
Helping the Non-Scholar Scholar: Information Literacy for Lifelong Learners

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ABSTRACT

The Information Literacy Initiative (ILI) at the University of Washington Information School provides services to populations outside of traditional academic environments that are in need of either information literacy training for the first time or a refresher course on new concepts and technologies. They are adult learners in need of just-in-time education and not credits or a degree. The ILI uses both classes and videos to teach information literacy. The populations receiving training are able to learn information literacy skills that are both practical and useful, which gives them the ability to find quality information for their business, professional, health, and daily needs. Participants include owners of small- to medium-sized businesses, adults over the age of fifty, and women without homes who are experiencing extreme poverty. While steps have been taken to determine the effectiveness of these programs, there is still more to be done to find appropriate assessments for these particular demographics. Initial results are promising in the effectiveness and need for quality just-in-time education for the non-scholar scholar.

MISSION

The aim of the Information Literacy Initiative (ILI) formulated by the University of Washington Information School is to provide direct services to populations beyond college or out of school who have lifelong information needs. ILI teaches information literacy skills to lifelong learners, so they can find, analyze, and use quality information in the various phases of their life and utilize information to their advantage.

THE PROGRAM

The Information Literacy Initiative at the University of Washington Information School provides services to populations outside of traditional academic environments that either need information literacy training for the first time or a refresher course that includes new concepts and technologies (<http://ischool.uw.edu/mlis>). The ILI utilizes both classes and videos to teach information literacy concepts and skills. The populations receiving this training are able to learn highly applicable information literacy skills that are both practical and useful, which gives them the ability to find quality information for their business, professional, health, or other needs, and to then apply that information appropriately. There are various terms associated with this population including; lifelong learner, professional development, adult learning, nomadic learner (Sims, 2008), and in this paper the non-scholar scholar. The term *information literacy* is rarely used, or accurately understood, by these populations.

HOW DOES THE INFORMATION LITERACY INITIATIVE PROGRAM WORK?

The primary populations served by the Information Literacy Initiative are adults who have a need to find, evaluate, and use quality information. They are, as Sims (2008) notes, nomadic learners. In his work with distant learning Sims states that,

through examining cycles of educational technology, current trends in e-learning research, the practices and competencies of educational designers, and the roles of key stakeholders, a framework is established to reinforce the emergence of the nomadic, mobile learner who is dependent not on the teacher or formal educational systems, but on the network of knowledge and skills that can be accessed on an anytime, anywhere, e-learning basis. (p. 153)

This describes the individuals served by the Information Literacy Initiative.

Face-to-face training began in late 2007 in the Denver and Boulder metro areas of Colorado in the United States. Trainings focused on job seekers, business owners, select youth, older adults, and women without homes. These individuals were reached through various nonprofit organizations. The classes were held in public libraries, small business development centers, and at nonprofit organizations with computer labs.

Mike Eisenberg, Dean Emeritus and professor at the Information School, is the primary investigator and Lark Birdsong is the director of the Information Literacy Initiative. Birdsong provides the training, fund raising, and administration services for the Information Literacy Initiative. Donors who are interested in the Information Literacy Initiative mission are able to support it through donations to the University of Washington.

Initially all of the information literacy trainings were conducted in classrooms. This required considerable planning to find adequate lab

space, coordinate dates with the nonprofit organizations serving the various populations, and advertise to potential clients. In addition, class size was limited in regard to the room's capacity for computers, wireless bandwidth, and space. As a result of these limitations, the Searcher in Charge video series was created (figure 1; Searcher in Charge, 2010a). Production of the series began in late 2009. Core information literacy concepts were embedded within the videos. In addition, series of videos for health information, owners of small- to medium-sized businesses, and adults over the age of fifty were produced (Searcher in Charge: Business, 2010b; Searcher in Charge: Fifty, 2010c; Searcher in Charge: Health, 2010d).

As the program progressed, a curriculum and information literacy model, identified as IN PFAC, was developed for individuals who were not in school, but were in need of information literacy skills (Birdsong Information Services, n.d.). This information literacy model is based upon the concepts of the Big6 by Mike Eisenberg and Bob Berkowitz (Eisenberg & Berkowitz, n.d.). Details on the model and curriculum are discussed later in the article.

WHAT IS ALREADY HAPPENING WITH INFORMATION LITERACY BEYOND SCHOOLS

The concept of information literacy (IL) and the need to better educate individuals on how to find and assess information have been keenly studied in academic spheres. While many IL standards have their origins in education, it is important to consider the information literacy needs of those outside of traditional academic environments. This need permeates every aspect of society and the inability to locate, evaluate, and apply this knowledge effectively is detrimental.

INFORMATION LITERACY DEFINED

It is important to first define what is meant by the term *information literacy*. While there is a great deal of overlap in the different uses of the term, there are also some important distinctions. This will be followed by an exploration of the need for information literacy in nonacademic settings as well as a sampling of programs being offered to assist in meeting this growing demand.

The American Library Association and the Association of College and Research Libraries propose one of the most widely held standards for information literacy. For these organizations, IL is defined as "a set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information" (American Library Association [ALA], 1989, p.1). The Chartered Institute of Library and Information Professionals in the United Kingdom adds to this the requirement to communicate gained information in an ethical manner (Chartered Institute of Library and Information Profes-

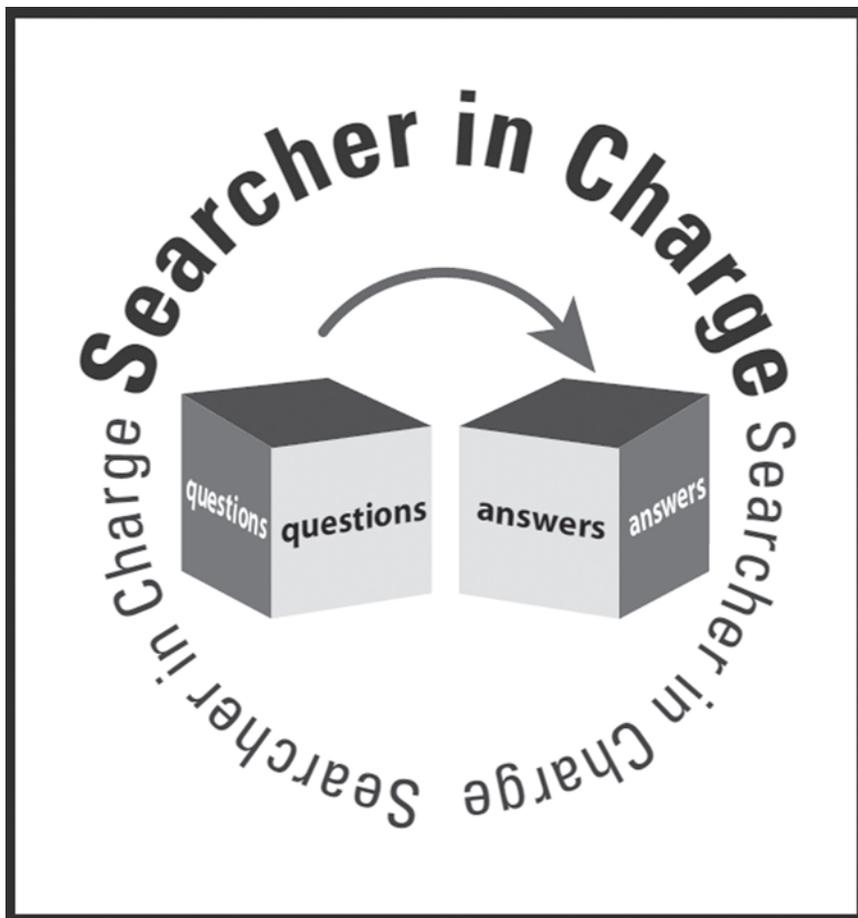


Figure 1. Searcher in Charge logo

sionals [CILIP], 2004, p. 1). Even this description is narrow in scope when compared to the standards set forth by the Australian Library and Information Association, which expands upon this description to include the importance of information literacy to “a thriving national and global culture, economy and democracy,” as well as depicting IL as “a basic human right in a digital world” (ALIA, 2006, p.1). This concept of information literacy is taken directly from the Alexandria Proclamation on Information Literacy and Lifelong Learning. Developed in 2005 and sponsored by the United Nations Education, Scientific, and Cultural Organization (UNESCO), the Alexandria Proclamation recognizes the importance of information literacy in providing a competitive advantage to individuals

and corporations, as well as being crucial to the support of economic development, education, and health and human services (National Forum on Information Literacy, 2005). These are vital to fulfilling the Millennium Declaration and World Summit on the Information Society, which calls for improvements in information literacy to end extreme poverty and hunger as well as for the promotion of gender equality, for the reduction of child mortality, to combat the spread of diseases, to ensure environmental stability, and for the development of global partnerships (World Summit on the Information Society, 2003). The Prague Declaration of 2003 also defines information literacy as a right and declares that it is a “prerequisite for participating effectively in the Information Society” (p. 1). As can be seen from these various standards for information literacy, the concept can be defined rather narrowly for academic settings or expanded to meet the global needs of an Information Society (Sturges & Gastinger, 2010).

THE WORKPLACE

The workplace is an important area for improvements in information literacy. In addition to the ability to recognize the need for information, find it, evaluate it, and apply it, the business world also requires that individuals be able to create, package, and present the information in an effective manner (Cheuk, 2008). This can include using various technologies and engaging in broad professional responsibilities and social collaboration (Bruce, 1999). While there is a general unfamiliarity with the term information literacy outside of the library world, the value of information is widely recognized (Bruce, 1999; Kirton & Barham, 2005; Klusek & Bornstein, 2006). An analysis of twenty-one job profiles in the Department of Labor’s Occupational Information Network, or O*Net, revealed that information skills such as active learning and listening, critical thinking, learning strategies, monitoring, and speaking and writing, were routinely required of employees (Klusek & Bornstein). In addition, a 1998 survey of company executives found that 76 percent believed information to be critical to the success of their companies (Feldman & Sherman, 2003). As further testament to the importance placed on information by the business world, it is estimated that in the year 2000, \$884.3 billion was spent in the United States on information technology (Feldman & Sherman, 2003). Likewise, the United Kingdom has also spent considerable amounts of money encouraging the development of broadband and telecommunication technologies for small- and medium-sized businesses (DeSaulles, 2007). While technology is often an important component of information work in today’s digital world, it is not sufficient for information literacy.

There is often confusion between computer literacy and information literacy (Bruce, 1999; Campbell, 2004; DeSaulles, 2007; Jensen, King, Da-

vis, & Guntzwiller, 2010; Ramesha, 2008; Spiranec & Pejova, 2010; Underwood, 2009). Some of the problems that arise from being able to successfully navigate the technology, but not the information, include the use of out-of-date information, being unaware of important resources, and the assumption that Google is the best approach to finding information (Cheuk, 2008). The sheer volume of information available from a wide variety of sources often leaves employees wondering what is reliable and relevant, and whether or not they have found enough information to satisfactorily answer their query (Feldman, 2004).

In an attempt to discover what a lack of information literacy was costing businesses, the International Data Corporation (IDC) conducted a survey. In 2001, IDC found that approximately 50 percent of Web searches were abandoned (Feldman, 2004). They also estimated that as much as 90 percent of the time spent on creating new reports was actually spent recreating existing reports (Feldman). A 2009 IDC white paper estimates that this wasted time costs more than \$1.5 trillion in U.S. salaries (Gantz, Boyd, & Dowling, 2009). With workers in the United States spending approximately nine and a half hours a week searching the Internet and databases, it estimated that a third of that time is spent on searches that do not yield the required information (DeSaulles, 2007). This wasted time comes with a high price. In 2001, Outsell Research estimated that ineffective researching costs American businesses \$107 billion each year in wages costs. In 2005, Fortune 1000 companies were believed to have been facing losses of \$2.5 billion a year due to time spent on ineffective searching. These figures are not confined to the United States. In the United Kingdom for the same year, small- and medium-sized businesses lost approximately £3.7 billion through the ineffective use of the Internet as a research tool (DeSaulles). Given the direct impact on a business's ability to conduct itself in a profitable manner, the question that must be answered is, why do people have such great difficulty locating necessary information? The answer is multifaceted. For one, people often do not recognize the need for information literacy skills in the workplace. In a survey conducted by DeSaulles, most workers believed that their research abilities were more than adequate. However, evaluating the effectiveness of their search queries depicted a much different scenario. There is often a discrepancy between people's perceived and actual abilities in locating information. In addition, the scattered nature of information in the digital age leaves many at a loss as to where to begin to locate relevant information. There is no single access point to information and most searchers not only struggle with where to look, but also with how to ask for the information they need, and how to know when their information need has been sufficiently satisfied (Feldman). This leads to anxiety at the sheer amount of information available. Employees need to be able to sort through a large volume of information, separating what is of value from the vast amounts of irrelevant,

outdated, misleading, and incorrect information. These tasks are often carried out under significant time constraints, which add to the pressure and anxiety (Cheuk, 2008; Kirkton & Barham, 2005).

To address this need in the workplace, several concepts of information literacy have been developed. Kirkton and Barham (2005) identify several key aspects of information literacy for businesses. First, employees must be able to identify the attributes of information, including its relevance, currency, consistency, and timeliness. They must also be able to evaluate the sources of information to determine whether or not they are credible, current, and reliable. The information needs of the workplace are often messy, open-ended, and complex in comparison with those of an academic environment. Employees are responsible for assessing their own tasks, rather than completing clearly defined assignments (Kirkton & Barham). This necessitates that information literacy designed for this group must be tailored to fit their particular needs. Bruce (1999) addresses the various perspectives with which users approach information literacy with her seven faces of information literacy in the workplace. Kuhlthau and Tama (2001), in their study on the information practices of lawyers, found that the correct answer was not necessarily the goal of information seeking among professionals, but rather the construction of a body of knowledge that could be applied on a regular basis. The need of professionals to deliver results in a time-sensitive manner with direct financial impacts requires special attention (Klusek & Bornstein, 2006).

FIFTY PLUS OR SECOND HALF OF LIFE

Another segment of the population in need of literacy training is the elderly. While the term *elderly* is often considered to represent individuals over the age of sixty-five, those that are much younger may also be included based on their particular circumstances (Williamson & Asla, 2009). For the purpose of this paper, this population is defined as adults over the age of fifty. The constraints placed upon this population, in terms of cognitive and physical abilities, make meeting their information needs more difficult at a time in their lives when making well-informed decisions is especially important. Problems with vision, as well as hearing and memory loss can inhibit the effective pursuit of information. Seemingly simple tasks, such as turning on a computer, typing, or manipulating a mouse, become increasingly difficult. For this group, it is often psychological and cognitive issues that restrict their information behaviors rather than a lack of interest. Moving icons on the screen or changing an interface can severely hamper information seeking (Chu, Huber, Mastel-Smith, & Cesario, 2009; Williamson & Asla). For the elderly that do make use of the Internet, there are four primary categories of search topics in which they are most interested; health, income, recreation, and pharmaceuticals (Williamson & Asla).

Despite the prevalence of information online, this is not necessarily where members of this population search for information. Research has shown that the elderly prefer to obtain information from people, especially medical professionals and family members (Eriksson-Backa, 2010; Williamson & Asla, 2009). To help bridge the gap between this population and the information they seek, Williamson and Asla have proposed the creation of common spaces for information sharing. These informal gathering places allow for the exchange of information and ideas among this particular population, as well as providing a forum for the dissemination of health, financial, and other information of particular interest or need. Examples of such programs have been established in community and library settings. Other possibilities for increasing the information literacy proficiency of this population are to offer instruction in small-group settings and to facilitate the use of assistive technologies, such as, larger keyboards and screens as well as larger font sizes and streaming video (Chu, et al., 2009; Jensen, et al., 2010; Williamson & Asla). Regardless of the system of delivery and adaptation, this group demonstrates a need for affective and personal interaction during the information-seeking process (Lee, Gazmararian, & Arozullah, 2006; Williamson & Asla, 2009).

HEALTH INFORMATION

Access to health-related information is of great concern and interest to the elderly, as well as to other segments of the general population. Approximately 66 percent of Americans reported searching online for health information at least once and 70 percent have used information obtained online as the basis for a health-care decision (National Quality Forum [NQF], 2009). The emphasis on consumer-oriented health-care models, combined with increases in health information and less time spent with patients has created a need for individuals to become more engaged in their personal healthcare (Campbell, 2004; Fox, 2010). The volume of health-related information can be overwhelming to those with low information literacy skills (Jensen, et al., 2010). Possible outcomes resulting from this lack of information literacy can include poor health status, improper use of medications, increased hospitalizations, increased health-care costs, and poor treatment options (Lee, Gazmararian, & Arozullah, 2006). The National Priorities Partnership estimates that low health literacy costs \$236 billion annually and is more prevalent among the elderly, minorities, and immigrants (NQF). Demographic indicators of low health information literacy include those that are more socially isolated, those with low incomes, males, and those with less education.

The criteria for health information literacy are similar to those for more general standards for information literacy and include the ability to obtain, process, and assess information and then make decisions based upon that information. The National Quality Forum adds the ability to

understand available services as a key component to health information literacy (NQF, 2009). The Medical Library Association asserts that the ability to use the information obtained in making good health care decisions is also fundamental to health information literacy (MLA, 2011). To fulfill these standards, individuals need to be able to investigate illnesses and treatment regimens, the background and training of physicians, and the efficacy of specific medications (Campbell, 2004). In addition, they must also be able to ascertain the quality and relevance of the information they have collected to ensure their ability to make decisions based on the most current, relevant, and accurate information possible (Eriksson-Backa, 2010).

A WORLD IN NEED

The need for information literacy is not isolated to the United States, or to the developed world. As developing nations struggle to achieve parity with the developed world, information literacy holds the key to their success. In India, Ramesha (2008) has defined information literacy as the ability to access, evaluate, and use information from a variety of sources. He calls for the development of a clear, coherent, and authoritative curriculum with specific learning outcomes. The lack of such a curriculum, combined with a lack of trained staff capable of implementing it, limits India's ability to fully realize the potential of its technological improvements (Ramesha).

Southeast Europe and South Africa face similar constraints on their efforts toward information literacy. A series of UNESCO conferences in Southeast Europe and the meeting of the 73rd General Conference and Council of the International Federation of Library Associations (IFLA) in South Africa both recognized the importance of information literacy for integration into global markets. Spiranec and Pejova (2010) state that a lack of information literacy skills restricts research capabilities and precludes many of the countries of Southeast Europe from European Union membership. For South Africa, increases in information literacy would allow for improved opportunities for many segments of the population. However, poverty, language, and the lack of infrastructure, in terms of technology, are constant roadblocks (Underwood, 2009). In Southeast Europe there is a lack of awareness regarding information literacy. The development of information literacy in Western countries has been fueled by market-driven forces, which are not yet present in this area of the world. While libraries offer a great opportunity for the dissemination of these skills to the general public, Spiranec and Pejova note that the low public opinion of librarians, their training, and their abilities, has prevented them from becoming effective catalysts for the spread of information literacy skills. While the focus on information literacy has its origins in education, from these examples it is clear to see that the need for information literacy instruction goes far beyond the classroom.

EXISTING PROGRAMS AND EFFORTS

There are a variety of methods for addressing these needs for information literacy training to the non-scholar scholar. They divide into two categories, instructor-led programs and self-guided instruction. Instructor-led programs are especially useful for elderly segments of the population whose levels of anxiety regarding computer use have been shown to decrease, while their confidence and self-efficacy levels increase, in this type of setting (Williamson & Asla, 2009).

The Medical Library Association has an extensive selection of programs for those involved in health care professions to increase the health literacy level of their clientele. These include PowerPoint slides, detailed scripts and notes for presenters, background readings, and tips (MLA, 2011). Public libraries and community centers are also excellent resources for information literacy instruction. Most public libraries will offer regular classes on basic computer use and Internet searching. The Danville Public Library in Virginia recognized an increasing need for computer and literacy skills after a series of layoffs in the area had raised the unemployment rate to over 11 percent. They began offering four-week classes, consisting of one hour sessions each Tuesday and Thursday. These classes offered hands-on training for the Microsoft Office suite, with an emphasis on Word and Excel, as well as Internet searching and website navigation. The intent of the course was to improve the information literacy of its patrons through the use of technology (Alexander, 2006). Public libraries are in a special position to deliver these services to low income, elderly, and other populations that may not otherwise have access to the resources and training to meet their information needs.

The focus has increasingly been shifting toward the use of self-guided instruction to address the need for improved information literacy skills. These programs are more adept at providing point-of-need instruction as individuals can directly access training specific to their particular need. While information literacy encompasses all forms of information, not just digital, there is a wealth of knowledge stored in digital formats that is crucial to information literacy training. The National Institutes of Health's Senior Health Website (National Institutes of Health, 2011) is designed with simplified, easy-to-use interfaces to accommodate the needs of the elderly. The Virginia Adult Learning Resource Center offers an online tutorial that covers search engines, internet terms, time management, organization, study skills, communication, web browsers, downloads, and security issues. It also contains a glossary of terms to assist users. Composed primarily of text, it takes approximately thirty minutes to complete the tutorial and users have the option of completing the entire tutorial, or selecting specific segments (Virginia Adult Learning Resource Center [VALRC], n.d.). Another online information literacy tutorial is 21st Century Information Fluency (Information Fluency, 2011). This website was

developed by the Illinois Mathematics and Science Academy, with funds from the U.S. Department of Education, to research and develop information literacy training. While most of the services are still available at no cost, there are also courses and face-to-face workshops available for a fee.

There are also a number of freely accessible online tutorials made available through academic institutions. While nearly every college and university provides some form of online information literacy training, here is a sampling of some of the available programs. Wichita State University offers EMPOWER (2008, p. 1), which equips the users to “search, select, and evaluate information sources.” This tutorial is based on Searchpath, which was developed by Western Michigan University (Western Michigan University, 2002, p. 1) and the Texas Information Library Tutorial (TILT) through the University of Texas. The open public license version of TILT was removed from the university’s website. While widely implemented at other institutions, the University of Texas has not actively used TILT as a part of its information literacy program since 2002. In addition, the university cited the difficulty of fielding questions from TILT users, of whom only 4 percent were University of Texas students (n.d., p. 2). The fact that so many beyond the campus made use of this program demonstrates the need for these tutorials outside of academia. Some of the programs built on the TILT model are PILOT through Sacramento City College (PILOT, 2009, p.1) and IRIS at Clark College (IRIS-42, 2010). Stanford also offers a free online information literacy tutorial, Stanford’s Key to Information Literacy (SKIL). This model incorporates assessments of the skills learned and the ability to change the font size. However, the site is no longer being updated as of December 2009 (SKIL, 2009, p.1). It would be interesting to determine whether the universities that have suspended their online information literacy tutorials did so because they were ineffective, because they implemented a new program on campus, or because most of their users were not students.

Another source for online tutorials is YouTube. The advantage of many of these tutorials is that they are in video format and therefore allow for demonstrations of the various techniques and strategies employed. In addition, users can replay the video segments whenever needed to refresh their skills. While there are a number of videos hosted by a variety of sources, including academic institutions, there are also specialized channels that offer more comprehensive instruction, such as bbaker48 (bbaker 48, 2008) and the Searcher in Charge series (Birdsong, 2010a). These allow both businesses and individuals to access free resources that address their particular information literacy requirements. There are also several commercial companies that offer information literacy instruction. These include Atlantic Link, Go to Training, Omniplex, and Skillsoft. These provide for more targeted programs aimed at businesses.

For those not yet comfortable perusing the Internet to find information

literacy training, the For Dummies series has a number of titles that may help open the door. Some of the titles include, *Job Searching Online*, *Genealogy Online*, *Internet Searching*, *Google*, *World Wide Web*, *Building Research Tools with Google*, *Google Search and Rescue*, and *Researching Online* (<http://www.dummies.com/>). The sheer volume of books on the topic from a single series demonstrates that there is a substantial market for this knowledge.

SPREADING THE NEWS ON INFORMATION LITERACY LESSONS

The problem of disseminating information literacy lessons is a concern. While there are a number of excellent products available for improving information literacy skills, those with poor searching abilities will have a difficult time locating and identifying them. Libraries are a great entry point into information literacy, but too often their role is perceived in terms of providing access to recreational materials. Libraries offer a current collection of materials, the expertise to guide patrons to trusted sources, an ability to work with organizations and the community to improve accessibility, the ability to inform consumers of their rights, and to assist in locating and evaluating sources of high quality information (Eriksson-Backa, 2010). To promote these functions of the library there is a need for the library and other organizations to actively market these services. Beyond the library, there is a need for multiple access points to online tutorials and programs that utilize keywords that are familiar to those trying to locate these items.

ASSESSMENT IN EXISTING PROGRAMS

Assessing the effectiveness of information literacy programs is difficult, although the importance of assessment and feedback in the learning process is well documented (Lindsay, Cummings, Johnson, & Scales, 2006; Nicol & Macfarlane-Dick, 2006; NQF, 2009). The combination of assessment and feedback, especially in terms of incorrect answers or strategies, allows for improved learning and retention, especially in self-guided learning. The problem is how to design effective assessments. First, the effective measure of learning must be determined. Lindsay, et al. conducted an assessment of the effectiveness of an online tutorial versus traditional classroom instruction of information literacy in an academic environment. After the students finished the tutorial, they were asked to complete a series of searches, documenting their answers and the strategy and resources used. This study provided valuable feedback regarding the effectiveness of the online tutorial. However, outside of the academic environment this style of assessment would be very difficult to implement. Some web-based tutorials do offer the opportunity for users to take self-guided assessments of their learning, such as the programs offered by 21st Century Information Fluency. It needs to be determined whether demonstrating the use of techniques and resources provided in instruction is sufficient for

demonstrating literacy or if a more comprehensive evaluation is required. For instance, an individual may be able to complete a series of tasks at the end of a tutorial, but to truly demonstrate learning, it may be necessary for the skills acquired to be applied in a real-world setting, for which there are very few measures. Assessment is an area of vital importance and as the field of information literacy for adults matures, it is hoped that more effective means of assessing the success of programs, providing feedback, and making necessary adjustments will also be discovered and implemented.

THE INFORMATION LITERACY INITIATIVE CLIENTS

Clients receiving information literacy training were small- to medium-sized business owners (SMBs), adults over the age of fifty, youth in the I Have a Dream Program, patrons seeking jobs, and clients needing health information. These clients became aware of the classes through the marketing efforts of public libraries, small business development centers, and liaisons with nonprofit organizations serving the targeted populations. All the classes were taught by Lark Birdsong, entrepreneur and literacy instructor.

The attendees in the classes were given a notebook of the materials taught for future reference. Each person had a computer to practice the skills in an effort to reinforce the concepts that were taught. All of the clients receiving information literacy training responded to terms such as plan, find, search, analyze, review, think through, and conclude rather than the term information literacy. By carefully breaking down information literacy into its core competencies, and using terms familiar to the targeted populations, a more effective learning environment was created.

The Clients

Owners of Small- to Medium-Sized Businesses. Owners of small- to medium-sized businesses (SMBs) received training on how to grow their businesses by finding, using, and evaluating information vital to their existence through the Boulder Small Business Development Center in Colorado. The classes were structured to show SMBs how to obtain current news and industry information, use alerts, and find quality information for ongoing information needs relative to their industry, company, clients, and competitors. The value of using their public library was demonstrated by showing examples of the vital information available for business owners. The vetting of materials by librarians was discussed as a key reason for beginning their business search with a library's information resources or with the librarian. The use of Google, Bing, and generalized Web browsing was addressed and attendees were shown how to use search techniques, evaluate domain names, and save to bookmarking services.

Additionally, a case study was presented showing how one business used information literacy skills to reverse declining revenues by restructuring

their product line with quality information, the use of key sources, and the application of critical thinking. These lessons were initially conducted in person and lasted for half a day. A video series was added for SMBs, titled *Searcher in Charge Business Information* (Birdsong, 2010b).

Health Information. A series of health information videos, titled *Searcher in Charge Health Information* (Birdsong, 2010c, 2010d), were produced to reach individuals needing to learn how to find, analyze, and use quality health information. These videos were uploaded to YouTube and embedded in a website to provide multiple points of entry for all of the videos. The videos demonstrate how to conduct a search for health information using the public library. Users are shown search techniques, how to use sources beyond websites, how to analyze websites, how to save information, and they are provided a selection of current, quality health information sources. The series includes an example of a complete health inquiry to aid users.

Adults over the Age of Fifty. Weekly classes, over a six week period, for adults over fifty were offered through Osher Lifelong Learning Institute (OLLI Plus) at the University of Denver and hosted by the Denver Public Library. Classes were structured with appropriate content and pace for this population, with time allotted to practice the concepts presented in each class. Concepts taught included:

- How and where to find reliable, quality sources of information
- How to evaluate web pages and other sources
- How to use the library sources and databases away from the library
- Search browsers; what they are and how to use them
- Search tips that make finding information easier and more efficient
- Subject matter searches on topics of interest to adults fifty plus, such as financial, health, and travel
- Techniques to manage information overload
- New technologies that could enrich their life, such as Facebook

Patrons without Jobs. Classes were offered to library patrons of the Boulder Public Library who were seeking employment. Those seeking jobs have often lost access to technologies, such as computers and Internet connections, which would aid them in finding gainful employment. The classes are structured such that attendees learn how to use the computing cloud to create, find, and save job-related information and how to save information on a USB drive. These are necessary skills since the use of public computers is often limited.

Women without Homes. The Gathering Place is a daytime drop-in center for women and children who are experiencing homelessness and poverty. These women received information literacy training two to three times per month. The women used their newly acquired skills of planning, finding, analyzing, staying in focus, and concluding to help with a variety of

issues including job seeking, finding a home, health issues, and personal knowledge. They contributed to a research topic on “How to stay healthy (emotionally, mentally, spiritually, and physically) as a woman who is temporarily without a home: What are the top survival tips?” Their work was included in an article on information literacy training for all, published in *Searcher Magazine* (Birdsong, 2009b). A total of 100 percent of the attendees who came to the class in 2009, on an ongoing basis, were able to find a home of their own and some were also able to secure employment.

Youth from Colorado I Have a Dream. A Research Rocks project for middle school students involves youth that are members of the Colorado I Have a Dream Project. It teaches research and information literacy skills and has been in existence for approximately four years. Youth in this program have earned trips to the Sand Dunes National Park, Colorado and to Washington, DC through their research efforts. They started in the fourth grade learning information literacy concepts and are presently in ninth grade.

Over the period of a year, the concepts taught include skills of planning, finding, analyzing, staying in focus, and concluding geared for their age. Students were taken through a progression of steps that included; securing library cards, locating and checking out materials, working with librarians, understanding the databases in a library, analyzing information, learning how to write a research paper, and working in and presenting their research to a group.

MODELS AND CURRICULUMS FOR THE NON-SCHOLAR SCHOLAR

A Model for the Non-Scholar Scholar

IN PFAC was developed using the concepts from the Big6 (Eisenberg & Berkowitz, n.d.). IN stands for understanding the user’s information need and for staying IN focus. P is for plan, F is for find, A is for analyze, and C is for conclude. It was helpful to be able to ask the learners if they had done their “A” (analyzing) when they were reviewing a website to see if it was a quality website or ask them if they were “in focus” if they started to follow an interesting link versus staying on task. Details are listed below. The model is looping and allows individuals to go from analyze, back to plan or find. Conclude can be simply saying I need to start over with a new plan. More details are listed below.

IN=Information Needs & IN Focus (anything that needs knowing and for staying focused IN the question)

- Does something need an answer, what needs knowing (an information need)?
- Is need on-going, one time or occasional?
- How “big” is the need?

- When there is an information need, stay focused (**IN**) the topic throughout the process.

P=Plan

- What is the question?
- What type of information is needed?
- What are some of the key words, similar words, and concepts?
- Where are some possible information sources?
- Which are the best sources of information for the question?

F=Find

- Go find sources.
- Use search techniques that are efficient and effective.
- Determine if information needs to be saved, and if so, how?
- Look for information inside quality sources.
- Ask what information is useful in each source.

A=Analyze

- Read, hear, touch, and view the information.
- Plan how to present the information.
- Determine if there is a need to share the information and if so, how and with whom.
- Plan how best to use and organize the information.
- Evaluate the source and determine validity for my question.
- Determine if more information is needed or if it is time to stop and move on to other things.

C=Conclude

- Organize the information into a useful format.
- Present the information (even if only to yourself).
- Determine if the information answered the question, if the information found was needed, and if more needed.
- Determine if the process was useful and efficient.
- Share the information if needed. Discard information if not useful.

A Curriculum for the Non-Scholar Scholar

Instruction is more effective when the format and curriculum are tailored for these populations. The curriculum is a work in progress. Below are examples of lesson plans used to prepare for and teach the classes. Sometimes a class would have multiple lessons and there would be two to four lessons included. Each lesson plan was comprised of learning outcomes, tools, and a measurement.

ONE LESSON PLAN EXAMPLE

Learn How to Analyze and Evaluate Sources of Information

Learning Outcomes Desired

- Focus on A (analyze) in model when a new source of information is in

front of the learner. Each web page is a new source of information that one needs to stop and analyze.

- Understand the ease of producing information and the need to use criteria to evaluate information.
- Gain literacy in evaluation sources of information for credibility, authority, currency, reliability and purpose/bias.

Tools (selection depending upon class; continuous additions/deletions)

- Checklist to evaluate web page
<http://library.binghamton.edu/research/guides/webcheck.html>
- Evaluating both web and non-web sources. Notes: Older presenter. Content is very good. Info Literacy 10. Evaluating Information Sources
http://www.youtube.com/watch?v=VvVhN3_ex_8
- How to read a news story
http://www.bazian.com/pdfs/HowToReadA_NewsStory_vers03_26Nov08.pdf
- Asks questions about evaluating a web page. Younger presenter.
http://www.youtube.com/watch?v=ZMb0_5pI-u4
- From Trident Technology College. All music and keystrokes.
<http://www.youtube.com/watch?v=VnrL8wQQIoE&feature=related>
- Evaluating websites younger students
<http://www.youtube.com/watch?v=gBe4WKcQzVI&feature=related>
- Library Fairy kind of goofy yet content good
<http://www.youtube.com/watch?v=GRIW1EhUDSk&feature=related>
- A website that looks authoritative yet is populated with false facts.
<http://allaboutexplorers.com/index.html>
- Sounds like a very dangerous chemical indeed. It's actually H₂O, but if you're not of a scientific mind this site will get you every time.
<http://www.dhmo.org/>
- A fake hospital
<http://www.rythospital.com/2008/>
- YouTube: <http://www.brasschecktv.com/page/667.html>
Notes: Brasscheck TV does not indicate the names of the spokespersons, the name of the television station, its network affiliation or any other information outside of the incomplete banner on the video itself, so one does not know the source of this information prior to viewing. The issue discussed but not named in the post or on the text on the YouTube page is the Chem Trails or ChemTrails issue. Here are some sources and selected content that discusses the ChemTrails issue. Chemtrail conspiracy theory From Wikipedia, the free encyclopedia
http://en.wikipedia.org/wiki/Chemtrail_conspiracy_theory
- Website aids & women false facts
<http://web.archive.org/web/19991127225822/http://147.129.1.10/library/research/AIDSFACTS.htm>

- Bookmarks on several sites to analyze
http://delicious.com/NMTC_Librarian/IsThisReal
- Wikipedia: Beneath the Surface.
<http://www.lib.ncsu.edu/tutorials/wikipedia/>
- Evaluation criteria with links to examples.
<http://lib.nmsu.edu/instruction/evalcrit.html>
- ABCs of website evaluation
<http://school.discoveryeducation.com/schrockguide/pdf/weval.pdf>

Measurement

- Identifies five criteria for review of sources (credibility, authority, currency, reliability, and purpose/bias) and concept behind each criteria
- Evaluate websites and identify areas of concern based on five criteria

ANOTHER LESSON PLAN EXAMPLE

Learn How to Go Online and Use Library Databases

Learning Outcomes Desired

- Learn how to find an article and email full text to an email address

Tools

- Use Denver Public Library (DPL) databases to find Searcher Magazine article

Measurement

- Can go online to DPL, find Searcher Magazine article (September 2009, page 18), and email it to an address

LESSONS LEARNED

What Did They Learn?

When teaching individuals who are not in a degree or certificate program, assessing outcomes is more difficult since there are no grades. Additionally, assessing the outcomes for educational videos that are intended to be used anytime, anywhere, by anyone wanting information adds yet another layer of complexity. Traditional instruction settings provide better opportunities for assessment and feedback.

With the face-to-face classes, a brief survey was used to measure the attendees' perceptions. Three measurements were asked; the relevance of the class to its intended purpose, whether they learned the concepts, and if would they recommend the class. They were asked if they; 1-strongly agree, 2-agree, 3-disagree, or 4-strongly disagree. Ratings were consistently high with 1.26 or higher in each of the three measurements. Additionally, a space was given for open-ended responses for how the class could be better. Although the ratings were high, assessment of the learner's needs,

teacher effectiveness, and learning that occurred could be better to ensure appropriate learning.

Successes

The following have been successes for the Information Literacy Initiative:

- 293 contacts (some individuals repeating classes to gain more knowledge and reinforce learning) received training in 2009.
- Ninety-six contacts received face to face training (some individuals repeating classes) in 2010.
- 1,613 views of the thirteen Searcher in Charge videos had occurred as of December 19, 2010.
- ILI provided five information literacy programs in serving individuals from age twenty to those over seventy. Training serves job seekers, at-risk youth, and adults over fifty, women without homes, and small/medium sized business owners.
- Partnerships have been created with the University of Washington, libraries, small business development centers, Osher Lifelong Learning, The Gathering Place, and Colorado I Have a Dream.
- A curriculum focused on lifelong learners has been developed.
- A model for lifelong learners has been developed called IN PFAC.
- Ratings from individuals taking ILI classes were positive and high.
- With 1.0 being strongly agreed, average rating by attendees of class for relevance of content is 1.16, learned some concepts is 1.26, and 1.16 would recommend the class.
- Donors found ILI important enough to fund.
- Ten youth went on a three day trip to Washington, DC after they earned their spot with a four-month-long research project prior to the trip.
- One website was developed as a single point of entry for the entire Searcher in Charge video series and to provide for comments.
- A series of videos for health literacy was created and produced titled Searcher in Charge: Health Information.
- The California State Library system used the Searcher in Charge health information videos in their health toolkit for their patrons (California State Library & National Network of Libraries of Medicine, Pacific Southwest Region, 2010).
- Facebook for adults fifty plus video was created and produced.
- New York Public library is referring to the videos for their older adult population.
- Searcher in Charge produced a series of videos for small to medium sized business owners.
- World News (2010) carried the Health Literacy Videos.

Challenges

The following have been challenges for the Information Literacy Initiative:

- Logistics of setting up trainings with partners, initially time consuming
- Capacity of the training rooms do not allow for large numbers of attendees
- Finding a permanent physical home within the Denver Metro Area
- Creating an awareness of the Searcher in Charge videos as a resource
- Methods to accurately assess class effectiveness
- Metrics to measure effectiveness of Searcher in Charge videos
- Funding to create awareness and produce more videos

CONCLUSION

The need for information literacy training for individuals out of school is widespread and continues throughout one's life. Information literacy has been defined and the need for this training among various adult populations has been demonstrated. Offerings in both instructor-led and self-guided programs have been explored. The concern is where these programs are falling short of meeting the information needs of their targeted populations. Misconceptions regarding the meaning of information literacy, problems of disseminating these programs to the appropriate audiences, and the assessment of their effectiveness are all hurdles that must be overcome.

Information literacy is often confused with computer literacy. With such a variety of information readily available by way of the Internet and search engines, many believe that they are capable of finding what they need using simple Internet searches. A comfort with using computers and other technologies, including mobile devices, often leads individuals to overestimate their searching abilities, thereby underestimating their need for information literacy training (Bruce 1999; Campbell, 2004; DeSaulles, 2007; Jensen, et al., 2010; Ramesha, 2008; Spiranec & Pejova, 2010; Underwood, 2009). The work of the Information Literacy Initiative addresses several of these issues. A model and a curriculum for these populations provide a starting point for teaching the nomadic learner who has no need for grades or credit, but rather for what is necessary to get the job done.

Outstanding issues and areas for development include how to assess the effectiveness of information literacy to this population, creating an awareness of these programs and improving access, funding for the delivery of information literacy to the nomadic learner, and continued development of the model and curriculum.

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