



Evidence Summary

Undergraduate Use of Library Databases Decreases as Level of Study Progresses

A Review of:

Mbabu, L.G., Bertram, A. B., & Varnum, K. (2013). Patterns of undergraduates' use of scholarly databases in a large research university. *Journal of Academic Librarianship*, 39(2), 189-193. <http://dx.doi.org/10.1016/j.acalib.2012.10.004>

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Abstract

Objective – To investigate undergraduate students' patterns of electronic database use to discover whether database use increases as undergraduate students progress into later stages of study with increasingly sophisticated information needs and demands.

Design – User database authentication log analysis.

Setting – A large research university in the Midwestern United States of America.

Subjects – A total of 26,208 undergraduate students enrolled during the Fall 2009 academic semester.

Methods – The researchers obtained logs of user-authenticated activity from the university's databases. Logged data for each user included: the user's action and details of that action (including database searches), the time of action, the user's relationship to the university, the individual school in which the user was enrolled, and the user's class standing. The data were analyzed to determine which proportion of undergraduate students accessed the library's electronic databases. The study reports that the logged data accounted for 61% of all database activity, and the authors suggest the other 39% of use is likely from "non-undergraduate members of the research community within the [university's] campus IP range" (192).

Main Results – The study found that 10,897 (42%) of the subject population of undergraduate students accessed the library's electronic databases. The study also compared database access by class standing, and found that freshman undergraduates had the highest proportion of database use, with 56% of enrolled freshman accessing the library's databases. Sophomores had the second highest proportion of students accessing the databases at 40%; juniors and seniors had the lowest percentage of use, with 38% of enrolled students at each level accessing the library's databases. The study also found that November was the peak of database search activity, accounting for 37% of database searches for the Fall 2009 semester. Database use varied by the schools or colleges in which students were enrolled, with the School of Nursing having the highest percentage of enrolled undergraduates using library databases (54%). The authors also report that the College of Literature, Science, and the Arts had the fourth highest proportion of users at 46%, representing 7,523 unique students, more than double the combined number of undergraduate users from all other programs. Since the College of Literature, Science, and the Arts accounts for more than 60% of the total undergraduate enrollment, the authors suggest that information literacy instruction targeted to these programs would have the greatest campus-wide impact.

Conclusion – Although the library conducts a number of library instruction sessions with freshman students each Fall semester, the authors conclude that database use patterns suggest that the proportion of students who continue to use library databases decreases as level of study progresses. This finding does not support the study's hypothesis that database use increases as students advance through their undergraduate studies.

Commentary

With academic library expenditures for electronic database and journal subscriptions continuing to rise, combined with students' reported preference for Internet-based

resources, investigating use of electronic library resources remains important for academic libraries of all sizes and classifications. Previous research suggests that electronic resource use is positively associated with higher student grade point averages and student retention (Davidson, Rollins, & Cherry, 2013; Haddow, 2013; Soria, Fransen, & Nackerud, 2013). The current study is an informative addition to the existing literature in its attempt to understand whether undergraduate students' rate of access to scholarly resources through library databases changes as they advance through their academic career.

Utilizing Glynn's (2006) critical appraisal checklist, the study's strengths lie in choice of population, data collection method, and study design. Unobtrusively gathering authenticated access logs throughout an entire semester allows for collecting data on the majority of users who accessed electronic resources, reducing sampling bias and providing a robust sample size. Measuring actual database use, rather than relying on self-report methods, lends support to the reliability of the findings. Students do have the option to opt out of logged activity tracking at the university, but it is unclear how many students may opt out. Additionally, although the authors suggest that the reported unauthenticated use is likely from non-undergraduate researchers, it is unclear how much error this may introduce into the study. For instance, if an undergraduate student accessed resources via one of the library's non-authenticated workstations, their search activity would be lost in the unauthenticated data.

The article's literature review places the study within the context of information literacy in the curriculum and librarian-faculty collaboration. Since the study's aim and findings highlight patterns of undergraduates' resource use, a more thorough review of current literature tying undergraduates' electronic resource use to information literacy instruction would help elucidate the connection between information literacy instruction and study findings. Although the introduction includes a discussion of students'

online search preferences, the cited literature is somewhat outdated and is not integrated with the information literacy instruction material.

In discussing their findings, the authors suggest that the momentum of first-year students' information literacy seminars does not continue throughout advanced years of undergraduate study. It is unclear from the article how much information literacy instruction is provided in upper division courses or whether upper-level students in the current study would have experienced the same type or amount of library instruction during their freshman years. In addition to the current study's one semester snapshot, future longitudinal research tracking change over time with cohorts of students throughout their undergraduate career may provide additional support for the study's conclusions.

The study's findings are useful for academic instruction librarians attempting to integrate information literacy throughout the undergraduate curriculum. Although many institutions focus their efforts on library instruction during an undergraduate's first year of study, students' information needs are also expected to require more interaction with library resources as they engage in advanced disciplinary study. The study's findings suggest that upper division students may not continue to engage with scholarly sources as hypothesized, implying that freshman interventions alone do not promote long-term growth and resource usage. Academic librarians should continue identifying strategic

places within the disciplinary curriculum to target on-going information literacy development beyond the first year, encouraging students to utilize resources necessary for deep engagement within an academic discipline.

References

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