



Evidence Summary

Graduate Students Report Strong Acceptance and Loyal Usage of Google Scholar

A Review of:

Cothran, T. (2011). Google Scholar acceptance and use among graduate students: A quantitative study. *Library and Information Science Research*, 33(4), 293-301. doi: 10.1016/j.lisr.2011.02.001

Reviewed by:

Lisa Shen
Business Reference Librarian
Sam Houston State University
Huntsville, Texas, United States of America
Email: lshen@shsu.edu

Received: 2 July 2012

Accepted: 4 Nov. 2012

© 2012 Shen. This is an Open Access article distributed under the terms of the Creative Commons-Attribution-Noncommercial-Share Alike License 2.5 Canada (<http://creativecommons.org/licenses/by-nc-sa/2.5/ca/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly attributed, not used for commercial purposes, and, if transformed, the resulting work is redistributed under the same or similar license to this one.

Abstract

Objective – To determine the frequency of graduate students' Google Scholar usage, and the contributing factors to their adoption. The researchers also aimed to examine whether the Technology Acceptance Model (TAM) is applicable to graduate students' acceptance of Google Scholar.

Design – Web-based survey questionnaire.

Setting – The survey was conducted over the internet through email invitations.

Subjects – 1,114 graduate students enrolled at the Twin Cities campus of the University of Minnesota.

Methods – 9,998 graduate students were invited via email to participate in a study about their perceptions of Google Scholar in the fall of 2009. A follow-up email and a raffle of two \$25 gift certificates were used to provide participation incentive.

The survey measurements, which consisted of 53 items in 15 questions, were based on modifications to the validated TAM using measurements adopted by other studies using the same instrument. Each item was scored using five-point scales ranging from 1 ("strongly disagree") to 5 ("strongly agree"). Because the TAM model is based on direct user experience, only responses from those who have used Google Scholar in the past were included in the data analysis.

Main Results – The survey had a response rate of 11.4%, with 73% of the respondents reporting having used Google Scholar at least once before. However, only 45% of those who had used Google Scholar reported linking to full text articles through the customized library link “frequently or always.” On average, respondents found Google Scholar easy to use (M=4.09 out of 5) and access (M=3.86). They also perceived Google Scholar as a useful resource for their research (M=3.98), which enhanced their searching effectiveness (M=3.89). However, respondents were less enthusiastic when asked whether they often found what they were looking for using Google Scholar (M=3.33) or whether it had enough resources for their research (M=3.14). Nonetheless, most still felt they made the correct decision to use Google Scholar (M=3.94), even if their loyalty towards Google Scholar was limited (M=3.23).

The researcher categorized survey measurements into 9 TAM-based variables and performed regression analysis (all with $p < 0.001$) to analyze the relationships. Overall, accessibility ($\beta = 0.32$) and system quality ($\beta = 0.53$) were significant determinants of respondents’ perceived ease of use of Google Scholar, while perceived ease of use ($\beta = 0.33$) and comprehensiveness ($\beta = 0.53$) were significant determinants of respondents’ perceived usefulness of Google Scholar. In turn, perceived usefulness ($\beta = 0.45$), loyalty ($\beta = 0.38$), and perceived ease of use ($\beta = 0.12$) were the main factors contributing to respondents’ actual intention to use Google Scholar. Lastly, respondents’ loyalty towards Google Scholar was largely attributed to their satisfaction with the search engine ($R^2 = 0.532$).

Conclusion – This study found several factors that strongly influence graduate students’ intention to use Google Scholar, including students’ perceived usefulness of Google Scholar, their sense of loyalty towards the search engine, and its perceived ease of use. Moreover, the findings also showed that TAM is an applicable model for explaining graduate students’ use of Google Scholar. These findings provide useful insights for librarians seeking to understand graduate students’ perception of

Google Scholar and practical implications on how to best promote new information resources to graduate students.

Commentary

This study examines graduate students’ perception and usage of Google Scholar. The findings should be of interest to academic librarians seeking to strike a balance between the promotion of library resources and Google Scholar for student research. Not only did the author highlight major determinants for graduate students’ use of Google Scholar, but she also drew attention to the frequency at which respondents already use this search tool. The findings make a strong argument for librarians to focus on improving the usability and accessibility of library resources and the linking between library databases and Google Scholar, instead of simply discouraging students’ Google Scholar usage.

A close examination of the research using the EBL Critical Appraisal Checklist (Glynn, 2006) indicated an overall validity of 78.3%. In addition, validity scoring was consistent for each Appraisal Checklist section. Therefore, it can be safely concluded that the study is valid. The survey instrument was adopted from past TAM studies and published with the article. Moreover, Cronbach’s Alpha, a reliability measurement for internal consistency, showed that all the survey variables were above the accepted standards of 0.70. This provided further evidence to the soundness of the survey construct.

However, this study does have some limitations. First, there is a lack of comparative data to place study findings in context. For instance, based on factors such as users’ perceived search effectiveness (3.89 out of 5) of Google Scholar, the author observed that user loyalty (3.23 out of 5) towards Google Scholar is rather limited. However, respondents’ loyalty ratings of Google Scholar may actually be significantly higher compared to their loyalty ratings of most library databases, or vice versa.

In addition, the perceptions and attitudes of respondents who have never used Google Scholar and those who use it less than once per semester were excluded in the data analysis. The reasons for graduate students to choose not to use Google Scholar can be just as valuable as their reasons for adopting it as a regular search tool. Additional research exploring students' non-use of Google Scholar and usage of library databases based on TAM would provide valuable insights for academic librarians.

Nonetheless, this survey study is well constructed and investigates a pertinent and timely issue in academic librarianship. It

provides valuable contributions to the limited current literature on user studies examining Google Scholar. Moreover, the study validates TAM for examining user perception towards information resources and provides detailed methodology for those interested in expanding this field of study.

References

- Glynn, L. (2006). A critical appraisal tool for library and information research. *Library Hi Tech*, 24(3), 387-399. doi: 10.1108/07378830610692154