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Title	Academic library use in the Google era
Authors	Alazemi, TR, Chen, Y and Kutar, MS
Type	Conference or Workshop Item
URL	This version is available at: http://usir.salford.ac.uk/id/eprint/57297/
Published Date	2016

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Academic Library Use in the Google era

Talal Alazemi¹, Yun Chen², Maria Kutar²

¹ College of Basic Education, Public Authority for Applied Education and Training, Kuwait, ²Salford Business School, University of Salford
tr.alazemi@paaet.edu.kw / Y.Chen@salford.ac.uk / m.kutar@salford.ac.uk

Abstract

Academic websites provided by academic libraries face challenges to their utility stemming from the rapid developments in information and communication technology (ICT). These developments have created diverse options and channels for information sources that can be accessed easily by users through the Internet, particularly Google search engine and its specialised variants such as Google Scholar. Hence, the number of users who take advantage of library websites is also decreasing because of the availability of other diverse options for information sources and channels on the Internet. This paper aims to explore the role and impact of search engines, particularly Google, on use of the academics' libraries' websites. A qualitative study has been conducted with staff and students at two universities, one in UK and one in GCC (Cooperation Council for the Arab States of the Gulf.). The findings illustrate problems with the use of library websites to search for information. In particular, these concerned the complexity of finding information, lack of resources and the organisation of the library websites. As a result, the library users relied heavily on Google to find information. These findings imply a necessity for the academic libraries' websites to reflect the effectiveness and simplicity of Google's search features and techniques which have become dominant and which are the de facto standard.

Keywords: Academic Library, Google, Information Seeking

1.0 Introduction

Academic libraries' websites today face remarkable advances and challenges from developments in search technology, especially these provided by search engines, such as Google. Users of the academic libraries' websites have a variety of information needs and differ in terms of the strategies they follow in seeking information, yet despite this the simple Google search is the predominant information seeking resource. Academic library users require various kinds of information resources and services and prefer the fastest ways to access information, especially those that require little effort or expertise. In fact, academic libraries' websites do not take into account alternative sources, such as Google, and their influence on users' behaviours,

experiences and needs, which strongly affects the use of their websites. Haglund and Olsson (2008, p. 57) reported that ‘libraries spend huge amounts of time and money to work on the structure and content of the library web page, while few researchers use it as a starting point for information searching’.

This report starts with a review of relevant literature on academic library use, and how Google affects academic search strategies. We then outline the methodology used in the study, and present the results collected via interviews and focus groups. The discussion highlights a number of difficulties postgraduate students, academics, and library staff encountered when attempting to use the library website, and in the final section we present our conclusions and recommendations.

1.1. The Academic Library and Its Users

Hoare (2003, p. 3) defined the academic or university library as ‘attached to academic institutions above the secondary or high school level, serving the teaching and research needs of students and staff’. The academic library is the most important of all types of libraries because it serves a wide range of users, unlike most other libraries. According to Brophy (2005), the many different types of users of the academic library include the following:

- Undergraduate students.
- Postgraduate taught students.
- Postgraduate research students.
- Teaching staff.
- Research staff.
- University management, including heads of academic departments and senior management.
- Former students (alumni).
- Members of the local business community.
- Members of the public, including organised community groups.
- Higher education funding councils (which provide much of the library funding and require the library to be accountable).
- Distance learners.
- Members of government.

- Local or regional library communities, including specialised and public libraries and other academic libraries that rely on cooperative agreements.
- Users with special needs.
- National and international research communities, especially in relation to special collections and services.
- National and international communities, especially in relation to interlibrary loans and other cooperative arrangements.
- Library and information professions.
- Posterity (future generations of users).

Indeed, this list of academic library users could be extended. Oakleaf (2010) argued that people who could potentially be affected by academic libraries include parents or even future employers. However, in this study we focus on postgraduate students, academics and library staff. Postgraduate students have the most diverse needs related to their scholarly activities (e.g. assignments, dissertations and theses). Academics are frequent users of the library website in order to research or prepare lectures for their students (e.g. articles, books and proceedings). Library staff are keenly aware of the resources and services that users have at their disposal. And intimately know the users of their libraries (Fox, 2014).

1.2 The Google Impact on Academic Search Strategies

Numerous studies have investigated postgraduate students' and academics' methods and search strategies used to look for information and how they employ them when they seek information.

The Internet is the most popular method used by postgraduate students and academics, and they use it as their primary tool, particularly Google and Google Scholar search engines, as an important point of access to conduct searches of any kind of information in both everyday life and research (Haglund and Olsson, 2008; Al-Moumen, 2012; Vezzosi, 2009; Liyana and Noorhidawati, 2010; Drachen et al. 2011; LAC, 2012; Catalano, 2013).

Searching the Internet using either Google or Google Scholar is usually an initial search, not a deep search, to obtain and find general information (Haglund and Olsson, 2008; Liyana and Noorhidawati, 2010). According to RIN (2006), Google is

used for a variety of general search tasks, but not as much for tasks that are critical to the research. Moreover, Wu and Chen (2014) found that postgraduate students use Google Scholar in the early stages of their information seeking only if they have vague concepts of what they are looking for; most of them use it mainly to retrieve full-text documents.

2. Use of Academic Library Websites

The expanded access to various information resources available through the Internet has become a challenge for academic libraries. This advancement has led many users of the library, such as postgraduate students and academics, to use alternative sources of information in addition to the library's website. Sadeh (2007a) argued that some challenges threaten libraries:

- The open direct channels provided by the Internet eliminate the need to go to the library or search through the library because users can obtain online information and physical items through various Internet services.
- The search process provided by Internet search engines is easier and intuitive. Hence, users do not learn library research skills.
- Online search engines lead to new means of human interaction. Instead of consulting a reference librarian when looking for specific information, users check the citation number of the article they need.

Several studies have investigated the reasons for the use or non-use of academic library websites by postgraduate students and academics. In terms of postgraduate students, several studies have indicated the low use of the library as users instead turn to the Internet—namely, Google and Google Scholar. Vezzosi (2009) found that the use of the library was limited by the doctoral students to a few services. Although they expressed that they were familiar with databases, catalogues, and online journals, they named Google as a crucial information tool in seeking information. Similarly, Drachen et al. (2011) found that Google and Google Scholar were the main tools used to conduct searches. They preferred Google to the other databases offered by the library, which did not function well. The PhD students in Wu and Chen's (2014) study indicated that Google was user friendly and that they could search efficiently, whereas the library's site required the knowledge of databases and sophisticated search methods. Postgraduate students also preferred Google Scholar to find highly

crucial information sources of academic-related learning and research information. They used it mainly to retrieve full-text documents. Some of them used it to validate the quality and authority of certain documents according to the citation information found on Google Scholar.

The postgraduate students did not regularly use the library website due to the ability to take courses online, which reduced their use of the library, or the availability of the facilities provided by the Internet which are more than any other library resources (Onifade et al., 2013). Furthermore, they encountered a number of difficulties with the library website, such as finding appropriate information resources and using databases or Boolean logic in the library as well as the use of passwords to retrieve off-campus information and the lack of some databases in a particular language (e.g. Arabic); these were considered factors that influenced the use of the library. Consequently, they preferred relying on resources that did not require effort, such as search engines regularly Google (Al-Moumen et al., 2012). A recent study by Ganaie and Rather (2014) stated that postgraduate students access the e-resources of the library through search engines because they encountered problems through the university library website, such as networking, the time-consuming need for a username and password to access resources, and the limited e-resources held by the library. These findings support Awana's (2008) argument and Khan et al.'s (2014) findings that the lack of informational materials (e.g. e-resources, inadequate collections) and insufficient physical facilities were major issues and factors in the effective use of the library. However, the use of the library can be increased by faculty members, due to the crucial role they can play in encouraging postgraduate students to use the library to study, conduct research, or do their assignments (Al-Moumen et al., 2012). Correspondingly, Yousef's (2010) study found that many faculty members usually advised their students to go to the library and told them how to use its resources.

In term of academics, their use of the library was lower. Haglund and Olsson (2008) found that most researchers used Google to search for all kinds of information and rarely used the library as they had very little contact with the library. According to these authors, 'the majority of the researchers seldom use the library web page as a starting point for information searching and instead use bookmarks/shortcuts added by themselves on previous visits to the information sources' (p. 55). Moreover, they

indicated that they were confident that they could manage on their own, and they relied heavily on instant access to electronic information.

Marouf and Anwar (2010) found that the faculty's use of the library was extremely low. They attributed this finding to the low quality of resources, especially in a particular collection (e.g. Arabic), limited access to international resources, and limited library staff. Khan and Shafique (2011) reported similar findings and showed that, although the faculty used their institutional libraries to find resources, they were hindered by the disorganised sources and the lack of required materials. Consequently, they used the Google search engine.

Haines et al. (2010) found that none of the researchers in their study used the library and instead preferred to use different sites such as Google or websites specialising in their subject area, rather than the library website which one researcher described as painful to use. A report by RIN (2006) found that, academic researchers use Google Scholar primarily to follow up on references instead of searching for unknown publications, they do not depend on it for deep research; thus, ultimately, they use it for convenience.

Although these findings are slightly recent, they supported Anderson's (2005, p. 32) argument, who stated that 'Google has succeeded wildly at finding its users the information they want in return for a minimum investment of time and energy'. Anderson added, 'Google allows the user to pick his own terms and phrases and use them to interrogate the full text of documents on the open web' (p. 35).

Based on the findings of the previously mentioned studies, the use of library websites by both postgraduate students and academics remains low because they prefer other tools, such as the Internet and search engines, especially Google. Sadeh (2007b) described users' expectations when looking for information, explaining why users preferred web search engines and other Internet services. The study pointed out that these online sources are attractive and provide many benefits, such as the following:

- Simple searches can often provide sufficient results without needing sophisticated research skills. Moreover, they provide alternatives to search queries and spelling corrections.

- Users do not need to use precise search terms.
- Internet search engines use simple interfaces, so expertise is not required to perform a keyword search.
- Internet search engines provide organised faceted browsers that help users minimise their searches and gain accurate results.
- They provide vast and heterogeneous content. For example, Google Scholar and Windows Live Search have more resources than are available in libraries. Although the library resources are of higher quality, users like to search in a variety of places, which can be a challenging process (e.g. catalogues, remote databases, and digital repositories). They prefer to search for all resources in a single location, which search engines such as Google and Google Scholar provide.
- Internet search engines are easy to access because they are always available and do not present barriers to searches, such as a proxy server.
- Users generally prefer online materials that can be accessed from everywhere. Online access facilitates searching within documents, zooming images in and out, watching videos, listening to audio items, and extracting quotations.

In addition, a recent study by Johnson et al. (2015) aimed to discover the factors that influence the evaluation of information and the judgments made in the process of finding useful information in web search contexts, particularly in Google and Google Scholar. They found that the user's involvement in the information interaction and the influences of the perceived system related to ease of use and information design.

Practical research was conducted to support future study which is described in the following session.

3 Investigating Academic Library Use

3.1. Study Design

In order to achieve the study objective, semi-structured interviews and focus groups were conducted with academic and library staff in order to investigate the following issues:-

- use or non-use of the academic library website and its purpose;
- search strategies participants adopt for seeking information;
- advantages of the alternative sources they use rather than the academic library website.

Interviews with six academics and six library staff, and four focus groups with 16 postgraduate students at two universities were conducted, one in UK and one in GCC (Cooperation Council for the Arab States of the Gulf).

Participants	Postgraduate Students	Academics	Library Staff
Data Sources	Focus Groups	Interviews	Interviews
GCC	2 Groups (2x4)	6	6
UK	2 Groups (2x4)	6	6
Total	16	12	12
	40 Participants		

Table 1: Participants from both universities

The questions asked in the data collection activities are shown in the table below:-

Issues to explore	Questions to Academics and Postgraduates Students	Questions to Library staff
Use or non-use of library websites	If they use the library website when they need information? If not, why? If yes, how often do they use it? If rarely, why they rarely visit the library website?	If they cannot find what a postgraduate students and academics are looking for, either information services or resources?
Adopted information search strategies	What are the methods (search strategies) they follow to satisfy information needs?	What methods (search strategies) do they follow to meet their needs?
Advantages of alternative sources	What are the advantages they believe are provided by websites or sources they visited or used but do not exist in the library website?	What are users (postgraduate students and academics) frequently asked questions regarding the obstacles and difficulties they encounter with the library website? Why?

Table 2: Questions asked of participants

A content analysis approach was applied to analyse the data. The analysis focused on the participants' purposes using the libraries' websites or other sources and their consequent opinions about them, their search strategies when they look for information to satisfy their needs in order to gain an in-depth understanding of the impact of search engines particularly Google on use of the academic libraries' websites, which will be illustrated in the following section.

3.2 Data Analysis and Findings

The findings showed that all the participants who used the library websites did so based on their information needs. Moreover, the participants who used the library websites did so only rarely or did not use them at all; instead, they used alternative sources, thereby indicating similar information needs. With regard to the postgraduate students, their needs were diverse and were affected by their positions. The PhD students used the library websites to conduct their research, while the master's students used them to do assignments, write proposals, write dissertations, do projects, find resources from reading lists provided by their lecturers or search for information based on recommendations by their lecturers. While academics searched for sources to help them conduct research, teach their students, gain new information and verify existing information.

The findings showed that only a few participants used the library websites frequently, the majority used them only rarely and only a few used them sometimes. It was remarkable that at GCC State, the majority of postgraduate students never used the library website, and the academics rarely or never used it. They indicated to a number of difficulties they encountered when attempting to use the library website such as:

Lack of Organisation

All participants indicated that information in all areas cannot be searched within the library website using a single search tool as with Google, because resources are scattered across different search options.

Lack of Findability

All participants mentioned several problems related to the findability of resources via the libraries' websites such as:

- Failure to retrieve existing resources, leading to difficulties in finding these resources;
- Failure to recognise the names of books, conferences and whole authors' names, as well as journal article titles or phrases that users have typed;
- Failure to retrieve organised results as they are displayed randomly; and
- Failure to retrieve accurate information.

Lack of Resources

The findings suggest that the vast majority of the libraries' users encountered difficulties due to the lack of availability of some of the resources they need. The findings revealed that there was a lack of new and specific resources on library websites (e.g. Arabic collections). In contrast, the availability of resources on Google and Google Scholar was a reason to rarely or never use library websites.

Complexity of Academic Library Website and Searching Characteristics

The findings revealed a number of complexities in the characteristics of the libraries' websites and systems, which affected users' experiences and were obstacles for them when they were conducting searches. The findings showed that regular users of the library websites stated that they used them to find resources that were not available from other sources, such as Google, Google Scholar, databases and other websites, as well as to find books, because searching the library websites for other resources was a confusing and difficult process. The participants who rarely or never used the library websites do that due to the ease of using and searching other sources, such as Google and Google Scholar.

The advantages of Google

The most interesting finding was that all the participants preferred the advantages of Google and Google Scholar and compared these with the abilities of the libraries' websites. All participants first looked for information on the Internet, particularly Google and Google Scholar. Even librarians did this when they encountered problems with their libraries' websites and were unable to find the information required by the users.

All of them declared that the difficulties they experienced and encountered with the libraries' websites were not encountered when they used Google. Most of them do not use Google and Google Scholar to seek initial information; rather, they use them for all the information they need. They also use Google to access specialised databases or journal websites related to their subject areas. Furthermore, many of them access the resources to which the library subscribes which cannot be accessed through Google; they access these via the universities' Wi-Fi and also by using Google. Moreover, obtaining citations for resources or articles on Google Scholar, which helped to

identify related articles, was a factor that affected library use and preferred Google or Google Scholar.

4 Discussion and Conclusions

Both the literature and the results above suggest that the use of academic websites has been significantly affected by Google. The reason causing the problem is twofold: *Issues* with academic websites and *Advantages* of Google. The table below illustrates the comparison between academic websites and Internet resources (e.g. Google) from four aspects: *Required Skills*, *Interface Usability*, *System Accessibility*, *Resource Availability*.

	Academic Websites	Google
Required Skills	Precise search terms needed	Less requirements on searching skills – simple searches can provide sufficient results
Interface Usability	Resource are scattered across different search options	Simple interface, no keyword search required.
System Accessibility	Time-consuming need for a username and password to access resources	Easy to access 24/7 online
Resource Availability	Lack of informational materials (e.g. e-resources, inadequate collections) and insufficient physical facilities Lack of some databases in a particular language (e.g. Arabic)	Vast and heterogeneous content on different languages

Table 3: Comparison of academic website and Internet resources

Despite the diversity of services and resources that can be accessed through a library website, many users are missing the opportunity to take these as they are lured by the simplicity and effective search capabilities offered by Google. There is a mismatch between user needs and what the academic library provides. The richness of the library resources have the effect of making them harder to access through complex interfaces. Google’s regularly refined but simple offering is now the de facto library and increasingly offers integration with the resources provided by libraries (e.g. in

Scholar the ability to find papers through the services that your institution subscribes to). It may be that we are reaching a tipping point and that libraries might more effectively devote their resources towards looking at ways to capitalise on Google, developing sites that integrate and complement it rather than seek to provide a little used alternative. There are clear dangers in this approach, which would entrench the hegemony of Google, but it is clear that the academic library much change in order to avoid becoming obsolete. Given the take up of Google, a more fruitful approach to this topic might be to ask instead why library users don't use Google, as a starting point to understand how to improve the offer and attract users back to the library.

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