STUDENTS' PERCEPTION ON DUBLIN BUSINESS SCHOOL DISCOVERY SEARCH AND INTERNET SEARCH ENGINE TOOLS

By

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Abstract

Discovery search is a tool that allows user to access the majority of the library's resource using a single search. In a previous research, it was discovered that all libraries are automated with some form of online catalogue system, subscriptions to electronic journals sites and bibliographic indexes. Notwithstanding the foregoing, students seem to preferred internet resources as the interface is more intuitive to use and yields unlimited information on the subjects. Consequently, this study offers a view, by comparing the Dublin Business School (DBS) discovery search with internet search engines within the context of supported process and expected outcomes within DBS environment. The purpose of this research is to explore DBS students' perception of the discovery search compared to internet search engine experiences on the information search to support their learning and research. The study offers a general perspective by examining students' search behaviours within the context of supported processes and expected outcomes in an academic environment. The research is conducted by adopting a mixed method approach: 4 interviews and a survey were conducted in order to obtain both quantitative and qualitative data. The results of both data analyses were compared and contrasted. The key finding of the study discovered students often preferred the use of internet search engine, believing it is more efficient and user friendly than a DBS discovery search tool. In addition, DBS students were very confident and always find information when using the internet search engine. Also, in this study, our findings suggest that, DBS postgraduate students increasingly rely on the DBS discovery search tool while the undergraduate prefer Google scholar to support their work. It is recommended that, information literacy should be mandatory implemented to the instructional curriculum of both library and Gateway courses. It is recommended that DBS teaching librarians need to educate the student s in making the best use of the DBS Discovery.

Keywords: Internet search engine; Discovery search; Student information literacy; Dublin Business School

Introduction

Discovery search is a tool that allows patrons to access the library resources using a single search, users spend less time in formulating queries that often yield large result sets. These resources include academic journals, magazines, books reviews and records of items in the library's catalogue such as books, print journals and DVDs (Sadeh, 2013). While internet search engines are programs on the web that are designed to help users find information stores

on websites, Franklin and Curt (2000) state that all search engines perform the same basic tasks.

The purpose of this research is to explore Dublin Business School students' perception of the discovery search compared to internet search engines experiences on the information search to support their learning and research. The study offers a general perspective by examining students' search behaviours within the context of supported processes and expected outcomes in an academic environment. Drawing on multiple data gathering methods, the study combined qualitative and quantitative information to illustrate the situation and goals driven nature of the information gathering and consumption process.

The importance of an internet search engines is that it aids the users to search information on the worldwide web. This information may be in a specialized form in web pages, images, information and other types of files. Internet search engines search the web; users enter search terms/keywords/phrases to retrieve information and web pages from its database that match the search terms entered. Therefore, this runs on special sites on the web which is designed to help the users find information stored on other sites and show search results in the amount of help available. Examples of internet search engines are Google, Yahoo, and Bing., etc. (Sivasubranmanian, 2015)

While the importance of Discovery search is to enable to search across a wide collection of subscribed and open-access information resources through a centralized index that has access to the library's wealth of information resources (Nelson & Turney, 2015). Discovery search tool such as EBSCO Discovery Service (EDS) are web based application software that search journal-articles, books, conferences materials and library catalogue metadata in a unified index and presents search research in a single interface example (Jody, 2012).

This study has never been conducted in Nigeria, although a similar study was conducted by the Brooklyn College librarians, in which they compared an older version of discovery search (known as the federated search). Georgas (2013) compared Google and federated search tool. Thus, their research result discovered that, results generated within federated search tools are more objective than the results generated within Google. In recent years, Armstrong (2009) carried out a similar study in which he asked students to compare federated search and single database searching, and he produced comparable results which show that students preferred federated searching because it enabled them to find more relevant results.

Research Aims and Objectives

The aim of this study was to measure undergraduate and postgraduate student search preferences for using a discovery search tool compared to individual database search. Unlike other usability studies of Meta search tools, clarifications of effectiveness, efficiency and user satisfaction were based solely on student first impressions; the students themselves determined the usefulness and quality of search results after only initial and brief exposure to both resources.

This dissertation therefore has three research objectives.

- To identify which search tools DBS students (undergraduate and postgraduate) prefer when doing their research.
- To compare the effectiveness of the two search tools that give a relevant research resources when DBS student doing research (DBS discovery search and internet search engines)
- To inform the teaching librarians of the effectiveness of each search tool and students' preference

Results:

The results of the primary research are analysed and displayed, both quantitative (survey) and qualitative (interviews) data findings will be presented separately and further discussion

combining both results will be provided in the discussion section. After this the responses to each question are displayed in the order in which they appeared in the questionnaire.

Response Rate

The DBS enrolled 9,000 students and because of the large sample size, the study used the Krejcie and Morgan (1970) table which indicated 368 sample of a given population number of 9,000. However, there was low response of only 100 people to the questionnaire; due to DBS students' holiday period. Among those collected, Ten of them have missing data, which were treated; and majority of the blank space were in open-ended questions in section (2) of the questionnaire. The survey which compares students' perceptions of DBS Discovery search and internet search engines use was complemented by the qualitative data that was collected, and together they elucidate the overall research questions of this study.

Personal Questions

The first two survey questions were designed to provide information about the student's education level in the college, their departments and levels. In addition, the study have compared and contrasted the results of the desired response rate which will allow drawing such comparisons as the results would be representative across the intended population of the research. However, survey respondents were representatives of all departments of DBS which is shown in Figure 1. The highest department that responded to the questionnaire survey is Business with 14 responses and 11 responses from information and library management.

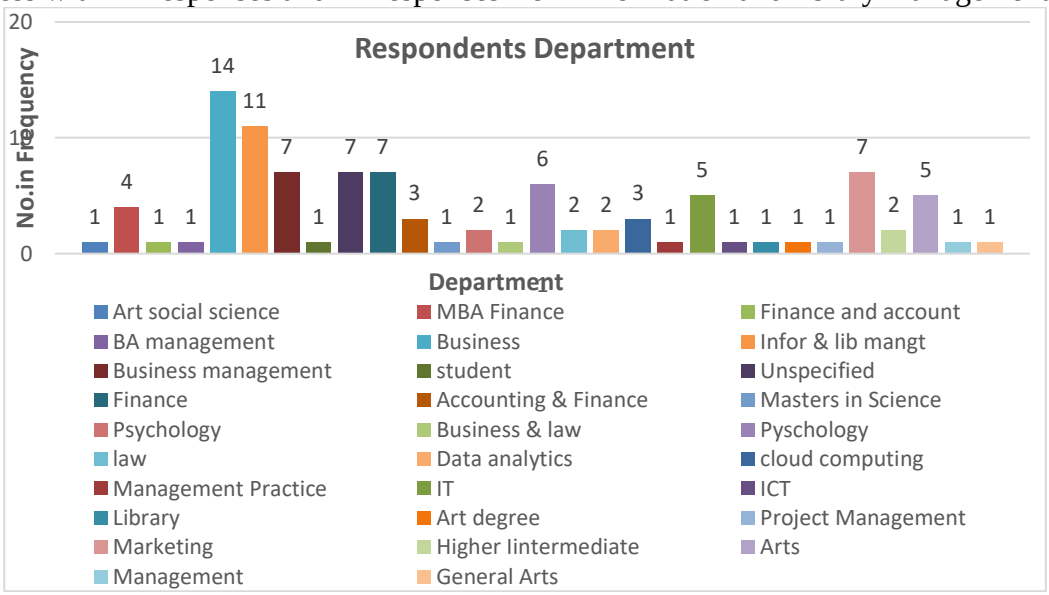

Figure 1: Respondents Department

Level of Education

In this section of the questionnaire, students were asked to identify their level of education. This is very important in understanding the study results. As it is shown in Figure 2, the majority of the respondents that answered the questionnaire are postgraduate students, with response rate of 62%, while undergraduate students' rate is 38%.

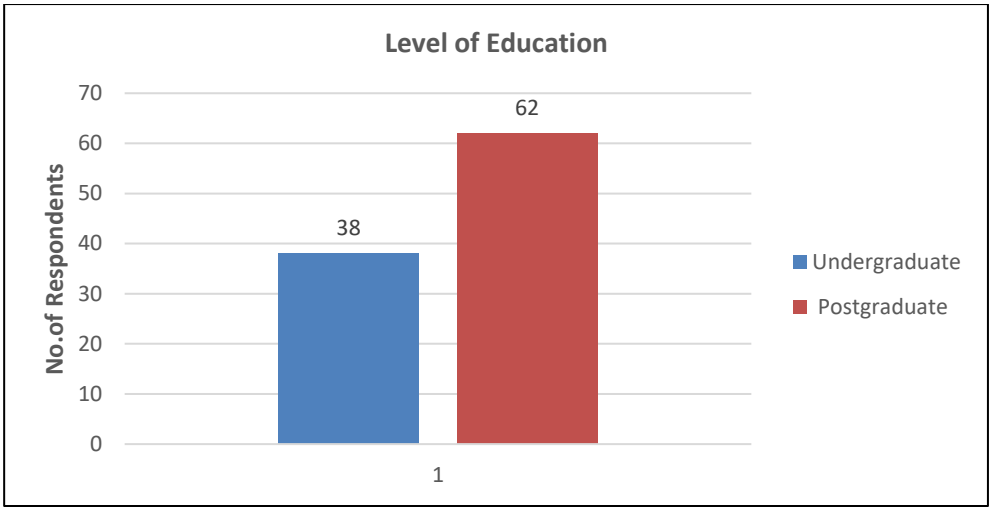

Figure 2: Level of Education

Gender

In the questionnaire, respondents were also asked their gender. 51 per cent of the respondents are female, 47 per cent were male, while 2 per cent of the respondents chose not to answer. This indicates that 51 per cent respondents that filled the questionnaire are female, 47 per cent are male and the 2 per cent are unspecified. This result shows that relative gender balance was achieved. This can be seen in Figure 3.

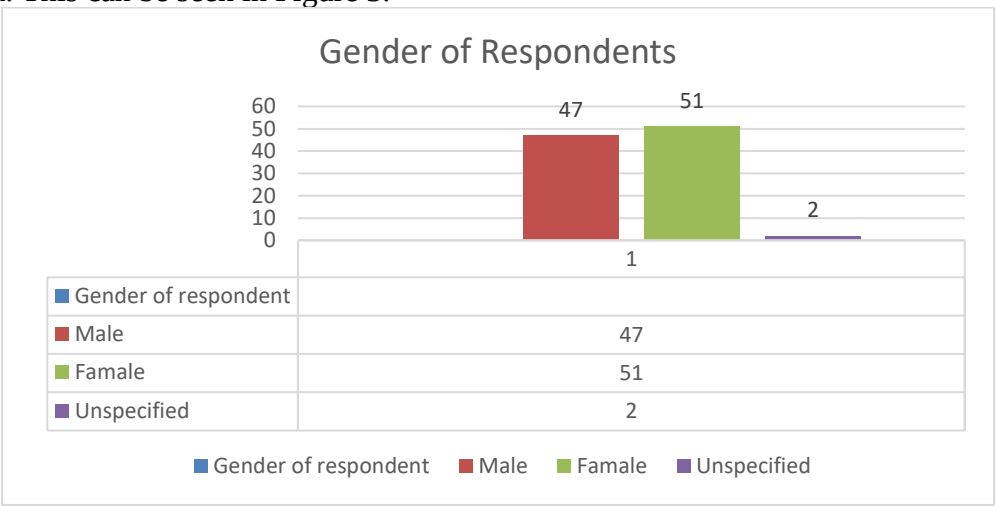

Figure 3: Distribution of the Respondent based on Gender

Age

There are questions in the questionnaire that dealt with respondents' demographics. Respondents were asked of which age group they belong. The majority of respondents were aged between 20 and 30 years with 41 per cent, 26 per cent of them are within the ages of 30-40 years, 50 to 60 years old are 13 per cent, and 12 per cent of the respondents were under 20-year-old and 7 per cent of the respondents were over 60 years of age. A detailed breakdown of respondents' age is presented in Figure 4.

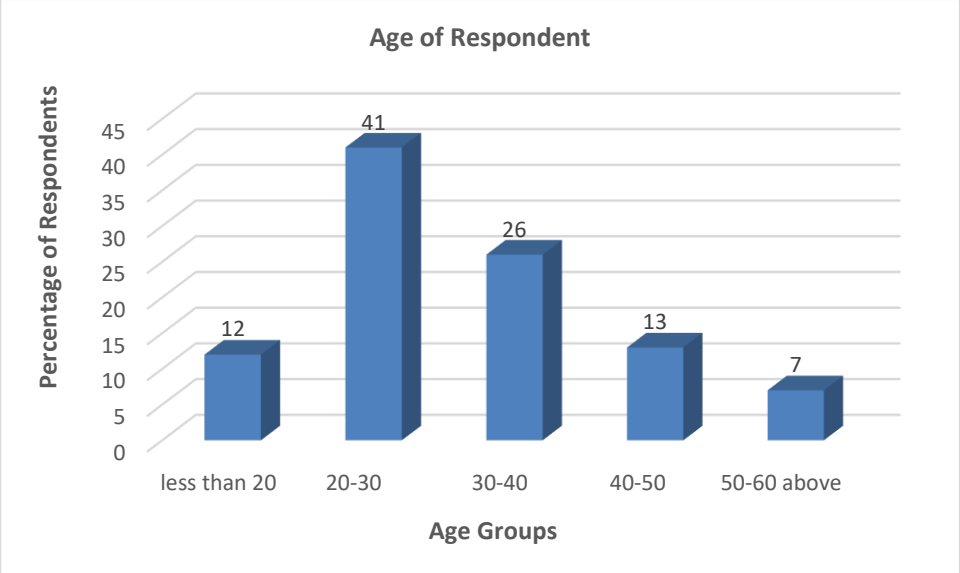

Figure 4: Age of Respondents

Search Tools Use By Respondent Often

Another question asked students to state which search tools they use most often, when searching or doing research. From the Figure 5 below it is clearly indicated that 57 per cent of the respondents use the internet search engine, while 43 per cent of respondents use the DBS discovery search tool. According to Daqing *et al.* (2012) undergraduate students preferred internet search engines for their research. Bashir, Mahmood and Shafique (2016) reveal that most students rely on the internet for their academic needs to ease their work and to save time. In addition, De Rosa and OCLC (2006) report observed that student preferred internet search engines as the starting place when searching for information. Asekhame (2014) reveals that library and information students in Bayero University preferred using internet search engines in conducting their assignments. The findings of this question suggest that students most often use internet search engines for their research than the library database.

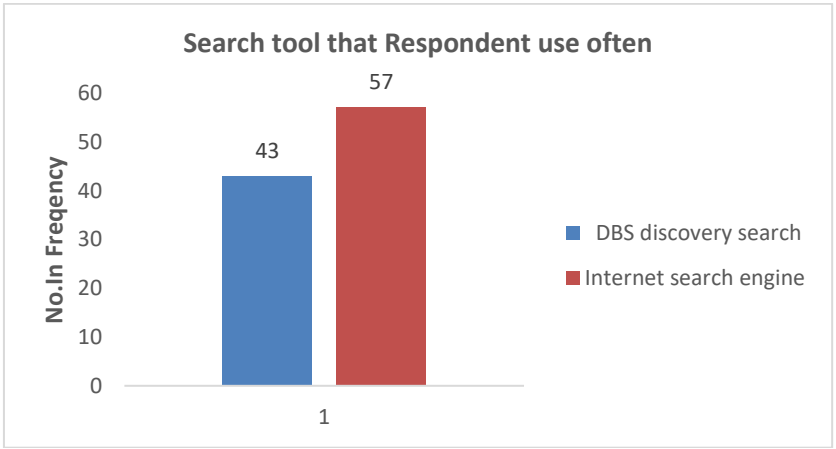

Figure 5: Search tool use most often

How Often Students Find Information Often Using DBS Discovery Search?

The questionnaire asked about when searching for information using DBS discovery search how often they find information. This is done to find out how students often find information

when they are using the DBS Discovery search. The majority of the respondents find information most of the time with 57.58% using DBS Discovery search as shown in Figure 6.

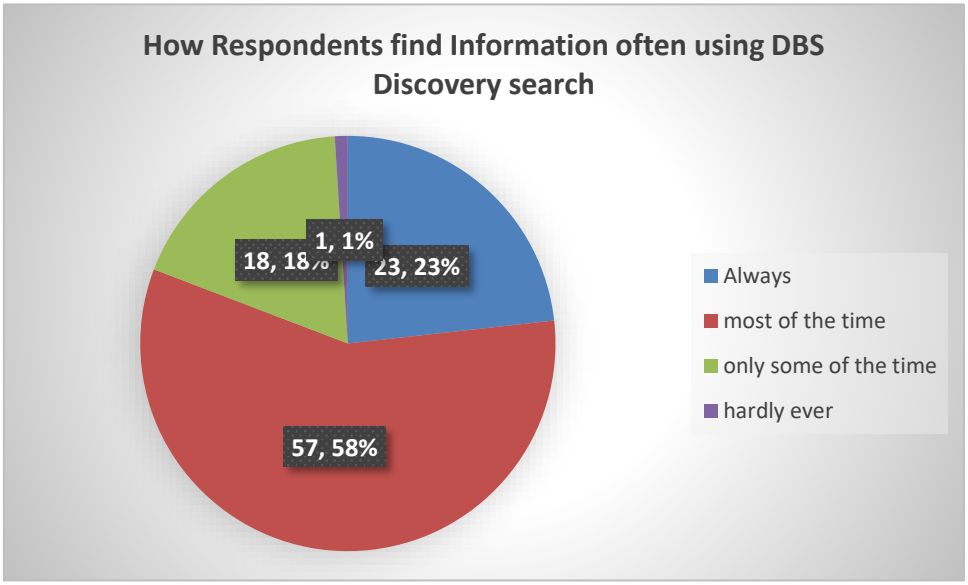

Figure 6: Finding Information often using DBS Discovery search

How Often You Find Information on Internet Search Engines?

The study indicated that 49% of the respondents (Figure 7) replied that most of the times they find the information for their research, and only 3% of the respondent find it rarely, when they are using the internet searching engines for their research. Asekhame (2014) stated that search engines have become an interface of choice to most of the faculty members and students, to address their information needs, against using the library catalogues and others library database.

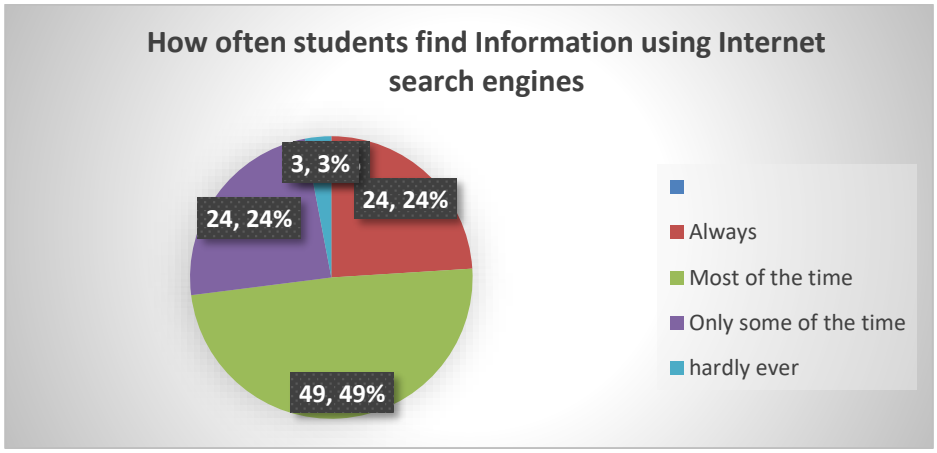

Figure 7: Finding Information often using internet search engine

Confident in Searching Using Internet Search Engines

To further explore respondents' perception of using the two search engines, another question asked the students how confident they felt when using the internet search engines when doing research. The respondents were very confident in their searching abilities; the results of this question are shown in Figure 8. Here, 53% of the respondents have confidence in their abilities to search for information to satisfy their information needs when using the internet search engine. Only 1% of the respondent have no confidence at all. According to Bernhardt *et al.*

(2006) Students' probability of using an internet search engine is statistically related to reports of finding the information one is looking for; having confidence that the information that one has found is factually correct.

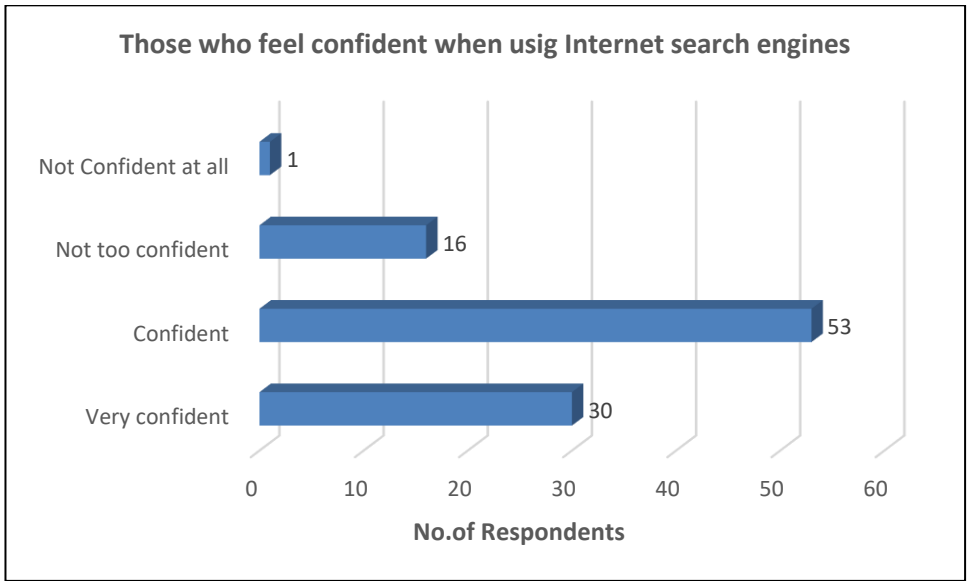

Figure 8: Confidence on Internet search engines

Confident in Searching Using DBS Discovery Search

The respondents were also asked the same question above about the different search engine to gauge how confident they felt when using DBS Discovery search for their research. The result in Figure 9 shows that respondents have confidence in using the DBS Discovery search. Overall, of the 100% of the students who answered this question, 46% have confidence, 28% are very confident, 25% not too confident and 1% of the students have no confidence at all. Purcell, Brenner and Rainie (2012) stated that "internet search engines users not only have confidence in the information they get using these tools, they also have confidence in their own search abilities and report finding what they are looking for most or all of the time".

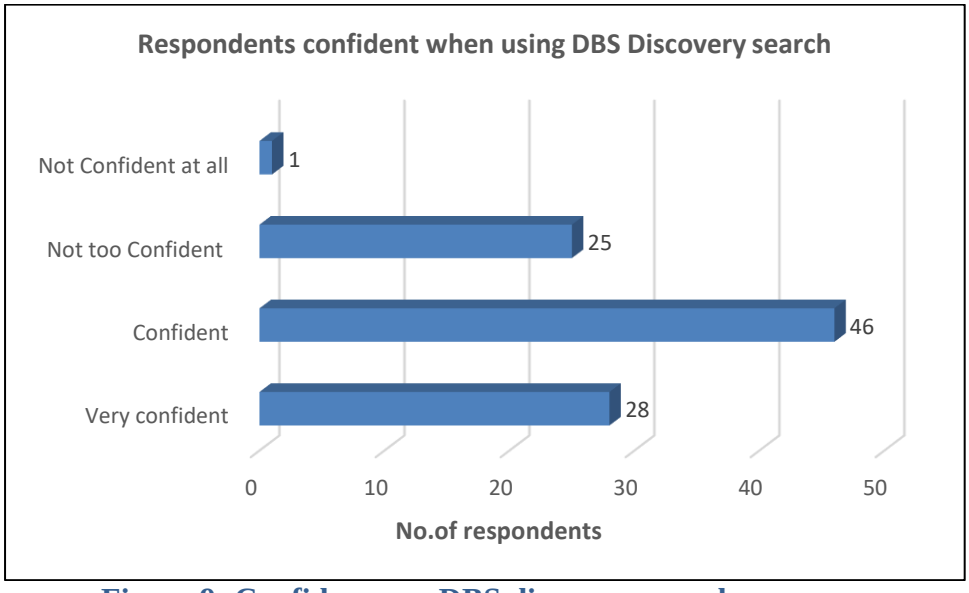

Figure 9: Confidence on DBS discovery search

Search Engines That is User Friendly

This question has answered one of the key research questions of this study which is to find out what search engines student preferred to use for their research. This section of the questionnaire asked the students to compare both the search tools in terms of being user friendly for them. The result, which is presented in Figure 10, shows that 59% of DBS students prefer internet search engine in which is more user friendly than DBS discovery search with 37% respondents.

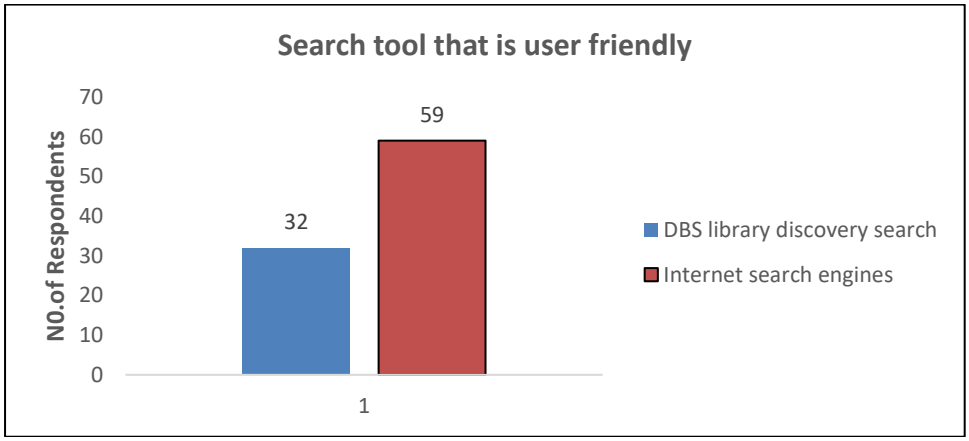

Figure 10: Search tool user friendly

Qualitative Data Findings and Analysis

Initially, in order to ensure anonymity, each interview participant was assigned a code linking them to their educational level. Four (4) participants were interviewed in different department and level. Two postgraduate and two undergraduate students in DBS were used. Therefore, the codes were assigned as follows:

PG 1-participant 1
PG2-participant 2
UG1-participant 1
UG 2-participant 2

Then, the study analysed my qualitative data. The following results are presented in the below sections.

My interview survey findings reveal that most of the participants preferred using Google Scholar as their search engine. Analyses of all four interview transcripts show that the first interviewee was a male undergraduate from the Psychology Department. He preferred the use of Google scholar as his search engine. He stated that search engines give him relevant information for his research. He also said that he finds both internet search engines and Discovery search user friendly. When he was asked how he felt when he did not find pertinent results, he answered

"[…..] Well, I persevere, you know. I become impatient after a certain amount of time but I will find it on Google Scholar ……. the search engine recommended by DBS"

He trusted the internet search engine because of Google Scholar which provided him a good result but he wouldn't use Wikipedia sites in internet search engines. When he was asked about his Google Scholar preference, he said,

"[....] but yeah, Google Scholar is what the college endorsed"

DBS Discovery Search Need To Be Improved

The second interview participant was a female undergraduate student from the Social Science Department. She mentioned that she uses the DBS library Discovery search engine and

sometimes Google Scholar and that they both yield information relevant to her research. When asked what happens if she not satisfied with the results of her search and how she felt about it, she said,

"[….] will probably go for more books or use the subject portal on the Library website instead of searching Google Scholar for it"

Interestingly, this participant expressed an opinion that DBS discovery search are not the best search engines because the DBS discovery search does not give up to date information or new research so she thinks is not trustworthy. She recommended that DBS Discovery search be updated with new articles, journals, etc., because other search engines such as Google Scholar provide more recent and up to date information resources. This suggests that, DBS Library staff need to help students in their use of the Discovery search.

[….] well I do but I think there is more going on, it should be a little bit more open because sometimes if I go to Google Scholar I can find some type of research as in some journals, articles that I can't access with only DBS engine. She said that both the DBS Discovery search and internet search engine are both user friendly, but she mentioned that DBS.

"[……] Yeah I think DBS, I just think DBS may be should have more quiet what is going on and have more but probably they have to pay for that so maybe that's the reason they don't have many resource in their discovery search tool depending on the areas that you searching for they don't really have a wide research as other maybe even other universities may have and sometimes DBS doesn't".

Preferred DBS Discovery Search (Interview Result)

The third interviewee was a level 9 student from the Department of Business and Management. When asked which search engines he uses for his research, he said;

"[….] I use Google sometimes and I use the library website EBSCO Discovery probably more or so than Google"

Moreover, he said the DBS library Discovery search provided him with more relevant information for his research more than Google. When asked how he felt if the search engine do not satisfy his needs, he stated that

"[….] probably frustrated, if I use the library Discovery search too, I usually find what I am looking for. I don't have any issues"

However, the interviewee mentioned that internet search engines are also user friendly and easier to use than the DBS Discovery search. Finally, when asked whether DBS Discovery search provides him with the best results, he said that,

"[….] Yeah, Discovery is reliable because you know itis peer reviewed and you know you can reference it….. whereas, if you are using Google you'll be worry about where the information is coming from; you know you'll have to be more careful with the sources you select"

The last interview participant was also a level 9 DBS student from the Financial Accounting Department. He also stated that DBS Discovery search is his preferred search engine. He said that he has been using the DBS Discovery search since the time he was undergraduate student in DBS, and that make him more familiarly with search tool and also he used the DBS search tool throughout his postgraduate time when performing his research.

"[….] maybe because am used to it, I believe it has more information that is relevant to my study and relevant to my assignment most of the time so Google will be like my backup, I will use it as a second you know second preference."

So, when asked whether he means that DBS discovery search give him a relevant information every time he is doing his research, he said that;

"[….] Yeah not every time you see, you know yourself, you have to use the right keyword to be able to get what you are looking for. But it won't be I won't say every time but I will say DBS (Discovery search) will give me at least 60 to 70% like what I am looking for… but Google, I know it's kind of

bigger than DBS, but I will say if I can't find anything in DBS, sometimes I find it in the Google search engine. Between Google and DBS search engine, I will get what am looking for at least 80% of the times"

When asked how he felt if he did not find any results that satisfy him in his research, he said,

"[…..] Oh God, as a student yourself you know definitely it can be so annoying when looking for something and you can't find it. You know, we students, we procrastinate. We say the assignment is due in two months' times, ah I still have time even when it's close. I will do it tomorrow, I will do it next week, you know, but it's really when it's very close and you want to rush and at that time you want to get the information you are looking for every single time you search which is not happening, you know, and it can be so annoying when you are not finding the exact information you are looking for. It can be so annoying that just the summary"

When this participant was asked whether he trusts internet search engines to provide him with the best results, he was not so sure how to respond,

"[…] No and yes because the internet search engine can be so bogus. I will give an example. I know I will never use encyclopaedia for my assignment but I will just use it as an example. Any individual can go to Wikipedia and search information. I don't know if you know about that but it can be right or wrong at the same time so that is why I know the information on DBS library (Discovery search) will be more kind of close to what am looking for…will be more kind of real to what am looking for, will be more informative, will be more correct to the kind of things that I am looking for so that's why that's another reason why I prefer the DBS (Discovery) search engine .But Google can be anywhere, can be anything that you can find but I just have to be careful about what information I get. Again, it will not always be perfect, will not always be right, but I have to have a background of knowledge of what am looking for so that when I get what am looking for, whether I get the information from the DBS (Discovery) search engine or Google, in that way I will be able to know, ok, is this correct or not? So, I will now be relying on information on the internet 100%"

This participant also mentioned that his own knowledge of DBS Discovery search also provided him with the best result in his research. This is because he has been using the search engine since his first year at undergraduate level. He stated "so I will say yes it will give me more not all the time but when I compare it to Google I will say it will give me more".

Lastly, when asked whether he considers internet search engines and DBS Discovery search to be user friendly, he replied that both are user friendly but he mentioned that DBS Discovery search is more user friendly than internet searching because:

"[…] it is what you have been using for four, five years so may be for the new incoming coming in to year one it might be a bit difficult to use once you know the keyword once you know how to navigate yourself which I have been doing for many years I think its user-friendly for me more than Google because Google just be like you know some of the idea I discovered when I was using DBS when I relate to Google I find DBS more user-friendly that's my own personal feedback".

Furthermore, he mentioned the reason why internet search engines are user friendly for him;

"[….]No it is user-friendly as well because it is the one I have been using even before I start my level eight but I was doing my level eight year one and year two I went for this training that kind of train us on how to use DBS Discovery search tool that kind of equip me more on how to use DBS I have never have the same opportunity for someone to tell me how to use Google tools maybe if I have that opportunity it will make my life a lot easier maybe my judgment may be different but for now I have more experience using DBS Discovery search tool".

Discussion

The research findings, each interview results and replies to questionnaire, show that postgraduate students prefer using DBS discovery search while undergraduate prefer to use internet search engine such as Google Scholar, Google for their research. In addition, responses to survey question 7 (about which search tool which students use most often) show that 57%

of the student prefer the use of internet search engines while 43% prefer discovery search engines. Indeed, 50% respondent find internet search engines more efficient and 48% of respondent find DBS discovery search too efficient. Furthermore, students prefer to use of Google Scholar during their research because they have a prior knowledge of the tool. He also gave some examples of their search queries in which Google suggested results from Google scholar. He concluded that students learned of Google Scholar while searching.

Students' judgments of relevancy were slightly more weighted towards the DBS Discovery search tool than the internet search engines: two of the undergraduate students stated that results were more relevant when using Google Scholar than DBS Discovery search tool. Determinations of the relevancy of search results in this study are based solely on students' judgements. One of the interviewees was critical of the DBS Discovery that it does not have current articles and journals; she compared the DBS discovery search tool to another university portal and observed that the university have more recent research. The two undergraduate interview participants emphasised that Google yields more relevant information for their research. The postgraduate interview participants cited use of DBS discovery search tool for their research as it yields more relevant information for their research. Indeed, one of the postgraduate participants said that he started using the DBS Discovery search at undergraduate level and he has never found any difficulty in using it. He maintained that it yields good pertinent results for his searches.

Conclusion:

The findings of this research project will be summarised and the conclusions outlined in this chapter. The significance of the research will also be discussed. Recommendations for future research will be outlined. The purpose of this research was to explore Dublin Business School students' perception of DBS Discovery search compared to their experiences with internet search engines experiences on the information search to support their learning and research. Both quantitative and qualitative information gathering techniques were employed. Quantitative data was utilised to show the arranged and objective driven nature of the information gathering and consumption process.

The primary contribution of this study to search engines literature is in its methodological approach. This illustrates on how to merge the strength of different data gathering methods in understanding search use in DBS College. This case study offers an insight into how DBS students use the search engines to support their learning and research. Regardless of these serious limitation, however, this research results discovered that DBS students often preferred using the internet search engine, believed it to be more efficient and user friendly than (DBS discovery tool) for their research and also the student were very confident and always find information when using the internet search engine and in most time their often find information using the DBS Discovery search tool but some student believed they have confident using the DBS discovery search tool too. Also, the survey results reveal that in most of the time students preferred using Google scholar as their search engine. Furthermore, in keeping with some of the observations made in this study, our findings suggest that DBS postgraduate students increasingly rely on DBS discovery search tool while the undergraduate prefer Google scholar to support their work.

However, the qualitative and quantitative research have raised concerns about the information seeking behaviours and information literacy associated with the DBS students. Georgas (2014) stated that "student's high use of format terms within queries present an opportunity for librarians to engage with students about how "search" might work differently within different tools, and the best way to limit their searches depending on the tool been used". Furthermore, one of this survey participant recommended that the DBS discovery search tool need to be

update with new information resources for educating the student body. Georgas (2014) pointed out "for library search tool such as discovery tools student should look for ways to limit or facet their search via interface options presented to them.

It is recommended that librarians should guide their students how information is packaged and also encourage students to go directly specific components library tools such as discovery search tool as a way to immediately focus their search by format. Nichols *et al.* (2014) suggested that since "discovery search tool are widely adopted in the academic libraries, colleges that choose adopt them should continue conduct studies to uncover flaws in usability and shared their finding with vendors and the academy library community and also academic libraries should study and promote the use of discovery tools, investigate the strengths and weakness of discovery search too in various research situations and research best practices for teaching users of all levels how to use these tools."

Moreover, case studies such as this will add insights into user's information seeking behaviour and information literacy contexts in order to help and support the development of search engines that take into consideration students' information interaction in a more holistic manner. It is recommended that, information literacy should be mandatory implemented to the instructional curriculum of both library and Gateway courses. This Gateway course is a small discussion-oriented class designed to develop students' critical thinking and writing skills. Lastly, the study recommend that DBS teaching librarians need to educate the student s in making the best use of the DBS Discovery.

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