Evidence Based Library and Information Practice

Students Taking Numerous Honours Courses in High School Have Higher Information Literacy Levels

A Review of:

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Abstract

Objective – To assess the impact of students' high school performances on the development of their information literacy (IL) competency.

Design – Statistical analysis of test performance.

Setting – A large public university in the United States of America.

Subjects – 93 first-time college freshmen. Of these, 46% had been admitted on a probationary status due to GPA under the required 3.0 ("alternate admits"), and 61% had not declared a major ("exploring majors"). 39% identified as Caucasian, 25% as Hispanic, 22% as African American, and 15% as Asian. 84% declared that their best language was English only.

Methods – Participants were self-selected freshmen who enrolled into programs offered by the university's Academic Success Center. They took the iSkills test, an online evaluation of information literacy competencies developed by the Educational Testing Service, and provided background data on their high school experience. Using hierarchical multiple regression analysis, the researcher evaluated predictors of iSkills score variance among a range of high school experiences: core high school GPA, number of honours classes taken in high school, and number of research projects or assignments in high school. The analysis controlled for gender, best language,

race, and admission status as either alternate admit or exploring major.

Main Results – Participants' mean iSkills scores was below the minimum passing score for the test. There was a significant positive correlation between iSkills scores and exploring major status, core high school GPA, and having taken 5 to 12 honours courses. There was a negative correlation between iSkills scores and language other than English, Asian race, alternate admission status, and having had 1 to 4 honours courses. Among the background variables, the most significant predictor of a student's iSkills score was his or her best language, followed by race. After controlling for these variables, the most important factors were students' high school GPAs and the number of honors courses taken.

Conclusion – The researcher discovered that the number of honours courses taken in high school is a strong predictor of information literacy competency as measured by the iSkills test. This remains true when controlling for race and other background factors. This finding is consistent with the assumption that high school teachers of honours courses believe their students to be capable of learning higher-order skills and therefore adopt a constructivist pedagogy, and that such pedagogy promotes the development of information literacy skills. Yet the number of high school research projects or assignments could not be statistically correlated to information literacy competency. In subsequent focus groups, students who had taken fewer honours courses expressed test anxiety, while students who had taken numerous honours courses expressed their determination to get the correct answer. This may inform one surprising result of the study: that students who took 13 or more honours courses in high school did not score significantly better on the iSkills test than those who took 5 to 12 courses.

Commentary

The literature on information literacy assessment is abundant, especially literature regarding the factors associated with IL competencies. This study provides an original approach to this topic by examining the link between high school experience and IL performance at the university level. Other studies on the connection between high school and college IL skills have generally not used a performance-based, high-order skill-testing instrument such as iSkills. Furthermore, previous research has not focused on special populations of students characterized by lower than average high school academic achievements.

The study is based on a strong conceptual framework informed by IL best practices and education scholarship. The methodology is sound and is explained in detail. The sample was very small but the researcher checked its normality against the overall student population. The author identifies several limitations of this study, including the fact that students self-reported their high school experiences, and also that participants were self-selected, as the test was administered to those who volunteered for programs offered by the university's Academic Success Center.

The researcher also uses selected results from another study, introducing focus groups she conducted after the test administration. These results help confirm the unreliability of self-reporting and provide explanations for some of the quantitative findings. However, not enough is said about the focus groups study, although it informs the results presented in this article.

More information about the design and validity of the iSkills test would have allowed readers to better evaluate its effectiveness compared to other forms of IL assessment, such as portfolio-based tests (Katz, 2007; Katz et al., 2009). iSkills was developed between 2002 and 2006, and is based on the ACRL IL standards, which are now being superseded by a framework relying on threshold concepts rather than learning outcomes (Oakleaf, 2014). Yet because it is associated with critical thinking and problem solving skills, iSkills is likely to remain a relevant assessment tool even under the new IL framework.

Improving undergraduate students' IL skills is central to the mission of academic librarians, so a better understanding of the factors conducive to IL development could help librarians improve learning environments. This may include reaching out to high schools and encouraging constructivist pedagogy. This study is particularly important because it focuses on incoming students with lower GPAs, who may have greater difficulty completing college. Unfortunately, the findings in this article do not point to specific practical strategies. For example, the study could not link high IL levels to the number of research assignments students had completed in high school. The author suggests that more research is needed about high school students' experiences and about constructivist IL pedagogy. More research on which specific IL skills are most affected by high school experiences would also be welcome.

References

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