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Keeping the Enemy Close: Integrating Google Scholar into the Online Academic Library

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ample of the library not being the sole owner of resources for which vendors may want to trade their research. In this case, the vendor was willing to sell its report in exchange for both cash and information. The students were able to use Google to identify both the information they thought they needed and a contact at the vendor providing the information. They then used that information to broker an exchange of their own information. Fifteen years ago, students could only identify information the library had already selected for them using finding tools the library provided; not only can today’s students use tools external to those supplied by the library to access information available to them outside the library, they can also identify the creators of that information.

Conclusion

As shown here, the Internet in general and Google in particular have impacted libraries and their services in irreversible ways. Students have access to many more information resources than ever before, and the vast majority of these are no longer maintained by the library. As a result, libraries must ask new questions about the need to balance the needs of their current and future users. Libraries must also create finding tools that enable users to search library collections as quickly as they can search collections outside the library. Finally, libraries must realize that students now have access not only to other resources, but to those responsible for creating those resources. Libraries are no longer the only party responsible for negotiating for information, collecting it, and providing access to it, and the sooner they realize this, the more relevant they will be to their students.

Original Proposal

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Keeping the Enemy Close: Integrating Google Scholar into the Online Academic Library

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Introduction

Although it is less than four years old, Google Scholar has already generated an enormous amount of attention from academic librarians. It is a disruptive innovation with ambiguous implications for the future of academic libraries. Will Google Scholar degrade the quality of scholarship by enticing researchers away from the sophisticated tools that librarians have developed or will it be a valuable introduction to library resources for students intimidated by the conventions of scholarly discourse? I will summarize arguments on both sides to make the case that the best policy for academic libraries is to embrace Google Scholar as closely as possible — either as a friend or as an enemy — by integrating it into the library’s online environment as the San Francisco State University (SFSU) Library has done.

Google Scholar as the Enemy

Google Scholar threatens academic libraries because it undermines the symbiotic relationship that has developed between librarians and online databases such as EBSCOHost and Web of Science. Although few researchers in the digital age need the bulky volumes of printed citations that previously sat on a library’s reference shelves, libraries have continued to serve as valuable intermediaries between online citation databases and their end users. Digital indexes such as Academic Search Premier or Web of Knowledge are powerful tools for discovering relevant research, but they are expensive to buy and difficult to learn. Academic researchers, especially new students, would be overwhelmed if they had to go out into the marketplace as consumers to choose between the various resources available to them. Thus, librarians perform a valuable service by evaluating and purchasing online databases for the collective use of their patrons. At the same time, librarians serve as experts in the use of these tools, instructing novice users in the intricacies of Boolean logic, subject specific thesauri, and other skills required to use these resources effectively.

Google Scholar challenges the librarian’s role as the natural interface between scholarly researchers and online discovery tools in two senses. First, Google provides its services free of charge. Academic researchers do not have to go through the library’s proxy servers to access the scholarly citations indexed by Google as they have to do with “library” databases. This reduces the scholar’s dependence on the library as the means of purchasing expensive research tools, and diminishes the visibility of the library in the eyes of students who may be able to conduct their research without visiting either the physical or virtual library. Second, because Google Scholar gives users a simple and familiar search interface, it reduces the need for the instruction provided by librarians. Like Google’s Web search engine, Google Scholar relies on automated ranking algorithms rather than on the skill of the user to identify relevant search results. If Google ever were to dominate the marketplace for scholarly research tools as thoroughly as it dominates the Web search engine marketplace, the value of the reference librarian’s expertise in online searching would be greatly diminished.

Early reviews in the library literature suggest that Google Scholar will not conquer its competitors by offering a superior product. Peter Jascó’s thorough comparison between Google Scholar and Web of Science demonstrated that Web of Science is more complete and more accurate in almost every sense. Other studies have shown that Google Scholar is less useful for finding relevant citations than general purpose subscription databases such as Academic Search Premier or various subject specific databases used by libraries. Google Scholar also is much less transparent than other scholarly databases. It does not offer users a list of the publications that it indexes. Nor does it provide a complete explanation of the algorithm that it uses to determine the relevancy of the citations returned in a search. The conclusion of these early reviewers is that Google Scholar may be a useful addition to existing scholarly research tools but would be utterly inadequate as a replacement for them.

Nevertheless, Google Scholar is a serious threat to other scholarly database vendors because cheap and easy tools often defeat difficult

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and expensive tools in the online information economy even when the expensive products are much better. Librarians know that students gravitate toward the easiest search interfaces available to them regardless of how useful it is for their research needs. Although librarians often attribute this behavior to laziness or inexperience, Shapiro and Varian would argue that the students are making a rational choice because information is an “experience good.” Due to the uncertainty inherent in the quest for knowledge, researchers never know how valuable their discoveries will be until after they spend their time, effort, and money on the search process. Perhaps the extra time spent on doing a thorough search in an intimidating database like Web of Science ultimately will be “worth it” in the eyes of the researcher, but perhaps not. When researchers have ready access to an easy search tool that gives them adequate results, it often does not make sense for them to take the risk of investing additional effort on a difficult search tool that may not do better.

The greatest danger of Google Scholar from the perspective of academic librarians is that it will degrade the marketplace for scholarly research so that it no longer will be possible for anyone to invest the resources required to produce a sophisticated search tool such as Web of Science. If students abandon the library’s subscription databases to use Google Scholar instead, it will become increasingly difficult for libraries to justify their expenditures on these tools. Without the support of library subscriptions, Google’s competitors will be unable to continue producing high quality scholarly search products, and Google could become the dominant option for discovering scholarly content. At that point, Google would have even less incentive to develop Google Scholar in a way that is consistent with the needs and values of the academic community than they do now.

Google Scholar as an Ally

Google Scholar has the potential to benefit academic libraries by making their collections more visible and their services more evident to users. Two recent studies of Internet and library use somewhat surprisingly discovered that they were correlative. On average, the more that someone used the Internet, the more that she used the library as well. These results challenge the common notion that libraries and the Internet are involved in a zero-sum competition for the same information consumers. In fact, the most recent study argues that “the use of one source leads to others; museums, public libraries and the Internet do not compete, but rather complement each other in this information-rich environment.” Ultimately, Google Scholar and other Google projects such as Google Book Search may stimulate a desire for information that libraries are uniquely positioned to satisfy. Google Scholar could become an entry-level research tool that introduces students to the rich resources available at the library and entices them to visit the source to get even more.

Google Scholar promotes library use in a couple of important ways. First, much of the literature that Google Scholar indexes is expensive, copyrighted material. Although researchers can read abstracts of copyrighted articles on Google Scholar, they have to pay the publisher or go to the library if they want the entire content. Because Google wants to limit the frustration experienced by its users, it has made it easier for those associated with academic institutions to get to the library’s subscriptions by setting up Google Scholar as an OpenURL source. Any library that has an OpenURL resolver can direct its users from Google Scholar to library’s ejournal subscriptions. By providing a quick and simple interface to access scholarly material, Google Scholar potentially makes it much easier for university researchers to discover expensive online content that the library has acquired for their use. Second, the limitations of Google Scholar’s simple search interface for answering sophisticated research questions may increase a student’s appreciation for the expert assistance provided by librarians. Although students who get adequate results with Google Scholar are unlikely to look for something better at the library, a recent study suggests that Google searches are not even minimally adequate for the needs of most college students who are working on research papers. The study demonstrated that students working on a class assignment often started their research with a general Internet search engine, but quickly became frustrated with them. In the long run, the students found that they were much more successful and satisfied when they used the library tools that were built with the specific needs of the students in mind and when they could get direct assistance of librarians.

In an ideal world, academic libraries would be able to take advantage of the frustration experienced by researchers whose information needs exceed the abilities of Google Scholar by using it as a bridge between the Internet and the library. With one foot in the World Wide Web and another foot in the intimidating world of peer-reviewed journals and scholarly discourse, Google Scholar can help college students make the transition from Web surfers to information literate academic researchers. Just as a novice wine drinker who buys a few bottles of cheap wine from the supermarket may develop sophisticated tastes that lead her to try more expensive vintages, a few searches on Google Scholar may help novice scholars develop a taste for independent research that lead them to the sophisticated tools and experts available in the library.

Domesticating Google Scholar

Although it is still too soon to know whether Google Scholar ultimately will be a friend or a foe of academic libraries, librarians can influence the results by integrating Google Scholar into the library’s online environment as much as possible. If researchers see Google as an external resource completely unrelated to the library, they will be less likely to use it as a bridge into the library. The less expensive in terms of time and effort it is for the student to get from Google Scholar into the library’s resources, the easier it will be for her to take that next step.

At SFSU, we have used all the technical resources currently available to us to make Google Scholar behave like “just another library database” in the eyes our students. We started by adding OpenURL links from Google Scholar to our SFX server through Google’s Library Links program so that researchers on campus see hyperlinks that say “SFSU: Find Full Text” on the Google Scholar results.
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screens. However, there are limitations to this approach. Only on-campus users see the links to the library resources because Google uses the IP address of the user to determine which OpenURL server to use. When our patrons do research from home, as many of them do, Google does not know that they are from SFSU and cannot direct them to our resources.

Google does allow end users to specify which library they want to use for “Library Links” on its “scholar preferences” page, but few users set this preference independently because it is difficult for the uninitiated to understand what it does.

To address this issue, the library has included Google Scholar’s URL in our proxy server and added re-written links (which go through the proxy) to Google Scholar to our list of databases on the library Website. Normally, the proxy server is used for subscription databases that require researchers to identify themselves as library patrons before they gain access. However, by sending our patrons through the proxy server so that they pick up an SFSU IP address when they are using Google Scholar, we allow Google to identify them as SFSU users. From the perspective of students who start out on the library Website, therefore, Google Scholar works in the same way as our subscription databases do. Google automatically adds links back to our SFX server from the Google Scholar results pages as it does for on campus users.

Another technical tool that helps the library domesticate Google Scholar is LibX, a browser plug-in for libraries that was developed by librarians at Virginia Tech University and which we have adapted for the use of our patrons. In addition to the many other useful things that it does, LibX automatically adds our Library Links to Google Scholar. If a researcher is using Google Scholar with a browser that has our version of LibX installed, she will see OpenURL links back to the library’s resources even if she has not set up the Scholar Preferences or gone through the library’s proxy server. In addition, LibX helps the library get its branding into the library Website in comparison with our subscription databases. After a few months of tracking, we found Google Scholar is approximately the 10th most frequently used database of the 130 resources that we offer from our Website. It is used more often than many of our narrowly focused subject specific resources but much less frequently than our most popular general research databases such as EBSCOhost, Lexis-Nexis and JSTOR. So far at least, visitors to the SFSU library Website seem to view Google Scholar in much the same way as librarians do, as a useful addition to our existing resources but not as a replacement for them. I would encourage all academic librarians to continue to look for new ways of bringing Google Scholar and its users as close to us as possible.

Another benefit of adding Google Scholar to the proxy server is that it allows us to keep statistics on how often it is used from our Website in comparison with our subscription databases. After a few months of tracking, we found Google Scholar with its SFX button, which is used for OpenURL links in our subscription databases, to know what they will get when they click on a link to our resources from Google Scholar.

So far, our efforts to integrate Google Scholar into the library have not been perfect because patrons who access Google Scholar without going through our Website or installing our LibX plug-in still do not see links back to our resources. Thus, those researchers who are least likely to visit the library in the first place will also be least likely to discover the connections between Google Scholar and the library. It is difficult to estimate how many potential library users are trying to do all of their research on free tools like Google Scholar without realizing that the library provides more sophisticated research tools and complete access to many articles that are not available for free on the Internet. Nevertheless, the steps that we have taken so far give our patrons tangible benefits for starting with the library and allow us to place Google Scholar, which we describe as a “simple way to do a broad search,” in the context of the other library discovery tools that allow them to do more complex and focused searches.

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Endnotes
5. Griffiths and King, p8.
7. See http://www.libx.org/.