Evidence Based Library and Information Practice

Evidence Summary

Students in Nova Scotia Schools Without Teacher-Librarians are not Achieving Department of Education Expectations for Information Literacy Skills

A review of:

Gunn, Holly, and Gary Hepburn. "Seeking Information for School Purposes on the Internet." Canadian Journal of Learning and Technology 29.1 (Winter 2003): 67-88. 24 May 2007 < http://www.cjlt.ca/content/vol29.1/04_gunn_hepburn.html>

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Abstract

Objective – This study investigated whether the expectations for Internet searching strategies outlined in provincial curriculum goals are being met in Nova Scotia Schools. Twelfth-grade students in representative schools were surveyed as to their Internet information seeking strategies and their perceptions of the effectiveness of those strategies. The results are presented as six themes based on the survey questions.

Design – Survey questionnaire consisting of yes/no, multiple-choice, Likert style, and open-ended responses.

Setting – Twelfth-grade students from four high schools in one district in Nova Scotia. Total participants: 198.

Subjects – Questionnaires were analyzed from 243 general practitioners, practice nurses, and practice managers in four Nottingham primary care trusts as well as practices in the Rotherham Health Authority area.

Methods – Four research questions guided this study:

1. What strategies and techniques do students use that are helpful for information-seeking on the Internet?
2. What knowledge do students have of the different World Wide Web search engines?
3. How do students perceive their ability to locate information for school purposes on the Internet?

4. How do students learn how to seek information on the Internet for school-related assignments?

The survey was developed through a literature review of previous research. Each survey item reflected a theme and one of the four research questions. The survey was field tested in a pilot study with two twelfth-grade students, and two twelfth-grade English classes.

The sample was assembled by asking principals at the four schools to identify two classes in each of their schools that represented mixed academic abilities. Three schools chose English classes, and one school chose math classes participate in the study. All students had agreed to be a part of the study and only students present in class on the day the questionnaire was given were represented. No effort was made to include students who were absent.

Results were tabulated as percentages of responses, and presented in tables related to the themes of the four research questions.

Main results – Throughout the study, students reported very few strategies for effective Internet searching. They cited friends and family members rather than teachers as their main sources for support, and reported self-taught trial and error as the most common method of learning search strategies. Despite their lack of effectiveness, most students considered themselves "good" or "very good" at finding the information they need for school purposes. Most of the students used very few of the strategies associated with effective searching that have been stated in prior research studies.

- Research Question One: Use of Strategies and Techniques for Information-Seeking on the Internet

Only 15% of students used Boolean operators regularly.

Over 70% of students did not know how to eliminate commercial sites, use particular features, limit searches to recently updated pages or limit searches to the title section of a Web page.

- Research Question Two: Knowledge of World Wide Web Search Engines.

Google was the overwhelming choice, with 66.7% percent of students reporting that they used it regularly. Other search engines were used from 0 to 22%.

- Research Question Three: Students' Perception of Their Information-Seeking Ability on the Internet

81.3 % of students reported their abilities as good or very good.

Only 5% felt their abilities were poor.

- Research Question Four: How Students Learn What They Know About Information-Seeking on the Internet

72.7% reported self-teaching strategies.

39.8% relied on friends or classmates, 36.8 % relied on teachers.

2.5% reported librarians as a source

Of the students who reported self-teaching, 53% used trial and error, 6.6% used help screens and 4% searched for assistance. 80.8% of students who reported teachers as a source for learning information strategies were taught in computer-related classes, rather than in content area classes across the disciplines.

Although only 72% of students reported having Internet access at home, 64% stated

that they used the Internet more at home than at school to find information for school-related assignments. 46.3% of students with no Internet access at home rated their perception of searching ability as poor, compared to only 8.3% of students who did have Internet access at home.

Conclusion – The researchers state that actual practice in Nova Scotia schools does not reflect the standard instructional strategy of modeling as recognized by the Nova Scotia Department of Education. They feel that the results of this study show that very little modeling is being done by classroom teachers; that the modeling is instead being done by peers and family at home. This magnifies the disparity in effective skills for those who do not have Internet access at home. They also note that the goal of integrating search strategy instruction across the disciplines is not being reached.

The researchers suggest two ways to offer the needed instruction: compulsory classes in information seeking for all students, or the hiring of teacher-librarians to support instruction in the schools, working collaboratively in all disciplines. Research supporting the presence of teacher-librarians in teaching effective information literacy skills, including Internet searching, is noted.

Commentary

The 1994 reassignment of teacher-librarians to classrooms delegated the instructional role of teaching information-seeking strategies to teachers in each discipline, with the goal of integrating the instructional role across the disciplines. *The Vision for the Integration of Information Technologies within the Nova Scotia Public School System (1999)* explicitly outlines the need for teacher support in helping students achieve stated expectations for information-seeking skills.

The researchers state that assumptions about teachers' expertise in online information-seeking, and their ability to support students in this area, are erroneous -- that "the lack of qualifications of library staff, the range of qualifications of library staff, and the sometimes limited expertise in Internet searching techniques of many teachers who are to support students" may have a dramatic effect on meeting expectations for graduation.

The researchers have confirmed at a local level results that are similar to the initial findings of the ETS (Educational Testing Service) information literacy skills test that has been developed and tested with high school and college freshmen in the United States. The ETS testing clearly indicates that students, although savvy with technology, are not arriving at college with the search skills necessary to successfully initiate and complete inquiry based research assignments integral to all college disciplines (Katz 2007).

A wealth of research is available on the information-seeking behaviors of students in school. Gross (2003) documented the effect of imposed queries on children's searches at school and Hirsch (2003) explored the effect of children's domain knowledge on search behaviours. Shelton (2007) outlined the causes of information-seeking failure in students, and provided insight that can be used to shape effective instructional practices. There is a need for teachers to understand how to structure both targeted and open-ended inquiry lessons in search strategies, including specific compensations for the cognitive and affective needs of children at different developmental stages and contexts. Professional development courses for school librarians and teachers as pre-service instruction or as instruction guided by the school librarian in a professional development role would benefit from

including this research and its practical applications in daily practice and collaborative lesson design.

This user study addresses a clearly focused issue, and the approach the researchers have taken is substantiated by earlier related research. The data collection was validated with a pilot study and both the response rate and the population chosen were satisfactory. Results were clearly reported and interpreted. The survey was given only in schools that did not have a teacher-librarian on staff, and since there are a small number of schools in Nova Scotia that do have a teacher librarian, it would perhaps have been helpful to see the results of the survey given at one of those schools, as a basis of comparison.

The researchers have successfully documented the lack of effective information skills in students in the Nova Scotia schools. Based on earlier studies that cite correlations between the presence of teacher librarians and the demonstration of effective searching skills, they propose that the lack of teacher librarians is a major contributing factor to the lack of skills. Further study is needed to substantiate the correlations.

Works Cited

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