NORDIC JOURNAL OF INFORMATION LITERACY IN HIGHER EDUCATION
2013, Vol. 5, Special Issue 1, 49-53 noril.uib.no

Communicating the relevance of the library in the age of Google: Improving undergraduate research skills and information literacy though new models of library instruction

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Abstract
Most academic librarians have long been aware that the ascent of the Internet has posed a challenge to the primacy of the library as information hub. Recent studies have shown that the majority of undergraduate students do not begin their research in the library, but with Google and Wikipedia – and many students end their research here as well (Connaway, Dickey, & Radford, 2011). This trend would seem to bode ill for the quality of the research skills and the level of information literacy among current undergraduates, as many students privilege convenient access to information over quality of content (Colón-Aguirre & Fleming-May, 2012; Connaway, et al., 2011). But how do we prepare undergraduate students for the rigours of academic research given this circumstance? The library instruction session has been the path to information literacy traditionally taken by colleges and universities, but increasingly, librarians have begun questioning the value of these sessions. Many undergraduates do not find library instruction sessions relevant to their practical information needs and to changing modes of information access, and many students do not come away from library information sessions feeling fully prepared – or even fully willing – to move beyond Google and into the library in order to carry out quality information searches (Colón-Aguirre & Fleming-May, 2012). Indeed, many librarians also now feel that the classic model of library instruction no longer fully meets the information needs of undergraduates nor anticipates their Internet-focused research habits, and that library instruction needs to change dramatically in order to do so (Colón-Aguirre & Fleming-May, 2012; Farkas, 2012). Such means of improving library instruction include: breaking away from the single-session model and moving toward a multiple-session model (Farkas, 2012); incorporating discussion of Internet-based and electronic resources more fully into instruction sessions (Colón-Aguirre & Fleming-May, 2012); tailoring library instruction to course curricula and assignments (Smith, et al., 2012); and incorporating active, student-centred learning into library instruction sessions (Abate, Gomes, & Linton, 2011). The successful implementation of these measures is ultimately dependent upon communication and collaboration among library staff, faculty, and students. Implementing major changes to library instruction can be challenging for all stakeholders; such challenges will be explored in a

discussion of the implementation of a prototype library instruction model developed at Selkirk College, a small undergraduate-focused institution in British Columbia, Canada.

Literature Review

As current studies into undergraduate research styles have indicated, most, if not all, undergraduates begin their information searches on the Web (Detlor, Booker, Serenko, & Julien, 2012). Indeed, a troubling number of students rely "on Internet resources almost exclusively" for research projects, despite having received library instruction (Cmor & Li, 2012, p. 452). Studies by Colón-Aguirre & Fleming-May (2012), Connaway, et al. (2011), and Porter (2011) have indicated that the major factors influencing millennial undergraduates' research styles are the convenience, familiarity, and ease of use of information retrieval (IR) systems.

Undergraduates often choose to rely primarily on Web-based resources for their research because they perceive search engines such as Google as more convenient and easy to use than library IR systems (Connaway, et al., 2011). Web search engines typically require less expertise to navigate than do library IR systems, and many students do not have, or feel that they do not have, the skills to "maneuver the online library environment effectively" (Porter, 2011, p. 268).

This problem is compounded by the fact that undergraduates in turn tend to overestimate their abilities when it comes to finding sources on the Web (Gustavson & Nall, 2011), and they often expect library IR systems to function in the same manner as do Web-based search engines (Porter, 2011). Further, undergraduates sometimes overestimate the reliability of online resources, or do not fully understand why it's important to approach such sources with caution (Colón-Aguirre & Fleming-May, 2012). Though they may find enough information online to suit the purposes of a particular task or assignment (Connaway, et al., 2011), students who privilege the quick and convenient access to information offered by the Web are missing out on "unique, published, and peer-reviewed" (Porter, 2011, p.268) library resources. In wider terms, this lack in information literacy – typically defined as "the ability to find, access, evaluate and use information" (Saunders, 2012, p. 227) – is highly problematic given the increasing need for all people to be information literate citizens in our culture of information overload.

Library instruction can help to address these problems. Many librarians feel, however, that typical models of library instruction – one-shot (or single session), lecture-style, instructor-centred lessons led by a librarian in the role of guest instructor – are ineffective (Detlor, et al., 2012). Ideally, colleges and universities would require or encourage students to complete full-semester, stand-alone, for-credit information literacy and research-skills courses (Farkas, 2012). However, many academic institutions simply do not have the resources available, in terms of time, staffing, and facilities, to offer such courses. An alternative to full-credit courses could be embedding librarians within a course or program in order to foster information literacy throughout the semester. Other means of engaging student interest include incorporating active learning activities, a mode of learning in which "students are encouraged to use their higher-order thinking skills (…) while engaged in activities that help them think critically and explore their own attitudes and values" (Detlor, et al., 2012, p.153). The literature has indicated that students tend to disengage with the learning process during large-group lectures (Abate, et al., 2011), whereas student-centred approaches that involve active learning methods such as problem-based and discussion-based learning can significantly improve student uptake of information. In addition, tailoring instruction to a specific course, program, or assignment can provide an incentive to participate in and retain information gained from the session.

Of necessity, collaboration among librarians, faculty, and students is crucial when it comes to improving undergraduate research skills and academic outcomes (Colón-Aguirre & Fleming-May, 2012). Librarians need to work with faculty and students to determine intended student learning benchmarks, negotiate time allotted to library and research-skills instruction, design effective research assignments, tailor instruction to class curricula (Lindstrom &

Shonrock, 2007; Smith, et al., 2012), and keep abreast of any changes to class assignments or curricula (Lindstrom & Shonrock, 2007).

Case Study: Library Instruction at Selkirk College

Librarians at Selkirk College were increasingly noticing students' reliance on Google for finding materials to support their research, despite the fact that these students had received library instruction that highlighted the value of using library resources to enhance and streamline the research process. Where was our message going astray? Initial research (see above) suggested that uptake of content might be improved by moving away from a linear, lecture-based instruction model towards an active learning model that encouraged student engagement and critical thinking. This section will detail the initial successes and challenges of implementing this new model of library instruction at Selkirk College, a small regional college located within the West Kootenay and Boundary region of British Columbia, Canada.

To begin this transition, sample lesson plans were created that outlined the ideal instruction session, and into which active learning elements were built. To determine the effectiveness of the lesson plans and to build support for the implementation of a new model of information literacy instruction, a small pilot project was undertaken with three courses at Selkirk College.

For the purposes of this research it should be noted that Selkirk College does not have subject liaison librarians that engage with specific faculty regarding instruction, nor does it have a required course in any of its schools (program areas) where information literacy instruction occurs. The majority of students encounter library instruction in its traditional form: as a 50 minute, lecture-based session in their first year of study through English 110: College Composition, which for many students is a required class. Student understanding of what was taught in the instruction session is assessed through an assignment called *My Research Log*, in which students are required to define a research topic, identify search terms, and conduct both OPAC and database searches to find material to support their topic.

The pilot project ran from January to April 2013, and included two English 110 classes as well as one second-year Psychology class. These classes were good pilot project candidates because students were already being marginally assessed by the librarians for understanding and application of learned skills. By comparing the assignments of these pilot groups with those from previous years, it was hoped that we would see an improvement in those areas of the assignment that were being taught actively rather than passively.

Unfortunately, the pilot study did not show a marked increase in engagement with, and retention of, information literacy skills. The challenges around introducing changes to the traditional library instruction model were substantial, and included: lacklustre student engagement, difficulty in garnering faculty buy-in and collaboration, an unclear perception of librarian roles, a lack of defined learning outcomes for information literacy, and a lack of assessment tools. Each of these challenges is described in detail below.

The challenge to engage students is of particular importance. Students were not interested in doing any active learning as part of library instruction. Though it is difficult to determine the exact cause of this resistance without direct feedback from students, management of student expectations of library instruction certainly plays a role. The Selkirk Librarians need to better manage student and faulty expectations by marketing the value of information literacy to instructors so that what we do, what we teach, and who we are, is apparent.

Faculty buy-in also posed a significant challenge. Though Selkirk Librarians are increasing our efforts to engage with faculty whose disciplines haven't historically been targeted for IL instruction, we currently have a limited audience, many of whom might find it difficult to

move away from the traditional library instruction model. Additionally, it is unclear how librarians are perceived by students and faculty at Selkirk College in the context of teaching and learning. Do faculty see us as teachers? Are they prepared to have conversations with us about pedagogy and assessment tools? The success of the new model will likely be dependent upon this type of collaboration.

Additionally, we are challenged by our own perceptions of our role. Do we identify ourselves as teachers, as well as librarians? Confusion over our professional identity could contribute to our continued reliance on the traditional library instruction model and our reluctance to move to something new, despite its potential to promote student learning (Davis, Lundstrom, & Martin, 2011).

Another issue we faced in creating the lesson plans is that Selkirk Librarians don't subscribe to any particular information literacy outcomes that guide our instructional planning. Our traditional, one-shot, lecture-based library instruction sessions leave little room for learning outcomes beyond traditional library research skills, which in today's information landscape is only the bare bones of what we could cover.

Closely related to learning outcomes is assessment, which is another area where we are lacking. Currently, Selkirk College Library's only assessment tool is *My Research Log* (described above). *My Research Log* is marked by librarians and is returned to students with comments and suggestions for improved OPAC and database searching. Though the librarians are able to glean some insight into student retention of basic library research skills through marking this assignment, we do not keep track of this in any quantifiable way. Having neither a useful tool or tools of assessment in place, nor any established learning outcomes, we cannot measure student engagement, student learning, or student performance. We have no way of knowing whether or not our programming makes a contribution to the College's wider success. In British Columbia's increasingly tight economic climate, our library faces pressure to quantify its contribution to student success and we need to be prepared to meet these demands.

The challenges and limited successes that this small scale pilot revealed are invaluable for the Selkirk College Librarians as we continue to re-imagine information literacy instruction at Selkirk College, and to prepare for the eventual implementation of an active model of library teaching and learning. Active learning elements will continue to be piloted in our ongoing traditional library instruction sessions and we will continue to work closely with willing faculty to ensure that students are getting the most out of information literacy instruction.

The next steps for improving delivery of these active learning activities are: using technologies, such as audience response "clickers", for example, to enhance student engagement; employing problem-based learning that would help students connect information literacy skills to real-world scenarios; researching assessment tools in order to identify the best means of gathering student feedback on the traditional lecture model, as well as the active learning model; and increasing outreach and marketing to both students and faculty in order to change and manage expectations around what information literacy is, and how the library supports students in becoming information literate.

Conclusion

The Internet, for better and for worst, has fundamentally changed the way that students and academics carry out their research. The abundance of information available on the Web has made accessing information more convenient than ever; however, this quantity of conveniently-available information has made students less inclined to seek out the quality information available in their institutions' libraries. While library instruction can be a corrective to this privileging of convenience, we as librarians and instructors have to continually evaluate and revise the means and methods by which we teach information literacy and research skills to our students. Despite the challenges presented by collaboration and change management, it is only by working collaboratively with faculty and with students that we can ensure that tomorrow's

undergraduates have the skills that they need to become successful students, employees, and citizens.

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