

“The Library Catalog is Definitely the Best Place to Find Articles!” Overconfidence Among Undergraduate Library Users

Katelyn Angell, MLIS, MA
Long Island University, Brooklyn Campus

ABSTRACT

TITLE:
“The Library Catalog is Definitely the Best Place to Find Articles!”
Overconfidence Among Undergraduate Library Users

BACKGROUND:
Beginning in the 1980s, researchers in a wide array of academic disciplines surveyed undergraduate students to learn if they were overconfident with regard to their knowledge of disciplinary subject matter. The majority of researchers have found that students tend to overestimate their abilities within a certain body of knowledge. Up until recently, most of these projects were conducted in the fields of education, psychology, and economics. In the past few years, several academic librarians have applied these methodologies to their undergraduate patrons, curious as to whether this population demonstrates similar overconfidence in their grasp of academic research.

OBJECTIVE AND METHODS:
The present study surveyed 34 undergraduates enrolled in psychology classes at a large urban university in the United States to determine if these students were overconfident about their knowledge in key library research areas. These questions included citing and referencing, identifying components of scholarly and popular sources, and developing and applying searches in electronic resources. A general knowledge survey was created for comparison purposes.

RESULTS AND DISCUSSION:
Statistical analysis showed that students displayed marked overconfidence on both tools, signifying a need for increased library and metacognitive skill instruction. These results were in line with the findings of similar studies conducted by researchers in disciplines such as psychology and economics.



Study Hypotheses

- ✓ **Null hypothesis:** There will not be a significant relationship between test scores and confidence level on either instrument
- ✓ **Alternate hypothesis:** The highest levels of confidence will be found in participants with the most incorrect answers

METHODS

- **Participants**
 - 34 undergraduates enrolled in undergraduate psychology classes
 - Mean age: 25 years
 - 15 visited the library at least once for information literacy instruction
- **Measures**
 - Library Knowledge Confidence Scale
 - 10 true/false questions about library research skills
 - Confidence level rating scale for each question
 - General Knowledge Confidence Scale
 - 10 general trivia true/false questions
 - Confidence level rating scale for each question

Sample questions from Library Knowledge Confidence Scale

Directions: Each question has two parts for you to complete. First, circle if you think the question is true or false. Then below your answer circle how sure you are of your answer. For example, if you're positive that you're correct circle "100% absolutely." If you're just guessing circle "50% just guessing."

- The library catalog is the best place to go to search for academic journal articles. This statement is [True / False]
50% just guessing 60% 70% 80% 90% 100% absolutely sure
- The following is an MLA citation for a book: Tabery, J. (2014). *Beyond versus: The struggle to understand the interaction of nature and nurture*. Cambridge, MA, US: MIT Press. This statement is [True / False]
50% just guessing 60% 70% 80% 90% 100% absolutely sure
- An abstract is a summary of a journal article. This statement is [True / False]
50% just guessing 60% 70% 80% 90% 100% absolutely sure



Sample questions from General Knowledge Confidence Scale

- An instant camera is still called a Polaroid. This statement is [True / False]
50% just guessing 60% 70% 80% 90% 100% absolutely sure
- Aphrodite is the Greek goddess of wisdom. This statement is [True / False]
50% just guessing 60% 70% 80% 90% 100% absolutely sure
- Microsoft is the company of Bill Gates. This statement is [True / False]
50% just guessing 60% 70% 80% 90% 100% absolutely sure

RESULTS

- Each participant was categorized as low, medium, or high confidence to determine differences between incorrect answers and confidence levels for both library and general scales
- Low scores on library knowledge scale (M=60)
 - Translates into a “D” on standard grading scale
- High confidence levels on library knowledge scale (M=2.35)
- Low scores on general knowledge scale (M=69)
 - Translates into a “D” on standard grading scale
- High confidence levels on general knowledge scale (M=2.37)
- Moderate positive relationship between scores on two tests ($r=.36, p<.05$)
 - Performance on two tests was similar

Figure 1. Mean number of incorrect responses presented by confidence category

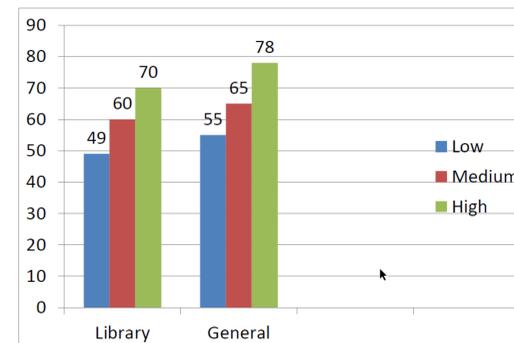


Table 1. Means and standard deviations for the Library Knowledge and General Knowledge Scales and confidence levels

	Scale Mean	Scale Standard Deviation	Confidence Mean	Confidence Standard Deviation
Library Skills	60.9	15.47	2.35	0.35
General Knowledge	69.41	20.74	2.37	0.47

Table 2. Means and standard deviations for the number of incorrect answers on the Library and General Scales presented by confidence category (two one-way between-group ANOVAs)

	Confidence Category		
	Low (n = 7) M (sd)	Medium (n = 18) M (sd)	High (n = 9) M (sd)
Library Skills Score	48.57 (19.51)	60.00 (12.36)	70.00 (12.24)
	Confidence Category		
	Low (n = 4) M (sd)	Medium (n = 16) M (sd)	High (n = 14) M (sd)
General Score	55.00 (31.09)	65.00 (17.12)	78.57 (20.73)

DISCUSSION AND CONCLUSIONS



- Conclusions**
- Alternative hypothesis was confirmed
 - Students demonstrated overconfidence with regard to both library and general skills tests
 - Results in line with psychology and educational literature
 - Tendency to overinflate one's knowledge can be extrapolated to additional topical areas
 - Corroborated a similar study of undergraduate library patrons by Gross and Latham (2012)
 - Students with lowest test scores most likely to show overconfidence
 - **Limits**
 - Lack of diversity among gender and class year
 - 31 women and 3 men
 - Small sample size

Strategies for decreasing overconfidence and improving research skills

- Partner with teaching faculty to develop reflective and interactive courses featuring an embedded librarian (Polkinghorne & Wilton, 2010)
- Teach students to carefully evaluate each answer on a test
 - Reflect on their reasons for deciding that an answer is correct, first writing their rationale and then discussing their selection
 - Teach metacognitive critical thinking skills with an emphasis on improving self-monitoring abilities (Molteni & Chan, 2015)
- Investigate self-assessment of skills in outside disciplines, such as “human information behavior, the development of user interfaces, and evaluation of information systems and services” (Gross & Latham, 2012, p. 582)

WORKS CITED

- Angell, K., & Kose, G. (2015). “The library catalog is definitely the best place to find articles!” Overconfidence among undergraduate library users. *Partnership: The Canadian Journal of Library and Information Practice and Research*, 10(2), 1-18.
- Bruine de Bruin, W., Parker, A.M., & Fischhoff, B. (2007). Individual differences in adult decision-making competence. *Journal of Personality and Social Psychology*, 92(5), 938-956.
- Gross, M., & Latham, D. (2012). What's skill got to do with it?: Information literacy skills and self-views of ability among first-year college students. *JASIST*, 63(3), 574-583.
- Molteni, V.E., & Chan, E.K. (2015). Student confidence/overconfidence in the research process. *The Journal of Academic Librarianship*, 41(1), 2-8.
- Polkinghorne, S., & Wilton, S. (2010). Research is a verb: Exploring a new information literacy-embedded undergraduate research methods course. *The Canadian Journal of Information and Library Science*, 34(4), 457-473.

For additional information please contact:

Katelyn Angell
Assistant Professor/First Year Success Librarian
Long Island University, Brooklyn Campus
Katelyn.Angell@liu.edu