Boolean logic is often challenging for first-year, lower-level students to grasp. If Boolean can be left out of first-year instruction, that would free up valuable class time for meatier IL concepts such as question development and source evaluation.

Is it necessary to teach Boolean to lower-level students, or can they find equally relevant sources with a simple phrase search?

Methodology

8 databases: Academic Search Premier (EBSCO); Google Scholar; JSTOR; LexisNexis Academic; ProQuest Central; PubMed; Scopus; and, Web of Science

4 searches: unfiltered Boolean; filtered Boolean; unfiltered natural language; and filtered natural language

Filtered = by document type/ scholarly or peer reviewed article

First 25 results evaluated for relevance using rubric

Very Relevant (3)

All concepts represented in title or abstract and abstract is relevant.

Relevant (2)

Majority or all of concepts represented either in title or abstract but when looking at abstract, may be tangential to research question.

Not Relevant (1)

Less than half concepts represented OR concepts are there but not relevant to research question.

Not at all Relevant (0)

0 of total concepts represented OR false hits, terms are there but used in different ways (e.g., social work instead of social rejection).

Overall, there is no clear advantage to teaching Boolean search logic to first-year students in terms retrieving relevant results on a topic. For the overwhelming majority of databases included in this study, both Boolean and natural language searching delivered results of highly comparable relevance. Based on this study, one page of results, and certainly the first 25, may be enough to satisfy the needs of a first-year research assignment. Boolean may be more important for upper level students and/or students with more complex research needs.