Where Are They Now? Results of a Career Survey of Library and Information Science Graduates

JOANNE GARD MARSHALL, VICTOR W. MARSHALL, JENNIFER CRAFT MORGAN, DEBORAH BARREAU, BARBARA B. MORAN, PAUL SOLOMON, SUSAN RATHBUN-GRUBB, AND CHERYL A. THOMPSON

ABSTRACT
This paper provides an overview of Workforce Issues in Library and Information Science 1 (WILIS 1), a large scale retrospective career study of graduates of all library and information science (LIS) programs in North Carolina from 1964–2007. The interdisciplinary research team used a multiple methods approach to data collection consisting of a survey of LIS graduates, a survey of administrators of LIS programs, and key informant interviews. This article presents an overview of the study design and methods followed by key results from the survey of graduates. The specific research goals of WILIS 1 were: (1) to gain a comprehensive understanding of the educational, workplace, career, and retention issues facing LIS graduates; (2) to investigate the way in which LIS programs track their graduates and use these data for educational and workforce planning; (3) to explore possibilities for a career tracking model that could be used by all LIS programs in the future; and (4) to disseminate the study results in a manner that would facilitate LIS workforce planning. WILIS 1 has now been joined by a second study known as WILIS 2, which is further developing the alumni tracking model that all LIS programs can potentially use.

INTRODUCTION
As the nature of the field of library and information science continues to change and as the profession matures, it is more important than ever that LIS educational programs obtain feedback from their alumni. The use of such data can improve the ability of LIS programs to prepare future students for the changing work environment and to communicate more
effectively with alumni, employers, professional associations, policy makers, and other stakeholders. Such data can also help programs to meet the Standards for Accreditation of Master’s Programs in Library & Information Science of the Committee on Accreditation of the American Library Association (2008), which call for “systematic evaluation of the degree to which a program’s academic and administrative programs and activities are accomplishing its objectives.” Even though LIS educators agree that such data collection and use is a priority, few programs have the resources to survey their graduates on a regular basis.

The Workforce Issues in Library and Information Science (WILIS) project consists of two studies funded by the Institute of Museum and Library Services (IMLS) that address the need for better data on what happens to LIS graduates. The first project (WILIS 1), funded in 2005, aims to develop an in-depth understanding of the careers of those who graduated from library and information science (LIS) programs in North Carolina for over four decades. Since the LIS field does not have a mandatory statewide or national licensing requirement for practitioners, we do not have the same mechanisms for systematically tracking our workforce as can be found in the licensed professions such as medicine, nursing, and social work. Not only do we not know where LIS graduates are now, but we also do not know where they have been during their careers. The WILIS 1 study addresses the need for a greater understanding of the long-term experiences of LIS graduates in the workforce. A survey of deans, directors, and chairs of LIS programs was also used to gain an understanding of existing alumni tracking practices and to determine the level of interest in a shared system. Workforce Issues in Library and Information Science 2 (WILIS 2), funded in 2007, is taking the recent graduates portion of the WILIS 1 study and using a community-based participatory research approach to build a shared alumni tracking system that all LIS programs can potentially use. The purpose of this article is to present an overview of the WILIS 1 study design, and methods followed by some key results from the Web-based survey of graduates, which was fielded from September to December 2007. A separate article on WILIS 2 by J. Marshall et al. is included in this issue.

**Study Design and Methodology**

The WILIS 1 research team used the life course perspective as a framework for designing the long-term career retrospective survey. This perspective has been used extensively in the social sciences to study occupational careers, although we could not find any evidence in the literature that it has been used in the LIS field. In the context of changing social conditions and demography, the life course perspective directs attention to an individual’s experiences over time, examining stability and change in the occupational career. The use of the life
course perspective acknowledges that a complex set of factors influence workforce recruitment and retention behavior. Additional detail about the life course perspective and its relevance for LIS may be found in the article by V. Marshall, Rathbun-Grubb, and J. Marshall in this issue.

The LIS programs that participated in the full WILIS 1 study included three American Library Association (ALA) accredited programs (also accredited by the National Council of Accreditation for Teaching Education [NCATE]); two programs accredited by NCATE only; and one library technicians’ program in a community college. One of the ALA-accredited programs is located in a historically Black university (HBU), which increased the ability of the study to focus on factors affecting minority career and retention issues. The five participating LIS master’s programs in North Carolina are Appalachian State University Library Science Program, East Carolina University Department of Library Science and Instructional Technology, North Carolina Central University School of Library and Information Sciences, UNC at Chapel Hill School of Information and Library Science, and UNC at Greensboro Department of Library and Information Studies. Central Carolina Community College Library and Information Technology Program, a NC library technicians’ program, also participated in the study. Profiles of these programs and their development from 1964–2007 were created to aid in the analysis and are available at the project website, http://www.wilis.unc.edu.

North Carolina is a state with a population of over nine million, with 74 percent White, 21.7 percent Black, and 6.7 percent Hispanic peoples. Over three-quarters of adults are high school graduates and 22.5 percent have a bachelor’s degree or higher (U.S. Census Bureau, 2004–07). There are 385 public library service outlets in the state, 1,877 school library media centers, and 125 academic libraries in post-secondary degree granting institutions (National Center for Education Statistics, 2000, 2005, 2006). Although North Carolina is not highly urbanized, the Research Triangle (Raleigh, Durham, and Chapel Hill) and the Piedmont Triad (Greensboro, Winston-Salem, and High Point) areas in central North Carolina and the Charlotte, NC, area are home to many government, college and university, business, and scientific organizations and high technology companies, all of which provide additional employment opportunities for LIS graduates. The collaborative nature of the North Carolina LIS programs and the active support of LIS research by the State Library and the North Carolina Library Association were among the factors that facilitated widespread participation in WILIS 1 by North Carolina LIS programs and graduates. In many ways, North Carolina can be seen as a microcosm of LIS education and practice nationally, which makes it an ideal location for the study. In addition to having programs with varying forms of accreditation, the North Carolina programs differ in their size; orientation toward international, national, and local markets; availability
of online courses; and research intensity. As in other parts of the country, all of the programs play an important part in meeting workforce needs at the state level and beyond.

Both the WILIS 1 and WILIS 2 studies are collaborations between the School of Information and Library Science (SILS) at the University of North Carolina at Chapel Hill and the University of North Carolina Institute on Aging (IOA). The SILS investigators (J. Marshall, Barreau, Moran, and Solomon) brought LIS research, administrative, and teaching expertise to the project. The IOA investigators (V. Marshall, Morgan, and Konrad) contributed their expertise in social science theory, large scale survey methods, and aging workforce research. The interdisciplinary research team used a multiple methods approach to the project as a whole consisting of a comprehensive Web-based survey of LIS graduates, a survey of heads of LIS programs, and key informant interviews, which were used to explore perceptions of LIS workforce issues and current LIS alumni tracking practices. The WILIS 1 Advisory Committee included a wide range of employers, educators, alumni, professional association representatives, and researchers who advised on the research goals, methods, outcomes, and practicalities of implementing the data collection and communications about the study.

The results reported in this paper are restricted to some of the key findings from the in-depth career survey of master’s degree graduates of the five university-based LIS programs from 1964–2007. With over 1,700 variables available for analysis, it is anticipated that the WILIS 1 data will be useful for investigating many aspects of LIS careers in the future. The WILIS 1 proposal stated that all those graduating between 1964 and 2005 would be included in the survey; however, preparation of the lists of graduates, especially for the earlier years, proved to be very time consuming as did the construction of the complex survey instrument. The resulting time frame allowed 2006–7 graduates from the University of North Carolina at Chapel Hill to be added to the study as well as any 2006–7 graduates from the other five programs who responded to the postcard, listserv, or individual program requests to participate.

The main data collection instrument for WILIS 1 was the in-depth career survey of those who had graduated from the six NC programs from 1964–2007. The Web-based survey was introduced through an invitation letter signed by the head of the graduate’s program and the WILIS 1 principal investigator. This letter was sent by postal mail along with a two dollar bill incentive. Four reminders were sent to nonrespondents, including one additional mailed letter and up to three e-mails. The use of a Web-based survey was deemed appropriate for WILIS 1 given the technology orientation of LIS graduates. Use of the Web also allowed the investigators to collect data from the entire population of graduates and to test the feasibility of an e-mail-only communications strategy for recent LIS
graduates (for additional information on Web survey methodology see Crawford, 2002; Crawford, Couper & Lamias, 2001; Dillman, 2000).

The WILIS 1 Web-based survey used complex skip patterns to move the respondent through the survey to specific sections, depending upon the number of different jobs indicated and the category or categories into which each job fell. The research topics covered in the sections were as follows:

- Education (section A)
- Career Outline (section B)
- Job Detail (sections C, D, E, F, G, H, I)
- Life and Work (section J)
- Overall Career (section K)
- Continuing Education (section L)
- Trends in LIS (sections M, N)
- Recent Graduates (sections P, Q, R)

Those who had graduated in the last five years were also asked to complete a recent graduates section that focused on evaluation of their LIS program and how well it had prepared them for the workforce. This recent graduates’ section has formed the starting point for the development of WILIS 2, which is using a community-based participatory research approach to create a shared alumni tracking system that all LIS programs can potentially use. For further detail on WILIS 2, see the article by J. Marshall et al. in this issue.

The ability to compare jobs within careers was increased by asking each respondent to describe five jobs: (1) their job before entering their LIS program; (2) their job after graduating from the LIS program; (3) their longest job; (4) their highest-achieving job; and (5) their current job (or previous job if they were not working at the time of the survey). Depending on career length, the survey took respondents approximately thirty to sixty minutes to complete. Opportunities were provided for participants to provide a narrative description of their career as well as written comments throughout the survey. Particular attention was paid in the survey to diversity and minority issues. Each of the North Carolina LIS programs received a tailored, de-identified report of the results for their graduates and a full list of their alumni with updated contact information. The combined results for all master’s programs were made available on the project website for comparison purposes. For additional detail on the study design and methodology, see the article by Morgan, J. Marshall, V. Marshall, and Thompson in this issue.

**Comparison with the IMLS National Workforce Study**

In order to ensure complementarity, the WILIS 1 research team took into account the goals and data collection strategies of the IMLS national
workforce study funded by IMLS in 2004. Led by Jose-Marie Griffiths and Donald W. King, the national study entitled The Future of Librarians in the Workforce is an ambitious project with multiple goals related to projecting workforce supply and demand, assessing the ability of existing programs to meet demand, developing approaches to recruiting, educating, and retaining workers, providing data on information professionals who perform functions similar to LIS professionals, determining the value of libraries from multiple perspectives, and developing recommendations for future data collection. According to the website http://libraryworkforce.org, eight to ten surveys are planned of the following groups: libraries, LIS professionals and other library personnel, information industry employers, LIS programs, informatics programs, library funders, high school counselors, and possibly undergraduate and high school students. Elements of the study are intended to replicate measures used in an earlier study on library human resources conducted by King Research (1983).

By comparison, WILIS 1 aimed at deepening our understanding of what happens to LIS graduates over the long term and the complex personal, organizational, and social factors that affect career trajectories and workforce composition. Whereas the unit of analysis for WILIS 1 was the LIS graduate, the national workforce study began with a survey of library directors, which asked one-fifth of the directors to distribute a subsurvey to up to twenty-five librarians and support staff. As a result, the national study was limited to those who worked in libraries. By contacting LIS graduates, the WILIS 1 study was also able to gather data from those graduates who had left or retired from the LIS field. Since the WILIS 1 survey was sent directly to the LIS graduates, it was possible to employ a comprehensive survey methodology with full follow-up aimed at maximizing response rates and to conduct a nonresponse survey to determine representativeness. Although representatives from the national workforce study served on the WILIS advisory committee and vice versa, there was no formal connection between the two studies.

**OVERALL RESULTS**

The response rate for the full WILIS 1 career survey of master’s program graduates was 35 percent \((n = 2,653)\). The respondents were primarily female (82 percent) with a median age of fifty for those currently working. By comparison, the median age of the U.S. labor force in 2000 was thirty-nine (Dohm, 2000). The same source named librarians as the seventh highest on a list of occupations with the highest percentage of workers aged forty-five years or older. The average age of WILIS 1 respondents at LIS graduation was 32.7 years. Eleven percent of the respondents were nonwhite.

Over three-quarters of the respondents lived in the Southeastern United States, primarily in North Carolina (57 percent) and Virginia (9 percent),
although there were North Carolina graduates in all fifty states and fourteen countries. Over three-quarters (76 percent) were employed, and one-fifth (20 percent) were retired. Almost one-quarter were working in nonlibrary settings or self-employed. Notably, half of those working in nonlibrary settings said they were still using LIS knowledge and skills in their jobs, which suggests that the LIS degree provides knowledge and skills that are relevant for work in other types of organizations. Those employed outside of libraries worked in a wide variety of jobs and settings with no predominant place of employment evident. Forty-four percent of those who were no longer working in libraries continued to use their LIS skills in nonlibrary or information settings, and 14 percent were self-employed.

Current Job and Professional Identity
While 80 percent of the library science graduates were working in libraries using LIS skills, 21 percent of the information science graduates were also working in libraries. It may be that information science students are made more aware of the job opportunities in libraries when they are in an LIS program or that some students who take the information science degree for its greater emphasis on technology are interested in positions as systems librarians that emphasize technology skills. Table 1 shows the responses to this question by degree program. Two of the six North Carolina programs offer a separate information science degree. We found that the curricula and courses taken by students can vary substantially from one LIS program to another, whether or not separate programs for library science and information science exist. As a result, it is difficult to make hard distinctions between library science and information science graduates as far as educational background and place of employment are concerned. Of those currently working in libraries (n = 1,515), the largest proportion were working in school libraries (33 percent), followed by academic (31 percent), public (20 percent), and special libraries (16 percent).

Of those currently working (n = 2,061), 89 percent were full time and 60 percent supervised others. The average salary for librarians was $51,952, and for those working outside of libraries, $73,471. By comparison, in 2008 the Bureau of Labor Statistics gave the annual mean wage of librarians as $54,700, slightly higher than the North Carolina graduates (U.S. Bureau of Labor Statistics, 2008). In terms of professional identity, 41 percent considered themselves to be a librarian only, and 15 percent to be an information professional only (see fig. 1). Over one-third (35 percent) saw themselves as both a librarian and information professional, and 9 percent saw themselves as neither. Only 13 percent of those currently working considered themselves to have left the LIS field. Of those who are no longer working in libraries, 32 percent consider themselves to be information professionals, and 30 percent still claim “librarian” to make up at least a portion of their professional identity.
These initial results suggest that identity shifts are occurring in the field in which many librarians are seeing themselves and their work in a broader information service context. At the same time, many of those who have adopted a broader identity as an information professional continue to see themselves as librarians. It is also notable that many of those who have left librarianship do not lose their identification with the library and information profession. These findings are particularly interesting in light of the difficulty we pointed to earlier in making hard distinctions between library science and information science graduates. It appears that there is a great deal of overlap between the two groups and that graduates who use their traditional library science skills such as cataloging, collection development, and reference services coexist well with those who have a major interest in the technological aspects of information provision. Thus there seems to be more that unites us than separates us as library and information service providers regardless of whether we remain in traditional library or information center jobs. We plan to explore this professional identity phenomenon in greater depth as we continue our data analyses.

**Retention and Retirement**

Career satisfaction is a major factor affecting retention and retirement decisions. In this regard LIS appears to have an advantage. Overall career satisfaction rates for those working in LIS were high, with 45 percent strongly agreeing and 50 percent agreeing that they were satisfied with their career. Although few are dissatisfied with their LIS career, there are small but significant differences between several groups. Five percent of whites versus 10 percent of nonwhites are dissatisfied with their LIS career ($\chi^2 = 8.9, p < .05$), and 4 percent of women versus 8 percent of men are dissatisfied ($\chi^2 = 30.1, p < .01$). In terms of job satisfaction, significant differences also exist between whites, 10 percent of whom are dissatisfied with their current job, and nonwhites, of whom 20 percent are dissatisfied ($\chi^2 = 15.9, p < .01$). There were no significant differences in job or career satisfaction by age cohort. Consistent with the satisfaction results, only 9 percent of respondents indicate that the chances are good or definite that they will leave their current employer within the next year (see fig. 2).

### Table 1. Setting of Current Job by Type of Master’s Degree

<table>
<thead>
<tr>
<th></th>
<th>Library Science</th>
<th>Information Science</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$N = 1801$</td>
<td>$N = 132$</td>
</tr>
<tr>
<td>Library setting, using LIS skills</td>
<td>80%</td>
<td>21%</td>
</tr>
<tr>
<td>Library setting, NOT using LIS skills</td>
<td>.2%</td>
<td>1%</td>
</tr>
<tr>
<td>Nonlibrary, using LIS skills</td>
<td>9%</td>
<td>51%</td>
</tr>
<tr>
<td>Nonlibrary, NOT using LIS skills</td>
<td>5%</td>
<td>13%</td>
</tr>
<tr>
<td>Self-employed</td>
<td>3%</td>
<td>7%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
<td>7%</td>
</tr>
</tbody>
</table>
Further analysis of the data will be required to explore the nuances of these results, including satisfaction with specific aspects of the job such as salaries, opportunities for upward mobility, continuing education opportunities, and the impact of information technology on older workers. This will provide clues to ways in which libraries can attract and retain both younger and older librarians in a job market that is likely to become increasingly competitive. For a more detailed look at the issue of job
satisfaction in the context of autonomy, see the article by Patillo, Morgan, and Moran in this issue. For an examination of the influence of job and career satisfaction and other factors on the intention to leave the LIS field, see Rathbun-Grubb (2009), whose work also investigates the post-library careers of former librarians.

Previous research has attempted to estimate the extent to which turnover due to retirement will impact the LIS workforce, and the projections vary given the variety of predictive methods (e.g., use of census data, surveys of librarians, etc.) and time frames used. Using 2000 census data, Lynch (2000) predict that library retirements will “peak . . . between 2015 and 2019. . . . the ten-year period beginning in 2010 will see 45 percent of today’s librarians reach age 65” (p. 2). The Institute for Museum and Library Services (2005) estimates that 58 percent of librarians will be eligible for retirement by 2019. The A*CENSUS (Society of American Archivists, 2006) survey indicates that 28 percent of archivists in the United States will retire by 2013. The Future of Human Resources in Canadian Libraries study (2005) estimates that 39 percent of librarians in Canada will retire by 2014, and The Future of Librarian-ship in Colorado project (Steffen & Lietzau, 2005) found 17 percent of the 571 credentialed librarians surveyed planned to retire by 2008, and half of the school librarians planned to retire in the near future.

Retirement Intentions and Plans
WILIS 1 asked respondents directly about their retirement intentions and plans. One-quarter of the respondents to the WILIS 1 survey said that they would definitely not be working after age sixty-two, and 23 percent did not plan to work after sixty-five. If intentions hold true, by 2013 almost half (49 percent) of those sixty-two or older will have left (or 12 percent of the workforce). By 2018, 63 percent of those sixty-two or older will have left (or 23 percent of the workforce). Since the data were gathered in late 2007, it remains to be seen whether these intentions hold true or whether the economic downturn that began in 2008 will result in LIS professionals remaining longer in the workforce. It is notable that the WILIS 1 data are based on actual intentions to retire rather than age or eligibility, which is the basis for most workforce projections. The greatest proportion of intended retirements will be from school libraries (41 percent), followed by academic libraries (27 percent), public libraries (23 percent), and special libraries (9 percent).

Figure 3 presents the retirement plans of LIS professionals. There was considerable interest in reducing working hours (21 percent), taking phased retirement (8 percent), changing the kind of work they do (19 percent), and working for themselves (10 percent). A large proportion (86 percent) expected to volunteer after they retired, with 65 percent expecting to volunteer in libraries, and 78 percent expecting to use their LIS skills regardless of the setting in which they volunteered.
Given the average age of fifty, many of the LIS graduates in the WILIS 1 survey have a broad experience base that makes their views of what lies ahead in LIS very valuable. Figure 4 illustrates the respondents’ views on future trends in the field. Two-thirds of the alumni (66 percent) thought that librarians would continue to be considered leaders in the information age although 70 percent also thought that libraries would hire more staff without LIS degrees, not replace all of the retiring librarians (75 percent), and rely more on paraprofessionals for daily operations (86 percent). Almost three-quarters (78 percent) anticipated an increasing demand by nonlibrary employers for information science graduates. Over half (55 percent) of respondents also saw an increasing demand for library science graduates by nonlibrary employers. Most alumni (70 percent) thought formal continuing education courses were important for staying up-to-date in their field. The most in-demand areas of continuing education related to technology (91 percent) and subject expertise (84 percent) (see fig. 5).

Conclusion
This general overview of the WILIS 1 findings presented in this paper demonstrates that LIS is an aging workforce, that overall employment is high, and that most LIS graduates tend to work in libraries. Recent graduates are more likely to work in nonlibrary settings than earlier graduates. Employment prospects for recent graduates have been especially strong in recent years, although the economic recession that began in 2008 may...
temporarily slow hiring if libraries are unable to fill vacant positions due to budget cuts or if older workers delay their retirement due to loss of pension savings. Another unknown is the extent to which libraries will hire professionals without LIS degrees to fill specialized positions related to areas such as human resources, marketing, and technology. Another possibility, as Oder (2009) suggests, is that tight budgets may force libraries to hire more paraprofessionals rather than professional librarians. Likely a variety of these factors will come into play over time, illustrating the complex and shifting nature of the employment picture.
Other articles in this issue provide a more detailed report of the data based on different types of work settings or special issues such as diversity. For additional detail about the WILIS 1 graduates who work in school libraries see the article by Solomon and Rathbun-Grubb in this issue. Moran, Leonard, and Zellers provide a specialized article on women administrators in academic libraries, not based on the WILIS data. Rathbun-Grubb and Marshall provide further detail on the WILIS 1 respondents who are working in public libraries. Diversity findings from WILIS 1 may be found in the article by Morgan, Farrar, and Owens. With over 1,700 variables available for analysis, the WILIS researchers look forward to producing a variety of future conference presentations and publications that deal with detailed work and educational histories, job quality, recruitment, retention, and retirement issues, and trends in the LIS field.

Wilder (2003) states that the critical factor affecting the library workforce will be the management of the population cycle in the organization. This cycle includes all stages of recruitment, compensation and retention of staff. Although Wilder’s work relates to academic libraries, his statement appears to be relevant for workforce planning in all library and non-library environments that employ LIS graduates. A first step in the cycle is to have data available upon which to make evidence-based planning decisions. As we continue to explore the WILIS findings, we will be looking for ways that the data can be used to inform not only employers but also educators, professional associations, policy makers, and other stakeholders as they tackle the growing workforce issues in the field.

NOTES
1. The school library media programs of all five North Carolina LIS programs are accredited via NCATE.

REFERENCES
Institute of Museum and Library Services. (2005). Over $21 million to recruit new librarians


