower side in comparison to scholars’ similar usage of open access journals accessing and citing openly accessible scholarly content.

Most of the respondents had a lot of expectations regarding open access journals is improving both accessibilities as well as dissemination of scholarly output. Even though less publishing
in open access journals by many academicians in the study sites, the fact that the majority of the respondents were expectant of publishing in such outlets in the future implies good prospects for the future development of open access journal usage in such universities.

The findings of this study revealed that the academicians in public universities involved in this study rated social influence factors as strong determinants of their decisions to use open access journals. In addition to that academicians’ Internet usage skills (Internet self-efficacy), facilitating conditions, performance expectancy, and perceptions on open access journals are among the factors that could facilitate the academicians to use open access journals in their study area.

From the finding and general comments obtained from academicians many respondents highly welcomed the idea of open access publishing, policy regarding open access, and the establishment of advanced institutional repositories as a way of improving the accessing and dissemination of research output originating from their respective universities.

5.2. Recommendations

Based on the findings and conclusion of this study, the following recommendations were made.

Librarians in both WSU and HU should make efforts to alert users to use OAJs by using different promotion methods like through training, workshops, seminars, etc.

Training on effective usage of the internet is important taking into account the fast-changing of open-access usage making it difficult for most academicians to easily access and disseminate their research output. Based on the above observations, it is highly recommended for the academic libraries in the study to give training on how to use the internet to improve their internet usage skill so as to meet enhanced usage of OAJs at the respective universities.

The fact that this study targeted first and third-generation universities that were randomly selected from among many public higher learning institutions in Ethiopia suggest the need for a more comprehensive study for a better understanding of open access journal usage in this country by participating three generations (first, second and third-generation universities).

5.3. Implications for Future Research

Other researchers may do an assessment of open access policy views by librarians and university administrations regarding open access and open access publishing at the national level. This is a result of the findings from this study in which the majority of the respondents considered open access policy as a basic and priority issue with regard to publishing and using open access journals. The support for the open-access model at the national level depends very much on the written policy and support by librarians and other university leaders. It is thus suggested that a study be conducted to target this group of respondents in order to establish their views about the new mode of scholarly communication with respect to the development of library collection and as well as the development of the country.

The study on the assessment of librarians in fostering open access is suggested to be conducted in all public and private institutions and other research institutions in Ethiopia. This suggestion is a result of the findings from this study in which the majority of the respondents considered librarians as the main role player regarding the promotion of open access journals and they consider libraries as the most appropriate units for the establishment and management of institutional repositories.

This study not assessed whether academicians publish their research output in reputable journals or not. Further research should be done on this topic including citation analysis and impact factor of the open access journals.

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