



*Evidence Summary*

**A Multiyear Curriculum-Integrated Information Literacy Program Increases the Confidence and Research Skills of Nursing Students, Although Not as Much as Expected**

**A Review of:**

Farrell, A., Goosney, J., & Hutchens, K. (2013). Evaluation of the effectiveness of course integrated library instruction in an undergraduate nursing program. *Journal of the Canadian Health Libraries Association*, 34(3), 164-175. doi: 10.5596/c13-061

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**Abstract**

**Objective** – To evaluate nursing students' information literacy (IL) confidence and competence after a four year implementation of a curriculum-integrated information literacy program.

**Design** – Web-based and paper-based information literacy questionnaire.

**Setting** – Two Schools of Nursing in Newfoundland, Canada.

**Subjects** – 422 undergraduate nursing students.

**Methods** – A 20-item questionnaire was distributed to nursing students at two School of Nursing programs. Questions were designed to test one or more of the nine learning outcomes set forth for the IL program. At one School of Nursing, web-based questionnaires were sent via email, while paper-based questionnaires were distributed in class at the second School of Nursing.

**Main Results** – Because response rates were low at one of the nursing schools, these questionnaire responses were not examined, nor were they included in the data analysis. The 422 completed questionnaires were divided into groups based on the number of IL sessions attended. The class of 2011 attended

two out of three IL sessions, the class of 2012 attended all three IL sessions, and the classes of 2014 and 2015 did not attend any IL classes.

There were 109 responses from class of 2011 students, 98 from class of 2012 students, and 215 from the classes of 2014 and 2015 (98 and 117, respectively). Results were reported according to the two main goals of the study – evaluating confidence levels and IL skills. Regarding confidence level, the class of 2012 felt more prepared than the other classes to begin evidence-informed practice (EIP). When asked about their confidence in the ability to perform research tasks, confidence levels rose between first year students and the class of 2011, but decreased between the class of 2011 and class of 2012.

In regard to information literacy skills, when asked to identify appropriate tools for locating scholarly research articles, only 2.8% of the first year students correctly identified two resources. Within the class of 2011, 33.9% could correctly identify tools, while 57.1% of the class of 2012 correctly identified appropriate tools. For a series of questions that asked if students could make appropriate decisions about the use of scholarly and popular literature, there was overall improvement between the first year students and fourth year students.

Several questions asked students about their understanding of different study types; students in all classes had difficulty with these questions. Additionally, there were questions related to identifying components of PICO (problem/population, intervention, comparison, outcome), and none of the students in the first year classes or in the 2011 class were able to correctly identify all four parts although 11.2 % of the class of 2012 identified all components correctly. Students were asked to create an answerable question using the PICO format, and 11.9% of the class of 2011, along with 11.2% from the class of 2012 and 3.7% from the first year class were able to do so.

When asked to identify criteria for evaluating websites, 28.4% of students in the class of 2011

and 30.6% of the class of 2012 were able to list three correct criteria. Only 8.3% of the first year students answered this question correctly. Finally, students were given a research question and asked to select the best search statement; those who answered correctly included 28.4% of the class of 2011, 27.6% from the class of 2012, and 20.8% of first year students.

**Conclusions** – The authors concluded that overall, IL skills improved from first to fourth year, although not as much as the anecdotal information from nursing faculty would indicate. This ongoing, four year study has prompted discussion on ways to improve the current IL component of the undergraduate nursing degree curriculum, and changes will be implemented in a future version of this curriculum.

### **Commentary**

In their literature review, the authors note that the norm in IL seems to be the “one-shot” library instruction session; research has shown that this type of session does not have a lasting impact on students, as they are not likely to retain skills taught in the session. Further research has supported the idea that IL instruction should be at the point of need, should be similar to real world situations, and should be integrated throughout the curriculum. While there are numerous published studies evaluating the IL skills of nursing students, very few have been done in Canada, and none were found that evaluate students’ skills with regard to evidence informed practice (EIP). The two nursing programs in the current study incorporate searching strategies for EIP into their IL curriculum; as such, the authors’ research is unique and possibly the first to be conducted on this distinct aspect of IL.

This study was evaluated using the ReLIANT Instrument (Koufogiannakis, Booth, & Brettle, 2006). The significant strengths of this research related to study design include the clearly explained research methodology, the researchers’ strategies to ensure efficacy of the research instrument, the measurement of IL

skills over multiple years, and the detailed description of the IL curriculum and learning outcomes, with inclusion of the BN (Bachelor of Nursing) IL Questionnaire as Appendix A.

Regarding educational content, the authors describe the IL topics taught during each academic year and list the learning outcomes for the BN IL program and how these map to the questions on the evaluative questionnaire. Results of the study are clearly explained and the researchers provide the percentage as well as actual number of responses for each question component of the evaluation. However, no statistical analysis was performed on results; conclusions were solely based on descriptive statistics.

Because acceptable response rates for data analysis were only acquired at one site, the research results and conclusions were based on the 422 responses from a single site. The main reason for this issue was the mode of questionnaire delivery. Due to unexpected changes in the timing of the IL sessions, evaluations were delivered electronically at one site, which resulted in a poor response rate. At the other site, the questionnaires were distributed in class in hard copy, resulting in a much higher response rate.

Even though the study's research results are specific to the course-integrated IL at one of

the two nursing program sites, the information gained can be useful to libraries and librarians that work with nursing programs and who are thinking about curriculum integrated IL. Librarians struggle with justifying value in "one-shot" instructional sessions and may face resistance when suggesting cumulative, curriculum integrated IL to faculty members, as these sessions take time away from the course content, and may be difficult to include based on a class's schedule. The most valuable aspect of this research is that it provides evidence that this type of instruction is effective and has long-term benefits to nursing students.

The article notes that anecdotal evidence from nursing faculty suggests that IL sessions have a positive impact on student papers and also results in more confident students. This information could certainly be considered as an area for further scholarly inquiry.

## References

- Koufogiannakis, D., Booth, A., & Brettle, A. (2006). ReLIANT: Reader's guide to the Literature on Interventions Addressing the Need of education and Training. *Library and Information Research*, 30(94), 44-51. Retrieved from <http://www.lirjournal.org.uk/lir/ojs/index.php/lir/article/view/271>