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Developing People's Information Capabilities

Fostering Information Literacy in Educational, Workplace and Community Contexts

Chapter 11

Information Literacy in the Business School Context: A Story of Complexity and Success

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Abstract

This chapter addresses information literacy instruction (ILI) in business schools, where learning outcomes receive considerable emphasis due to accreditation requirements, and where information literacy outcomes are increasingly being recognized as critical to graduates' success in the workplace. We report a study examining ILI practices and program components against the background of student demographics and factors in the learning environment. The outcomes of those instructional experiences for students are analyzed, including psychological, behavioral and benefit outcomes. Data were collected via student skills testing; interviews with students, teaching faculty, librarians, and school administrators; and a web survey of students. Taken together, the results convincingly demonstrate that ILI is a complex undertaking with diverse perceived outcomes. Some success is evident, and verifiable outcomes include increased student self-efficacy; positive perceptions of libraries, librarians, and online library resources; improved and increased use of librarians and online library resources; and increased efficiency and effectiveness of conducting information research. The results demonstrate the value of pedagogical approaches such as active learning, just-in-time instruction, and integration of information literacy instruction with course

curricula, as well as the importance of marketing efforts to manage students' expectations of instructional benefits. Although instruction remains uneven and complex due to divergent expectations and assumptions by different stakeholders (students, librarians, and administrators), successful learning outcomes are possible.

Keywords: Information literacy; business schools; learning outcomes; research

11.1. Introduction

Accreditation processes are increasingly relevant to academic programs in a world focused so intently on assessment. In schools of business, that assessment focus has had a long tradition. For example, established in 1916, the Association to Advance Collegiate Schools of Business (AACSB), which currently accredits 672 member institutions in nearly 50 countries and territories, ensures that business programs articulate and measure student learning outcomes. Among those outcomes is the skill set variously labeled "information literacy," "digital literacy," or "research skills." Regardless of the label applied, graduates' ability to identify the information they need, to locate it efficiently and effectively, and to use it ethically is critical in a twenty-first century workplace. That skill set is also increasingly recognized as essential for digital and democratic citizenship, and success in daily life decision-making, related to health and other personal matters. It is within the context of an assessment culture, program accreditation, and increasing recognition of the value of information literacy skills that we explored information literacy instruction (ILI) in business schools. The cooperation of teaching faculty, administration, librarians, and students assures effective learning outcomes and is critical to the success of graduates throughout their careers.

11.2. Literature Review

Information is a critical asset and information handling skills are core to the success of business school graduates (Detlor, 2010). Therefore, business schools increasingly focus curricular attention on information literacy outcomes for their graduates (Bowers et al., 2009; Detlor, Julien, Willson, Serenko, & Lavallee, 2011; Hawes, 1994; Jacobson, 1993; Malu & Yuhfen, 2004; Rutledge & Maehler, 2003; Taylor, 2008). Those outcomes are typically achieved through some cooperative instructions delivered by

teaching faculty and library staff. Librarians historically have played a role in training clients to find and use information effectively and efficiently; in recent years, that role has intensified and the skill set of interest has been expanded to a broad concept of information literacy. The outcomes of those training efforts are often not systematically assessed (Julien 1998, 2000, 2006; Julien & Boon, 2004), and instruction in business schools has been described as "evolving" (Cooney, 2005). The lack of data addressing outcomes is a gap which demands attention.

Assessment literature is vast, so a focused approach was appropriate for the study. Lindauer, Arp, and Woodard's (2004) assessment framework, specific to ILI, provided an elegant theoretical lens through which to examine the variables appropriate for analysis. The framework is tripartite, suggesting that information literacy assessment should include examination of (1) the *learning environment* (curriculum, co-curricular learning opportunities, independent learning opportunities); (2) *information literacy program components* (courses, workshops, reference desk encounters, instructional learning opportunities by appointment, independent learning opportunities); and (3) *student learning outcomes* (performance measures on course tests, course-embedded assignments, program portfolios, course grades, self-assessment, surveys of attitudes about the learning environment).

11.3. Methods

The study explored the interplay between factors of the learning environment and information literacy program components and their impact on business student learning outcomes. Those outcomes were analyzed from the points of view of students, librarians, and teaching faculty. The study aimed to uncover the salient elements of the learning environment which affect business student information literacy learning outcomes.

The study was conducted at three Canadian universities of varying size and geographical location. Two of the schools were AACSB accredited; one was seeking accreditation. At each school, data were collected via skills testing of undergraduate students using the SAILS test, which is based on the five ACRL Information Literacy Standards (Association of College and Research Libraries, 2010), and tests students on their knowledge in those content areas. In addition, 79 interviews were conducted at the three schools, including 7 librarians, 4 administrators, 16 course instructors (teaching faculty), and 52 students; all participants provided informed consent. Interview questions were focused on ILI experiences and outcomes (students interviews), on instructional work with business students (librarians interviews), on students' information literacy skills (teaching

faculty interviews), and on the place of ILI within the institution (administrators interviews). Based on results of that data set, a web survey of 372 students was conducted at one of the participating business schools. This survey tested the cause and effect relationships among the outcomes identified from the interview data. Full details of methods may be found in Julien, Detlor, Serenko, Willson, and Lavallee (2011), Detlor et al. (2011), and Serenko, Detlor, Julien, and Booker (2011).

11.4. Results

11.4.1. Environments and Programs

The learning environments differed considerably among the three participating business schools. School A was relatively newly accredited when the study took place. It is hosted in a research-intensive university of medium size. There is a history of close collaboration between librarians and teaching faculty at that school, and ILI is integrated into several undergraduate courses. ILI is delivered via a diverse array of methods, including an online tutorial that was developed using funding provided centrally by the university (demonstrating commitment to ILI goals). Significant library staff resources have been dedicated to ILI at School A, and SAILS testing had been conducted prior to our study, providing evidence of a concern for assessment. School A has also invested in skill training for librarians. School B has had AACSB accreditation for over 40 years, and is located in a large, research-intensive university. There has been less focus on ILI in that context, but mandatory ILI was incorporated into an undergraduate course required for all students. Librarians deliver ILI through a range of approaches, including course research guides that are integrated into the teaching faculty's course management systems. School C is located in a small, undergraduate-focused university, and remains unaccredited. Two required undergraduate courses include some information literacy components. Assessment efforts at Schools B and C were, and remain, informal in nature, and neither allocates specific funding for ILI. In addition, few students knew about ILI opportunities at School C, and there appeared to be a lack of communication about ILI between library administrators and teaching faculty. At Schools A and B, interaction between librarians and teaching faculty was emphasized on both sides; at School C there was little interaction, and, not surprisingly, little demand for ILI by teaching faculty. The relationship between students and librarians was a point of pride for librarians at Schools A and B.

The learning environments in the three participating schools differ on a number of aspects. ILI is a particular emphasis at School A, and

investments are being made to achieve success. These efforts have translated into significant demand from teaching faculty for ILI. The focus on personal relationships between librarians and faculty, and librarians and students, is a hallmark of School B. The environment at School C is murky, ILI is not emphasized, and success remains elusive (at least at the time of the study).

There are also discernible differences in the teaching environments of these schools. A consistent philosophical approach was reported by librarians at all three schools, focusing on practical and relevant skill development, the need to appeal to different learning styles, and the value of active learning. Librarians at School A, however, are explicitly committed to pedagogical innovation, which complements their ILI resource allocation and focus on assessment.

11.4.2. Outcomes

Key results from the interviews suggest that ILI leads to a number of psychological outcomes, including decreased anxiety using online resources provided through the library, increased self-efficacy with respect to using these online resources, improved perceptions of the librarians' value and helpfulness, as well as improved perceptions of the value of online library resources and of the physical library. ILI also leads to behavioral outcomes, such as students selecting better resources, better use of online resource features, better searching techniques, better evaluation of retrieved information including assessment of citations, and better understanding of economic, legal, and social issues associated with information. Additional outcomes included increased use and more efficient and effective use of the physical library. Benefit outcomes included time savings and reduction of effort, higher grades, and greater workforce preparation (Detlor et al., 2011). Interestingly, but perhaps not surprisingly, positive benefits accrued mostly from active learning experiences than from passive pedagogical approaches (Detlor, Booker, Serenko, & Julien, 2012). The role of active ILI was not apparently modified by relative frequency or intensity of active learning opportunities; even one ILI experience that was characterized by an active approach led to positive learning outcomes (Booker, Detlor, & Serenko, 2012).

Based on expectation disconfirmation theory, a model of cause and effect was drawn from these outcomes (Bhattacherjee, 2001). The structural equation modeling test (PLS — partial least squares) demonstrated that when students receive instruction that meets or exceeds their expectations, their perceptions of the quality of, and satisfaction with, that instruction increases. Various psychological outcomes associated with those positive effects were observed, with the exception of increased positive perception of

the physical library. The positive behavioral outcomes articulated above also accrue from expectations that are exceeded and from increased satisfaction; those behavioral outcomes affect benefit outcomes. Especially relevant benefit outcomes include more efficient and effective information finding, improved course grades, and time savings. When students' expectations are not met, their perceptions of quality are low and satisfaction is decreased.

One of the concerning findings arising from the interview data was that perspectives among the stakeholder groups differed on several points. Several gaps were identified between perceptions of librarians and teaching faculty, and those of students. Students reported general confidence in their information literacy skills, which was not shared by their instructors. In addition, librarians' and library administrators' high expectations for the learning outcomes associated with ILI are not shared by students. Students report wanting more instruction on search skills, while teaching faculty prefer to focus on evaluation skills and believe that ILI develops those skills; students are less sanguine about that outcome. Students are also less certain that ILI develops their database searching skills, an outcome that is assumed by librarians, library administrators, and teaching faculty. Of further concern was that few students, other than those focused on marketing careers, could make a connection between the ILI they received as students, and the application of those outcomes in the workplace. Teaching faculty, librarians, and library administrators all believe that ILI will transfer beyond the academy. If the point of ILI is to develop skills that will transfer beyond the classroom, then perhaps those connections need to be made much more explicit than is the case currently.

ILI outcomes also appear to vary according to student demographics and other factors. For example, more senior students report more positive outcomes and benefits, suggesting a role for repetition of instruction, as well as a possible role for developmental maturity in students. Another finding suggests that female students emphasize time savings over other benefits, which may reflect females' generally more comprehensive searching style (Hupfer & Detlor, 2006). International students more appreciated the need for and value of ILI, and reported greater benefits than domestic students. Students who strongly prefer to use convenient and simple resources such as Google and Wikipedia were likely to express negative attitudes toward more complex sources provided by the library, and toward ILI. Finally, students who perform better academically were more likely to report positive outcomes of ILI.

11.4.3.   *Test Results*

The SAILS test data revealed relatively modest skill levels at all three participating institutions. On a scale from 0 to 1,000, most students scored

between 530 and 580. The only statistically significant differences among the institutions were on two measures. At School A, students demonstrated better proficiency at "using finding tool features" than participants at the other two schools. In addition, students at School B scored better than those at School A at "understanding economic, legal, and social issues." These differences undoubtedly reflect different content emphases in ILI in these schools. The relatively low scores overall are consistent with results of standardized testing conducted in other contexts and with other tests (Gross & Latham, 2007, 2012; Smith, De Long, Given, Julien, & Ouellette, 2012).

11.5.   Discussion

One of the hallmarks of educational settings is their complexity. Multiple variables are associated with positive outcomes; this study examined only a handful, including aspects of the learning environment, program components, and learning outcomes. It is notoriously difficult to disaggregate variables of interest, but this study demonstrates some statistically significant causes and effects, which have important potential to inform expectations of ILI outcomes and to inform approaches to ILI. In addition to the quantitative results, the qualitative results can improve understanding of what stakeholders' perceptions might be, what assumptions are being brought to ILI, and how varying levels of commitment to, and investment in, ILI can influence success. School A, in particular, provides a benchmark for commitment and investment, and should be held up for emulation. Similarly, this study reaffirmed the value of good practices such as applying active learning techniques, integrating instruction into courses, and fostering positive communication among stakeholders.

One of the encouraging findings from the study was the fact that specific forms of success were evident in the outcomes for students. Students can and do learn specific and useful skills as a result of ILI, and they can learn to appreciate the value that librarians and libraries bring to their information environments. In addition, concrete benefits arising from ILI were also identified, including improvements in academic standing. This is not to suggest that no potential for enhancement remains. It is evident, for example, that the transferability of information literacy skills to the workplace requires explicit attention.

11.6.   Conclusions and Recommendations

An axiom of pedagogy, the value of active learning, was demonstrated. Students' active engagement in learning led to positive outcomes. Also fully

consistent with previous work in several disciplines, such as Library and Information Science, Education, and Information Systems, our line of research demonstrated that to be highly effective, ILI should be integrated with course curricula. However, the degree to which integration is possible in any single setting is very much dependent on the place of librarians within the institution, on their perceived role in instruction, and ultimately on campus politics and power relations (Julien & Pecoskie, 2009). Librarians may know perfectly well how best to develop information literacy skills and when to ideally time instruction; seizing an opportunity to capitalize on that understanding may be very challenging. A significant literature exists on the complex relationship between academic librarians and other teaching faculty, and recent work on the instructional roles of librarians focuses on the key impacts of those relationships on librarians' instructional work (Julien & Pecoskie, 2009; Julien & Genuis, 2009, 2011). Nevertheless, the degree to which ILI can be delivered in the context of student learning more generally will significantly affect its perceived outcomes. The value of connections between librarians and teaching faculty was highlighted well by our study results. The learning environments of the three participating schools differed significantly in terms of that connection, but success was certainly more evident where connections were frequent, strong, and positive.

Integrated instruction and connection beyond the classroom are also intimately tied to the quality of communication among stakeholders. When librarians make the case for the value of their subject expertise for students' learning, and when teaching faculty can be helped to understand the value of that expertise, collaboration and connection can begin. Additionally, if students can be helped to understand the value of the information literacy skill set for their future career success, beyond the immediate value to their academic performance, positive student expectations for ILI could be translated into greater learning and benefit outcomes. All of these positive results depend on improved communication among librarians, teaching faculty, library administrators, and students. The assumptions that each group brings to their mutual interactions need to be examined and untangled (Julien & Given, 2003). Perhaps the results of this study can be useful to show the gaps, opportunities, and potential for positive difference in students' lives.

Recommendations for practice flow quite logically from this study's results. Ideally, ILI should be integrated with course curricula, and delivered using active methods. The most successful ILI appears to occur in contexts where ILI is resourced and encouraged, where librarians are provided with development opportunities and where emphasis is placed on strong, professional, and mutually respectful relationships with teaching faculty. ILI opportunities should be marketed strongly to students, and the

connections between the value of information literacy skills in academia and their application in the workplace need to be made more explicit for students. Teaching faculty need to understand the relationship between perceived quality and satisfaction with ILI and their effects on outcomes for students, since the teaching faculty could have a significant role in strengthening positive attitudes toward ILI and librarians. Librarians, too, need to carefully manage student expectations, and then deliver instruction of excellent quality. This last point is of particular concern and requires increased attention to preparation for instructional roles, to marketing, to instructional design, to good pedagogy, and to myriad other aspects of instruction that affect its success. There is agreement about the importance of information literacy, particularly in the business school context; the path to successfully developing that skill set is perhaps made clearer through this study.

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