
Where Will They Be in the Future? Implementing a Model for Ongoing Career Tracking of Library and Information Science Graduates

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ABSTRACT

This article provides an overview of Workforce Issues in Library and Information Science 2 (WILIS 2),¹ a study aimed at developing a career-tracking and program evaluation system that can potentially be used by all library and information science (LIS) programs. Such a system could enable stakeholders at all levels to collect data on an ongoing basis, informing their planning process and resulting in more effective ways to educate, manage, and retain the LIS workforce. WILIS 2 is informed by the experience of the research team in developing WILIS 1, an in-depth career retrospective study conducted between 2005 and 2009. WILIS 2 is using a community-based participatory research approach that involves members of the LIS community in the major aspects of project design and implementation. Three working groups on survey design, data reporting, and sustainability have been formed to increase the likelihood that the data collection system will meet the needs of a wide range of LIS programs. Members of the working groups are being drawn from the WILIS project advisory committee and representatives of the participating LIS programs as well as stakeholder groups such as the Association for Library and Information Science Education (ALISE), the American Library Association (ALA), and the Institute of Museum and Library Services (IMLS). Eight programs are participating in a pilot test of the survey, and an additional thirty-five programs will join in the full launch. Results from a WILIS survey of LIS program administrators regarding their existing alumni-tracking practices as well as key results from the recent graduates section of the WILIS 1

survey are included in this paper. The administrators' survey found a high level of interest in a shared approach to alumni tracking, and the results from the recent graduates section of WILIS 1 serve to illustrate the type of data that programs can gather through a recent graduates' survey.

INTRODUCTION

The library and information science (LIS) field is facing a variety of challenges related to educational and workforce planning. In North America, the master's degree from an accredited program has typically been the entrée into the field; however, unlike many other professions, there is no systematic annual licensing requirement that would allow for the ongoing collection of workforce data on a national basis. Many LIS educational programs gather data from alumni in preparation for accreditation visits, but again, data collection is not consistent over time or across programs. Furthermore, most programs lack the resources required to conduct surveys in a manner consistent with the survey methods needed to optimize response rates and ensure validity and reliability of findings. Without regularly collected data from alumni, it is impossible to accurately estimate overall workforce numbers and trends and to produce evidence that will adequately inform both educational and workforce planning. Data collected by government bodies such as the U.S. Bureau of Labor Statistics and the National Center for Education Statistics provide estimates of employment based on industry and occupation. Since LIS graduates are now working in a wide range of industries in addition to libraries and under many job titles, these types of statistics do not capture the state of the LIS field as a whole. The Association for Library and Information Science Education (ALISE) gathers annual statistics from LIS programs; however, the association gathers information about programs and student characteristics and enrollment rather than alumni. The annual surveys of new graduates conducted by *Library Journal* provide some data about employment rates for those who respond to their Web survey, but the timing of the survey is such that many graduates may not have had sufficient time to find jobs, and there is no attempt to systematically follow graduates with earlier graduation dates (e.g., five years out vs. just graduated). For additional background on certification programs for librarians and paraprofessionals, see the article by Grady in this issue.

Although the paucity of comprehensive data on graduates and the overall LIS workforce has been an ongoing problem, the growing concern about the demographic changes that are occurring as the baby boomers age is adding a sense of urgency to the situation. In the United States, some seventy-eight million boomers born between 1946 and 1964 are expected to leave the workforce over the next two decades. Dohm (2008)

states that the effect of baby-boomer retirements will be heaviest in the decade following 2008. As a field, LIS appears to be particularly at risk for workforce shortages. Dohm (2008) gives the average age of librarians as forty-seven and seventh on a list of occupations in 1998, with the highest percentages of workers aged forty-five years and older.

The LIS workforce is affected by the overall trend toward an aging population and by the demographic composition of its own workforce. In the WILIS 1 study, we found that the average age at master's graduation was 32.7, indicating that many people enter the field later in life, possibly as a second career. As a result, the average length of time in the profession is reduced for many graduates. The fact that a large proportion of LIS graduates are women also affects the workforce since women are more likely than men to have career interruptions for family caregiving purposes. In the recession of the 1970s, the demand for academic and public librarians in particular was reduced and, as a result, a number of LIS master's programs closed their doors. The effect of this economic downturn and the reduction in graduates and hiring during this period have led to a perceived shortage of mid-career librarians with leadership experience. All of these factors increased the workforce challenges faced by the LIS field. For additional data on the leadership shortage in particular, see the article by Sivak and De Long in this issue.

As the field of library science has broadened to include information science, the range of job opportunities and work settings available to graduates has also broadened. Many library employers are concerned that new master's graduates may be choosing to work outside of libraries, thus reducing the potential labor pool even more. While multiple organizational, social, and economic factors affect workforce supply and demand, it seems more important than ever that LIS programs develop ways in which data can be gathered on an ongoing basis so that educational and workforce planning can be done in an evidence-based manner.

BACKGROUND TO WILIS 2

Workforce Issues in Library and Information Science 2 (WILIS 2) builds on the earlier WILIS 1 study, which took an in-depth approach to studying the careers of LIS graduates in North Carolina between 1964 and 2007. Details of the WILIS 1 study may be found in a separate article by J. Marshall, et al. in this issue. For programs that may wish to do an in-depth career study of their graduates similar to WILIS 1, the researchers have developed a toolkit with detailed instructions on all aspects of the in-depth career study that is available on the project website at www.wilis.unc.edu. Although the main goal of WILIS 1 was to gain an understanding of the complex personal, organizational, and social factors that affect the long-term experiences of LIS graduates in the workforce, the WILIS 1 survey also included a section for recent graduates that focused on the evalu-

ation of their LIS master's program. Recent graduates were defined as those who had graduated within the last five years. This recent graduates section of WILIS 1 served as the starting point for the design of WILIS 2, which aims to develop a career-tracking and program evaluation system that can potentially be used by a wide range of library and information science (LIS) programs.

WILIS 2 is taking a community-based participatory research approach (CPBR), which is defined as "a collaborative approach to research that equitably involves all partners in the research process and recognizes the unique strengths that each brings. CBPR begins with a research topic of importance to the community and has the aim of combining knowledge with action and achieving social change" (Israel, Schultz, Parker, & Becker, 1998). While CPBR is largely used in public health research (Israel, Eng, Schultz, & Parker, 2005), it makes sense as a strategy for WILIS 2 as a way to bridge the academic and professional practice worlds of LIS in constructive and mutually beneficial ways. The WILIS 2 proposal stated that the study team would work side by side with the stakeholders to do the following: (1) develop the WILIS 2 survey; (2) finalize the survey methodology; (3) implement the pilot and national launch of the model system; (4) disseminate the findings; and (5) explore sustainability options.

The research team used a variety of methods to make LIS programs aware of WILIS 2 and to invite programs to participate. Initial interest was gauged via a survey regarding current alumni tracking practices that was sent to heads of ninety-nine LIS master's programs in the United States and Canada. This group included all programs that could be identified by the study team, regardless of accrediting body, for example, American Library Association (ALA), National Council for Accreditation of Teacher Education (NCATE), or regional colleges and schools accreditation. WILIS 2 team members also presented the WILIS studies in a forum on workforce issues organized by the Council of Deans and Directors at the 2008 ALISE annual meeting. At both the 2008 and 2009 ALISE annual meetings, forms were distributed that allowed programs to indicate their interest in WILIS 2 and posters were presented. Additional follow up by e-mail and telephone was used to encourage selected programs to participate so that the selected group would represent a range of types and sizes of programs located in different geographical areas.

At the time of writing, three working groups on survey design, data reporting, and sustainability have been formed to increase the likelihood that the WILIS 2 career-tracking system will meet the needs of a range of LIS programs. Members of the working groups are being drawn from the WILIS project advisory committee, which includes representatives of the participating LIS programs, as well as stakeholder groups such as ALISE,

the American Library Association (ALA), and Institute of Museum and Library Services (IMLS). Eight programs are participating in a pilot test of the WILIS 2 survey, and an additional twenty-five programs will join in the full launch. Each program is being given the opportunity to survey up to 250 of their alumni as part of the study, with an option available for surveying additional graduates on a fee basis. Due to heavy demand, a supplementary grant was requested and received from IMLS to add an additional ten LIS programs to the full launch group, making a total of forty-three participants.

Following an initial advisory group meeting, the survey working group held four conference calls during which the broad goals of the survey were discussed and agreed upon. The questions from the WILIS 1 recent graduates section and additional sample surveys provided by the University of Illinois at Urbana Champaign and the University of Toronto were used as a basis for considering specific items to be included in the WILIS 2 survey. Adobe Connect software proved to be useful as a way to provide all participants with the opportunity to view the survey items simultaneously on their own computer screens and to comment on changes as they were being made to the draft document as the meeting progressed. The software also had the ability to allow participants to vote on a particular issue or item change as required. The resulting draft versions of the survey were sent to the members of the working group for further input at the end of each meeting. When a final draft was achieved, it was sent to the entire Advisory Committee for comment. In addition to program evaluation, other major topics covered in the survey are previous education, employment, leadership, continuing education, and technology use.

Programs participating in the pilot of the WILIS 2 survey received detailed instructions from the WILIS 2 research team on how to prepare their alumni lists and communicate with their alumni about the survey. The research team worked with a professional Web survey company, Survey Sciences Group, which sent out the initial mailed letters and programmed the survey. The programmed survey was pretested by members of the survey working group and additional recent graduates from North Carolina to ensure that the survey was ready for pilot use. Given the higher response rates of recent graduates compared to earlier cohorts in the WILIS 1 study, a Web-based survey was deemed appropriate. Details of the WILIS 1 methodology may be found in a separate article by J. C. Morgan, et al. in this issue.

Eight LIS programs are participating in the pilot phase of the WILIS 2 project. The pilot phase includes an initial postal invitation with a two-dollar bill included as an incentive. Postal letters and incentives are not planned for the full launch, thus providing another opportunity to compare response rate differences with and without postal mail and incentives. Since responses are being tracked, only nonrespondents receive the

follow-up e-mail reminders. At the time of writing, the response rate for the WILIS 2 pilot survey was 54 percent ($n = 1,922$), of which 963 respondents completed the full survey and seventy-seven partially completed the survey. Program response rates varied from 35 percent to 80 percent. The pilot survey will be reviewed by the original survey working group with the data in hand to determine whether the survey achieved its goals and to discuss any needed changes to the instrument. The full launch of the alumni survey with twenty-five additional LIS programs is planned for fall 2009. The survey will be launched for the additional ten programs funded by the IMLS supplement in early 2010. Two additional working groups have now been created, one to design a format for the data reports that programs will receive with the results for their graduates, and another to explore options for sustainability after the WILIS 2 project ends.

The remainder of this article provides data from two sources: (1) a survey of deans, directors, and chairs of LIS programs that was conducted in 2007 to assess current alumni-tracking practices and the level of interest in developing a shared system, and (2) the recent graduates section of the WILIS 1 survey.

RESULTS OF THE SURVEY OF LIS DEANS, DIRECTORS, AND CHAIRS

The survey of heads of LIS programs, conducted as part of both WILIS 1 and WILIS 2, served as a needs assessment for a shared alumni tracking system that a wide range of LIS programs could potentially use. We identified ninety-nine LIS programs in the United States and Canada and surveyed the head of each program. Because the academic unit housing a program was sometimes stand-alone and sometimes subsumed within a larger school (such as education or communication), the head of the LIS program might hold the title of dean, director, chair, or coordinator. In addition to such administrative differences, there are different accreditation standards followed by the programs. Programs may be accredited by the American Library Association (ALA), the National Council of Accreditation for Teaching Education (NCATE), or a regional accreditation agency alone.

Each program head was sent a postal invitation letter. This was followed, as necessary, by up to four e-mail reminders and up to two phone reminders for nonrespondents. To underscore the importance of the study, the last reminder for nonrespondents was a phone call from a co-investigator. In total, sixty-one programs responded, for a 65 percent response rate. Heads of ALA-accredited programs were more likely to respond than those holding only NCATE accreditation; see table 1.

Seventy percent of the programs responding were ALA accredited. There was considerable variability in the size of programs as measured by the number of master's degrees awarded in the 2006–7 academic year (mean

Table 1. Response Rates

Accreditation Organization	Number of Respondents	Total Programs	Response Rate
American Library Association (ALA)	43	58	74%
National Council of Accreditation for Teacher Education (NCATE) only	18	38	47%
Not accredited by ALA or NCCATE	0	3	0%

of 95; sd 87) and budget (from less than \$500,000 to over \$4.5 million). Because of the high variability among ALA programs as compared with more uniform NCATE programs, statistical comparisons between the groups may not be appropriate. We are confident, however, that the needs of both large and small programs were well represented by our respondents.

Current Alumni Tracking

Despite much variability in alumni-tracking practices among programs, the vast majority (92 percent) stated that it was important to maintain contact with their alumni. Most LIS programs (83 percent) collected some alumni contact information, and 80 percent relied, at least in part, on institutional alumni records. The number of staff members dedicated to collecting contact information ranged between zero and three (mean 1, sd 0.7); 27 percent did not have any staff member devoted to this task. A majority of programs (56 percent) were dissatisfied with their ability to maintain up-to-date contact information for their alumni, and only 3 percent were very satisfied with their ability to maintain these records. When asked what factors might help them, more than half the programs cited more staff (65 percent), more institutional support (61 percent), and outsourcing to an alumni-finding service (51 percent).

All programs considered it important to allow alumni to update their contact information. Ninety-eight percent of respondents also thought it was important to track the careers of alumni and 95 percent were currently collecting some information on their graduates. Most programs (70 percent) surveyed alumni for accreditation purposes, while over half (52 percent) tracked alumni careers for fundraising. Those programs who surveyed for accreditation repeated their survey approximately every four years (4.1, sd=2.5), while other surveys for other purposes tended to be conducted every one or two years (1.7, sd=1.0 for program-administered surveys, and 1.6, sd=1.1 for institution-administered surveys). Only 36 percent reported conducting alumni focus groups. Overall, respondents were evenly split between those satisfied (49 percent) and dissatisfied (51 percent) with their career-tracking ability.

Purposes of an Ideal Career-tracking System

The most prevalent desired use for career-tracking data, cited by 95 percent, was accreditation. ALA accreditation standard IV.6 states that “[t]he school applies the results of evaluation of student achievement to program development. Procedures are established for systematic evaluation of the degree to which a program’s academic and administrative policies and activities regarding students are accomplishing its objectives” (ALA, 2008). Similarly, the NCATE Specialty Areas Studies Board (2000) noted the importance of evaluation for continuous improvement in its *Principles for Performance-Based Assessment Systems in Professional Education Programs*, specifying that the evaluation system “includes one or more measures that have been created, reviewed, and/or scored by specialty professionals external to the program.” All respondents stated that “having standardized questions that can be benchmarked with other programs” was an important feature for an alumni-tracking system. Programs universally wanted the ability to add specific questions to the list for their own purposes. Programs valued both standardization and flexibility.

There were many other potential uses for an alumni-tracking system beyond accreditation requirements. Alumni feedback was considered important for strategic planning and curriculum development purposes. Programs also saw the information as valuable for recruiting potential students and satisfying institutional reporting requirements. Table 2 details how programs indicated they would use alumni information.

Type of Alumni Information Tracked

What information were program leaders most interested to learn from alumni? Greater than 90 percent of the leaders wanted to know about aspects of the current job such as position, type of employer, and salary (or reasons for leaving the profession for those who have done so); participation in professional organizations and interest in continuing education; and curriculum evaluation. Percentages interested in these and other types of information are given in table 3.

Features Desired in an Alumni-tracking System

While everyone agreed that the ideal system would allow graduates to update contact information and would offer both standardized and custom questions, respondents also nearly universally identified several other features to be important. Standardization with some degree of flexibility was the theme. Respondents wanted to be able to access standardized report templates and to analyze the data online without additional software, but they did not want to be limited by such ready formats. In addition to pre-generated reports, respondents wanted the ability to create an archive and to export raw data to other software programs for customized analysis. See table 4.

Interest in Participating in the WILIS 2 Shared Alumni-tracking Survey

While respondents from ALA-accredited programs (90 percent) indicated strong interest in participating in the WILIS 2 study, reactions from NCATE-accredited programs were mixed, with only 53 percent indicating interest. While we did not ask the reasons for a lack of interest, NCATE programs tend to be smaller with lower budgets as compared with many

Table 2. Uses for Alumni Information

Use	Percentage
Accreditation	95%
Strategic planning	89%
Curriculum development	88%
Recruiting	88%
Institutional reporting	86%
Fundraising	82%
Marketing program	80%
Developing alumni services	75%
Benchmarking against other programs	75%
Developing continuing education	66%
Faculty planning	57%

Table 3. Types of Alumni Information to Track

Type of Information	Percentage
Type of employer	98%
Current job	98%
Participation in professional organizations	96%
Reasons for leaving the profession	96%
Curriculum evaluation	95%
Interest in continuing education	95%
Salary	93%
Faculty evaluation	86%
Reasons for changing jobs	84%
Interest in other alumni services	74%
Size of employer	70%
Retirement plans	63%

Table 4. Features Desired in an Alumni-tracking System

Feature	Percentage
Ability of graduate to update contact information	100%
Standardized questions to support benchmarking	100%
Ability to add specific questions to standardized list	100%
Ability to view survey results online	98%
Ability to export raw data to other software programs	98%
Ability to archive the data	98%
Security features	98%
Availability of standardized report templates	98%
Ability to analyze data without additional software	94%

ALA programs. Resources did prove an important factor for interest for all programs; while 80 percent of programs indicated an interest to participate in the funded pilot study, only 40 percent were willing to participate on a fee basis if not selected for the pilot. This figure drops to 30 percent for programs with annual budgets less than a million dollars. Just over half (53 percent) of ALA-accredited respondents would participate on a fee basis, but only 12 percent of the NCATE respondents would participate at a fee. Since valuable benchmarking data would arise from a more representative participation, encouraging NCATE member involvement seems an important goal. None of the NCATE-only respondents were members of ALISE. Groups such as the Educators of Library Media Specialists Section of the American Association of School Librarians may be helpful in reaching leadership of NCATE programs.

RESULTS OF THE WILIS 1 RECENT GRADUATES SECTION

The results of the recent graduates section of the WILIS 1 survey provide an indication of the type of data that programs can expect to receive from participating in the WILIS 2 project. WILIS 1 alumni who graduated between 2001 and 2007 were asked an additional set of questions about their educational programs and the extent to which the programs prepared them for their current positions. We report findings here for the recent graduates through 2005 because these data were gathered in a standardized manner from all the LIS programs in North Carolina, using both regular and e-mail invitations. The 2006 to 2007 graduates were primarily from University of North Carolina Chapel Hill and received an e-mail invitation only.

The response rate for the recent graduates was 38.8 percent ($n = 540$), compared to 35.1 percent for the full WILIS 1 study, which included alumni who graduated since 1964. The overall median age of the recent graduates, who were currently working, was thirty-seven, compared to fifty for the full study of all those who graduated between 1964 and 2005. These data suggest that the previous pattern of later age at graduation is continuing for recent graduates. Having a more mature workforce at entry into the profession may, in fact, prove to be an advantage for the LIS field, given the expected workforce shortages. Fourteen percent of recent graduates were nonwhite compared to 11 percent for the full study, suggesting that diversity in the profession is increasing. Employment rates are high, with 94 percent of recent graduates being employed, 2 percent not working and seeking work, and 3 percent not working and not seeking work.

Figure 1 shows the setting of the current job with 79 percent working in a library using LIS skills. Some 41 percent of those working in libraries were in school libraries, followed by 28 percent in academic, 17 percent in public, and 14 percent in special libraries. It is notable that almost all of those working in a nonlibrary setting were still using their LIS skills. Table 5 shows that average salaries for recent graduates are only 20 percent

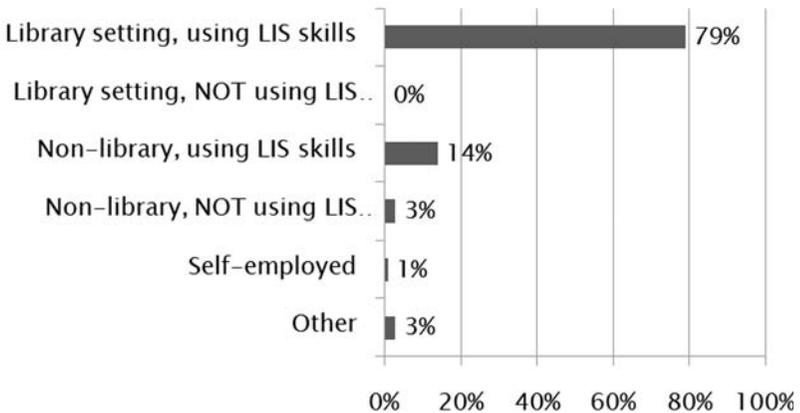


Figure 1. Setting of Current Job

Table 5. Current Job

	All Graduates (N=2001)	Recent Graduate (N=479)
Average annual salary	\$57,578 (N=1663)	\$47,929 (N=457)
Average number of hours worked per week	39.68, sd 9.87	40.56, sd 7.55
Considered full time	89%	94%
Supervise others	60%	59%

lower than for the study as a whole (1964 to 2005 graduates), suggesting that salaries are increasing for recent graduates. In addition, it appears that the percentage of recent graduates who supervise others (59 percent) is almost identical to the percentage for the study as a whole. Career satisfaction rates appear to be high for recent graduates, with 94 percent indicating that they agree (52 percent) or strongly agree (45 percent) that they are satisfied with LIS as a career.

Setting of Current Job

Respondents who applied to more than one program were asked which factors were important to them in selecting their program. The results are shown in figures 2 and 3. Various factors related to the admissions process were explored in the WILIS 1 survey, and it was evident that responses to these questions would be very useful for targeting areas in need of improvement such as financial aid, the program website, discussions with admission staff and faculty. The survey also provided feedback on various aspects of courses ranging from the ability to get into desired courses to the appropriateness of required courses to the usefulness of course assignments. Sections also targeted areas such as quality of instruction, accessi-

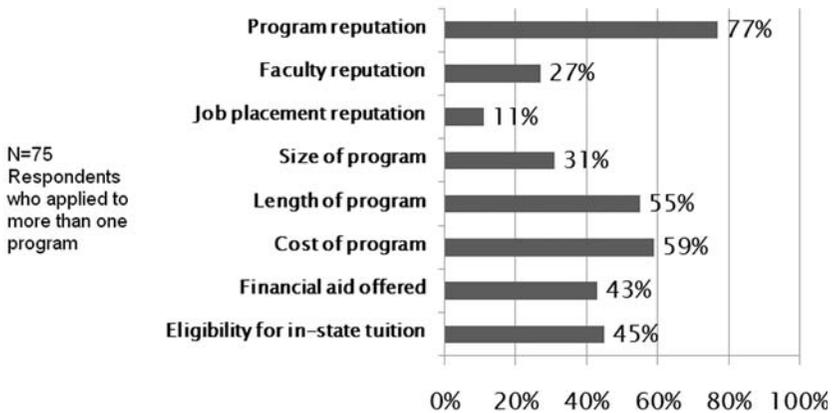


Figure 2. Selecting an LIS Program: Which factors were important to you in selecting your program?

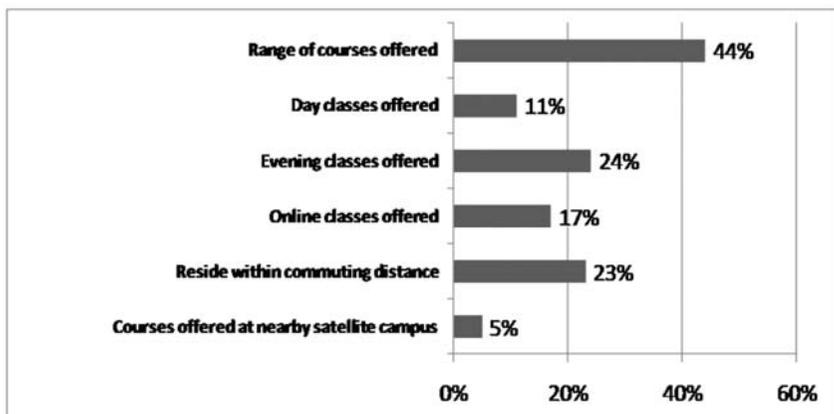
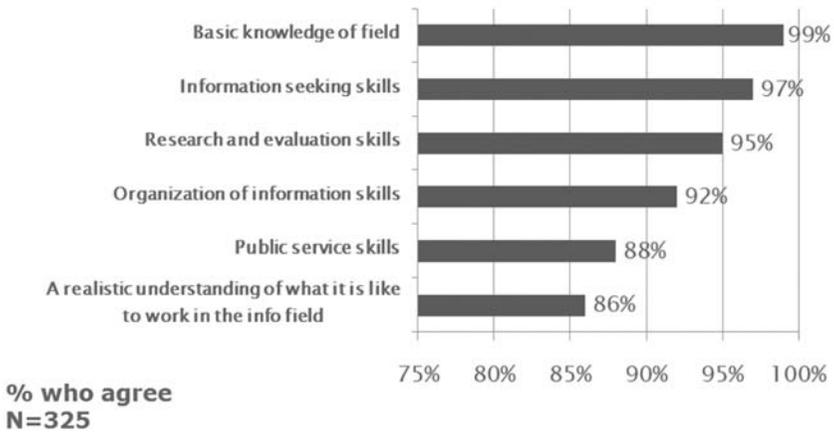


Figure 3. Selecting an LIS Program: Which factors were important to you in selecting your program?

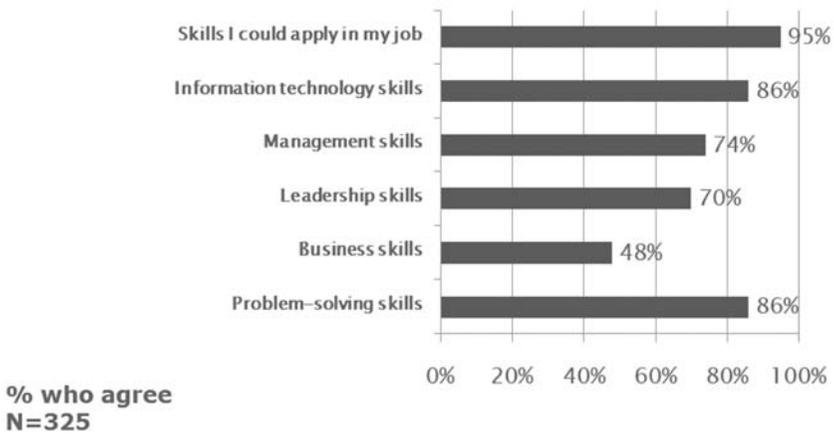
bility of teaching staff, and professors as leaders in their field. Program resources such as the computer lab, library, international opportunities, and availability of information technology were also on the list. Since education involves more than course work, data were gathered on topics such as the learning and research environment in the program, the quality of students, collegiality, physical facilities and campus life. A five point scale from poor to outstanding was used to measure graduates' perceptions of their program.

As shown in figures 4 and 5, almost all the recent graduates reported that their programs had provided them with a range of skills that they are



* Categories were collapsed: (strongly agree/agree)

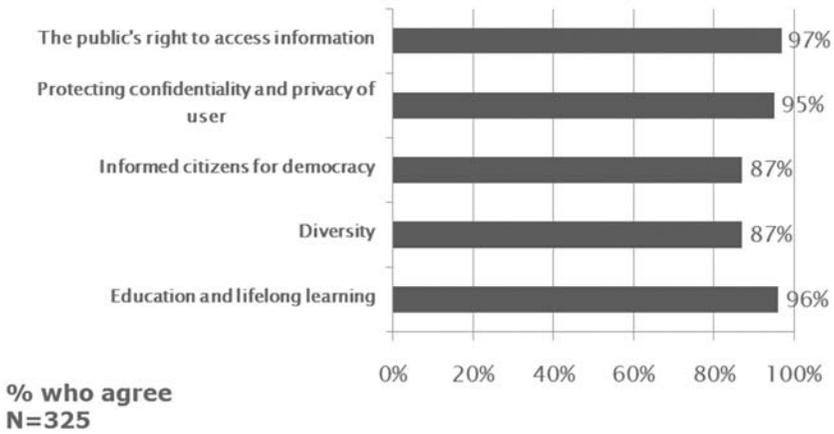
Figure 4. LIS Education: The program provided me with the following:



* Categories were collapsed: (strongly agree/agree)

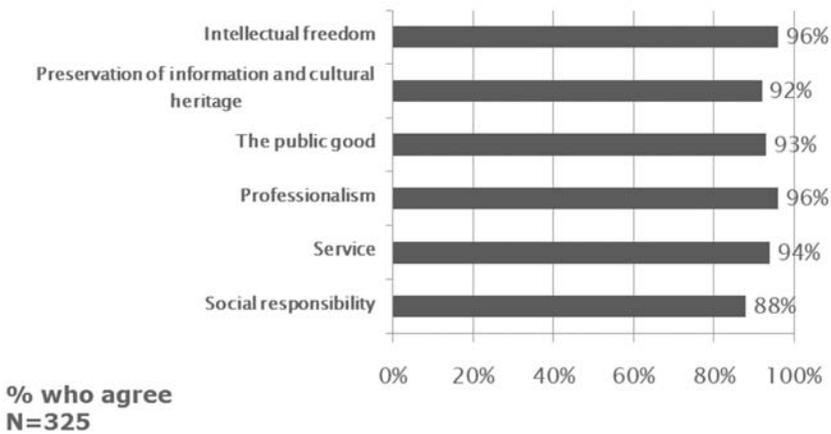
Figure 5. LIS Education: The program provided me with the following:

able to apply in their jobs. Some of the areas that were rated somewhat lower included business skills, leadership skills, and management skills, suggesting that these are areas that programs may want to consider expanding in the future. Figures 6 and 7 show that the programs tended to do well in providing commitment to important areas such as the public's right to access information, protecting confidentiality and privacy, diversity, and intellectual freedom.



* Categories were collapsed: (strongly agree/agree)

Figure 6. LIS Education: The program helped me to develop a commitment to:



* Categories were collapsed: (strongly agree/agree)

Figure 7. LIS Education: The program helped me to develop a commitment to:

Overall, 89 percent of the graduates rated their overall experience in the program as good (46 percent) or excellent (43 percent); however, the data show that there is always room for improvement. While 88 percent would recommend the LIS program to a friend, 9 percent were unsure, and 3 percent would not recommend the program. It is easy to see how programs could use these sorts of results to set targets for improved outcomes and to monitor ongoing progress through subsequent surveys over

time. The results also highlight areas that need special attention such as financial aid, networking opportunities, greater flexibility in modes of instruction, and opportunities for field experience.

CONCLUSION

This article has summarized the rationale, goals, and methodology being used in the WILIS 2 project, which aims to develop an alumni-tracking system that can potentially be used by a wide range of library and information science (LIS) programs. Data are also provided from the survey of heads of LIS programs that confirm the need for improved alumni tracking and indicate that most individual programs have limited resources available to devote to this important task. Selected results from the WILIS 1 recent graduates survey have been used to illustrate the range of information that programs could gather via such surveys to improve the quality and responsiveness of their educational programs. At the same time, alumni surveys can be used to track workforce trends, reach out to the alumni community, and engage with other stakeholders so that all stakeholders can work together to meet the LIS workforce challenges that lie ahead.

NOTES

1. The WILIS 2 study was supported by a grant from the Institute of Museum and Library Services. The primary research team from the School of Information and Library Science at University of North Carolina Chapel Hill and the University of North Carolina Institute on Aging consisted of: Joanne Gard Marshall, lead principal investigator; Victor W. Marshall, coprincipal investigator; Jennifer Craft Morgan, coprincipal investigator; Deborah Barreau, coinvestigator; Barbara Moran, coinvestigator; Paul Solomon, coinvestigator; Susan Rathbun Grubb, research scientist; Cheryl A. Thompson, project manager; and Shannon Walker, graduate research assistant.

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