Perceived Barriers to Research Publishing in Saudi Arabia

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ABSTRACT

Academic research represents the backbone of human activity in the way that it improves our quality of life through expanding frontiers of academic knowledge and making further research possible throughout the world. Academic research aims to provide solutions for many current problems. The importance of academic research has grown at universities and research centres in Saudi Arabia, fuelled by dramatic increases in governmental and private funding for research. This study focuses on the academic publication processes in Saudi Arabia, the barriers that affect researchers' ability to carry out and publish research and the potential advantages and disadvantages offered by the Internet in the area of academic publishing. The data collection and analysis presented in this study addresses the extent to which such benefit could be realised in practice. This research reviews the limitations of research publishing in Saudi Arabia by focusing on the nature of academic journals, in terms of their numbers and purpose, the barriers that academic staff faced when they wished to publish their research work in local or international academic journals, and the attitudes of academics towards electronic publishing and publishing in general. This research uses questionnaire tool. The data are tabulated and analysed in a systematic method to show findings in accordance with required objectives. The most prominent findings from this study are the lack of academic staff encouragement to conduct and publish research, lack of financial support to the research publishing sector, lack of a research publishing infrastructure and a lack of private sector support for funding research and publishing. An interesting finding is that unlike many other countries, there is no culture of volunteering for work that does not provide direct financial benefit. This could be an important factor affecting the adoption of an online open publishing approach in which reviewers and editors are not paid directly for the work. This research ultimately aims at proposing and implementing suitable processes and policies to solve these problems and to identifying means of overcoming the research publishing barriers in Saudi Arabia.

INTRODUCTION

Academic research represents the backbone of human activity in the way that it improves our quality of life through expanding frontiers of academic knowledge and making further research possible throughout the world. According to the world bank statistics (statistics 2010), in 2007 Japan spent 3.4% of its GDP on research and development, the United States of America spent 2.7%, along with 1.8% in the United Kingdom. Whereas in 2007 Egypt spent only 0.2% of its GDP, with 0.1% in Kuwait and 0.1% in Saudi

Arabia in 2004 which decreased to 0.0% in 2007, as we can see from these statistics, spending on research is generally low in the Arab world compared to the world average of about 1%. (Corbyn 2010) reported that according to Al-Swailem, senior scientist and policy adviser at the King Abdulaziz City for Science and Technology (KACST) - Saudi Arabia's national science agency and its national laboratory, since 1988, the Saudi government has been supporting financially science and technology. The average annual spending in the science and technology was about 600 million Saudi riyals (£106 million). In 2008 it increased to 2 billion riyals. The plan over the next five years is to increase annual funding to 8 billion riyals. He added that the kingdom of Saudi Arabia seeking to be a regional leader in science, technology and innovation by 2015; an Asian power by 2020; and, by 2025, to have completed the transformation into a knowledge-based economy and joined the advanced industrial nations.

This study focuses on the current academic publication processes in Saudi Arabia and the potential advantages and disadvantages offered by the Internet in general and electronic publishing in particular. It also proposes suitable processes to overcome the barriers research publishing face in Saudi Arabia where funding for research is limited and with little motivation to undertake it. Some Saudi universities may offer varying scales of financial incentive to authors, in return for their commitment to publish. Most scholarly publishing has been undertaken by universities' own publishing houses, whose major activity is printing textbooks to give or loan to students. The academic refereed journals are generally sponsored by the universities and do not enjoy a large circulation, particularly outside the Kingdom of Saudi Arabia and other Arabic countries. Electronic tools and electronic publishing facilitate and accelerate the process of knowledge distribution beyond the limits of printed journal volumes, potentially disseminating knowledge worldwide. Electronic publishing in its different forms: e-books, e-journals, e-prints, databases or hypertext pages, whether online or on CD-ROM has transformed the media by which information can be delivered. Arabic-speaking communities are currently not as well served by these developments as the English-speaking world, probably because the skills required are not widely available. Electronic publishing does not seem to have widely appealed to the scholarly community in Saudi Arabia.

Therefore, this research reviews the limitations of publishing in Saudi Arabia by focusing on the progress of print publications from a historical perspective, the nature of journals in the case of Saudi Arabia (in terms of their numbers and purpose), the financial barriers

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to publishing and finally the attitudes of academics towards electronic publishing as a medium for scholarly communication that might provide potential solutions to help researchers overcome the various publishing difficulties.

OBJECTIVES

The following objectives were laid down for the study:

1. To identify the barriers and problems preventing researchers from publishing in Saudi Arabia.
2. To construct a view on researchers' attitudes toward publishing in general and towards electronic publishing as an alternative choice.

METHODS

This research has used the survey method to investigate research publishing in Saudi Arabia. This method enabled to undertake an empirical enquiry of a certain phenomenon within its real life context. Survey research methods used questionnaire instrument for data collection. Oates states "it is easy to find tools with target population size and sample size calculators on the web, for example, (www.surveysystem.com/sscalc.htm)" (Oates 2006). According to this calculator using the confidence level 95%, the confidence interval +/-5 percent and the population 4751, the sample size recommended would be 355 academic staff, some in the Applied-Sciences area and others in the Arts and Humanities area.

The recommended sample size was 355. The surveys were completed and returned independently by each respondent or by the department secretaries in order to maintain confidentiality. The total number of respondents was 265 (74.65%).

RELATED LITERATURE

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Academic researchers publish to establish their claim to a specific result at a specific point in time. When researchers publish their academic studies, it is an opportunity for their peers to access their research and communicate with other academics interested in a similar subject area (Hunter 1998); (Besimoglu 2007). It may also result in invitations to attend conferences and to referee important papers and books. (Boyce and Dalterio 1996), (Hunter 1998) and (Besimoglu 2007) agree that the publication of research results is a significant link between the areas of communication and academic awards, thus academic societies were founded to encourage communication amongst their members. As Azzam stated, it is my opinion that research can be considered to be the backbone for the development of any society (Azzam 1995). The role of publishing in the development of societies has been crucial but many still tend to overlook the wider societal impact of publishing, with the focus mainly on its direct economic contribution. (Guedon 2001) and (Alexandrov 2006) believe that there is a consensus in the academic world that the publishing process will incur some costs and these costs will have to be met. The recent business plan changes the process of publishing a research result. Currently, the reader pays for publishing costs. Harnad claims that in an electronic-only situation, the costs can be significantly reduced and recovered by authors rather than users, so that readers can access academic publications free of charge on the Internet (Harnad 2001). (Taylor, Perakakis et al. 2008) agree with Harnad that researchers can publish their work free and such work will be freely accessible to all readers. (Martens 2004) in his article "Cumincad Hacks" said that there have been developments towards making research publishing cost free and to some extent the Internet can now serve the reader by offering the full text of various publications without charges. According to (Hamel and Schweik 2009) around the world there are an appearance of open source associations focused on joining of resources. While (Guttikonda and Gutam 2009) reported that the time from submission of an article to publication is long. They added availability of open source software for the change of traditional approach into open access journals and the establishment of open archive online repositories for archiving research will make research accessible to larger audiences and increase the availability of research output. In Australia the government supports institutional repositories and open access (Kennan and

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Kingsley 2009). The numbers of open access articles has increased since January 2006, whereas according to (Prammanee and Moussa 2010) as in most of the developing countries, the use of the Internet has a short history while the implementation of the Internet helps the governments to apply electronic learning into their national educational system. They also discussed how the government is using the Internet and electronic learning resources in the education sector. At present, in Saudi Arabia the universities are running activities concerning research databases and the establishment of local repositories. The Open Directory of Open Access Repositories (DOAR)1 lists three open repositories in Saudi Arabia; Knowledge, King Saud University repository and King Fahd University for petroleum and minerals electronic Prints. (Donovan 1998) highlighted that electronic publishing techniques are introducing inevitable changes in scholarly publishing as a whole and in the academic journal publishing business in particular. (Willinsky 2003) and (Grabarek-Matthews 2008) studied the ways in which print editions will continue to be used for some time but concluded that the future will lead to a digital form.

FINDINGS

The objectives of the present study are to identify the barriers and problems that prevent researchers from publishing in Saudi Arabia. The study considers these in relation to current thinking in open publishing, it aims to survey researchers' attitudes toward publishing in general and towards electronic publishing as an alternative choice; survey researchers' attitudes towards alternatives to publishing as a method of sharing knowledge.

1.   **Publications in the last 5 years**

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[1] http://www.opendoar.org/find.php?cID=188&title=Saudi%20Arabia

Perceived Barriers to Research Publishing in Saudi Arabia
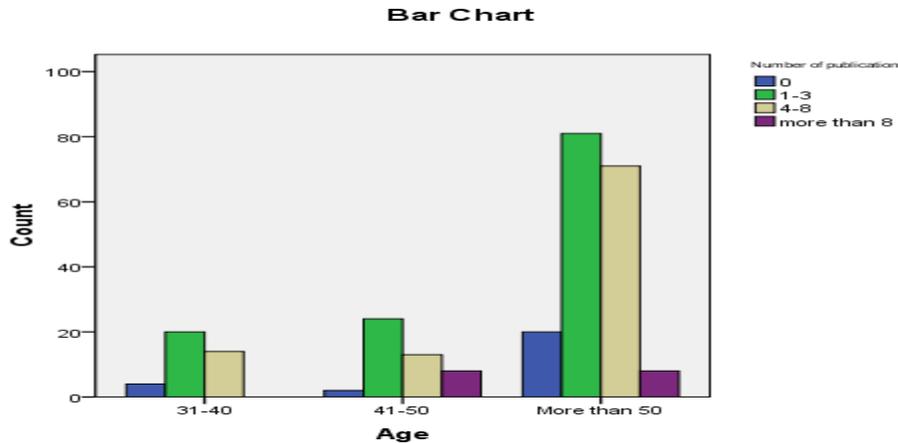
Figure 1 Age and number of publications

Figure 1 shows statistics of Saudi Universities' academic staff in three age groups who have publications in 2001 to 2005. It can be clearly seen that 1-3 publications was the most common number of publications across all of the age groups. The highest number of publications belongs to both 1-3 and 4-8 publications. Over 80 and 71 cases respectively for people over 50 years old. This number reduces (to 24 and 13 respectively) as we move to age group of 41 to 50 and reduces even more for ages 31-40, dropping to 20 cases of those who have 1-3 publications and 14 who have 4-8 publications. Figures of zero publication and more than eight publications cases shows very similar tendency to increase as we move from group 31-40 to more than 50, where they peak at 8 and 20 respectively. Another noticeable feature is that the majority of the academic staff who have more publications belonged to ages from 41 up to 64 for all number of publications.

2. **University and number of publications**

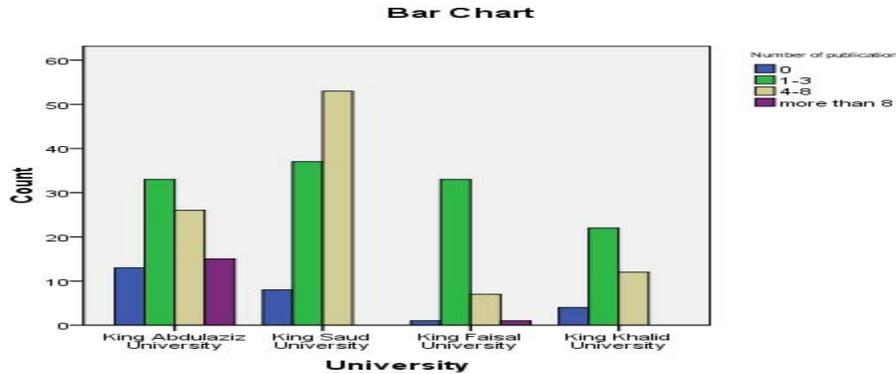**Perceived Barriers to Research Publishing in Saudi Arabia**

Figure 2University and number of publications

Figure 2 shows statistics of Saudi Universities' academic staff in four universities who have publications in 2001 to 2005. It can be clearly seen that 1-3 publications was the most common number of publications across all of the Saudi universities. The highest number of publications belongs to both 4-8 and 1-3 publications. Over 50 and 37 cases respectively for the academic staff from King Saud University. This number reduce (to 26 and 33 respectively) as we move to King Abdulaziz University and reduces even more for the respondents from King Khalid and King Faisal universities to 33 cases of those who have 1-3 publications and 7 who have 4-8 publications. Figures of zero respondents have more than eight publications from King Saud and King Khalid universities shows very similar tendency to increase as we move to King Abdulaziz and King Faisal universities.

Another noticeable feature is that the majority of the academic staff who have more publications belonged to King Saud and King Abdulaziz universities for all number of publications.

Also the observed figures in this Bar chart illustrate that academics in older universities (KSA & KAU) have published between 4-8 or more than 8 articles, more than academic staff in the newer universities, therefore the number of publications increases when the university is older. The highest proportion of academic staff is in King Abdulaziz University that have not had any publications during the last five years.

Perceived Barriers to Research Publishing in Saudi Arabia
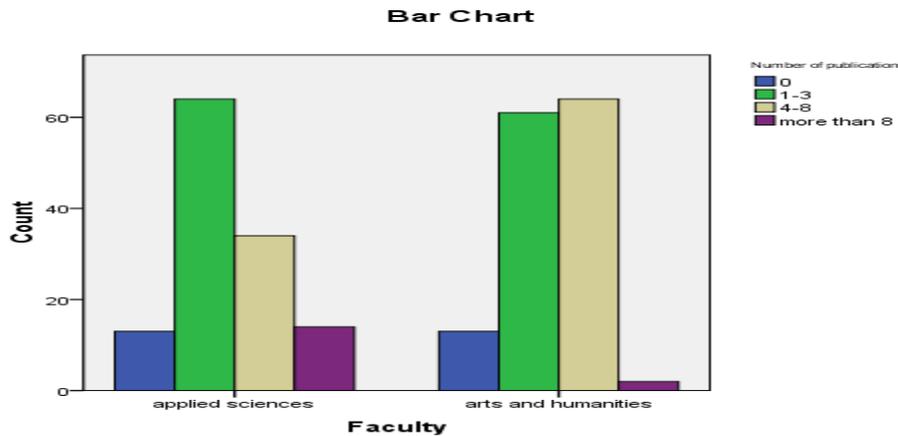
3. Faculty and number of publications

Figure 3 Faculty and number of publications

Figure 3 shows statistics of the subject areas for Saudi universities' academic staff in four universities who have publications in 2001 to 2005. The highest number of publications belongs to both 4-8 and 1-3 publications. Over 60 cases for the academic staff from arts and humanities faculties (4-8) and from the applied sciences faculties (1-3). This number reduces (to 34 who have 4-8 publications from the applied sciences and 61 have 1-3 publications from the arts and humanities faculties respectively). The numbers of publications reduces even more sharply for the respondents from the arts and humanities faculties who have more than 8 publications to 2 cases. 13 of respondents have zero publications from all subject areas.

Another noticeable feature is that the majority of the academic staff who have more publications belonged to arts and humanities faculties.

4. Position and number of publications

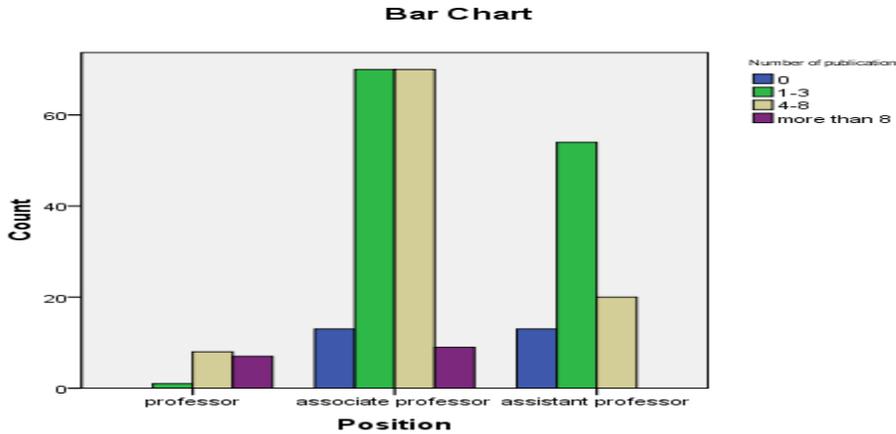**Perceived Barriers to Research Publishing in Saudi Arabia**

Figure 4 Position and number of publications

Figure 4 shows statistics of the position for Saudi universities' academic staff in four universities who have publications in 2001 to 2005. The highest number of publications belongs to the associate professors (both 4-8 and 1-3 publications). This number reduces (to 20 who have 4-8 publications from the assistant professors and 54 assistant professors have 1-3 publications.

The numbers of publications reduces sharply for the professors who have 1-3 and 4-8 publications to 1 case. Figures of 13 respondents have zero publications from assistant and associate professors. Another noticeable feature is that the majority of the academic staff who have more publications belonged to associate professors.

The bar chart illustrates that the number of publications increases whenever the academic position of respondents increased.

5. **Major problems facing publication in Saudi and international journals:**

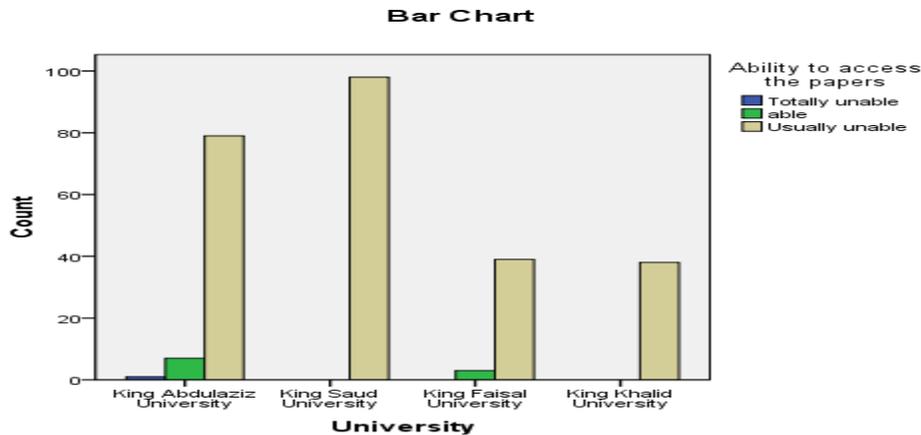**University and accessibility to the articles**

Figure 5 University and accessibility to the articles

Figure 5 shows the statistics of the ability to access the articles that Saudi universities' academic staff members want to in four universities who have publications in 2001 to 2005. The majority (254) across all of universities are usually unable to access the papers they want, while this number reduces (to 10) who are rarely unable to access the articles they want to. This is in contrast to all the respondents from King Saud University and King Khalid University, who are usually unable to access the articles they want to.

6. **Years of experience and accessibility to the articles**

Figure 6 shows the statistics of Saudi Universities' academic staff that have publications in 2001 to 2005 according to the years of experience that they have. It can be clearly seen that the inability to access the papers was the most common case for them across all of the years of experience.
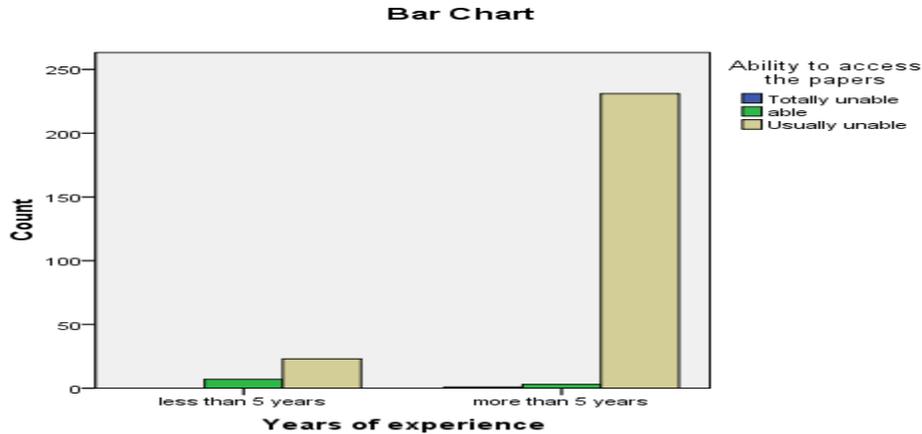
Figure 6 Years of experience and accessibility to the articles

The highest number of academic staff belongs to those who are usually unable to access the papers they want to. Over 230 and 3 respectively for people have more than five years of experience. This number reduces (to 23) as we move to those who have less than five years of experience. This is in contrast to all the respondents from academic staff who have less and more than 5 years of experience, who are usually unable to access the articles they want to. It can be observed from this bar chart that the ability of respondents to access the papers they need is decreased whenever the years of experience are increased. Therefore there is a relationship between the respondents' years of experience and their ability to access the paper they require.

7. Position and accessibility to the articles

Figure 7 shows the statistics of Saudi Universities' academic staff in three position groups who have publications in 2001 to 2005. It can be clearly seen that usually unable to access the papers was the most common number of cases across all of the position groups.
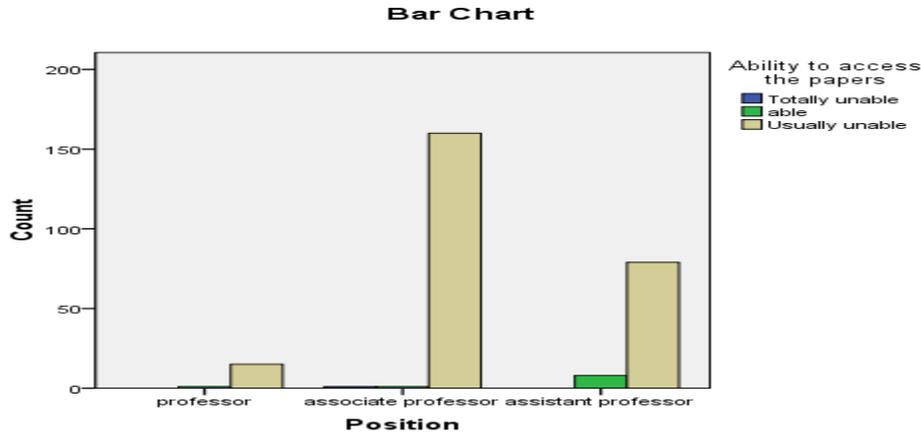
Figure 7 Position and accessibility to the articles

The highest number of academic staff belongs to those who are usually unable to access the papers they want to. 160, 79 and 15 cases respectively for people in the associate, assistant professors and professors positions. This number reduces (to 1, 8 and 1 respectively) as we move to assistant professor position and reduces even more for professor position, dropping to 1 case of those who have no ability to access the papers. Another noticeable feature is that the majority of the academic staff who are unable to access the papers they want belonged to all position groups.

RESULTS AND DISCUSSION

The study findings illustrate that academic staff members at Saudi universities have produced comparatively few research publications within the last five years with regard to researchers' output in other developed countries. This may be attributed to the barriers they face when conducting research and subsequently when publishing their work.

These findings correspond with those of (Touq and Zaher 1989), (AlSalem 1997) and (Al-Zahrani 1997). They claim that research productivity for academic staff in Saudi universities is poor in comparison with the academic staff at other universities in developed countries. According to (Ramsden 1994) who examined the requirements for promotion and evidence of individual and institutional excellence, the critical indicator of

research productivity is publication. In addition, the findings of (Athey and Plotnicki 2000) show that many authors in the Information Technology field in the United States of America published between 11 and 23 articles during their five year period of study. Furthermore (Agboola and Oduwole 2005) found that out of the thirty-four academics in their subject area (Library sciences) in Nigeria that responded, 2.94% had more than twenty publications, 8.82% had between ten and fifteen publications, 17.56% had between six and nine and 58.82% had between one and five publications, whilst 11.77% had no publications. The Saudi universities' academic staff reported some barriers that prevented them from publishing their academic work. They cited the length of time required to publish resulting from difficulties in accessing necessary articles as well as the prohibitively high cost of using and publishing in journals. Other difficulties included the criteria for choosing which journals to use or publish in and the length of mailing time required. Referring to the results reported in figures 10, 11, 12, and 13, there are differences between academic staff in their research productivity according to different variables. In relation to individual ages of academic staff, the results show a high proportion from the total sample population has not published articles during the last five years; the majority of them come from the older academic staff group who are still in assistant and associate professor positions. They have a wide experience of teaching and researching but due to the barriers they face, have less research productivity. The reported barriers included the lack of information resources in the university libraries, burden of teaching workload or tenure and the lack of financial support for the field of research publishing. University libraries can take a long time to provide the journals or the access to publications that are required by academic staff. They also found access to most of the relevant publications too costly. In Figures 28-32 other types of difficulties mentioned include the cost of publishing in some Arabic and international reference journals (as it is necessary to pay in advance for services such as peer review, mailing, copying and other publishing expenses). For example the Academic Journal of Engineering at Asute University in Egypt asks researchers to pay in advance 330 EGP as expenses for each single paper published.

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By contrast, the average research productivity for young academic staff is three articles or less during the same period of time. Some of these staff referred to a lack of encouragement, together with an overload of teaching and demands of management roles consequently having a serious negative impact on their research productivity. Academic staff members from the Applied Sciences faculty at the King Abdulaziz University cited these reasons more frequently than the academic staff from the Arts or from other universities. This could be because Applied Sciences academic staff faced other types of barriers such as a lack of laboratory materials, automations and technicians. The academic staff members at King Abdulaziz University and King Saud University had comparatively more publications in the last five years. It can be concluded therefore, that the barriers academic staff faced were not necessarily faced by all of them but could still affect the research productivity of many of them. It should also be noted that these two universities are the oldest universities in the country and therefore many of their academic staff have experience in dealing effectively with many of these barriers. These two universities have better budgets, information resources, research publishing infrastructure, facilities and human capabilities than some of the other universities. The professors are likely to have more research productivity than those in other positions. The assistant professors have published an average of three or less publications because they try to meet the promotion requirements of publishing at least four papers within (at least) four years. With regard to enhancing research publishing in Saudi Arabia, the respondents listed significant requirements such as an increase in financial support, elimination of long and complex publishing procedures and a reduction of multiple panel meetings.

In conclusion, research publishing in Saudi Arabia needs to improve its research-publishing infrastructure in a variety of different ways, such as:

1. Computerise all research publishing activities.
2. Eliminate unnecessary meetings or processes.
2. Build and update a reviewers' database.
3. Ensure reviewers undertake the review of early drafts to appropriate time scales.

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4. Ensure the researchers complete corrections to appropriate time scales.

5. Ensure all academic staff conduct and publish at least two papers annually.

6. Provide all information resources to researchers free of charge.

7. Encourage academic staff to publish their work internationally.

8. Define financial rewards & incentives for those who publish five or more papers annually.

The results show that access to articles requires a fast and reliable Internet connection, therefore inferior basic infrastructure, including good Internet connections and computers has become a barrier for Saudi universities' academic staff.

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