



Evidence Summary

Information Literacy (IL) Intervention Workshop has Positive, but Limited, Effects on Undergraduate Students' IL Skills

A Review of:

Gross, M. & Latham, D. (2013). Addressing below proficient information literacy skills: Evaluating the efficacy of an evidence-based educational intervention. *Library & Information Science Research*, 35(3), 181-190. <http://dx.doi.org/10.1016/j.lisr.2013.03.001>

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Abstract

Objective – To evaluate the impact of an educational intervention workshop on students' information literacy (IL) skills and self-perception of their own IL knowledge.

Design – Quasi-experimental design with control groups and semi-structured interviews.

Setting – Two community colleges in the United States of America, one in a rural setting and one in an urban setting.

Subjects – Ninety-two students enrolled in an entry-level English course, who scored below proficiency (65%) on the Information Literacy Test (ILT).

Methods – One hundred students from each college took the pre-session ILT and an IL self-assessment survey at the beginning of the Spring 2011 semester. The ILT used was developed and validated by James Madison University (Wise, Cameron, Yang, & Davis, n.d.) and measures understanding of all the Association of College and Research Libraries (ACRL) Information Literacy Competency Standards (ACRL, 2000, pp. 2-3) except Standard 4. For motivation, students each received \$20 for their efforts and were told those who scored in the top 15% would enter a draw to win one of two additional prizes of \$50. Those who scored below the ILT proficiency level of 65% were invited to participate in the quasi-experiment.

Forty-nine participants were assigned to the workshop group and 43 to the control group. The two groups were comparable in demographic characteristics, prior IL learning, and ILT scores. Those in the workshop group were asked to attend one of five workshops designed around the Analyze, Search, Evaluate (ASE) process model for IL interventions (Gross, Armstrong, & Latham, 2012). The workshops were offered on both campuses and taught by the same instruction librarian.

The workshop participants completed questionnaires, which included a second ILT, self-assessment, and ASE-based questions, before and after the IL workshops. Each workshop participant received \$30. The control group participants took the same post-session questionnaire after the workshops were completed and received \$20. The same \$50 incentive was offered to both groups. Two weeks after the workshops, semi-structured individual interviews were conducted with 30 participants to analyze their learning experiences.

Results – Participants' self-assessment of IL skills showed significant downgrading after they took the ILT for the first time. This downward calibration held true for both the control ($t(41) = 4.077, p < 0.004$) and the workshop ($t(45) = 4.149, p < 0.000$) groups. Subsequent self-ratings from the control group showed this downward recalibration of self-assessment was sustained over time.

For participants in the workshop group, their average self-rating of IL ability rose from a pre-ASE workshop rating of 2.79 out of a maximum score of 5, to a post-workshop rating of 3.83. However, the same participants' post-workshop ILT scores did not show any significant improvement. Attending the ASE workshop did not help participants to achieve the "proficient" IL skill level (an ILT score of 65% or higher).

Nonetheless, the workshop group's performance on the ASE focused questions, also administered pre- and post-session, indicated that participants did gain some IL skills during the workshop. On the ASE

questions, which had a maximum score of 25 points, the workshop group's average score increased from 10.62, pre-session to 13.40, post-session, while the control group had an average score of 10.91 pre-session and 10.77 post-session.

In the follow-up interviews, most participants reviewed the workshop positively and felt that their peers would benefit from attending. However, the skills participants reported learning primarily focused on the Search stage of the ASE model, such as exact phrase, truncation, and the advanced search options in Google.

Conclusion – This quasi-experiment examined the impact of a one-hour ASE model-based workshop on first-year English students with below-proficiency IL skill levels. Self-assessment ratings indicated that workshop attendance increased students' confidence in their skill level, although this upward recalibration of self-view significantly overestimated participants' actual skill gain. Pre- and post-test questionnaires indicated that, while students did gain some new IL knowledge, attending the workshop was insufficient to improve their IL skill to the proficient level.

Commentary

The design of this study appears sound. The authors also provided either copies of, or citations for all the assessment instruments. Nonetheless, the study scored an overall validity of 70%, slightly below the acceptable validity measure of 75%, on the Evidence-Based Librarianship (EBL) Critical Appraisal Checklist (Glynn, 2006).

The overall rating was negatively affected by some missing procedural information, such as ethics approval and participant consent, and minor study design flaws, such as asking the control group questions about the ASE workshop in the post-session questionnaire. While it is important to keep all conditions comparable between the control and workshop groups, including three survey questions

participants cannot answer might be unnecessary. For instance, the researchers noted 35% of the control group participants “failed to respond” (p. 186) to the final self-assessment question, likely because it was about the workshop. However, it would be more interesting to know how the other 65% of participants responded to a question requesting comments to a workshop they did not attend.

One omission of concern was the workshop group’s post-session ILT scores. The authors had stated there was “no evidence of improved scores... for any of the participants” (p. 187), though evidence was also unavailable to support this observation. The ILT is a validated 65-question instrument with four subscales. Therefore, participants’ performance on this test demands some elaboration, especially since extensive discussion was made on the same group’s performance on the post-session ASE questionnaire.

Some of these issues in the article may be attributed to editorial decisions. The authors had included extensive information about the ASE-based IL workshop, which took up over 10% of the article, leaving less space for other study details. The workshop development was an extensive project and deserves due attention, however, this information had already been captured in another article by the authors (Gross, Armstrong, & Latham, 2012). Therefore, it would have been more effective for the authors to refer readers to the other ASE publication, than attempt to describe two complex studies in one article.

Despite these issues, this study demonstrated the limited impact of a one-hour workshop on

students’ actual IL skills and the false positive self-assessment such workshops could generate. The study provides a timely and valuable contribution to current IL research and its findings provide strong practical implications for the current trends in reconsidering the usefulness of student self-perception reports and effectiveness of one-time IL workshops.

References

- Association of College and Research Libraries (2000). *Information literacy competency standards for higher education*. Retrieved from <http://www.ala.org/ala/acrl/acrlstandards/informationliteracycompetency.htm>
- Glynn, L. (2006). A critical appraisal tool for library and information research. *Library Hi Tech*, 24(3), 387-399. doi:10.1108/07378830610692154
- Gross, M., Armstrong, B., & Latham, D., (2012). The analyze, search, evaluate (ASE) process model: Three steps toward information literacy. *Community & Junior College Libraries* 18(3-4), 103-118. <http://dx.doi.org/10.1080/02763915.2012.780488>
- Wise, S. L., Cameron, I., Yang, S.-T., & Davis, S. (n.d.). *Information Literacy Test: Test development and administration manual*. Harrisonburg, VA: Institute for Computer-Based Assessment Center for Assessment and Research Studies, James Madison University.