Information Literacy Training in Public Libraries: A Case from Canada

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ABSTRACT
The purpose of this study was to explore the current state of information literacy (IL) training and to identify the strategies and methods used by Canadian public libraries in improving IL skills for their staff and patrons. Also, the study sought to identify problems associated with the development of IL training. This study employed document analysis, observations, and focus group interviews to collect research data. The focus group interview consisted of six library staff members. The research findings revealed that Canada’s public libraries valued their roles as IL training providers and paid careful attention to staff development by offering various training approaches in order to provide efficient IL instruction for the public. Another issue explored in this study is that Canadian public libraries build partnerships with other organizations to extend their IL teaching responsibilities. In addition to the financial concern, a major challenge, based on the research findings, is that public libraries need to let their staff understand the learning theories associated with IL education and adult learning in order to enhance the quality of this training. This study also proposes four guidelines for developing effective IL trainings at public libraries.

Keywords
Information literacy, Public library, Adult education, Lifelong learning

Introduction
In recent years, the issue of the digital divide has drawn remarkable attention from most developed and developing countries. “Digital divide” generally refers to unequal access to information and communication technology (ICT) and the gap between those who are “information-haves” and those who are “information have-nots” has raised great social problems of inequality (Hersberger, 2003; NTIA, 1995, 1998, 1999, 2000; Tien & Fu, 2008). In addition to the disparities of accessing information and communication technology, peoples’ lack of adequate computer knowledge and skills is also an important dimension that causes the digital divide (Tien & Fu, 2008). In 2000, the Group of Eight (G8) industrial summit issued a report. The report illustrated the serious problems related to this discrepancy in the world because the knowledge gap produced by the digital divide can cause an educational divide (Costello, 2000). Canada, a member of the G8 countries, has made efforts to bridge the digital divide within the country by developing advanced ICT infrastructure and providing information literacy programs to the public through libraries and schools (Whitehead & Quinlan, 2003). Under the policy of “Connecting Canadians”, a policy framework designed to make Canada the most connected country in the world, Canadian public libraries serve as appropriate sites to provide free computer access and to facilitate the development of Canadians’ information skills (Julien & Anderson, 2002; Julien, 2003). Public libraries in Canada play a significant role in bridging the digital divide and have brought positive influence to the country regarding the ever important issue of accessing both current and past information since any given decision or learning is directly influenced by the information base used to produce it.

Information literacy (IL) is generally defined as the set of skills to access, evaluate, organize, and use information from a variety of sources (Association of College and Research Libraries, 2000) and the emergence and prevalence of the Internet has made IL a necessary competency in the knowledge economy era. Resnick (2002) articulated that IL skills have become a prerequisite for obtaining a job, participating meaningfully in society, and learning throughout one’s lifetime. The public library is a place which supports adult education and lifelong learning and has the capability of narrowing the digital divide by providing free computer and Internet access and offering training courses to improve people’s IL skills. Governments around the world have recognized the critical role of public libraries in developing the IL skills of their citizens. As a result, funds have been allocated to public libraries to purchase computers and establish Internet connections, and a variety of IL approaches have been employed (Harding, 2008). In Canada, Industry Canada identified public libraries as appropriate sites to implement Community Access Programs (CAP), an initiative with the aim to provide Canadians with affordable public access to the Internet and the skills they need to use it effectively; thus, the majority of public libraries currently provide Internet access and IL training programs for the public (Julien & Hoffman, 2008).
Although the role of public libraries has been acknowledged as a valuable provider of IL development for the communities, existing literature primarily focuses on addressing the role of public libraries and their IL activities (Harding, 2008). There is still a lack of relevant study investigating IL training in public libraries, especially in the quality and organization of IL courses and the IL skills of public librarians. In Canada, there are two related researches on IL training in public libraries. A survey conducted by Julien and Breu (2004) in the 22 largest Canadian urban libraries found that 36% of those libraries provided formal IL training and 71% offered informal training. Another recent study showed that some of Canada’s public libraries were not engaged well in providing IL training to their customers because they lacked the following, 1) funding, 2) trained staff, and 3) appropriate physical space. However, some were embracing their teaching role in IL education by offering formal lessons for users at different levels (Julien & Hoffman, 2008). Their study surveyed 836 urban and rural public libraries across Canada. These two studies outlined the IL instruction occurring in Canadian public libraries and presented views of library staff and customers toward these training courses. The present study attempted to expand the understanding of IL training in Canada’s public libraries by exploring the strategies and methods used by Canadian public libraries in improving these skills for their staff and customers.

Literature Review

The definition of IL, according to the broad context of lifelong learning and the ongoing acquisition of information skills can be described as locating, evaluating, managing, and using information effectively from a range of sources for problem solving, decision making, and research (Koning, 2001). ICT and IL are closely related because the digital and electronic formats are gradually replacing printed materials in libraries. How to effectively use ICT to locate electronic resources has become a major concern for users and public libraries have the responsibility to provide IL education for the public for the purpose of meeting their growing demands to acquire information through libraries’ electronic databases. It is also a challenging issue for public libraries to design proper IL courses for their patrons. Moreover, their staffs’ IL skills are certainly a significant factor in determining the effectiveness of this training.

Research studies regarding the concerns of adult learning in using technology-enabled media have substantially increased in the field of adult education. The early works of Knowles (1990) identified relevant features of adult learners, which are different from those of young people, which consist of self-directed learning as the preferred model, a problem-based learning rather than a subject-centered approach, and sociocultural learning. Based on adult learning theory and the characteristics of computer-based instruction (CBI), Lowe and Holton (2005, p.158) developed a conceptual model to describe critical elements affecting the usefulness of CBI for adults. They listed four arguments according to their proposed conceptual model:

1. The characteristics of self-directedness and computer self-efficacy of adult learners play an important role in designing CBI for adults;
2. CBI design is interwoven with the units of self-directedness, computer self-efficacy, learning goal level, instructional design, and external support;
3. Learning goal level affects instructional design strategy and the instructional control component of CBI design; and,
4. External support and instructional support are needed to provide a positive CBI experience.

Merriam, Caffarella, and Baumgartner (2007) further indicated that linking adult learner’s prior and authentic experiences to practice new skills and knowledge helps them to construct meaning and promote reflective thinking in the learning process. Thus, when designing IL instruction for adult learners, their internal state of psychological readiness to undertake self-directed learning, prior experiences, and computer self-efficacy should be carefully considered. Also, the learning objectives of IL training courses and support from instructors should be well-planned and related to the needs of the learners.

Related studies (Ashoor, 2005; Hart, 2006; Julien & Breu, 2005; Julien & Hoffman, 2008) have suggested that the library staff’s attitudes toward IL training are critical in affecting the usefulness of IL curriculum and learning outcomes of the patrons. In Julien and Hoffman’s (2008) study, they found that library staff who possessed awareness of being IL providers cared more about their teaching role in IL training and these staff expressed their concerns in facing challenges associated with their teaching role, such as digital divide issues, infrastructural
problems with library buildings, and pedagogical challenges related to education. Hart (2006) investigated the IL education programs of public libraries in a South African province and she discovered that the leader’s involvement, library staff’s input, and sustainable IL programs contributed most to the success of IL education for the public. Ashoor (2005) also argued that various formal IL training programs, such as library-orientation and information-searching skill courses, enabled library users to master content and extend their investigations related to their work and life and helped them to become more self-directed learners which can further build their lifelong learning skills. 

Since IL competencies have been identified as a crucial element to foster lifelong learning and keep up with the fast changing world, integrating IL learning into education at all levels should be a priority concern (Badke, 2008; Snavely, 2008). Snavely (2008) emphasized that even though people claim that they have a high degree of confidence in using computers, their IL skills might be disgraceful. In today’s workplace, information, in most cases, can be easily retrieved from the Internet, but people waste so much valuable time because of a lack of adequate skills to find appropriate resources, evaluate information, and use the information effectively in solving problems (Badke, 2008). Therefore, in the context of formal institutional learning environments, teaching IL can permit students to navigate the technology effectively and become efficient seekers and users of information (Riedling, 2009). Recent studies (Barnard, Nash, & O’Brien, 2005; Hohlfeld, Ritzhaupt, Barron, & Kemker, 2008; Probert, 2009; Shanahan, 2007) have revealed that students’ IL skills need to be enhanced and careful attention needs to be paid to these skills in primary, secondary, and even in higher education sectors. Probert (2009) provided evidence from a longitudinal research project in New Zealand which showed that primary school students were not equipped with sufficient IL skills, especially judgment and discrimination when using Internet information. Hohlfeld et al. (2008) analyzed statewide data and discovered that significant differences in students’ ICT literacy existed in Florida’s K-12 public schools. Shanahan (2007) surveyed a group of undergraduate radiography students’ IL skills, and she found that students performed low skill levels in constructing search statements while using databases. Therefore, seeking help from the librarians, who possess knowledge for mastering electronic databases, can provide practical solutions. Barnard et al. (2005) articulated that librarians have a responsibility to work collaboratively with teachers in order to enhance students IL skills in meaningful ways. Snavely (2008) suggested that the best way to teach IL is to integrate it into the most important parts of schools’ curricula, and school administrators can look for ways to connect the public libraries and librarians with the curricula to integrate IL into courses. Hence, the attitudes of library staff toward IL training and the formal and informal IL instruction prepared by public libraries should be carefully organized and evaluated in order to increase library users’ IL skills and further close the digital divide among the people.

Research Methods

Subjects and settings

The subjects for this study were six staff members who were responsible for IL training in an urban public library located on Canada’s west coast. This library is the third largest public library system in Canada and it currently has 22 branches and an extensive virtual library. There are 520 total public Internet-connected computers available for library patrons and training facilities, such as computer labs and classrooms, are also accessible at different locations throughout the city. In addition, new immigrants can request IL instruction in other languages at the central library. These six participants were the manager, administrator, training coordinator, instructor, and computer technician and they all had been involved in designing and teaching IL training courses for library patrons and staff. Their experience ranged from 3 to 20 years. All research data were collected at the central library and a branch.

Data collection techniques

This study employed document analysis, observations, and focus group interviews to collect research data. Document analysis included analyzing and evaluating significant information contained in the library catalogues, official reports, policy statements, newsletters, memos, posters, lesson plans, and IL training scripts. The researcher observed and examined the setting and environment of training facilities and two training sessions that took place at the central library. The observations mainly were focused on the arrangement of the training facilities and the behaviors and interactions of library patrons while they were taking an IL training course and filed notes were taken
to record details of what happened during the training sessions. Focus group interviews were conducted to collect the thoughts of people involved in IL training by organizing a discussion to gather their comments. During the focus group interviews, the researcher used a digital recorder to document the discussions. The following research questions were used for the focus group interview:

1. What facilities and resources do the public libraries have in order to run effective IL training in both formal and informal ways?
2. What IL training programs involving librarians and library patrons are being run at present?
3. What were the reactions of library patrons who took the formal or informal training lessons?
4. What experience and training in IL theory and practice do public librarians have?
5. What might inhibit IL training programs in public libraries?
6. What might help IL training programs in public libraries?

Analysis

The focus group interview data were completely transcribed and coded and a qualitative analysis software program, Atalas.ti, was used to facilitate content analysis of the research data. All responses to every research question were grouped and potential categories or significant ideas were initially identified during the coding process. Focused themes were then formulated based on the commonalities in the potential categories. When the research data did not fall well into the themes, data re-coding and re-grouping were administered. Within this study, document analysis and the field notes of observations were triangulated with the focus group interview data to support the trustworthiness of the explanations of the research results.

Research Results

IL training: the essential service of public libraries

The research data, according to the library’s booklets and staff interviews, revealed that public libraries were aware of their educational roles in IL training and regular training sessions were arranged at the central library and other branches across the city. Most participants agreed that IL training was a mandatory service of public libraries and library staff had the responsibility to serve as agents to empower library patrons’ IL skills by providing guidance and instruction in formal and informal means of accessing that information. In addition, the design of IL courses was based on the needs of most library patrons and available resources at public libraries. For example, in a 90-minute hands-on section, the Computer Basics course at the central library taught primary computer skills, Internet browsing, email, and security issues. The training session also included practice of searching the library catalogue, and different searching techniques were introduced. Each training course had its own training script written by experienced instructional designers and the training script provided guidance for instructors to control the pace of the lecture. In addition, because of the growing population of new immigrants in Canada, public libraries also offered instruction in other languages. The central library considered the learning conditions of senior citizens that might require more and specific attention. An IL lesson, Computer Basics for Seniors, was offered exclusively to them on a weekly basis.

The formats of IL training, in addition to formal lectures, one-to-one and group coaching on a particular type of IL skill was available by request. One of the interviewees described that “Library customers can come to the reference desk to request training at a certain level of computer skill or subject, such as working on a business plan or looking for health information from the library database.” Another important issue revealed in the focus group interviews dealt with the strategy of attracting more library patrons to take IL training courses. There were three IL training courses, Computer Basics, Search Smart (figure 1) and TechnoTuesday, regularly offered in the public libraries. Besides posting the course information on the library web and bulletin boards outside and inside the library buildings, the course title was very important. One staff member indicated that “The name of course title affects people’s willingness to come to the class. The original name of Search Smart was Search Your Library and it did not sound attractive, according to library patrons’ opinions.” On the other hand, three respondents articulated that most library patrons were not effectively searching information due to lack of sufficient Internet searching skills and this problem greatly reduced their IL abilities. Public libraries, as IL providers, should pay more attention to this issue by providing IL training in the search techniques of using various search engines and databases.
Staff development: the crucial element of effective IL training

In order to provide effective formal and informal training opportunities to the public, library staff need to improve their IL and teaching skills. During the interviews, many library staff expressed their observations that their input was the most valuable resource needed to run successful IL training programs for library patrons. One library staff member noted that “Information technology has changed dramatically in the past years and librarians have to keep their knowledge and skills updated in every aspect of information technology applications.” Nearly every library staff member was required to participate in IL teaching in the public libraries and programs, and courses for training the staff were given inside and outside the libraries. The central library offered system-wide IL and training skill courses to staff. One of the training coordinators talked about the various IL instruction programs and resources for the library staff. “We expect our staff to provide certain types and levels of training to the public. We need to train the staff first. We offer staff courses in new technologies, training delivery skills, one-on-one coaching, and designing courses.” Also, informal training opportunities were arranged during the regular library staff meetings, that is, library staff were sometimes required to share their knowledge and training skills related to IL with their colleagues. One of the respondents noted that “Training is important not only to enhance staff’s skills in delivering IL instruction, but also to ease their fears when teaching the public.” Usually, staff took training courses based on the recommendations of their supervisors.

Partnership with other organizations to promote IL education

Public libraries’ administrators and staff realized that IL training programs should reach more people who were in need. Thus, the central library has built partnerships with local organizations to provide free IL training opportunities outside the libraries and people can attend IL training courses at community centers, career centers, senior centers, and universities’ continuing education centers. In particular, the public libraries also worked closely with new immigrant service organizations to provide services in helping them to use ICT and to become information literate. For instance, the central library structured a series of training workshops for the members of the S.U.C.C.E.S.S. organization. S.U.C.C.E.S.S. is an abbreviation of Sino United Chinese Community Enrichment Social Service and it is a non-profit charitable organization for the purpose of promoting the well-being of Canadians and immigrants (S.U.C.C. E.S.S., 2008).

Because of the limited IL training resources in most Canadian community centers, the central library had a truck that carried mobile training facilities to the training classrooms. The design of the mobile training facilities was easy to set up.

Factors affecting IL training

Library staff also expressed their concerns regarding effective approaches about how to run IL training programs. One of the major challenges was the pedagogical issue. One respondent said that “Even though we have sophisticated, highly skilled training programs and organizational supports, we kind of miss out–why? And we kind
Another library staff member further showed her agreement by explaining that “Most staff who work in the public libraries must have library science degrees and I assume they know the coherent theories behind teaching but they tend to ignore them.” Another challenge was the financial issue. During the interview, three respondents mentioned that insufficient funding had an impact upon the IL training in the smaller libraries. One staff member explained that “Some small libraries even don’t have full-time staff to do the training.” Moreover, although IL training programs were available to staff working in the public libraries, many library staff still did not value the training opportunities. One staff member indicated that “Some staff members are resistant to embrace their teaching role in providing IL instruction.”

Discussion

The results of this study revealed that IL training was highlighted as an essential service in Canada’s public libraries. IL training courses were provided to the public and staff, and to a great extent, training facilities and programs were designed to meet the needs of library patrons and staff. The well-placed ICT infrastructure in public libraries contributes to the positive influence. In fact, one of the Canadian federal government’s “Connecting Canadians” programs, Canada On-line, labeled public libraries, in addition to other publicly accessible places like schools and community centers, as appropriate sites to get Internet access (Julien & Anderson, 2002). Two subprograms of Canada On-line, LibraryNet and the Community Access Program, have funded all public libraries to purchase computers and establish Internet connections (Julien & Breu, 2005). The above observations suggest that ICT infrastructure is the foundation of bridging the digital divide in a nation, and the other part, which is the most difficult, is how to enable all citizens with the appropriate skills so that they can make good use of ICT. Providing well-organized IL instruction has become the primary goal of IL education for the public libraries to work on.

In this study, public libraries’ administrators and staff seemed to understand the importance of developing their staff’s IL knowledge and their training delivery skills in order to run effective IL programs for the public. Although the instructional design of IL courses took learners’ characteristics and the attributes of technology into consideration, the IL training manager and coordinator were also concerned about how to improve the staff’s teaching skills. The results show that most library staff were not aware of the theories behind IL education and adult learning when they taught IL courses to the library patrons, and this might inhibit the patrons’ learning outcomes. This finding is in accordance with Julien and Hoffman’s (2008) study in which they found that library staff faced challenges of becoming better teachers, and proper pedagogy or teaching models were needed to empower library customers to develop better IL skills.

In order to educate more people to become information literate, public libraries can expand their IL services by keeping close relationships with other organizations. This study found that the public libraries build partnerships with immigrant service providers and local communities. Public libraries provided IL training to new immigrants in their native languages and thus assisted them to find jobs. This observation suggests that partnerships enable public libraries to share their resources and services in ways that benefit their patrons in the larger world. Harding (2008) emphasized the importance of building partnerships between public libraries and other organizations by listing examples of successful cases in Australia. She also suggested that public libraries can partner with private enterprise to “provide opportunities to obtain funding for programs or training for staff or the public” (Harding, 2008, p. 161). The above arguments, on the other hand, imply that public libraries can work closely with faculty members at various levels of schools to make IL education an integral part of the curriculum. Snively (2008) proposed a strategy of integrating IL into course content by giving problem-based or evidence-based assignments to students, so that they do not feel like they are doing extra work. Library staff can contribute their expertise in helping teachers to design assignments that require students to engage with IL strategies.

The challenge of developing effective IL programs for staff and the public requires continually funded support from the government. However, the results of this research revealed that the most critical factor contributing to the success of IL training is the library staff’s dedication toward their teaching roles in that arena. Based on the results of this study regarding IL training in Canadian public libraries, four guidelines are important to consider when developing IL training in the public libraries: 1) developing advanced ICT infrastructure, 2) providing formal IL training courses, 3) improving library staff’s IL and teaching skills, and 4) building partnerships with local organizations. Figure 2 illustrates the guidelines of producing effective IL training in public libraries.
Conclusions

This study investigated the current state of IL training and the strategies and methods used by certain Canadian public libraries in improving IL skills for their staff and patrons. According to the research findings, Canada’s public libraries exhibit their role as IL training providers by offering free Internet access and IL courses in both formal and informal ways. Also, the public libraries recognized the importance of staff training in order to provide efficient IL instruction for the public, so various training programs were given to the staff. However, some staff members apparently were hesitant to embrace their teaching roles. Additionally, this study revealed an important truth that library staff lacked appropriate guidance in understanding the theories of IL and adult learning while teaching library patrons.

By taking into account the related studies discussed in the literature review and the findings of this investigation, it seems reasonable to conclude that Canadian public libraries still face many challenges in improving the quality and quantity of IL training programs for staff and the public. In addition, public libraries, as community learning centers and IL providers, need to reach more people. Canadian public libraries have recognized the importance of extending their service to community organizations by providing IL training programs and courses outside the libraries. This action suggests that public libraries can also forge close partnerships with K-12 schools and higher education institutions. As Snavely (2008) noted that librarians can assist faculty to develop students’ IL skills by setting IL goals for courses and designing assignments that effectively use IL strategies and identify appropriate electronic resources relevant to their studies. Public libraries, community organizations, and schools need to work closely and collaboratively to deal with this critical issue for the purpose of increasing peoples’ IL skills and furthermore to enrich their lifelong learning experiences.

The main contribution of this study is that it provides information on the issue of IL education in public libraries which is still a relatively uncharted field for research. Although there were two existing extant studies related to IL training in Canada’s public libraries, this study expands the understanding of these training programs by providing explanations for some key issues that need solutions. It is recommended that further research continue to focus on the impact of new technologies in regard to IL training in public libraries and formal education settings and what effect that has in bridging the digital divide.

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