



Evidence Summary

Gender is a Variable of Interest for Information Literacy Instruction

A Review of:

Pinto, M., Sales, D., & Fernández-Pascual, R. (2019). Gender perspective on information literacy: An interdisciplinary and multidimensional analysis within higher education settings. *Library & Information Science Research*, 41(4), 100979. <https://doi.org/10.1016/j.lisr.2019.100979>

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Abstract

Objective – To identify gender differences that present in 26 information literacy (IL) learning competencies using a multidimensional subjective–objective approach.

Design – Two quantitative survey questionnaires, administered online.

Setting – Five Spanish public universities in 2014.

Subjects – Third- and fourth-year students in eight social science degree programs including information science, audiovisual communication, journalism, psychology,

primary education, pedagogy, social work, and tourism.

Methods – Subjects were recruited using a stratified sampling approach. Two survey instruments were distributed online. The IL-HUMASS instrument uses Likert scales to measure students’ “belief-in-importance” (BI) of various IL competencies relating to searching, evaluation, processing, and communication–dissemination, as well as their self-efficacy (SE) regarding these competencies. The EVALCI-KN instrument measures students’ actual knowledge (KN) of the same IL competencies using closed answer options. The data were analyzed using

descriptive and bivariate statistics and confirmatory factor analyses.

Main Results – The total number of valid surveys collected was 1,575 (sampling ratio of 10.39% of eligible students). No significant differences were found between female and male students' BI, SE, or KN in the categories of searching and evaluation. Statistically significant differences between genders were found relating to SE and knowledge of information processing (with men having higher scores), and to knowledge of communication–dissemination (with women having a higher score). Overall, students' KN scores were higher than their SE scores. Statistically significant differences were found among male students in all categories and dimensions except in SE of evaluation and BI of communication–dissemination and among female students except in BI of processing. Information science and pedagogy were the highest scoring degree programs in different dimensions and categories; tourism and social work were the lowest. Male students' awareness of the importance of using print sources and assessing the quality of information could be improved; female students' awareness of the importance of knowing information source typologies, academic codes of ethics, and intellectual property laws could be improved. The authors also state that male students' KN should be increased in the areas of schematizing and abstracting information, handling statistical programs, and knowing the laws on information use and intellectual property, and they point to the need for instructional support to improve all students' SE across all IL categories.

Conclusion – Gender differences were found in various IL competencies as measured by the three scales (BI, SE, KN). Male students were found to believe assessment skills to be most important and to believe themselves more prepared in search skills; however, their actual knowledge was highest in the communication category. In comparison, female students prioritized communication skills and believed themselves more prepared in search skills, with their actual knowledge highest in the

search and communication categories. Among both genders, weaknesses were found relating to BI in four competencies (use informal electronic sources, know information search strategies, schematize–abstract information, recognize text structure), to SE in six competencies (use printed sources, know information search strategies, assess quality of information, schematize–abstract information, recognize text structure, write a document), and to KN in five competencies (use printed sources, use electronic sources, use informal electronic sources, determine whether information is updated, and know the code of ethics in the academic field). The students' mean score was higher for KN than for SE in searching, evaluation, and communication–dissemination. The authors recommend instruction or awareness-raising sessions to help students acquire IL competencies as well as to improve their self-esteem in these areas, with the design of these sessions incorporating the findings on gender differences. They also recommend a review of existing syllabi to help “incorporate the gender perspective into the classroom” (p. 8).

Commentary

This paper builds on the authors' previous work on university students' motivation and SE around IL competencies (Pinto & Fernández-Pascual, 2017), as well as the body of library and information science research on gender differences in IL. In a 2017 study, Taylor and Dalal analyzed gender differences in college students' approaches to searching and evaluating internet sources, and argued that these differences should inform “librarians' efforts to meet the needs of all learners” (p. 106). Pinto, Sales, and Fernández-Pascual contribute to this effort by investigating gender differences in the context of IL as a multidimensional learning process. Their work indicates that being information literate is not simply a matter of possessing certain cognitive skills relating to information, but also being confident in one's abilities and appreciating why the skills are important. This “subjective–objective” perspective gives us a more nuanced lens for exploring gender differences in IL.

The critical appraisal checklist developed by Glynn (2006) was used to evaluate this article. The authors note that the two survey instruments employed in this study were previously validated by other studies. Cronbach's alpha was used to confirm the reliability of the instruments. The IL-HUMASS instrument, which measures students' perceptions of IL competencies, is included in an appendix to the article. The EVALCI-KN instrument, which measures actual levels of knowledge, is linked to in the body of the article, but the link was not working as of the writing of this evidence summary. The response rate for the study was 85.78%, which exceeds the recommended minimum response rate for surveys with a sampling frame of this size (Fosnacht et al., 2017).

The article would have benefitted from an expanded discussion of gender in a few respects. The authors do not specify how the gender of participants was determined; this is a potentially significant limitation, given the focus of the study. Further, the study uses the male–female gender binary and does not account for nonbinary or genderfluid students. This may impact the applicability of its findings for library instruction for gender diverse populations and for future research on gender in IL. Finally, it would have been pertinent for the researchers to have acknowledged in their analysis or recommendations that female students are often treated differently than their male counterparts, both in school and in the wider society, and that this may have measurable effects on SE. Librarians attempting to bolster students' SE need to grapple with the reality of institutional sexism, and consider the steps they can take to counteract it. This is a tall order, given the limitations of the traditional one-shot model (Bowles-Terry & Donovan, 2016); to do truly meaningful work in this area, librarians will need to develop programmatic approaches to integrating gender-conscious IL instruction into curricula.

This research will help library practitioners and scholars better understand IL as a multidimensional phenomenon. The study explores IL from subjective and objective

perspectives and shows that students' objective knowledge of IL competencies does not always align with their SE. These findings should encourage librarians to think about how they can incorporate activities into their instruction that increase students' SE and motivation to learn IL skills. Additionally, by making the case for gender as a variable to consider when researching IL, the study adds to the evolving understanding of IL as a socially-constructed concept shaped by our notions of gender, race, socioeconomic status, and other social categories.

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