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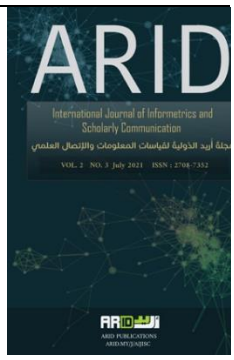

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Information seeking behaviour of Arab social science and humanities postgraduates: A descriptive study

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سلوك البحث عن المعلومات بواسطة طلاب الدراسات العليا العرب في مجال العلوم الاجتماعية الإنسانية: دراسة استكشافية

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ABSTRACT

The purpose of this paper is to report the findings of a study of information-seeking behavior among a group of Arab postgraduate students in social science and humanities disciplines. The paper also explores information-seeking styles and examines how information seeking is affected by external factors. The study employed a qualitative approach to explore information-seeking behavior in the sample and the sources of information used to obtain scholarly information. A sample of 33 participants was interviewed to elucidate the information-seeking behavior of the Arabic language speakers. The analysis of the interviews revealed that the participants use different methods to find information on the internet. These methods vary from using search engines to using sites that provide pirated scholarly papers. The data showed that most of the sample students use search engines and databases provided by their universities, but they should be trained in research ethics to avoid unacceptable research practices. The results also indicate that searching in other languages represents a challenge for Arab postgraduates in the social sciences and humanities. This study was conducted with social science and humanities postgraduates as part of a series of studies aiming to explore Arab language speakers' scholarly practices. The information-seeking behavior of science disciplines may differ, as the teaching language is mainly in English. This study contributes to the field by expanding our understanding of how non-English language speakers seek scholarly information and what sources are used to obtain the scholarly papers.

Keywords- Information Seeking, Arab postgraduates' information-seeking behavior, Searching practices, Information needs.

الملخص

تهدف هذه الدراسة استعراض سلوك البحث عن المعلومات بين مجموعة من طلاب الدراسات العليا العرب في تخصصات العلوم الاجتماعية والعلوم الإنسانية. تستكشف الورقة أيضًا أساليب البحث عن المعلومات وتفحص كيفية تأثر البحث عن المعلومات بالعوامل الخارجية. من أجل تحقيق أهداف الدراسة استخدمت الدراسة المنهج النوعي حيث تم إجراء مقابلات مع عينة من 33 مشاركًا من الطلاب لتوضيح سلوك البحث عن المعلومات لمتحدثي اللغة العربية. وقد كشف تحليل المقابلات أن المشاركين يستخدمون طرقًا مختلفة للعثور على المعلومات على الإنترنت. تختلف هذه الأساليب من استخدام محركات البحث إلى استخدام المواقع التي تقدم أوراقًا علمية مقرصنة. وأظهرت البيانات أن غالبية طلاب العينة يستخدمون محركات البحث وقواعد البيانات التي توفرها جامعاتهم، ولكن مع ذلك وجدت الدراسة أنه يجب تدريبهم على أخلاقيات البحث لتجنب الممارسات البحثية غير المقبولة. كما تشير النتائج إلى أن البحث بلغات أخرى يمثل تحديًا لطلاب الدراسات العليا في العلوم الاجتماعية والإنسانية. أجريت هذه الدراسة مع طلاب الدراسات العليا في العلوم الاجتماعية والإنسانية كجزء من سلسلة دراسات تهدف إلى استكشاف الممارسات العلمية للمتحدثين باللغة العربية. قد يختلف سلوك البحث عن المعلومات في تخصصات العلوم، حيث أن لغة التدريس تكون بشكل أساسي في اللغة الإنجليزية. ويمكن القول أن الدراسة الحالية تساهم في المجال من خلال توسيع فهمنا لكيفية بحث المتحدثين غير الناطقين باللغة الإنجليزية عن المعلومات العلمية وما هي المصادر المستخدمة للحصول على الأوراق العلمية.

الكلمات المفتاحية ـ البحث عن المعلومات ، سلوك طلاب الدراسات العليا العرب في البحث عن المعلومات ، ممارسات البحث ، احتياجات المعلومات.

Introduction

Searching and locating scholarly information are necessary skills for postgraduates to progress in their research and writing. Thus, studies have focused on academics and researchers' information-seeking behavior to understand information needs, ways of seeking information, strategies used to find relevant information, and methods of retrieving information resources (Ellis, 1989; Foster, 2004; Gunasekera & Balasubramani, 2019; Wilson, 1981).

Studies focused on information seeking have explored different categories of researchers, such as social science, science, humanities, distance learners and postgraduates (Buchanan et al., 2005; Mai, 2016; Spezi, 2016; Tury et al., 2015); the factors that affect information seeking behavior (Desta et al., 2019; El-Maamiry, 2020; Kuhlthau, 1991; Robson & Robinson, 2013); the ways that researchers evaluate and assess retrieved information (Nicholas et al., 2015); and the types of resources used by researchers (Khan et al., 2019; Nicholas, Boukacem-Zeghmouri, et al., 2017; Shehata. et al., 2015a). As a result, these studies have provided a better understanding of the different approaches that individuals use to seek information and of the resources they use in scholarly research.

Arab scholars' information-seeking behavior has not received the same attention; in the literature in the field, few studies have explored the information-seeking behavior of Arabic language speakers (Al-Wreikat et al., 2015; Elgllab. & Shehata., 2017; Mansour, 2017; Mansour & Alkhurainej, 2011; Shboul & Issa, 2016). These studies attempted to understand how Arabic language speakers seek information, but none of them aimed to explore where those users find information or how they obtain it.

The current study is mainly focused on Egyptian postgraduate students in the social science and humanities disciplines. The study aims to understand what methods Arabic-speaking postgraduates use to find information and how they obtain papers. The study is part of a series of studies that explore the reading behavior, information-seeking behavior and publishing

behavior of social science and humanities scholars and postgraduates in Egyptian universities in order to expand our knowledge of current scholarly practices in the Arab region.

Literature review

Information seeking behavior has been a subject of many studies aiming to understand, describe and model the behavior of different segments of the information community (Bukhari et al., 2020; Foster, 2003; Mawby et al., 2015; Wilson, 1981, 1999). Research has found that information seeking behavior arises as "a consequence of a need perceived by an information user, who, in order to satisfy that need, makes demands upon formal or informal information sources or services, which result in success or failure to find relevant information" (Wilson, 1999p.251). information seeking is identified as The user's constructive activity of finding meaning from information in order to extend his or her state of knowledge on a particular problem or topic (Kuhlthau, 1991p.361).

Studies exploring how and where scholars find information have revealed differences between various types of scholars. For instance, a study by Tahir et al. (2010) found that humanities scholars tend to rely on print sources of information. The study confirmed the results of earlier studies that explored humanities scholars' information-seeking behavior (Barrett, 2005; Bronstein & Baruchson-Arbib, 2008; Talja & Maula, 2003; Tibbo, 2003). In contrast, studies in science disciplines found that scholars working in scientific disciplines tend to use electronic resources over print resources (Gunasekera & Balasubramani, 2020; Kumar & Singh, 2011). Additionally, those scholars prefer to read and share informal resources rather than the formal equivalents (Mohammed, 2020; Shehata. et al., 2015a, 2015b; Tahira & Ameen, 2016; Tenopir et al., 2017).

Regarding the information sources used by early career researchers, a recent study by Nicholas, Rodríguez-Bravo, et al. (2017) found that early career researchers tend to use different methods to locate scholarly information. Google, Google Scholar, ResearchGate and Web of Science were found to be the most common methods used by the sample. Interestingly, sites such as

Sci-Hub were reportedly used to download papers if researchers cannot download papers from the original source. Similarly, a study by Shehata. et al. (2015b) found that postgraduates and early career researchers use various information resources to locate scholarly information. The study found that social networking sites play an important role in locating scholarly literature. However, the study sample revealed that online databases and Google Scholar are the primary tools used to satisfy the information needs of those in the sample. The study sample indicated that formal information resources such as peer review journals and conference proceedings are more important than informal information resources, as the former are the only information resources accepted by the academic community.

Arab scholars' information-seeking behavior

Despite the low number of studies that have investigated the information-seeking behavior of Arabic language speakers, these studies have explored different areas related to the topic. For example, a study by Marouf and Anwar (2010) investigated the information-seeking behavior of social science researchers at Kuwait university and revealed that those scholars prefer obtaining information from formal resources such as journals and books. The study also showed that social science researchers prefer print materials over electronic materials. Additionally, the study sample had problems accessing Arabic resources because Arabic content on the web is of lower quality than English content. Al-Abbasi (2007) found that social science and humanities scholars at Bahrain University prefer print over electronic resources. The study revealed that many factors demotivate researchers in using electronic resources; such factors include language barriers, awareness of resource availability and IT skills.

A later study by Al-Muomen et al. (2012) developed a model of Kuwaiti graduates' information seeking behavior, and the study revealed that many factors affect students' information seeking behavior: library awareness, organizational and environmental issues, source characteristics, and demographics. Elgllab. and Shehata. (2017) confirmed the previous results, finding that many factors affect the information-seeking behavior of scholars at Shaqra University. These

factors ranged from linguistic barriers to search skills. The study revealed that Arabic-speaking scholars prefer searching Arabic content on the web and try to avoid English content.

Al-Wreikat et al. (2015) explored information-seeking behavior in Arabic and English to understand and describe scholars' behavior when seeking information in different languages. Their study revealed that the sample used more search tactics with the tasks designed to retrieve the relevant information in Arabic. The study showed that language plays a key role in determining search strategies, and the authors developed a new theoretical model that describes the information-seeking behavior of Arabic language speakers. However, the study did not address the type of materials used and preferred by the study sample.

Methodology

A qualitative research approach was adopted to map the information behavior of the study sample. Semi-structured interviews were conducted with a sample of 33 participants representing eight social science and humanities disciplines (Table 1). Interviews were conducted to obtain rich data on how the sample locates information and where they find information required for their research. The sample was informed of the purpose of the interviews, and the participants agreed to be asked questions regarding their information behavior and reading behavior. The structure and scope of the interview and the nature of the questions to be used were provided to the participant in a meeting with the whole sample held prior to starting the interviews. This study is concerned with analyzing data obtained regarding the information seeking behavior of the sample. Each interview lasted approximately 15-30 minutes. The interviews were recorded, and notes were taken during the interviews.

Table 1 The sample distribution

The academic discipline	**Number of students**
Arabic language studies	2
Library and information science	11
Islamic studies	2
Philosophy	3
Theater	2
Media and communication	8
English language	3
Geography	2

The interviews contained 20 questions that explore both information seeking behavior and reading behavior. However, for the purposes of this article, this paper focuses on questions surrounding the following:

- How do postgraduates find the scholarly information they need? Do they use Google, Google Scholar libraries catalogs, social networks, and so on?
- Do postgraduates use the same tools to find Arabic and English papers?
- Do postgraduates use social media in their scholarly activities to find scholarly information, and if so, how?

All interviews were recorded, transcribed, and imported into Nvivo software. The transcriptions were coded, and codes were organized. The results were then compared with other findings in the literature.

Data analysis

Analysis of the interview data indicated that the Egyptian postgraduates use six main tools to locate and download the scholarly research they need:

- Google services
- Egyptian Universities' Libraries Consortia portal (EULC)
- Egyptian Knowledge Bank (EKB)

- Sci-Hub
- Social network research groups
- ResearchGate

These tools were reported to be used by the postgraduates. However, the level of use varies between different tools. Search engines, especially Google and Google Scholar are used the most for finding scholarly information. In contrast, EULC and EKB are used the most when researchers need to download scholarly papers. Figure 1 shows the importance of the information resources used by Egyptian postgraduates.

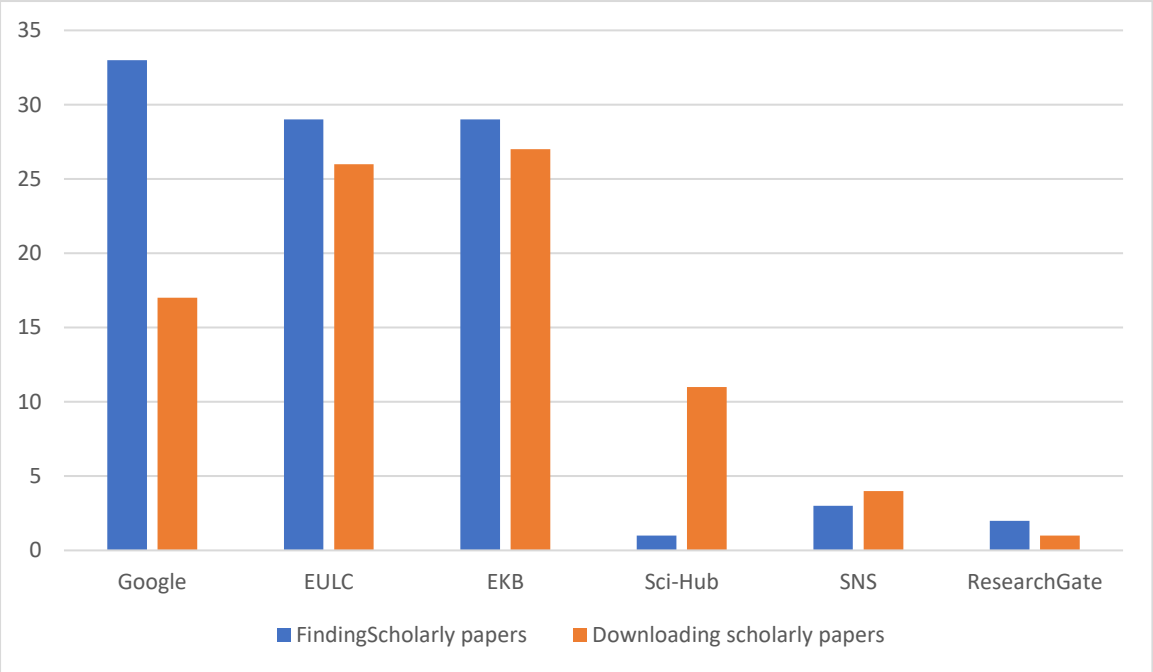

Figure (1) The importance of the information resources used by the Egyptian postgraduates

Search engines

The data retrieved from the interviews revealed that search engines are heavily used by the participants when they need to find scholarly research and download relevant papers. All the participants said that they use Google as the primary tool to find research papers. However, only 51% of the sample revealed that they find search engines useful for downloading scholarly papers.

The following are the main reasons that the sample found search engines to be suitable for locating scholarly research, as mentioned in the interviews:

- Search engines (Google and Google Scholar) are easy to use and faster.
- Search engines cover an enormous amount of scholarly data and are not limited to geographical boundaries.
- Google Scholar contains services that allow users to save searches and receive alerts about new scholarly papers.
- The participants revealed that they also use Google Scholar to import citations.
- Google Scholar is useful to find papers relevant to the topic they are interested in.

In addition, a number of participants said that they frequently use Google Translate to read papers in English, which reduces the time they spend reading scholarly literature. For example, participant 11 said,

> I heavily rely on Google Translate to understand the text in English. I use it to translate everything, even the title.

Many postgraduates believe that search engines, including Google Scholar, are essential at the start of searching and for identifying the main literature on the topic. Additionally, they use search engines to find general information and to find new keywords that can be used in their search. However, they revealed that they have failed many times to download or read the retrieved search result because they were not subscribed to the database that provides this paper or because the retrieved link did not work. This is illustrated in participant 1's comment:

> I start with Google, and I retrieve a huge amount of results that are not necessarily related to my search. The problem is, often when I try to access a paper, I find that I do not have the right to download it.

Part of the interviews explored the reading and searching preferences of the postgraduates. The data showed that the participants prefer searching for information using the English language,

but they also give priority to reading texts available in the Arabic language because of their lack of English language proficiency (Shehata., 2017).

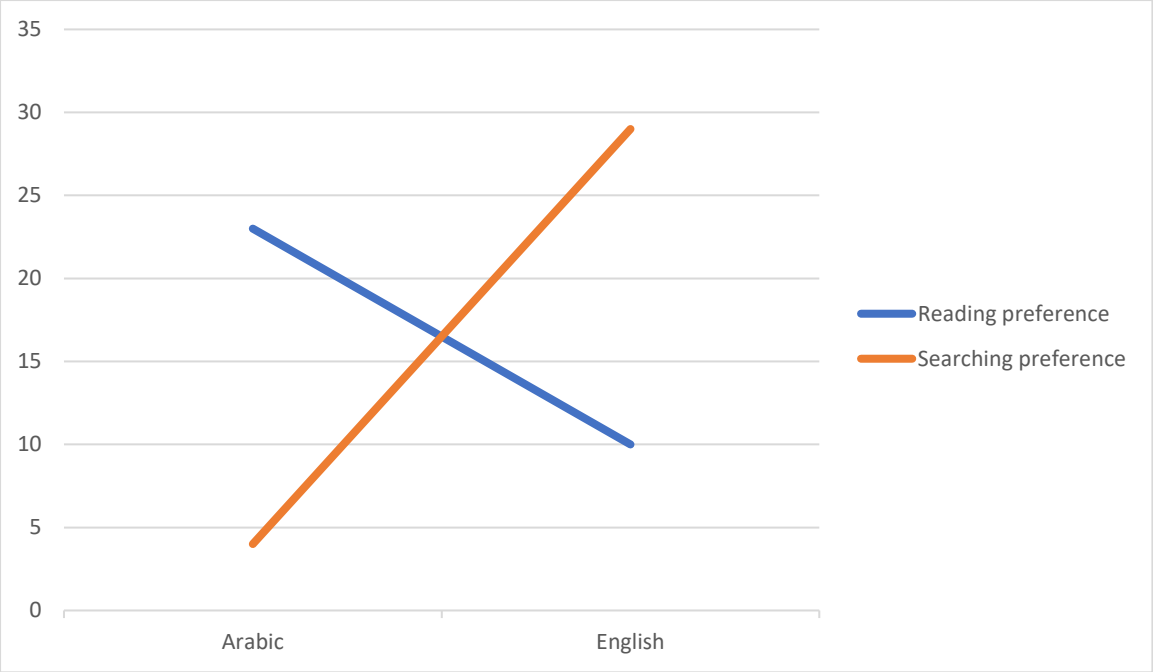

Figure (2) Reading preference versus searching preference (Shehata, 2017, p. 4)

The previously mentioned results were found to be consistent with prior findings discussed in the literature. In particular, studies have found that scholars prefer using search engines because they provide important capabilities in retrieving relevant scholarly literature. Additionally, search engines do not require a subscription and are not limited to a single database (Borrego & Anglada, 2016; Hemminger et al., 2007; Nicholas, Boukacem-Zeghmouri, et al., 2017).

EULC and EKB

The Egyptian universities are subscribed to 15 databases that allow access to thousands of research papers in all scholarly fields. The EULC portal provides a search engine that searches databases available through the portal. Accessing these databases requires one to be an academic staff member or a postgraduate student. The data showed that 87.8% of those in the sample use these databases to find scholarly papers. However, most of the sample does not use the search engine provided by the portal. In the interviews, two reasons for not using the portal search engine were mentioned: the lack of accuracy and the slow searching speed.

The participants revealed that they prefer to use EULC databases because they allow them to download the full text of scholarly papers that they cannot download through Google Scholar. Another reason is that the portal gives access to Arabic databases that provide access to a reasonable number of Arabic journals and allow the users to download the full text of Arabic papers. For example, as one participant stated,

> I frequently go to the central library and access the databases through the EULC portal. It allows me to download most of the papers I need. […] Also, sometimes I visit the knowledge embassy in the central library, where they provide access to the full text of thousands of Arabic books (P11).

Similarly, EKB provides access to 27 scholarly resources, which include six Arabic scholarly resources and one French scholarly resource. Additionally, EKB provides access to some Arabic journals. The portal allows any person who is using the internet in Egypt to access these databases free of charge.

The data showed that the same number of participants is using EKB databases. The participants mentioned that EKB is easy to use, free and available for everyone, all of which encourage them to use it. Only two participants indicated that they use databases because of the high quality and trustworthiness of retrieved papers. Two participants showed awareness of the importance of checking the quality and credibility of scholarly papers. These findings are consistent with the literature, as studies have confirmed that researchers prefer databases, second only to search engines (Borrego & Anglada, 2016; Liyana & Noorhidawati, 2014; Nicholas, Boukacem-Zeghmouri, et al., 2017).

Sci-Hub

The interview data revealed that eleven participants use Sci-Hub as a platform to download scholarly research papers that are not accessible to them. Sci-Hub provides access to more than 51 million pirated scholarly papers in all disciplines. The website claims that it tries to remove

barriers faced by scholars and to challenge the publisher model that depends on payment to read articles (Bohannon, 2016; Machin-Mastromatteo et al., 2016).

The participants who mentioned using Sci-Hub justified their use of the website by citing ease of use; they said that they could download almost any paper from the website. Participant 8 reported that he is heavily dependent on Sci-Hub because it is easier than using the EULC portal:

> I frequently download papers from Sci-Hub. All I need is the DOI of the paper, and I insert it into the search box. It is even easier than logging into the library portal.

Discussions of research ethics with the participants and the fact that Sci-Hub gives them access to pirated papers revealed that the participants do not mind using pirated scholarly papers even if they know that this use is illegal. The participants argued that they have no alternative to download scholarly papers using legal methods. According to the participants, neither EULC nor EKB provides access to all the scholarly papers they need. For example, participant 23 said,

> Often, I cannot download papers through EULC and EKB. I do not have another alternative; Sci-Hub is easy, and I always find what I need through it.

Social networks

The data showed that four participants rely on social networks to obtain scholarly papers that they cannot download through their library's subscriptions. The participants mentioned two Facebook groups that are used to request scholarly papers from other peers who have access to these papers. Additionally, three participants indicated that they use ResearchGate to find new research in the field by following scholars who have the same research interests or by requesting a copy of the papers from authors who subscribe to ResearchGate. For example, participant 23 said,

> If I cannot find a research paper and really need it, I use many approaches to get access to this paper. I ask other peers in research groups on Facebook, and I also use ResearchGate to request the paper from the author if the author is subscribed there; so far, this is working for me.

Interestingly, participant 17 mentioned that he has an account on ResearchGate and that he has received requests to send the full text of the papers he has published. The participant said,

> I frequently receive requests to send the full text to other peers on ResearchGate. I usually send them the full text, but I never share the full text in public because of copyright issues.

The data revealed that the participants use social networks to find and download papers, but only one of them shares research he published through ResearchGate. These results were found to be consistent with other studies finding that scholars tend to be consumers of information in the informal scholarly sphere and that they fear sharing their research through these channels (Gruzd & Goertzen, 2013; Gruzd et al., 2012; Shehata. et al., 2015a, 2015b, 2017).

Searching styles

Consistent with prior evidence that Arab scholars use similar searching styles while seeking information in the Arabic and English language (Al-Wreikat et al., 2015; Elgllab. & Shehata., 2017; Shehata., 2017), the current study results showed that the participants use almost the same methods to seek, locate and download scholarly information. Google and Google Scholar were found to be the primary tools used by the participants to seek information and download scholarly papers. Additionally, the participants expressed that Google is a stepping stone for further reading and generating new keywords that could be used to retrieve more relevant results.

The participants' search techniques included selecting suitable keywords, examining results by reading the title, browsing the results that they find relevant, refining keywords, and searching

by using new keywords. The sample expressed that they have difficulty reading scholarly texts in the English language, which affects the amount of time that they spend searching for English scholarly papers.

For the study sample, two main methods are used to track scholarly information if they fail to retrieve useful data through Google (Figure 3). The two paths used by most of them are the EULC and EKB portals, which provide access to a relevantly large number of scholarly databases. The participants' responses revealed that they are reluctant to use Arabic databases, as they do not contain recent scholarly Arabic papers. Interestingly, the participants prefer reading Arabic papers if available, but they rarely search for Arabic papers on the internet and always search for English resources.

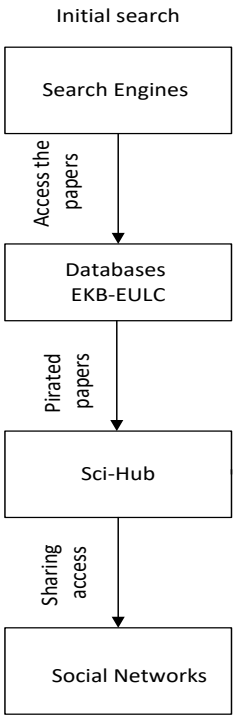

Figure (3) Searching styles of information

The participants were found to use Sci-Hub and social networks as the last resort if they fail to download the papers through the popular channels. Those two methods were found to be used to download papers identified through search engines and scholarly databases. The results showed that when the participants fail to obtain scholarly papers through the previous methods

and social networks, they stop trying to access these papers and find alternative scholarly papers discussing the same topic. However, two participants revealed that if they cannot download the full text, they use information in the abstracts in their studies.

Conclusion

This study contributed to explaining the information-seeking behavior of Arab-speaking postgraduates. The study revealed that postgraduates seek information from different resources, yet physical libraries were not mentioned during the interviews. Physical libraries' importance has declined, and they are no longer considered a suitable source of information.

The study also revealed that the participants' information seeking is affected by language barriers. Thus, most participants face difficulties while searching for and reading scholarly resources in the English language. Lack of English language proficiency affects the speed of the search and the quality of the results retrieved. However, the study participants expressed that they prefer searching for scholarly papers in the English language because there is more English scholarly content on the web than Arabic content. These results are consistent with the results presented in previous studies (Al-Wreikat et al., 2015; Elgllab. & Shehata., 2017; Shehata., 2017).

Interestingly, the study revealed that the participants who use illegal scholarly sites such as Sci-Hub do not care about copyright issues and research ethics, as their primary focus is obtaining the scholarly papers they need for their research. This finding emphasizes the need to educate young scholars about research ethics and acceptable scholarly practices. However, a recent study by Nicholas, Boukacem-Zeghmouri, et al. (2017) showed that scholars from France and Malaysia also use Sci-Hub to obtain scholarly papers, which means that scholars in other countries also exhibit this behavior in using such sites when they have difficulty downloading scholarly papers.

This study was conducted with social science and humanities postgraduates as part of a series of studies aiming to explore Arab language speakers' scholarly practices. The information-seeking behavior of science disciplines may differ, as the teaching language is mainly in English. This study contributes to the field by expanding our understanding of how non-English language speakers seek scholarly information and what sources are used to obtain scholarly papers. This study contributes to the field by expanding our understanding of how non-English language speakers seek scholarly information and what are the sources used to obtain scholarly papers.

Further studies are needed to explore cross-language information seeking in Arabic and English languages. Additionally, there is a need to explore other scholarly disciplines' information behavior. Further studies would extend our understanding of the information needs and behavior of Arab postgraduates, which would help tailor information literacy programs that would help them gain skills that allow finding quality sources of information.

List of abbreviations

EKB - Egyptian knowledge bank

EULC- Egyptian universities libraries consortium

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