Evidence Based Library and Information Practice

Exploring the Disconnect Between Information Literacy Skills and Self-Estimates of Ability in First-Year Community College Students

A Review of:
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. *Journal of the American Society for Information Science and Technology*, *63*(3), 574-583. doi: 10.1002/asi.21681

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Abstract

Objective – To explore the relationships between information literacy (IL) test scores and self-estimated ability both prior to and after completing the test.

Design – Information Literacy Test (ILT) with pre- and post-test surveys of self-estimated ability.

Setting – Two community colleges: a small institution in a rural area and a large institution in an urban area.

Subjects – First-year community college students enrolled in entry-level English courses.

Methods – The authors conducted a replication study of their earlier work using a larger sample from two community colleges. Information literacy (IL) skills were assessed using the Information Literacy Test (ILT) developed and validated by researchers at James Madison University. During the spring and fall semesters of 2009 and 2011, the authors administered in a single session the ILT, pre-, and post-test survey instruments to 580 participants. Participants self-selected via sign-up sheet. The first hundred students to sign up per enrollment period were scheduled. Participants received incentives for participation, with an additional incentive offered for scoring in the top 15%.

Main Results – The majority of students at both schools (95% at school 1, 80% at school 2) scored in the below-proficient range on the ILT, a few scored in the proficient range (5% at school 1, 20% at school 2), but no students scored in the advanced range. The mean of the few scores in the proficient range was closer to the below-proficient range (≤65%) than the advanced range (≥90%). For students at both schools, significant differences were found between their self-estimated and actual test score. While students at both schools adjusted their self-estimated scores downward after completing the ILT, post-test self-estimates remained significantly inflated in relation to their test performance. In particular, students scoring in the below-proficient range demonstrated a large and significant gap. The difference between the self-estimated comparisons to peers and actual scores was significant for students from both schools who scored in the below-proficient range. Only the proficient students at school 1 were able to accurately estimate their IL skill level. Most students completed the ILT remaining unaware of their poor performance.

Conclusion – The study revealed a significant disconnect between students' perceptions of their information literacy skills and their actual performance. Students scoring in the proficient range demonstrated a stronger post-test correction response than students scoring at below-proficient levels. Generally, the authors of the find that the results support the Dunning-Kruger Effect theory that people lacking skills in a particular domain demonstrate a miscalibration between self-estimated and actual skill. Specifically, it confirms that this effect occurs in the domain of information literacy.

There is a need for tools to diagnose information literacy competence. Most students are unable to self-assess accurately and competency should not be assumed. Meeting the needs of this population will be challenging, given that they do not recognize the need for instruction or assistance.

Commentary

Student self-perception of skill level is a relatively unstudied aspect of information literacy. This expanded replication study contributes to the body of evidence suggesting that students are entering college with inadequate information literacy skills. The comparison of actual performance with students' self-estimates is a useful contribution to our understanding of information literacy.

In general, the study was executed well and addressed the initial research questions. One concern pertaining to the use of the ILT to estimate information literacy is the exclusion of ACRL Standard 4, which addresses the use of information. The exclusion of Standard 4 may result in inaccurate measurement of student skill level. Despite that limitation, the ILT is generally accepted as a valid tool for assessing information literacy.

The procedures section is generally strong with some details missing. More complete description of the pre- and post-test survey development, data characterization and screening, and rationale for the statistical methods used would be helpful in assessing the validity of the data. Some of these details are provided in the Findings section rather than in the Methods section. The authors fail to state whether an Institutional Review Board reviewed the study and whether informed consent was provided. Overall, the results are presented logically and correspond to the initial research questions. The sample size was sufficient for the reported analyses and level of precision. The authors clearly state the primary limitations of the study: 1) a non-random sample of self-selected participants at two community colleges; and, 2) a lack of data on students scoring in the proficient range. Thus, the sample may not be representative of community college or university students in general.

This study describes an interesting approach for understanding the role of perceived ability in information literacy instruction. This area of research is exploratory, so immediate implications for practice are few. We can

conclude that librarians and faculty should not rely on students' self-reported ability to guide IL instruction. Diagnostic tools for identifying students with deficient IL skills are necessary so that appropriate instruction can be provided. Such diagnostic tools should attempt to address all five ACRL standards, particularly Standard #4 ("…uses information effectively…"), which is not assessed by the ILT.

Additional replication studies carried out at other types of institutions and using a random sample of students are needed for further replication. If this disconnect is present in the general student population, it speaks to the need for integrating information literacy instruction into program curricula, rather than expecting students to self-select for optional IL instruction. An approach to engaging students in IL learning opportunities might be through a certificate or badge program. Some institutions provide certification for skills in particular software applications or programming languages. Libraries could provide certification or badges for application of information literacy skills to relevant tasks; these could be included in student portfolios to demonstrate real-world skills.