

Laura A. Westmoreland. The Environmental Protection Agency and National Institute of Environmental Health Sciences Libraries Internship Program: Its History and an Analysis of Former Interns' Careers. A Master's Paper for the M.S. in L.S degree. April, 2009. 96 pages. Advisor: Barbara B. Moran.

This study describes the history of the Environmental Protection Agency and National Institute of Environmental Health Sciences Libraries Internship Program contracted through the University of North Carolina's School of Information and Library Science. It also explores former interns' current careers and their perceptions of how the internship affected their careers. Historical information about the internship program was gathered through a review of historical literature and interviews with individuals who played key roles in the internship program over the years. Information regarding former interns' careers and perceptions of the internship program was gathered through a web-based survey. The findings of this study are useful in documenting the history of a program that has played a major role in the School of Information and Library Science at the University of North Carolina at Chapel Hill. Results of the web-based survey indicate that the majority of interns felt very positively about their experiences as interns. More than two-thirds of respondents believed the internship program had either a strong impact or very strong impact on their careers.

Headings:

Surveys/Internship Programs

Library Schools/Practice Work

United States/Environmental Protection Agency/Library

National Institutes of Environmental Health Sciences

Librarian/Careers

The Environmental Protection Agency and National Institute of Environmental Health
Sciences Libraries Internship Program: Its History and an Analysis of Former Interns'
Careers

by
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A Master's paper submitted to the faculty
of the School of Information and Library Science
of the University of North Carolina at Chapel Hill
in partial fulfillment of the requirements
for the degree of Master of Science in
Library Science.

Chapel Hill, North Carolina

April 2009

Approved by

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Introduction

In 1974, the University of North Carolina at Chapel Hill's School of Information and Library Science (SILS) entered a contract to provide certain library services at the United States Environmental Protection Agency (EPA) Library in Research Triangle Park, North Carolina ("School will work with EPA," 1974). Over the years, this contract was expanded so that SILS would also provide services to the National Institute of Environmental Health Sciences (NIEHS) Library ("EPA Contract is 15 years old," 1989). For more than three decades, master's level library student interns from SILS and other local library schools have delivered information services to EPA and NIEHS scientists and staff. Simultaneously, the interns have gained professional experiences working in specialized scientific/government collections.

More than 350 SILS students have participated in the EPA/NIEHS Libraries internship program, which is now in its thirty-fourth year. Since its inception, it has been lauded as an outstanding professional opportunity for students—one of the best SILS has to offer. It is believed to have played an important role in maintaining SILS's ability to prepare students for careers in special libraries. It is also generally believed that interns obtain desirable, well-compensated professional positions over the course of their careers as a result of the skills gained during their time at the EPA/NIEHS Libraries. The internship is considered an award and is listed as such in SILS commencement programs.

Despite the pride SILS has in this program, there has been little research on the EPA/NIEHS Libraries internships for many years. No up-to-date history of the internship program exists, and no evaluation of its impact on interns' careers has been performed for nearly 30 years. This paper will document the program's history from its inception to present. In addition, it will explore former interns' careers and how they

perceive the EPA/NIEHS Libraries internship programs to have affected their career paths.

Scope and Purpose

The only research pertaining to the EPA/NIEHS Libraries internship program's impact on interns' careers occurred in the early 1980s. In 1980, a graduate student at UNC-SILS conducted a survey of former interns to analyze the impact of the program on the interns' careers and their general satisfaction with the program (Thorn, 1980). The closest thing to a written history of the internship program was written by another SILS graduate student. Taylor's (1986) detailed history of the Air Information Center (the department of the EPA Library that distributed environmental information to the public as needed) is valuable in its own right, but does not focus specifically on the history of the EPA/NIEHS Libraries internship program.

Despite the fact that Thorn (1980) reported that interns had generally positive opinions in her evaluation of the EPA Library internship program, one cannot assume that these findings are still true today. The field of librarianship has changed greatly in terms of theory and practice and in the use of technology. Additionally, interns were not completing rotations at the NIEHS Library at that time, and other changes to the internship's structure and content have occurred since then. Therefore, it is time for a reassessment of whether or not the EPA/NIEHS Libraries internship programs adequately prepare new library school graduates to enter the workforce. While there seem to be anecdotal examples supporting that the internship program is beneficial to interns, it is not clear how interns' careers are affected as a result of this program. In what types of

libraries do former interns pursue careers? Have they played roles as leaders in the library field, both within their job-specific institutions and within professional organizations? How do they feel, retrospectively, as to whether or not their experiences at the EPA/NIEHS Libraries impacted their careers in the long-run?

This paper accomplished two objectives: 1) Provide a comprehensive, detailed history of the EPA/NIEHS Libraries internship program from its inception to present, and 2) explore career paths of former interns in an effort to ascertain the ways in which their careers were affected by their time at the EPA/NIEHS Libraries. Specifically, this study collected information via a web-based survey, sent via e-mail, to explore the following aspects of former interns' careers:

- Whether or not they are still employed in the field of information/library science.
- The perceived role of the EPA/NIEHS Library internship program in finding their first jobs.
- The types of libraries in which they have worked and work in currently (i.e., academic, special, public, etc).
- The type of positions they have held and currently hold (i.e., technical services, public services, supervisory, etc).
- The content with which they have dealt and currently deal in their careers as information professionals (i.e., scientific information, government information).
- Salary.
- Involvement in professional organizations in information/library science.

- Perceptions of the degree to which the EPA/NIEHS Libraries internship program impacted their careers.

This research is valuable to several groups of people. One is SILS, which has invested a tremendous amount of time in the maintenance of this program via contract management, human resources management, and the education of interns, because the School believes that interns' experiences at the EPA/NIEHS Libraries will be of value as they enter the professional field. Exploring this issue empirically will allow SILS to ascertain the effect of the program on the interns' careers. Documenting the detailed history of the program will reflect the role it has played in SILS, and also provide a framework for similar programs that may be pursued in the future.

Such a study will also be of use to current and future interns, as they consider their career paths and gain understanding of what the internship equips them to do. It will likely be interesting, as well, to former interns, to learn the ways in which their former EPA/NIEHS Libraries colleagues are contributing to the field now.

The federal government may be interested to see whether or not the students fostered by the EPA/NIEHS Libraries internship program have gone on to work in government libraries, which might suggest that the internship program serves as an investment that will ultimately benefit the federal government (or other government entities) down the road.

This study will increase exposure of the internship, which will, in turn, increase exposure for all parties involved: SILS, EPA, NIEHS, the EPA and NIEHS Libraries, and the interns themselves. Also, by increasing the general exposure of the internship, more students will likely be aware and therefore apply for the available positions, which will

allow the EPA/NIEHS Libraries staff greater selectivity in filling the intern positions. By having a larger pool from which to hire, the quality of services provided will likely increase.

And, perhaps most obviously, this study will function as an evaluation of the EPA/NIEHS Libraries internship program's ability to successfully prepare students for careers in the field of information and library science.

History of the Internship Program

To fulfill the study's first objective of compiling a comprehensive history of the EPA/NIEHS Libraries internship program from its inception to present, the author began by reviewing all available SILS faculty meeting minutes, newsletters, and Deans' Annual Reports to the Chancellor. These documents provided useful, but not comprehensive, historical information regarding the internship program and the changes it has experienced over the years.

Fortunately, the information contained in these documents also allowed the author to compile a list of individuals who have played key roles in the creation, development, and maintenance of the internship program over the years. This list included former EPA and NIEHS Library Directors, Federal Project Officers/Library Managers, other staff members of both libraries, and SILS Deans. Additionally, some interns involved in the very early years of the program were added to the list of potential interviewees. Those for whom contact information could be located were contacted via e-mail (See Appendix A) and asked to participate in an interview. Initially, five individuals were contacted and

all agreed to be interviewed. All interviewees signed an interview consent form (see Appendix B).

Those who participated in the original round of interviews often recommended other individuals who had played key roles in the internship program since it began. These suggestions resulted in eight more potential interviewees. In the case of most of these individuals, the person recommending her/him was able to provide an up-to-date e-mail address. Considering time constraints and the need for more historical information from some periods of the internship's history than others, the author contacted four of the eight individuals for the second round of interviews. Of those four, three agreed and/or were available to participate.

In total, eight individuals were interviewed. All interviews were conducted face-to-face and were recorded only for the author's reference. All individuals who participated in interviews were assured that their identities would remain anonymous. Interviews typically lasted between 45 minutes to an hour. An interview schedule (See Appendix C) was created to provide some structure for the interview, and included questions regarding the capacity in which the interviewee was involved with the internship program, the time during which s/he was involved in the internship program, and a general description of the internship program during that time. Interviewees were also asked to describe any significant challenges the internship program faced during the time in which s/he was involved, and any significant changes that might have occurred. Follow-up questions were frequent and interviewees were free to discuss anything they believed to be pertinent to the history of the internship program.

The history of the internship program was written based on information available in literature pertaining to the program's history, and also on the interviews of individuals who played key roles in the creation, maintenance, or development of the internship program. Since interviewees' identities were kept anonymous, information provided by these individuals is included in the history. Information provided throughout this section that is not cited is based on information gathered during interviews.

Background of the Environmental Protection Agency Facility in RTP

The legal basis for the creation of the Environmental Protection Agency facility in Research Triangle Park (EPA-RTP) was the amended 1977 *Clean Air Act* (as cited by Thorn, 1980). As a result, the research that has taken place over the years and today at the EPA-RTP facility is focused on air quality and air pollution, chemical toxicity, and effects of environmental factors, particularly pertaining to air, on human health. The EPA-RTP Library is the largest EPA facility in the nation (Robertson, 1976; "U.S. Environmental Protection Agency Research Triangle Park, N.C.," 2008). At the internship program's inception, more than 1200 researchers were employed at the EPA-RTP facility (Robertson, 1976). Today, there are more than 2000 researchers and contractors on site ("School's unique partnership," 2001).

Creation of the EPA Library Internship

The EPA-RTP Library was established in late 1972, prior to the creation of the internship program (*Guide to EPA Libraries*, 1977). In the Fall of 1973, Dean Edward G. Holley of the School of Library Science at the University of North Carolina (UNC) at Chapel Hill was approached by administrators from the EPA-RTP facility. EPA expressed a need to organize its library services and collections to support the research

needs of scientists in EPA's Office of Air Quality Planning and Standards, Office of Administration, and National Environmental Research Center ("School will work with EPA," 1974). However, due to efforts to cut spending in the federal government, only a head librarian could be hired (letter from Edward G. Holley to Davenport Robertson, May 4, 1999). Administrators expressed interest in engaging in a contract between UNC and EPA for the provision of library services by School of Library Science students and staff at the EPA-RTP Library (McCoy, 1973).

Holley immediately saw the contract as an opportunity to provide financial support to School of Library Science students, and to offer them real world library experience (Lowry, 1993). After lengthy discussion and the submission of a request for proposal (McCoy, 1974a), Dean Holley and EPA administrators negotiated and entered a one-year contract to begin in May 1974 under which up to ten graduate student assistants would staff the EPA-RTP Library.

Both the School of Library Science and the EPA viewed the contract as a way to provide high quality library services to EPA-RTP researchers while providing graduate students valuable on the job training in special libraries. It was agreed that Dean Holley would serve as the University's contract officer for the project, and that Dr. Herman Henckle would serve as the program's faculty supervisor (McCoy, 1973; "School will work with EPA," 1974). In his capacity as faculty supervisor, Dr. Henckle would guide students' work at the EPA-RTP Library and also engage students in a seminar on special library work. Dr. Henckle would work closely with EPA-RTP staff, including Mrs. Elizabeth "Libby" Smith, Chief of the Technical Information Branch and EPA-RTP

Librarian, who had been employed in the EPA Library prior to the internship program's creation (McCoy & Kalp, 1975).

The First Interns Begin Work

The first group of student interns began work during the Summer of 1974, and by September 1, 1974, eight interns were working 20 hours per week in the EPA-RTP Library (McCoy, 1974b; McCoy & Kalp, 1975). Interns received an annual stipend of \$4500. Prior to beginning work at the EPA-RTP Library, students were required to have completed the School of Library Science's initial set of required courses, known as "the Block," which equated to the completion of one semester of coursework (Robertson, 1976; Thorn, 1980).

By November of 1974, two more students joined the team, which then totaled ten interns, the maximum number for which the contract provided (McCoy, 1974c). The federal staff at the EPA-RTP campus were reporting high levels of satisfaction, and discussion of a contract renewal and possible expansion of services commenced (Holley, 1975). The potential expansion would involve extending services to a division called the Air Pollution Technical Information Center, and could create as many as 20 new assistantships (Leggett, 1975). Although faculty members were supportive of the continuation of the contract to provide services to the EPA-RTP Library, the consensus was cautious when considering such rapid expansion of services. It turns out that expansion of that magnitude never occurred.

Also during this time, the EPA-RTP Librarian, Libby Smith, requested the addition of one full-time staff member under the UNC contract to oversee the day-to-day operations of the interns. W. Davenport Robertson, a new graduate of the School of

Library Science who had been part of the first class of interns, assumed the role on Onsite Supervisor on January 1, 1975 (McCoy, 1974d; McCoy & Kalp, 1975).

At a School of Library Science faculty meeting in February of 1975, Dr. Herman Henckle provided the faculty with a “thorough report” of the EPA Contract (McCoy & Kalp, 1975). Dr. Henckle reported that upon the interns’ arrival, the EPA-RTP Library was quite disorganized, but the interns were now delivering professional level services and contributing significantly to the Library’s increasing success. Students were assigned to work in particular task areas within the Library’s array of services for a specific number of weeks, and then switched to a different task area.

Dr. Henckle also explained that during their time as EPA-RTP Library Interns, all students were to take a Seminar in Special Librarianship (McCoy & Kalp, 1975; Holley, 1975). In short, both Dr. Henckle and federal stakeholders were satisfied and impressed with the progress and performance of the interns.

Description of the Library and the Internship Program: 1974-1976

The nature of the interns’ assignment of tasks for specific lengths of time as described by Dr. Henckle (McCoy & Kalp, 1975) became known as “rotations” (Robertson, 1976). Generally, students participated in the internship for one year, completing a minimum of three rotations in the different departments within the Library and working 20 hours per week. Rotations in the internship program’s early years included serials, cataloging and documents processing, interlibrary loan, circulation, and “computerized information searching” (Robertson, 1976, p. 354).

One of the most heavily utilized services at the EPA-RTP Library was interlibrary loan and photocopy requests. The serials and circulation rotations were often combined,

due to circulation's less time-consuming nature. Cataloging interns worked together to create a document cataloging system, and also made trips to UNC's Libraries to search for catalog records in the *National Union Catalog*. The intern assigned to the computerized searching rotation had the opportunity to utilize the library's "cathode-ray-tube terminal" to search various databases such as DIALOG, MEDLINE, and TOXLINE (Robertson, 1976, p. 355).

In addition to their task-specific rotations, the first groups of interns spent a significant amount of time working to organize the library and dealing with a backlog of interlibrary loan requests and documents waiting to be added to the collection. They also revised serials subscriptions, weeded the collection of books, and developed the library's reference services. All interns shared the responsibility of staffing the reference desk (Robertson, 1976).

The role of the Onsite Supervisor was to oversee student interns' work and ensure smooth transitions from rotation to rotation. He was responsible for training of interns and the translation of "administrative decisions of the head librarian into practice through the students" (Robertson, 1976, p. 355). The Onsite Supervisor also consulted with the internship program's faculty supervisor, who taught the Seminar in Special Libraries course that all interns were required to take. The intent of the seminar was to explore the real needs of the EPA-RTP Library and implement research that could result in potential solutions to problems or recommendations for improvement within the Library (Robertson, 1976).

The first description available of the Library's collection is from 1977 (*Guide to EPA Libraries*, 1977), but is still useful in providing context for the type of environment

in which the interns worked in the internship program's early years. The collection was comprised of roughly 4500 books, 650 journal titles, and "extensive technical reports" (p. 19). In alignment with the research focus on air quality and control at the EPA-RTP facility, the Library's collection had a "high concentration of pollution related material, with emphasis on the health aspects of environmental pollutants, especially pesticides, other chemical pollutants, air pollution control technology and meteorology" (p.19).

Evaluation of the Internship Program: May 1975

In order to assess the effectiveness of the internship program thus far, Dean Holley announced that an evaluation of the program would be conducted in May of 1975 by Ms. Sara Aull, Science Librarian Emerita from the University of Houston, and Mr. Gary Purcell, the Director of the University of Tennessee at Knoxville's School of Information and Library Science (Holley, 1975; Leggett, 1975). The evaluation was performed from May 6-9, 1975, and was carried out primarily by interviewing key individuals in the internship program, including "the Dean of the Library School, the Assistant to the Dean, the Director of the EPA Office of Administration, the Director of the EPA Information Services Division, the Librarian of the EPA Library, the Faculty Supervisor and the on-site Supervisor from the School of Library Science, and the contract officers for both UNC and EPA" (Aull & Purcell, 1975, p. 1). Additionally, Aull and Purcell (1975) interviewed most of the current library interns, as well as several users of the library. Lastly, the investigators examined documents pertinent to the UNC/EPA contract.

The objectives of the study as stated by Dean Holley were to assess whether or not the UNC School of Library Science had fulfilled its obligation of providing high

quality service to EPA-RTP Library users; whether student interns had benefitted from the clinical work program professionally and educationally; and to assess the relationships between UNC and EPA personnel to determine whether or not they were conducive to operating a top-notch special library (as cited by Aull & Purcell, 1975). Additionally, Mr. Stanton Coerr, director of EPA's Information Services Division, requested that the evaluation team address the following matters:

1. To determine that the mesh between UNC's strengths and EPA's needs is as optimal as possible.
2. To obtain a third party opinion of on the priority areas for development in servicing the library needs of EPA's research and standard setting programs.
3. To determine the impact of the contract on UNC's library school program and its effect in increasing the number of library science students competent in information systems relevant to environmental science (as cited by Aull & Purcell, 1975, p. 3).

Aull and Purcell's (1975) findings indicated that the program up to that point was an overall success. Aull and Purcell believed that the UNC School of Library Science had delivered high quality services as the contract required, and in a very satisfactory way. All federal stakeholders seemed very pleased with the library services rendered to them, and student interns appreciated and valued the practical experience in addition to their classroom theory. Aull and Purcell also remarked on the UNC contractors' successful merging of three collections and organization of technical reports and serials collections. Additionally, the evaluators found communication between UNC and EPA

personnel to be effective and efficient. Generally, Aull and Purcell (1975) perceived the EPA-RTP Library Internship Program to be beneficial to all parties involved.

Subsequent to the evaluation, the contract between EPA and UNC was renewed in July 1975 for another year (Holley, 1976b). This was the beginning of a long series of contract renewals over the years, as evident by UNC's continuous provision of library services to the EPA-RTP facility from 1974 to 2009.

The Air Information Center (AIC)

A substantial change in library services provided by UNC students and staff at the EPA-RTP Library occurred in 1976. The Air Information Center, or AIC, was relocated to the Library (Thorn, 1980). The AIC grew out of the Air Pollution Technical Information Center (APTIC), which began in 1966 (Taylor, 1986). APTIC's mission was to provide EPA materials pertaining to air quality and air pollution to groups and individuals who requested it. When the Air Pollution Technical Information Center was dissolved in 1976, the EPA-RTP Library absorbed many responsibilities formerly associated with APTIC, and the AIC was born. The primary result of AIC being located in the EPA-RTP Library was that library staff began managing a document inquiry and referral service. For the first year, documents were only provided to certain entities, including but not limited to government agencies, libraries of government agencies, academic institutions, EPA contractors or grantees, and scientific and technical organizations and societies. In 1977, the service was expanded to provide documents as requested to anyone for free (Taylor, 1986).

AIC became a rotation for interns when the EPA-RTP Library assumed responsibility for the document inquiry and referral service, and quickly became the

busiest department in the Library. Initially, AIC was staffed by one full-time contract staff member and four student interns. At its peak in 1980, the AIC rotation was comprised of one full-time contract staff member and six student interns who often worked overtime as funding permitted. Numbers of requests for documents increased steadily from 1977 to 1980, peaking at as much as 4,361 document requests in August of 1979 (Taylor, 1986).

In July of 1976, Sara Aull and two other colleagues returned to perform another evaluation of the EPA-RTP Library Internship Program. The structure of the evaluation was very similar to Aull and Purcell's 1975 evaluation and was based heavily on interviews with key players in the internship program. Although the team's findings were generally quite positive again, the evaluators warned that the arrival of the AIC was going to significantly affect workload in the EPA-RTP Library and should be watched carefully (as cited by Thorn, 1980).

The strain on the EPA-RTP Library was evident as the staff struggled to respond to patrons' document inquiries and requests in a timely fashion by adding more and more interns to the AIC rotation and working regular overtime. Luckily, in 1980, a portion of the documents in the AIC collection began to be distributed by an EPA Library in Cincinnati, Ohio, reducing the number of inquiries and requests to the EPA-RTP Library by 40%. From that point on, the number of documents to be delivered fluctuated based on the release of high profile documents, but the numbers never recovered to where they once were. In 1980, the number of requests to be filled dropped even more significantly as the result of an agency wide printing ban, and would never again climb above 1500 requests per month (Taylor, 1986).

As a result of this decreased workload, the AIC rotation was combined with the cataloging or reference rotation on a trial basis in August of 1983. An intern might split his or her time between providing AIC services and reference services or cataloging services. Then, in January of 1984, AIC again became a solitary rotation, although it was more and more becoming akin to reference. As the document publication process and storage procedures became increasingly decentralized, AIC interns spent more time locating items and referring patrons to other locations (Taylor, 1986). It is a bit unclear as to when the AIC rotation fully gave way to reference, but over time, the document delivery aspect of AIC more or less ended, and the rotation became purely reference.

Changes from the internship's inception to 1980

From the internship's inception to 1980, several changes are indicated in the literature available or from individuals interviewed for the purposes of this study, including the introduction of the AIC as described above. Other changes worth noting include the addition of another full-time contract staff member from 1977 to 1980 (Thorn, 1980), referred to as the APTIC Service Supervisor (Moore, June 1977). Other staff changes occurred, as well, including Dr. Herman Henckle's stepping down from the role of faculty supervisor for the internship program. He was replaced by Dr. Evelyn Moore (Holley, 1977), who was then replaced by Karen Momenee (Holley, 1980). Also, Davenport Robertson, the first Onsite Supervisor at the EPA-RTP Library under the UNC contract, accepted a position as the Library Director at the National Institute of Environmental Health Sciences in August of 1977, and his position was filled by Eva Metzger, who continued in the position until 1980 (Terll, 1980).

The Seminar in Special Libraries class was removed as a requirement for EPA-RTP Library interns, although they were still encouraged to take courses pertinent to their internship (Thorn, 1980). Part of the reasoning behind the removal of this course as a requirement was the belief of some faculty members that the EPA interns were being treated as an “elitist” group (McCoy, 1977). Previously, the course had been limited only to EPA-RTP Library interns. However, in May of 1978, faculty voted to open the course to all School of Library Science students. The EPA-RTP Library internship program continued to be reserved for “advanced students” in the School of Library Science (those who had completed their first semester of coursework) (“EPA Library work/study,” 1974). For a period of time, interns were also able to receive credit for their work experience at the EPA-RTP Library (McCoy, 1977).

In 1979, Martha Jane Zachert visited the EPA-RTP Library to “study the education aspects of the internship from the point of view of the interns, the supervisors, the agency librarian, and the library school” (Thorn, 1980, p.30). Zachert found that interns were being exposed to a variety of experiences in special librarianship. However, her findings indicated that students were exposed mostly to special library information services, as opposed to technical aspects such as acquisitions and administration. She also found that training of student interns was a constant problem as they continually rotated from department to department, and often into hectic situations, such as that of the AIC rotation (as cited by Thorn, 1980).

A Detailed Description of the Internship in 1980

By Spring of 1980, the EPA-RTP Library staff had grown since its inception. “In addition to full-time UNC personnel and the twelve part-time students, the EPA Library

ha[d] five full-time employees under the direction of Ms. Libby Smith, EPA Administrative Librarian” (“Environmental Protection Agency Library contract,” 1980). Additionally, by that point student interns’ stipends had risen to \$5600 annually. Also in 1980, the EPA-RTP Library internship was identified as “second only to the University’s library system in providing work/study opportunities for our students” (“EPA contract,” 1980).

The most detailed description of the EPA-RTP Library Internship Program (written to date 1980) can be found in a master’s paper written by Rosemary K. Thorn, who was an intern at the EPA-RTP Library as well as an Onsite Supervisor following her graduation from the School of Library Science. Thorn’s reasons for her study are quite similar to the reasons the current study is being written now:

While it seems that the experience gained in working at the EPA Library is useful, at this time there is no reliable source of information to show that this is so, except by word-of-mouth from the people involved. And further, when new students are made aware of the internship through the job announcements which are sent around once or twice a year, interested students have no good printed source of information concerning the internship program. That is, it is difficult to find out exactly what the students do at the EPA Library or what the library itself is like (Thorn, 1980, p. 1-2).

Thorn begins her description of the internship program by succinctly stating the goal of the EPA-RTP Library:

The library at EPA/RTP serves both EPA personnel and contractors, and provides air pollution information to outside requesters. Their goal is to do the work of

finding requested information so that the researchers, standards-setting personnel and administrators can spend their time using information and not locating it.

That is, the library staff strives to teach users how to make use of the library, rather than how to use it (Thorn, 1980, p. 21).

Thorn describes the EPA-RTP Library staff as being comprised of “two librarians, three support staff, plus two full-time and ten to thirteen part-time contract employees from the UNC Library School” (Thorn, 1980, p. 21). The Library was staffed from 8:00 a.m. – 4:30 p.m. every day, although EPA-RTP researchers and contractors had access to the Library anytime. All items in the collection, including journals and reference materials, circulated with the exception of the APTIC files, a special collection of documents related to air pollution.

Thorn (1980) indicated that the collection in 1980 was highly concentrated in the fields of air pollution, pesticide toxicity, pollutants’ effects on human health, and information on other sciences basic to research in these fields. The EPA-RTP Library relied heavily on borrowing items from three local university libraries and also utilizing national information sources to meet the needs of its clientele. The collection at the Library was comprised of reference materials, books, journals, documents, the APTIC files, and indexes and abstracts.

Library services such as interlibrary loan, literature searching and reference were extensively utilized and almost entirely managed by UNC contractors. Such was the case for the Air Information Center (AIC), as well. The federal library staff was generally responsible for technical services, including cataloging and acquisitions.

Thorn (1980) identified interlibrary loan as one of the Library's most heavily used services, and that it was generally staffed by a full-time supervisor and three interns. Additionally, a full-time federal employee made all the photocopies for this department. The Interlibrary Loan department generally processed approximately 2,000 requests per month. Interns became familiar with a wide variety of sources useful for locating items, and sometimes traveled to other libraries to make copies as needed. The Air Information Center (AIC) was also a very busy department in the EPA-RTP Library. Like Interlibrary Loan, it was staffed by one full-time supervisor and three to four interns. As previously described, the AIC was a document delivery service that responded to inquiries and requests for EPA documents from the public. In the event the EPA-RTP Library could not provide the document, interns would refer patrons to other libraries who could fill their requests (Thorn 1980).

The reference department was staffed by two interns who provided answers to requests for data or information and assisted patrons in locating items in the collections. Students nearing the conclusion of their internship were apt to participate in the reference rotation, as they tended to have a solid knowledge of the collection and were well equipped to locate items. The reference interns also participated in manual and online literature searching (Thorn 1980). Reference interns were also responsible for circulation management.

Additionally, one intern was assigned to assist the federal staff with online bibliographic literature searching by means of databases such as DIALOG and MEDLARS. Online searching was a service provided to EPA staff and some contractors,

and sometimes to external groups such as other government agencies or environmental organizations (Thorn 1980).

The EPA-RTP Library's substantial journal collection was also managed by an intern. The intern was responsible for all areas of maintenance of the Library's roughly 600 serial titles, with the exception of selection and acquisition. Tasks involved checking for and issuing claims, shelving issues as they arrive, and updating Journalink, the Library's automated journal listing at the time. The same intern was also responsible for the maintenance of the APTIC file and for providing photocopies of microfiche documents as requested (Thorn 1980).

Thorn (1980) remarked that interns' responsibilities had changed significantly since the internship's inception in 1974. A great deal of the interns' time during the first years of the internship program was spent cataloging, organizing, and integrating documents into the collection. Additionally, interns in the internship's formative years spent a considerable amount of time on special projects such as the writing and updating of various training tools and manuals and the organization of microfiche. Generally, the rotation system had solidified since 1974, and by 1980, interns focused more on regular tasks than special projects.

The Internship Program in the Early 1980s

The internship program experienced normal changes in staffing during the early 1980s. Dean Edward Holley served as the faculty supervisor beginning in 1980 with the assistance of David Jensen, a Ph.D. candidate in the School of Library Science. The contract continued to be renewed as the years passed, still providing for two full-time

Onsite Supervisors. Libby Smith continued to act as the agency librarian through most of the 1980s.

During the 1981-1982 academic year, “the decline in EPA appropriations led to modest reductions in the contract. Nonetheless, the contract continued to provide assistantships for 11 students at 20 hours per week” (Holley, 1982, p.9). As the contract came up for renegotiation in 1982, Dean Holley expressed in the Annual Report to the Chancellor that “while the nature of the new contract is uncertain, there is an expectation that it will continue, though possibly on a reduced scale” (Holley, 1982, p.9).

Fortunately, eleven interns were included in the contract renegotiated for the 1982-1983 years, each receiving an annual stipend of \$6300 (Holley, 1983).

The following year, 1984, marked the internship’s 10 year anniversary. Libby Smith, EPA-RTP Librarian, served as the speaker at the School of Library Science’s commencement in May of 1984. Dean Holley summarized the internship’s success as follows:

No mention of the year’s events should conclude without remarking on the tenth anniversary of our contract with United States Environmental Protection Agency Library in Research Triangle Park. During that decade, 118 persons have served as interns in providing information service to the EPA researchers. For both parties, the program has been an unqualified success. The federal government has received library and information service of a high order at a cost/beneficial rate and the students have received practical experience of a high order which has enhanced their professional education” (Holley, 1984, p. 3).

National Institute of Environmental Health Sciences Library added to Internship

Interns began working at the National Institute of Environmental Health Sciences (NIEHS) Library in addition to the EPA Library through an interagency agreement in 1985 (“EPA Contract is 15 years old,” 1989). The addition of NIEHS to the contract was spearheaded largely by Dav Robertson, formerly an intern and then Onsite Supervisor at the EPA-RTP Library, and then-current Library Director at NIEHS. Three interns were assigned to the NIEHS Library, and worked in rotations in serials, cataloging, and reference (Lowry, 1993).

Also of note during 1985 was the arrival of Evelyn Daniel as the School of Library Science’s new Dean. Dr. Edward Holley stayed on the SILS faculty after his many years of service as Dean. Dean Daniel, in her Annual Report to the Chancellor, stated that although the internship was currently only available to students who had completed a semester of coursework, possibilities might be explored to award the positions earlier (Daniel, 1987). Ultimately, this did not change until the early 2000s. Dean Daniel also described the work student interns completed at the EPA and NIEHS Libraries as that of “entry level library professionals,” working in public services, technical services, systems analytic work, and activities pertaining to special collections and branch libraries.

The branch library management rotation was a unique rotation in which interns were actually located at the Office of Air Quality Planning and Standards (OAQPS) Library located in Durham, NC. The intern(s) assigned to this rotation worked as truly solo librarians, managing all aspects of the OAQPS Library and providing services to patrons. Generally, the interns who worked at the OAQPS Library were senior interns who had been through several other rotations at the EPA Library. Based on the absence

of the OAQPS rotation's presence in Thorn's (1980) description of the internship program in 1980 and on the information provided by individuals interviewed about the history of the internship's program, it seems that the OAQPS rotation came into existence in the early 1980s.

It should also be noted that, shortly after Dean Daniel's arrival, the School changed its name from the "School of Library Science" to the "School of Information and Library Science" (SILS) in 1987. The inclusion of "information" in the School's name came as a result of the faculty's realization "that the study of information use and management was of central importance to society" ("About UNC SILS," 2004).

Internship Program's 15th Anniversary

In 1989, the internship program celebrated its 15-year anniversary. By this point, 170 students had completed the internship program at an average of 14 students per year ("EPA contract is 15 years old, 1989). A reunion of former EPA/NIEHS interns was held, and former interns from all across the country attended. The duties of interns were described as follows in the School's newsletter:

In providing library and information support services, the interns answer reference questions from EPA researchers, and from other federal agencies nationwide, make referrals to other information agencies when appropriate, maintain the serials collection, process incoming and outgoing interlibrary loan requests, provide the technical services of cataloging and acquisitions of new materials, assist patrons with online database searching, and consult with users in the microcomputer information center ("EPA contract is 15 years old, 1989, p. 1).

Based on interviews with individuals involved in the internship in the 1980s, it is known that Libby Smith, EPA-RTP Librarian, was transferred to a different department within EPA-RTP during the late 1980s, and her position was assumed by John Knight. Mr. Knight had worked in various systems and data analytics roles at the EPA-RTP Library since its inception, and served as the Library Director through the early 1990s, at which point he moved into the position of Federal Library Project Officer.

The Internship Program in the 1990s

At the end of 1989, Dean Daniel announced her resignation from her position as Dean and in 1990 joined the SILS faculty. The new Dean, Dr. Barbara B. Moran, continued to work with EPA to ensure the continued renewal of the contract that provided the basis for the internship program. The contract was continually renewed throughout the early 1990s, and in Fall of 1994 the contract was renewed for a five year term (“Twenty years of service,” 1994). It was again renewed in 1999 for another five year term.

In 1992, former SILS Dean Dr. Edward Holley was honored by the Special Libraries Association for pioneering the internship program and encouraging students in pursuit of careers in special libraries (Lowry, 1993). Shortly thereafter, in April of 1993, the EPA/NIEHS Libraries internship program was featured in the UNC magazine *Endeavors* (Lowry, 1993). The article provided an overview of the internship’s history and interviewed Dr. Holley and Dav Robertson, NIEHS Library Director and former intern and Onsite Supervisor at the EPA-RTP Library. Robertson emphasized the great benefit to the NIEHS Library of receiving new interns each year to share their new ideas and suggest improvements for the Library: “It’s like a breath of fresh air... It causes us to

look at our ways of doing things and question, ‘Could it be done any better?’ It keeps us on our toes, and that’s what I like about it” (Lowry, 1993, p. 13).

The article (Lowry, 1993) also indicated that more than 200 graduate students had participated in the internship program at the time of its writing, and that SILS had received \$2,705,105.10 from the series of contracts with the EPA since the program’s inception.

In March of 1995 Janis Deitch was hired as the new EPA-RTP Library Director, which was by that point a position under the UNC contract as opposed to a federal position (“Janis Deitch appointed,” 1995). Deitch resigned and the position was later filled by Kristen Roland in the late 1990s. Roland had worked as an EPA Library intern, Interlibrary Loan Librarian, Assistant Director, and finally, Director. When Roland relocated in 2000, Debbie Balsamo then assumed the position of Library Director, having previously worked as the Assistant Library Director, a position also under the UNC contract (“EPA promotes SILS alumna,” 2000).

A Description of the Internship Program in the early 2000s

Due to UNC’s decision to change its Annual Report requirements, Annual Reports from the SILS Dean to the Chancellor were significantly longer in the early 2000s than they had been in the past, and therefore provided significantly more detail on the internship program than those in previous years (School of Information and Library Science, 2001).

Although no mention of a “faculty supervisor” occurs in the available literature during the lately 1980s and 1990s, by 2000 the “EPA Coordinator” was Dr. Claudia Gollop, a SILS faculty member (School of Information and Library Science, 2001). The

role had changed significantly from the time in which it was called faculty supervisor. With more full-time librarians on site at the EPA and NIEHS Libraries, a great deal of the interns' professional mentorship came from their on-site supervisors, and less so from faculty supervisors/coordinators. In 2000-2001, the EPA Library was staffed by three full-time librarians, one library technical assistant, and one part-time library clerk in addition to the interns. All of these positions were under the UNC contract. Library staff at the NIEHS Library were mostly federal employees, but also served as the interns' main resource for training and professional mentorship.

Also, throughout the majority of the 2000s, students from other area library schools, such as North Carolina Central University's School of Library and Information Studies and the University of North Carolina at Greensboro's Department of Library and Information Science, became eligible for the EPA/NIEHS Libraries internship program (School of Information and Library Science, 2001). This opened the program to more future information professionals and allowed the library staff to be more selective in choosing interns due to a greater number of applicants. Over the years, several students from North Carolina Central University participated in the internship program, and one student from the University of North Carolina at Greensboro also became an intern.

Rotations in the early 2000s at the EPA-RTP Library were cataloging, interlibrary loan, reference, online searching, and branch library management at the OAQPS Library in Durham, NC (School of Information and Library Science, 2001).

Debbie Balsamo served as the EPA-RTP Library Director from 2000 to 2003, and many changes occurred for the Library during that time. She introduced an instruction program in which interns created and taught classes to EPA researchers. This program

empowered EPA researchers to better utilize Library resources, and also provided interns the valuable opportunity to design and implement classes. Balsamo also sought to cross-train interns in different library departments, even if they were areas in which an intern might not complete a full rotation. Additionally, Balsamo created the Library's electronic newsletter, which was sent to patrons who requested it; the newsletter highlighted library services, new resources, upcoming classes, and special events at the Library. Balsamo also sought to provide interns with opportunities for special projects, such as contributing to redesigning the EPA-RTP Library web site.

The internship was marketed to students in a number of ways during the early 2000s. Library staff would attend new student orientations at SILS, send out information on student listservs, and hold information sessions on campus. Also, classes from North Carolina Central University were invited to tour the EPA-RTP Library.

The EPA-RTP Library Moves to a New Facility

Balsamo also managed the Library's move to a new \$273 million EPA facility in RTP on the same campus as NIEHS from 2001 to 2002 ("EPA-RTP Library moves," 2002). During the move, more interns were brought on board to assist in this substantial undertaking. The Library staff was responsible for packing, unpacking, and reorganizing all library materials. The move of the entire EPA facility occurred in phases spread over several months, with some EPA staff and contractors moving to the new location at one time while others waited to move several months later. In an effort to create an immediate presence at the new facility, the Library staff and interns sought to provide Library services at both locations during the move, staffing reference desks at both the new and old facilities.

Also during the move, the OAQPS Library collection was merged into the main EPA-RTP Library. The location of the new library was central to all researchers on campus, and after the move in March of 2002, the Library staff hosted an Open House to welcome patrons to the new Library. More than 267 people attended (*UNC School of Information and Library Science*, 2002). Open House had been occurring by this time since at least 1998, and remains today the EPA-RTP Library's largest marketing endeavor each year.

EPA and NIEHS Honored by SLA

In Spring of 2001, EPA and NIEHS were honored with the North Carolina Chapter of the Special Libraries Association's Information Management Award. The award recognized EPA and NIEHS for offering such strong support to the special libraries that serve them. Dav Robertson, the NIEHS Library Director, and John Knight, the EPA Library's federal project officer, received the awards at SLA's annual meeting in Greensboro ("NC/SLA honors EPA, NIEHS," 2001).

Students able to work at both EPA and NIEHS Libraries during internship

In the past, interns were hired to work in either the EPA or NIEHS internship programs. However, during the 2003-2004 academic school year, the libraries' staff decided to allow students to complete rotations at both Libraries over the course of their internships if they so desired (*UNC School of Information and Library Science*, 2004). This afforded students a more diverse internship experience. This change was especially valuable for interns at the NIEHS Library, which had just reduced its number of interns on staff from three to two. The change was a result of a newly adopted strategic plan for the library as well as a reduction in appropriations. The serials rotation was eliminated,

while the cataloging and reference rotations at the NIEHS Library remained intact. NIEHS Library interns now had the opportunity to come to the EPA Library to gain experience in interlibrary loan, online searching, and the OAQPS document publication process.

Also during 2003, John Knight, the EPA Library's federal project officer who had been involved in various capacities with the internship program since its inception, including serving as Library Director during the late 1980s and early 1990s, retired. Debbie Balsamo moved from her position as EPA Library Director to the position of Federal Project Officer, and April Errickson, a 1999 SILS alumnus, became the new Library Director. Errickson was formerly Director of the U.S. Knowledge Center for the Dialog Corporation ("New leaders selected," 2003).

EPA Library Hosts Carolina Environmental Bioinformatics Research Center Intern

During the 2005-2006 academic school year, the EPA Library welcomed an additional intern position funded by the Carolina Environmental Bioinformatics Research Center (CEBRC). CEBRC was developed to "foster collaborative research between environmental bioinformatics researchers nationwide, and to provide for the interchange of research data and scholarly information" ("SILS participates in new Bioinformatics Research Center," 2006). Dr. Brad Hemminger, an assistant professor at SILS, served as the Director for a project within CEBRC called the Public Outreach and Translational Activities (POTA) and approached April Errickson, EPA Library Director, about the possibility of adding another intern position with CEBRC funding. Errickson embraced the opportunity, and two interns participated in this unique rotation focusing on

bioinformatics and working day-to-day in the EPA Library's reference department during the time in which it was funded.

The Internship Today

In Summer of 2007, April Errickson assumed the position of Federal Library Manager, and Tamika Barnes McCollough assumed the position of EPA Library Director. Barnes McCollough had previously worked for North Carolina State University Libraries and, more recently, served as Head of Reference at North Carolina Agricultural and Technical University ("Barnes McCollough," 2007).

The internship program today is comprised of seven to nine interns at the EPA Library and two interns at the NIEHS Library. All other staff members at the NIEHS Libraries are federal employees, while the EPA Library is staffed by three full-time librarians, one library technical assistant, and one part-time library clerk, all under contract through UNC. As was the case in 2003, interns are still able to work at both libraries in the duration of their internship if they so desire. Rotations at the EPA-RTP Library have remained the same for many years now, and are in reference, cataloging, interlibrary loan, online searching, and the Office of Air Quality Planning and Standards document publication process. Interns may complete rotations in reference and cataloging at the NIEHS Library (*Graduate student internships*, 2009). The cataloging rotation at the NIEHS Library also includes some responsibilities pertaining to serials management.

Special projects continue to be an important part of interns' experience and include participation in marketing projects such as the EPA-RTP Library's Annual Open House and the creation of monthly displays in collaboration with other EPA programs

such as the Black Employment Program and Federal Women's Program. Interns also have the opportunity to design and teach classes, which are now taught not only in person, but also via an online portal. Recently, interns had the opportunity to participate in an EPA Library Network-wide project to develop a list of core materials for an environmental sciences collection.

Just as the case was when the internship was formed, interns are expected to work 20 hours per week. Today, interns receive an annual salary of \$16,052 (\$15.43/hour) and tuition remissions are also available (*Library internships at EPA*, 2008). The EPA Library is open Monday through Friday from 8:00 a.m. to 4:30 p.m., and the NIEHS Library is open during the same days from 9:00 a.m. to 5:00 p.m. The EPA Library provides services not only to the patrons at the Research Triangle Park facility, but also provides limited services to EPA Researchers in Dallas, Texas; Kansas City, Missouri; and Washington, DC. The current contract between EPA and UNC ends in September of 2009. UNC is currently in the process of submitting its bid to renew the contract.

Literature Review

This portion of the paper focuses on literature pertaining to the assessment of the impact of programs similar to the EPA/NIEHS Libraries internship program on former participants' careers and former participants' general satisfaction with these programs.

Impact on Careers of Post-Master's Residency Programs

Lanier and Henderson (1999) explored several aspects of post-master's internship programs by surveying former interns at three institutions: The University of Illinois at Chicago, The Library of Congress, and the National Library of Medicine. Objectives of

the study included determining whether or not the internship programs contributed to getting a job; the internships' roles in developing key competencies and skill sets; whether or not the internship programs produce leaders and managers in the field of information and library science; and whether or not acceptance into a program indicates a successful career in the future. The study also sought to assess former interns' general satisfaction with their experiences in their programs.

To explore these issues, Lanier and Henderson (1999) distributed a survey composed of 54 questions to 520 individuals who had completed an internship in one of the three internship programs. The survey received a 49.8% response rate. Notable findings included that 67.9% of respondents indicated that they believed their internship was a factor in obtaining their then-current position. Lanier and Henderson (1999) did not provide data indicating whether or not interns believed the completion of their internships played a role in obtaining their *first* jobs. It is also worth noting that there were significant differences in respondents' perception of how much their internships played a role in obtaining their current positions depending on which internship they completed. Less than 50% of former University of Chicago at Illinois interns believed their internship played a role in getting their current job, whereas more than 75% of former Library of Congress interns believed their internship played a role in obtaining their current positions.

When asked to indicate whether or not they believed their internship experience was a positive influence on their careers, only 75.5% interns indicated they believed it was (Lanier and Henderson, 1999). Thirty-two percent of respondents identified themselves and directors, managers, or department heads, and an additional 55%

identified themselves as having demonstrated leadership activity as a result of appointed or elected positions or service to a professional organization, suggesting that a substantial number of leaders are developed in these internship programs. Finally, Lanier and Henderson (1999) indicate that 98.6% of respondents were satisfied with their internship program.

Brewer (1997) conducted a similar survey to persons who had completed post-master's residencies. Brewer's study had several objectives, including exploring former residents' perspectives on programs that focus on minority recruitment as compared to those with open recruitment, and to gather general qualitative data about the residency programs from former residents' perspectives. However, the objective of the study that pertains most directly to this study is Brewer's exploration of the career development of former residents.

Brewer (1997) administered a 60 question survey to 230 former residents of the various residency programs and received a 47% return rate. Although the data regarding the residency programs' impact on respondents' career development was inconclusive, some interesting data was reported. Eighty-eight percent (88%) of respondents indicated that their residencies either contributed to some extent or to a great extent to jobs they obtained since the completion of their residencies. Similarly, 83% of respondents indicated that they believe their career path would have been different if not for their residencies. Much like Lanier and Henderson's (1999) study, almost all respondents (97%) indicated that they enjoyed their experiences at their residencies.

To explore where former medical library interns ended up working, Martin (1967) administered a survey to 45 individuals who had completed post-masters residency

programs at one of three programs approved by the Medical Library Association. The programs were at the University of California at Los Angeles, Emory University, and the National Library of Medicine. A notable finding of Martin's (1967) study is that 90% of respondents (36 of 40) obtained jobs in medical or biomedical libraries after the completion of their residencies. From this, he concluded that MLA-approved post-master's residency programs are relatively successful recruiting methods for medical and biomedical libraries. Martin also found what he believed to be a disproportionate number (46%) of respondents currently working in technical services. Martin was of the opinion that most library school graduates at the time wanted to be reference librarians, and that perhaps these post-masters residency programs generated greater interest in technical services. Martin's (1967) study also received affirmative answers from all respondents when asked to indicate whether or not they believed their residencies to be worthwhile, and whether or not they would recommend the program to others.

Another study by Carle (1995) sought to characterize individuals who had participated in the NLM Library Associates program, the oldest post-masters residency program in health sciences librarianship in the United States. Similar to the current study, Carle did not seek to evaluate the quality of the internship program, but instead sought to gather information regarding the interns themselves, such as where their first jobs were and whether or not they are still employed in health sciences libraries.

Carle (1995) collected information from 121 former NLM Associates who had completed the residency program between 1957 and 1990. She found that 108 of those 121 found jobs in health sciences libraries after the completion of their residencies. Additionally, 54% of the 121 former associates have at some point been employed by the

NLM since the completion of their residencies. Carle also found that as of 1990, more than half of the former associates were still employed at NLM or in academic libraries.

An analysis of the EPA Library Internship Program: 1980

Despite the relatively small body of literature pertaining to the effect of student library internships on participants' career paths, a study extremely similar to the one currently undertaken was conducted in 1980 by an EPA Library intern. Thorn (1980) provides a detailed description of the internship program as it was at that time and also reports the findings of a survey administered to then-current and former EPA Library interns. At this juncture, the internship program did not yet include the NIEHS Library. The primary goal of Thorn's survey was "to find out how beneficial the program was to the interns themselves, how valuable it was to them as prospective librarians, and their opinions as to how the program could be improved to further increase its value" (Thorn, 1980, p. 32). The nature of the study currently undertaken does not contain evaluative measures that would suggest improvements for the internship program. This is simply due to the fact that interns from the 1970s versus interns from 2008 would have had very different experiences that could not be cohesively evaluated to make recommendations for improvement today. However, Thorn's study is quite similar to this one in her objectives to evaluate the impact of the internship on former interns' career paths, as well as to measure their perceived value of the program.

Thorn (1980) sent surveys via mail to all current interns at the time and all former interns for whom contact information could be located. Different surveys were sent to current versus former interns. At the time, approximately 75 individuals had either completed or were currently taking part in the internship. Sixty-six surveys were sent to

all individuals for whom she could find contact information, and Thorn received an impressive 92% return rate with 50 surveys completed. Thus, a total of 70% of all interns who had been involved in the program to that point returned the survey.

Since the intent of this study is to explore the careers and perceptions of the internship program of interns who have completed the program, as opposed to those currently involved, the results of Thorn's survey to then-current interns will not be discussed in this literature review. However, her survey to interns who had already completed the program gleaned many interesting findings. Fifty-eight (58%) percent of former interns indicated that the EPA Library internship program either sparked interest in or reinforced an already existing interest in special libraries. Conversely, two former interns indicated that the internship discouraged interest in federal libraries.

Former interns were asked to indicate the type of library in which they currently worked. The most common library types were special libraries (42%), biomedical libraries (18%), academic libraries (18%), and public libraries (8%). Smaller percentages of former interns indicated that they worked in law libraries, other libraries, were unemployed, or that they worked in a non-library setting. When asked to provide job titles, 21% of former interns indicated that they were reference librarians, and 21% were "either librarians with several areas of responsibility or held faculty status" (Thorn, 1980 p. 37). Another 13% and 11% identified themselves as information specialists and systems analysts, respectively, and another 11% indicated they worked in technical services. Thirty-seven percent (37%) of respondents identified themselves as coordinators, supervisors, directors, or chiefs/heads, indicating that many former interns were in management and/or leadership roles.

Thorn (1980) also explored then-current salaries of former interns, discovering that their salaries were, at the least, comparable to national salary averages in information and library science as indicated by the *The Bowker Annual of Library and Book Trade Information* published in 1980 (as cited in Thorn, 1980). Lastly, although Thorn did not ask for former interns' overall satisfaction with the program, she did ask whether or not former interns would recommend the internship program to other SILS students. Eighty-four percent (84%) said they would, and 16% said they might. No respondents indicated that they would not recommend the internship program.

Thorn's (1980) study is extremely valuable in developing areas of former interns' careers to explore, and will also provide an interesting comparison of results from the current survey.

Methodology

A major objective of this study was to explore former interns' past and current careers and how they perceived the EPA/NIEHS Libraries internship program to have affected their careers. To obtain this information, a request for participation (Appendix D) and a web-based questionnaire (Appendix E) was sent to all former interns for whom an e-mail address could be located. The questionnaire explored several aspects of interns' careers in information/library science after the completion of their EPA/NIEHS Libraries internships and their overall satisfaction with the internship program. Former interns were asked to provide information about the following:

- Whether or not they are still employed in the field of information/library science.

- The perceived role of the EPA/NIEHS Library internship program in finding their first jobs.
- The types of libraries in which they have worked and work in currently (i.e., academic, special, public, etc).
- The type of positions they have held and currently hold (i.e., technical services, public services, supervisory, etc).
- The content with which they have dealt and currently deal in their careers as information professionals (i.e., scientific information, government information).
- Salary.
- Involvement in professional organizations in information/library science.
- Perceptions of the degree to which the EPA/NIEHS Libraries internship program impacted their careers.

The questionnaire was created with Qualtrics Survey Software. In Qualtrics, the questionnaire author is able to tailor the instrument based on participants' responses to certain questions. This process is referred to as creating "skips." By creating skips, only relevant questions are presented to respondents based on their previous answers, thereby shortening the length of time required to complete the survey. The author also hoped that respondents might remain more engaged in a questionnaire free of questions not applicable to their experiences.

By utilizing skips, respondents were directed to particular groups of questions based on their employment situation. Respondents who indicated that they are currently employed in the field of information and library science were presented with 20

questions. Certain of these questions were not presented to respondents who indicated that they are not currently employed in the field of information and library science but have been previously (not including the EPA/NIEHS Libraries internship). In total, this cohort was presented with 12 questions. All 12 questions sought information also asked of individuals currently employed in the field; they were only slightly reworded to be more compatible with this group's employment situation.

Lastly, respondents who indicated that they are not now and never have been employed in the field of information and library science at any point since the completion of their internship were presented with only six questions. No inquiries were made as to the field in which these respondents currently work, or why they elected not to pursue a career in the information/library science field. This is certainly interesting and important information, but is outside the scope of this particular study.

The questionnaire was sent to all former interns for whom an e-mail address could be located. According to a list maintained by the EPA-RTP Library, 355 individuals have completed internships at the EPA and/or NIEHS Libraries since the program's inception in 1974. The list indicates that nine former interns are deceased. The author sought to acquire up-to-date e-mail addresses for the remaining 346 former interns.

E-mail addresses were obtained by searching the free Web and by gathering information available in the SILS Alumni Directory. The author also sent a request to the SILS alumni e-mail listserv briefly describing the study and requesting e-mail addresses of those who might be willing to participate (Appendix F). In total, 274 e-mail addresses were gathered, representing 79.2% percent of the total intern population according to the list maintained by the EPA-RTP Library. When the questionnaire was distributed, 10.9%

(30) of those e-mail addresses “bounced back,” indicating that these were no longer active e-mail accounts. The 244 remaining e-mail addresses received the questionnaire without error. Thus, the questionnaire was successfully administered to 70.5% of all former interns.

A link to the questionnaire was sent to every former intern for whom an e-mail address was available. The survey was open for 18 days. Ten days after sending the links to the survey, a reminder was sent to all former interns (Appendix G). Results were linked to respondents’ computers’ Internet Protocol (IP) addresses, but were otherwise anonymous. Upon the completion of the study, all data was destroyed.

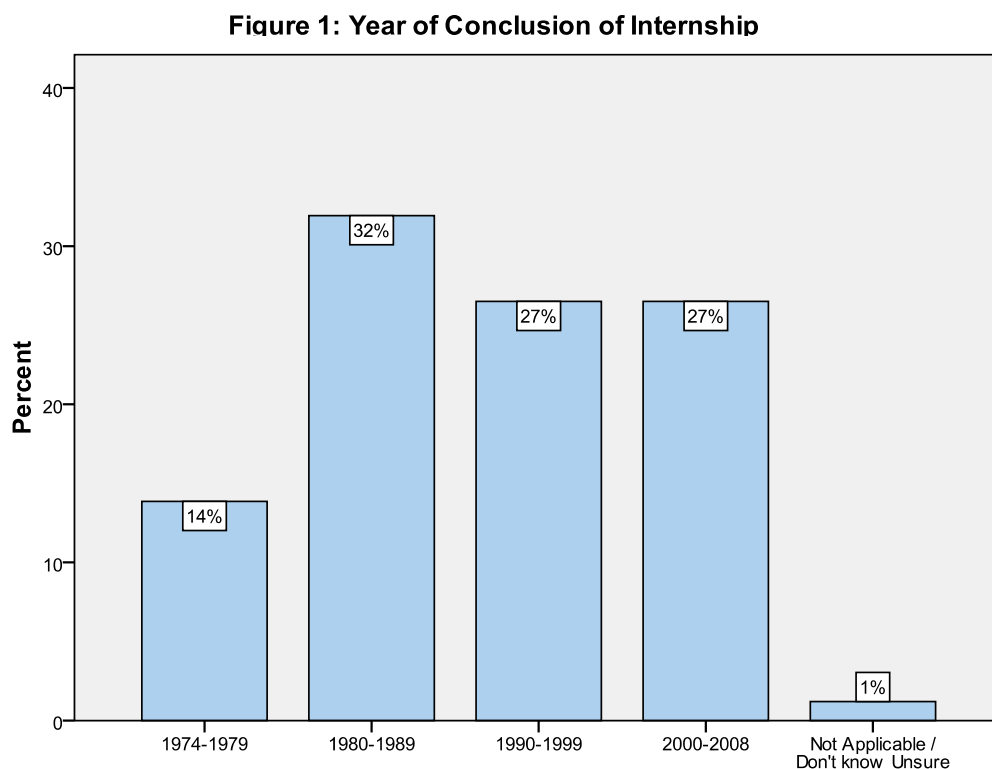
The questionnaire had a 68% return rate with a total of 167 surveys completed in part or in full. Thus, 49% of all known former EPA/NIEHS Library interns completed the questionnaire, excluding those known to be deceased. Data was analyzed in both Qualtrics and the SPSS 17.0.

Results and Discussion of Questionnaire Administered to Former Interns

Basic Results

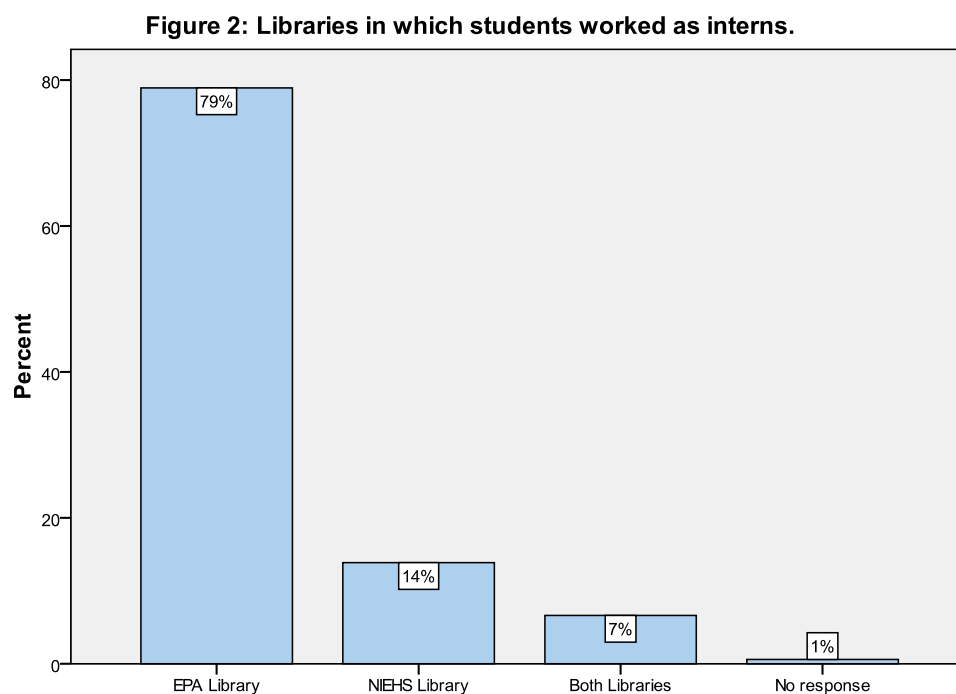
Interns from all decades of the internship’s existence were represented in the questionnaire results (See *Figure 1*). Fourteen percent (14%) of respondents completed their EPA/NIEHS Library internships between 1974 and 1979. Thirty-two percent (32%) of respondents finished between 1980 and 1989, while 27% completed their internships between 1990 and 1999. The remaining 37% completed their internships between 2000 and 2008. Although interns from 1974-1979 appear to be underrepresented in the bar chart, the fact that that particular portion of the chart represents only six years, whereas

the other portions of the chart represent either whole decades or at least nine years indicates that interns from 1974-1979 are proportionately represented in the survey results.



Respondents were asked to indicate which library or libraries they worked in as interns (see *Figure 2*). Seventy-nine (79%) of interns indicated that they had worked in the EPA-RTP Library only, while 14% only worked at the NIEHS Library. Seven percent (7%) indicated that they had worked in both libraries. There are a couple of reasons for the disparity in these numbers. First of all, the EPA-RTP Library was the only library that hosted interns for 11 years until the NIEHS Library was added to the internship program through an inter-agency agreement in 1985 (“EPA contract is 15 years old,” 1989). Also, it was not until the 2003-2004 academic school year that interns

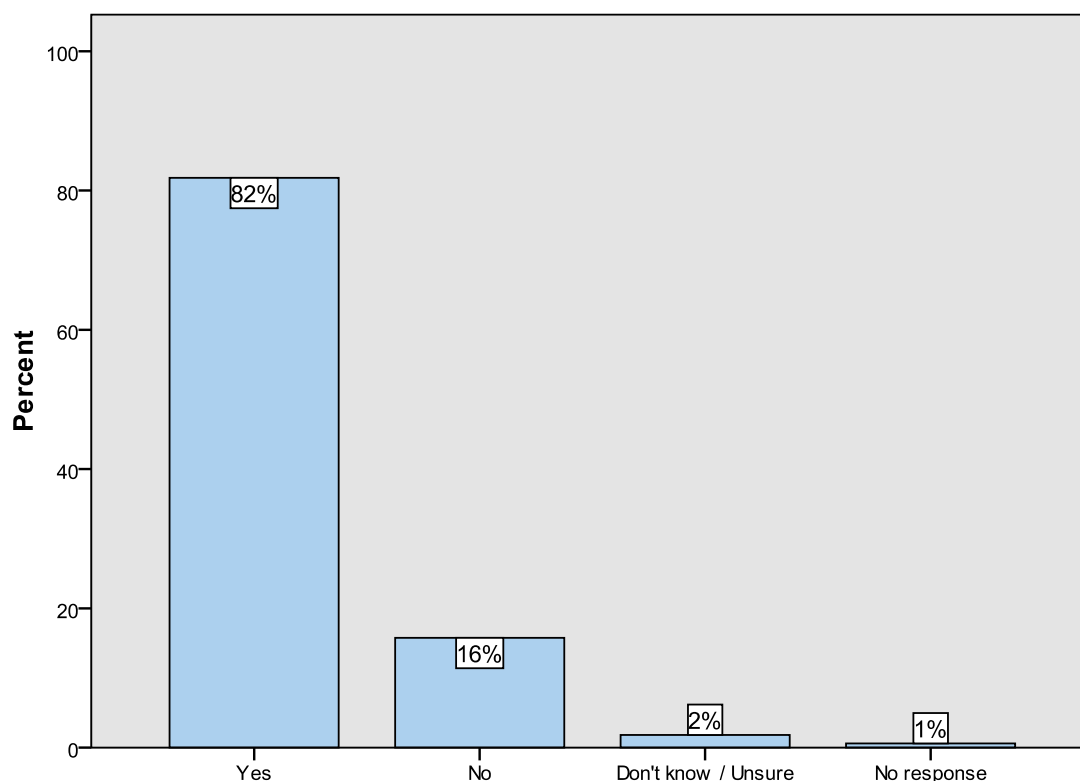
were given the option to work at both libraries during the course of their internship (*UNC School of Information and Library Science, 2004*). The difference in numbers can also be attributed to the fact that historically, the EPA-RTP Library has generally hosted between 7-11 interns simultaneously, while the NIEHS Library has hosted 2-3 interns simultaneously.



Employment in Information or Library Science

Eighty-two (82%) percent of individuals who completed internships at the EPA and/or NIEHS Libraries are still employed in the field of information/library science (See *Figure 3*). Two percent (2%) of respondents were unsure as to whether or not their current employment situation fell in the realm of information/library science, while 16% of respondents indicated that they were not employed in the field.

Figure 3: Current Employment in Information and/or Library Science



Of the 30 individuals (14%) who indicated that they were not currently employed in the field, 86% (25) indicated that they had been previously, while 10% (3) respondents indicated that they had not been employed in information/library science since the completion of their internships. One respondent indicated that s/he was unsure as to whether or not s/he had been employed in information/library science.

Combining the number of individuals currently employed in the field and those who have previously been employed in the field, 95% of respondents (160 individuals) have worked in the field of information/library science since the completion of their internships. Although many factors must be considered when discussing why individuals

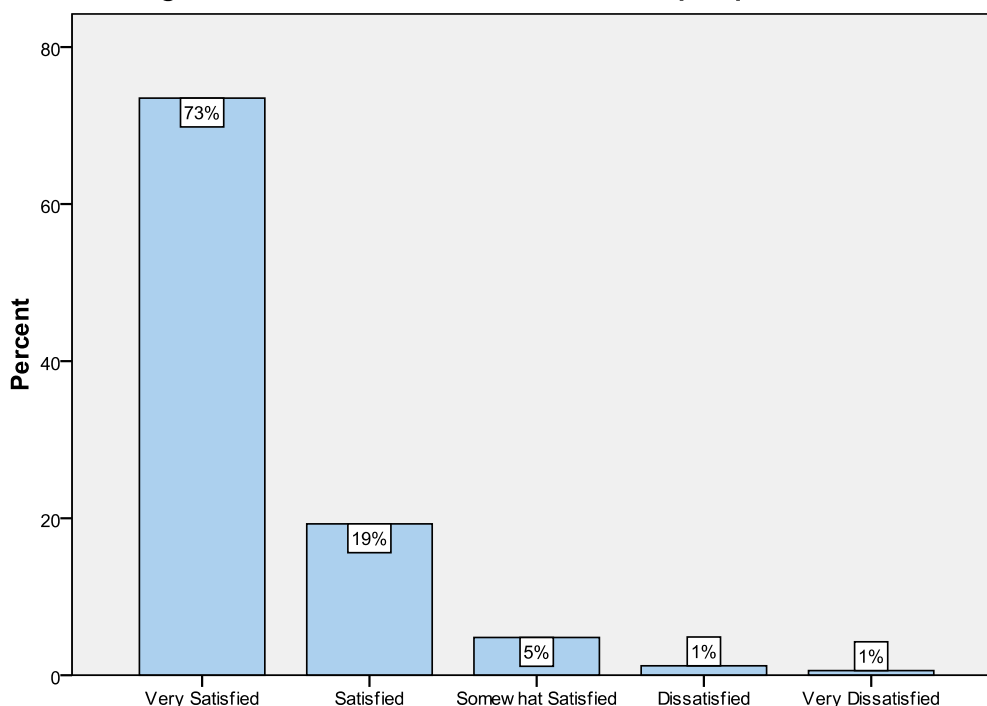
choose to stay in a particular field, this high percentage might suggest that students' experiences as interns at the EPA/NIEHS Libraries were positive enough to encourage their decision to continue to pursue a career of information/library science.

Although no question was asked to determine why respondents who indicated that they were no longer employed in the field of information/library science chose to leave, it can be inferred that reasons might include retirement, disability, a personal choice not to work, or pursuit of a different career. These reasons may also apply to individuals who never worked in the field of information/library science after the completion of their internships.

General Satisfaction with Internship Experience

Generally, respondents indicated high levels of satisfaction with their experiences as interns (See *Figure 4*). Seventy-three percent (73%) of respondents (122 individuals) indicated that they were very satisfied with their experiences as interns, while another 19% (32) indicated that they were satisfied. Another 5% (8) indicated that they were somewhat satisfied with their experience as an intern, while 2% (3) of respondents were either dissatisfied or very dissatisfied with their experience. One respondent did not answer the question.

Figure 4: Overall Satisfaction with Internship Experience.



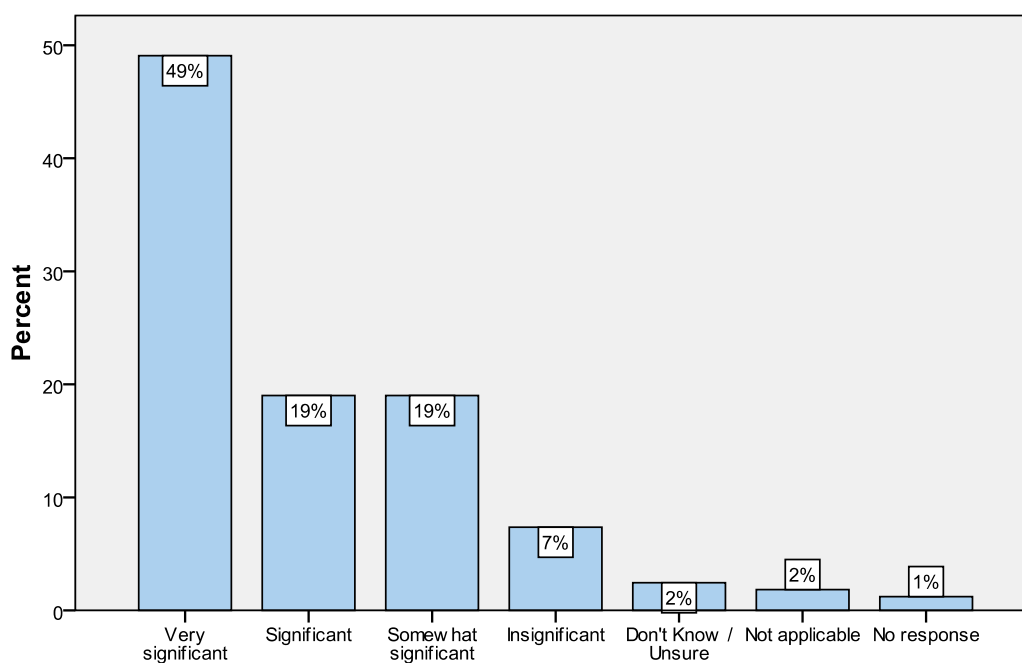
Respondents who worked exclusively in either the EPA Library or the NIEHS Library showed very comparable degrees of satisfaction with the internship program. Ninety-two (92%) of respondents who worked exclusively in the EPA Library were very satisfied or satisfied with their experience, while 96% of respondents who worked exclusively in the NIEHS Library were very satisfied or satisfied with their experiences. Interestingly, 100% of respondents who worked at both Libraries during their internship indicated that they were satisfied or very satisfied with the experience.

Impact of Internship on Obtaining First Job in Information or Library Science

Respondents who indicated that they either currently work in information/library science or previously worked in information/library science were asked to indicate the significance of their EPA/NIEHS Library internship in obtaining their first jobs (See

Figure 5). Sixty-eight (68%) of respondents (111 individuals) believed their internship had a significant or very significant impact on obtaining their first jobs. Nineteen percent (30) more believed the internship was somewhat significant in obtaining their first jobs, 7% (12) believed it was insignificant in obtaining their first jobs, and 7 respondents (5%) indicated that they didn't know/weren't sure of the impact the internship had, or answered "not applicable." Two respondents declined to answer the question.

Figure 5: Impact of internship on obtaining first job in information and library science.



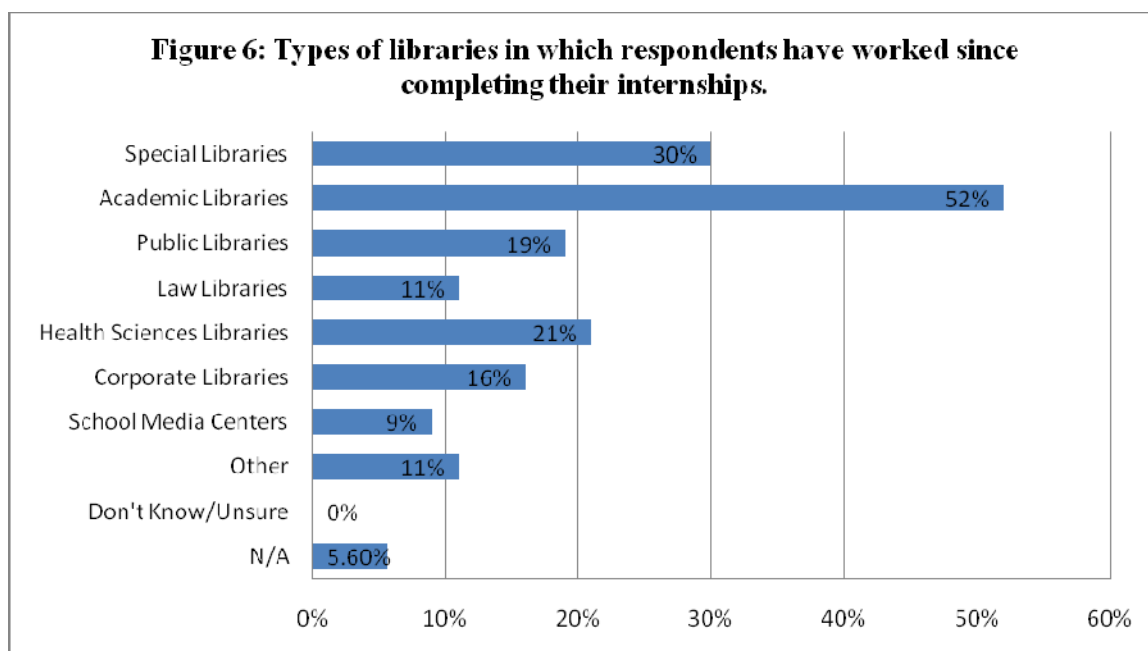
Types of Libraries in which respondents work or have worked

Former interns have worked in a variety of library settings since the completion of their internships (See *Figure 6*). More than half (82) of the respondents indicated that they have worked or currently work in academic libraries, while 30% (48 individuals) indicated that they have worked or currently work in special libraries. Nineteen percent

(30 individuals) have worked or do work in public libraries, 11% (17) have worked or do work in law libraries, and 21% (33) have been or are currently employed in health sciences libraries. Sixteen percent (25) of respondents have been or are currently employed in a corporate library setting and 9% (15) indicated that they work or have worked in school media centers or school libraries.

Eleven percent (15) selected the “Other” option. Of these 15 individuals, five indicated that they worked in government libraries. Two more were employed by Library/Information Science Schools, while two more worked for vendors. The remaining respondents indicated that they have been employed in an array of jobs, some within the field of information/library science and some that are not. These descriptions included providing information support in a non-library setting, “for-profit academic,” and a Peace Corps volunteer.



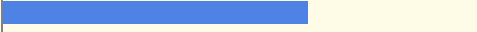




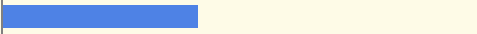

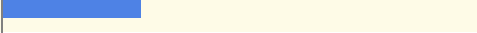


Additionally, 6% of respondents answered “Not Applicable” when asked to indicate the types of libraries in which they have worked or currently work. It is likely that these individuals work in non-library settings that still fall in the realm of information/library science, and chose to indicate “Not Applicable” as opposed to “Other.”



Types of Tasks Performed by Individuals Employed in Information/Library Science

Individuals currently employed in information/library science were asked to indicate tasks performed in their current jobs (see *Figure 7*). The most commonly performed task was reference services (71%), with collection development (65%) and instructional services (64%) close behind. Around two-thirds (62%) of respondents indicated that they have management or supervisory responsibilities in their current positions. Marketing and outreach is performed by 49% of respondents, and providing online/literature searching services is also a commonly performed task (48%). Forty-one percent (41%) of respondents indicated that they have web authoring and design duties. Slightly less than one-third of respondents indicated that they have cataloging or database administration duties (29% and 28%, respectively), while 19% of respondents indicated that they are involved in systems support services. Another 19% provide interlibrary loan services.

Figure 7: Types of Tasks Performed in Current Job

Answer		Response	%
Reference services		95	71%
Collection development		87	65%
Instructional services		86	64%
Management/supervisory responsibilities		83	62%
Marketing and/or Outreach		65	49%
Online/Literature Searching services		64	48%
Web authoring and design		55	41%
Cataloging services		40	30%
Database administration		39	29%
Other (Please indicate):		38	28%
Systems support services		26	19%
Interlibrary Loan services		26	19%

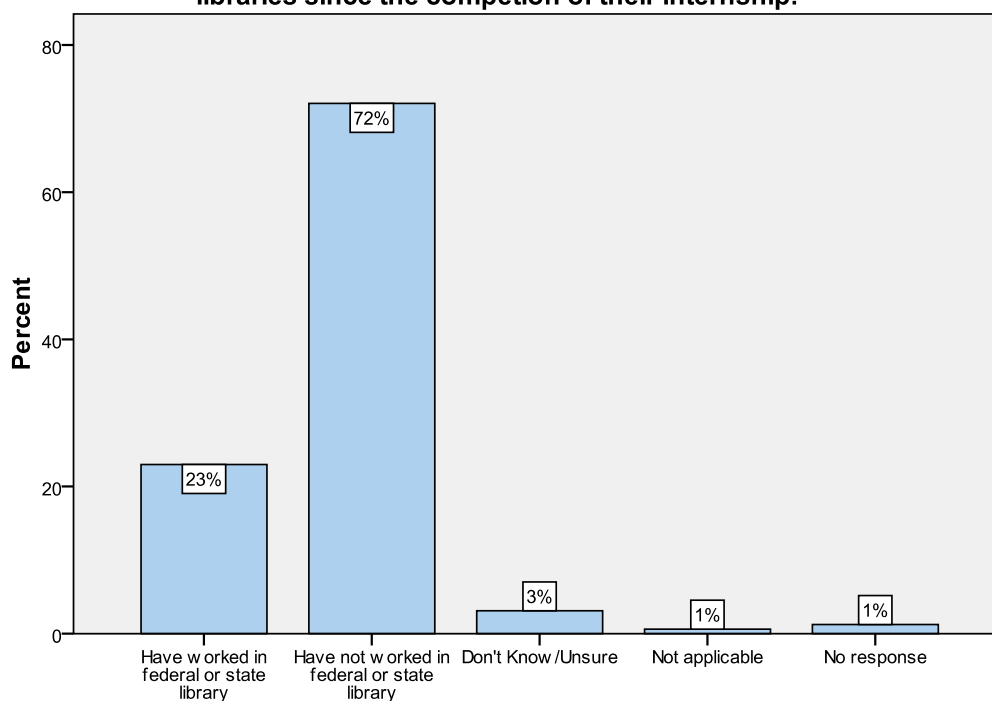
Twenty-eight percent (28%) of respondents also indicated that they perform “Other” tasks in their current jobs, which they were asked to describe. Some of the more frequently indicated tasks reported by respondents who selected “Other” included acquisitions, knowledge management, archive services, digitization, and project management.

Employment in Federal or State Libraries

The EPA/NIEHS Libraries offer interns the unique opportunity to work in a government library, potentially preparing candidates to work in government libraries in their careers. When asked to indicate whether or not respondents had worked in federal or state libraries since the completion of their internships, however, only 23% of respondents indicated that they had (See *Figure 8*), while 72% of respondents indicated

that they had not worked in a federal or state library. Three percent were unsure, 1% answered “Not Applicable,” and 1% provided no response.

Figure 8: Percentage of respondents who have worked in federal or state libraries since the completion of their internship.

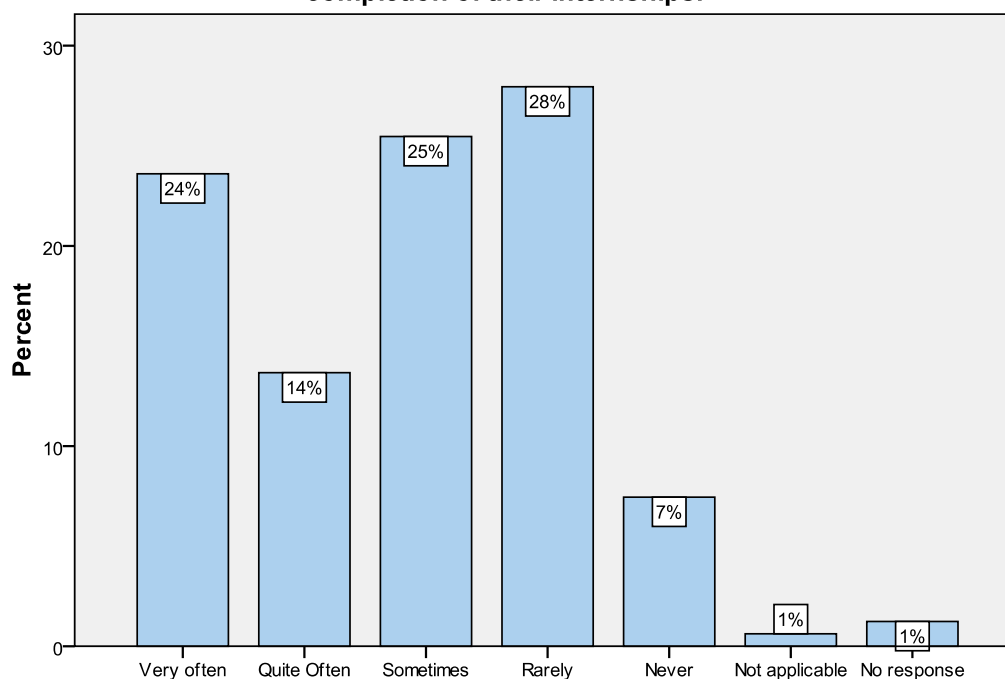


Use of Scientific and Government Information in Information/Library Science Jobs

Two primary types of materials dealt with at the EPA/NIEHS Libraries are scientific information and government information. Current and former professionals in information/library science were asked to indicate how often they deal with or have dealt with both of these types of information in their positions within the field. Nearly two-thirds (63%) of respondents indicated that they deal with scientific information sometimes, quite often, or very often (See *Figure 9*). Twenty-eight percent of respondents indicated that they rarely deal with scientific information, and 7% indicate

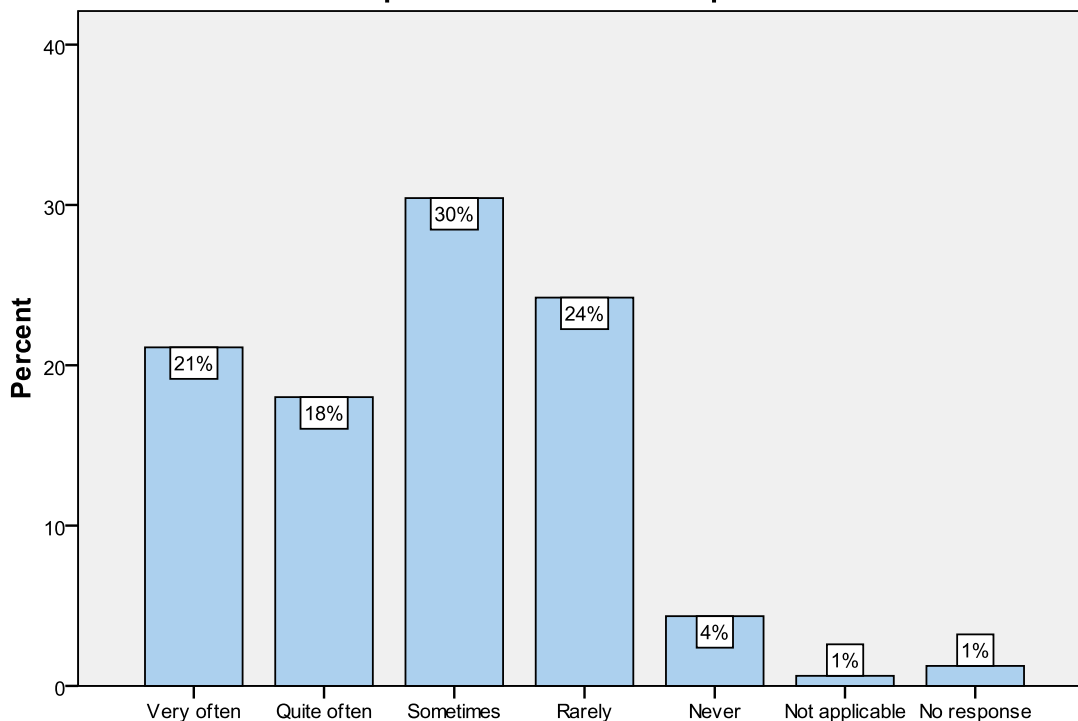
they never do. One respondent indicated that the question was not applicable, and two provided no response.

Figure 9: How frequently current and former information/library science professionals deal(t) with scientific information in their positions since the completion of their internships.



Government information is also often utilized at the EPA/NIEHS Libraries. Thus, respondents who currently work or have formerly worked in information and library science were asked to indicate how often they utilize government information during their careers in information/library science (See *Figure 10*). Sixty-nine percent (69%) of respondents indicated that they sometimes, quite often, or very often use government information at work. Twenty-four percent indicated they rarely use government information, while 7% said they never do. One respondent indicated that this question was not applicable to his/her situation, and two did not respond.

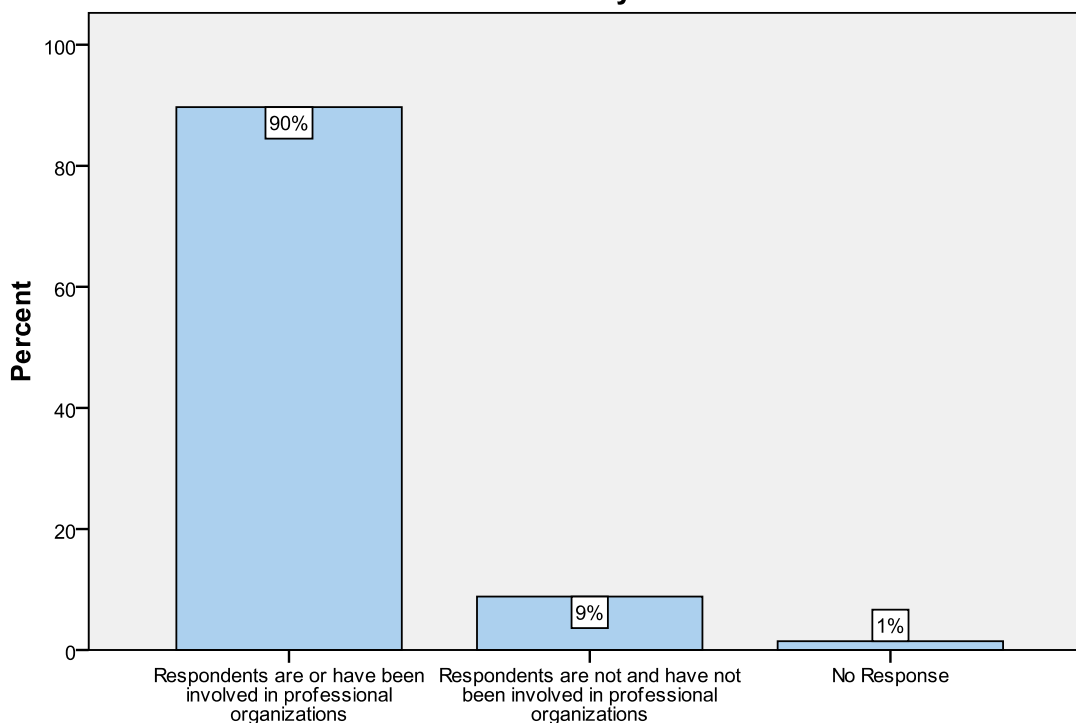
Figure 10: How frequently current and former information/library science professionals deal(t) with government information in their positions since the completion of their internships.



Involvement in Professional Organizations

Respondents currently employed in information/library science were asked to indicate whether or not they are or have been involved in information/library science professional organizations throughout their careers in the field (See *Figure 11*). A strong majority of 90% indicated that they are or have been active in professional organizations in the past, while only 9% indicated that they were not. Two individuals provided no response.

Figure 11: Percentage of respondents who are or have been involved in professional organizations who are currently employed in the field of information and library science.



Respondents who indicated that they are or have been involved in professional organizations were asked to indicate which ones (See *Figure 12*). Unspecified state-level organizations were the ones in which the most respondents were involved (67%), followed by the American Library Association (58%). Slightly more than half (52%) of the respondents indicated that they are involved in “Other” professional organizations. However, due to a problem with the questionnaire, the information regarding exactly which organizations those respondents are involved with is unavailable. Forty-three percent of respondents are or have been involved in the Special Libraries Association. Smaller percentages of respondents are or were involved in the American Society of Information Science and Technology (8%), Society of American Archivists (4%), and the

Association for Library and Information Science Education (1%). One respondent selected “Not applicable.”

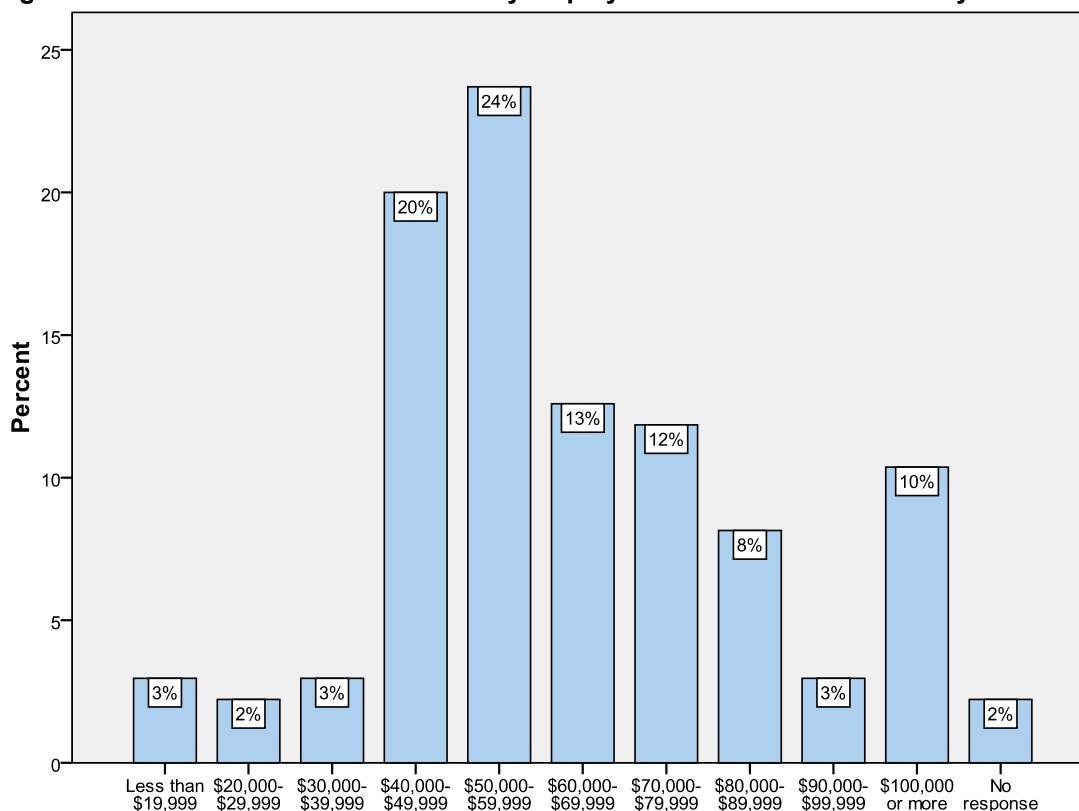
Figure 12: Professional Organizations in which respondents have been involved

Answer	Response	%
State-level professional organizations	80	67%
American Library Association	70	58%
Other	62	52%
Special Libraries Association	51	43%
American Society of Information Science and Technology	10	8%
Society of American Archivists	5	4%
Association for Library and Information Science Education	1	1%
Not Applicable	1	1%

Salary

Annual salary information was only requested for individuals currently working in the field of information/library science (See *Figure 13*). Twenty percent (20%) of respondents made between \$40,000 and \$49,999 and 24% made between \$50,000 and \$59,999. Only 8% of respondents made less than \$39,999 per year. Forty-six (46%) of respondents indicated that they made \$60,000 or more annually. Another notable finding is that 10% of respondents indicated that they make more than \$100,000 per year.

Figure 13: Salaries of individuals currently employed in information and library science.



Respondents were not asked to provide specific salary amounts, but were instead asked to indicate the range in which their salary fell. Thus, an exact mean salary cannot be determined based on the information provided. However, an estimated mean salary can be calculated using a conservative approach. With the exceptions of the lowest salary range and the highest salary range, each salary range spanned \$9,999. For example, salary ranges included \$20,000 to \$29,999; \$30,000 to \$39,999; etc. By selecting the middle number of each of those ranges (example: for the salary range of \$50,000 to \$59,999, \$55,000 was used to calculate the estimated mean) and multiplying it by the number of respondents who indicated that their salaries fell within that range, an estimated mean was calculated. A conservative approach was taken for dealing with the

lowest salary range (“Less than \$19,999”) and the highest salary range (“\$100,000 or more). For the former, all salaries were treated as \$10,000, although the range represented \$0 to \$19,999. For the latter, all respondents who indicated salaries of \$100,000 or more were treated as receiving exactly \$100,000 per year for the purposes of calculating a mean.

Using the number described above, the estimated mean of the respondents’ salaries is \$62,500 per year. This number slightly exceeds the median salary of Association of Research Libraries University Libraries, which for 2007-2008 was \$61,329 (Kyrillidou, 2008). However, this number was slightly less than salary averages of respondents from the Special Libraries Association’s 2008 salary survey, with a mean salary in the United States of \$71,812 (Special Libraries Association, 2008).

It is reasonable to assume that the respondents of the current study, the *Association of Research Libraries Salary Survey* (Kyrillidou, 2008), and the *Special Libraries Association Salary Survey & Workplace Study* (Special Libraries Association, 2008) represented a wide range of levels of experience from respondents, all the way from entry level to nearing retirement. However, the current study represents salaries of a much more diverse population of information/library science professionals, and it is important to note that the salary means and medians of the three surveys are not directly comparable as a result.

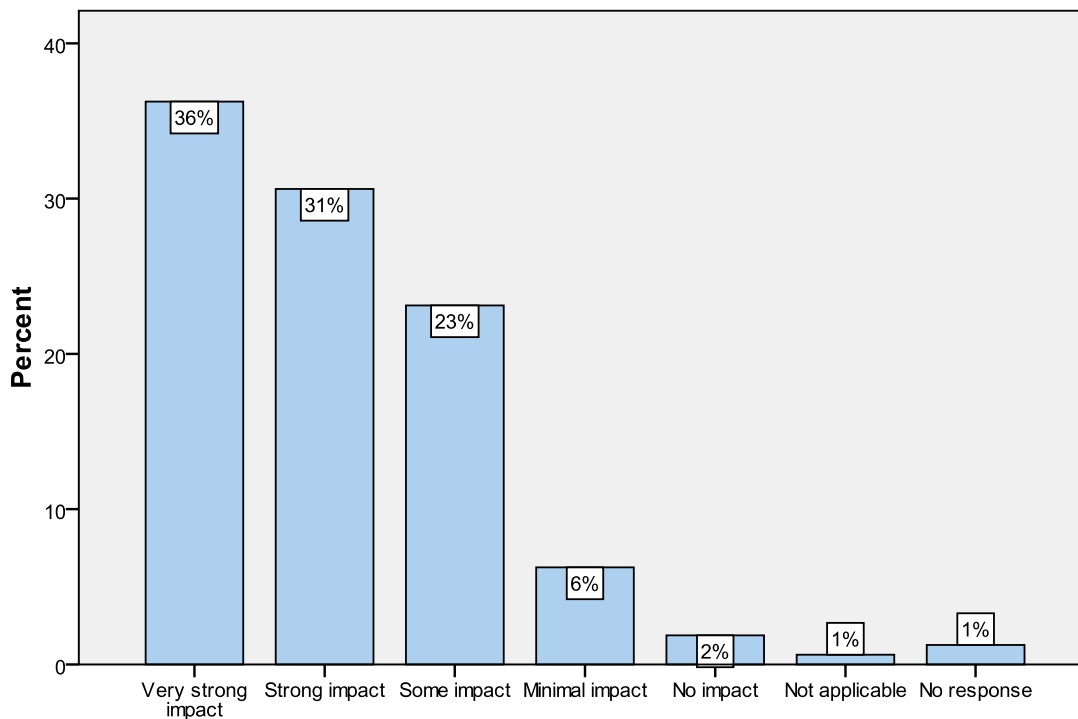
It is also worth noting that the mean salary of \$62,500 from the current study is an estimated mean, and could perhaps be significantly higher. Regardless, based on comparison with other salary surveys (Kyrillidou, 2008; Special Libraries Association,

2008), it appears that the EPA/NIEHS interns have been successful in obtaining lucrative positions in the field of information/library science.

Respondents' perceptions of internship's impact on careers

Sixty seven percent (67%) of respondents who have worked or are currently working in the field of information and library science indicated that their EPA/NIEHS Libraries internships had either a strong impact or very strong impact on their careers (See *Figure 14*). An additional 23% indicated that their internships had some impact on their career, while 8% of respondents indicated that the internship had either a minimal impact or no impact on their careers. One percent of respondents indicated that the question was not applicable, and 1% did not answer.

Figure 14: Strength of impact of internship on career of all former interns who have worked or are currently working in the field of information and library science.



Some differences were evident in interns' belief in the strength of the impact of the internship on their careers when comparing respondents who currently work in the field of information and library science, and those who previously worked in information and library science but do not currently work in the field (see *Figure 15* and *Figure 16*). Seventy-one percent (71%) of respondents currently employed in information/library science believe that the internship had a strong or very strong impact on their careers, while only 48% of respondents who previously worked in information/library science but are no longer employed in the field believed the internship played a strong or very strong impact on their careers. Twenty-two percent (22%) of respondents currently working in information/library science believed the internship had some impact on their careers, while 28% of those who previously worked in information/library science believed it had some impact on their careers.

Differences between these two groups are quite distinct when comparing the percentage of respondents who believed the internship had minimal impact or no impact on their careers. For those currently employed in information/library science, only 4% of respondents believed the internship had a minimal impact on their careers, while a sizeable 20% of respondents who previously worked in the field but do not any longer believed the internship had minimal impact on their careers. One percent (1%) of those currently employed in the field believed the internship had no impact on their career compared to 4% of those previously employed in information/library science. One possible explanation for the differences in these two groups' perceptions of the strength of the internship program on their careers is that some individuals who no longer work in information and library science pursued a career change in which perhaps their

experiences from the EPA/NIEHS Libraries was not particularly significant.

Figure 15: Strength of impact of internship on careers of individuals currently employed in information and/or library science.

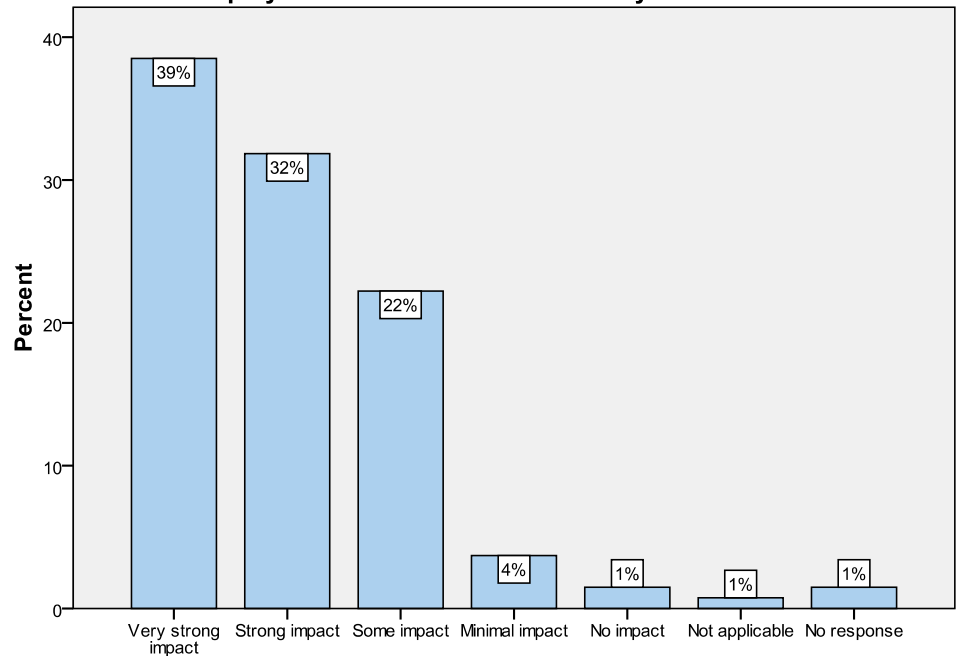
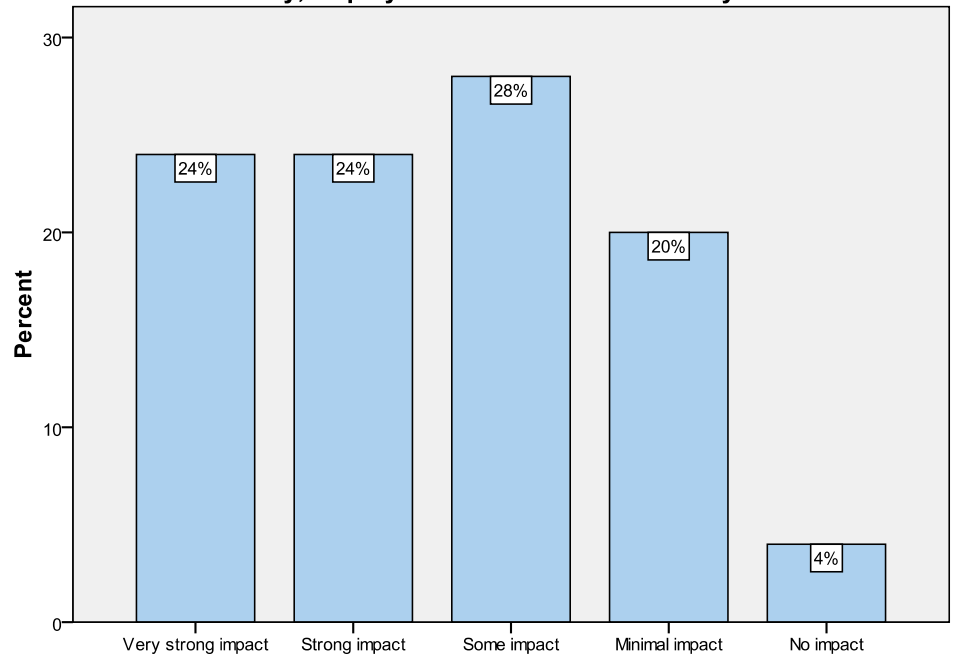


Figure 16: Strength of impact of internship on career for individuals previously, but not currently, employed in information and library science.



Limitations and Suggestions for Future Research

The main limitation of this study was the time frame in which it was conducted: from September of 2008 to March of 2009. With more time, it is possible that the author would have chosen to interview more individuals regarding the history of the internship program. Additionally, more qualitative data might have been gathered from former interns' about their satisfaction with the program and their perceptions of the internship's overall effect on their careers. The time consuming nature of qualitative data analysis prevented the collection of substantive amounts of qualitative data in the case of this study.

The use of a web-based questionnaire, and particularly the use of "skips," was somewhat experimental in this study and could certainly be refined if a similar topic were studied again. Also, the findings of this study are not (and were not intended to be) generalizable to other populations.

The author's suggestions for future research include a questionnaire administered to former and/or current EPA/NIEHS Libraries interns for the purposes of evaluating the quality of internship program in greater depth. Although this study suggests that the internship program is generally regarded very highly by former interns, the details of the internship program's day-to-day operations should be evaluated to pinpoint areas that could stand to be improved.

It might also be interesting to administer surveys of a similar nature to this one to other student internship programs, such as the Carolina Academic Library Associates (CALA) program at UNC SILS. Doing so would offer a more contextualized understanding of how the EPA/NIEHS Libraries internship program affects interns as

compared to other student internship programs. For example, although this study indicates how many former EPA/NIEHS Libraries interns work in special libraries and various other library settings, it would be more fruitful for the purposes of analysis to compare the same data from other internship programs, which would give a better sense of whether or not the EPA/NIEHS Libraries internship program is truly affecting students in a unique way.

Conclusion

Since 1974, the EPA/NIEHS Libraries internship program has played a significant role in the history of SILS and has provided more than 350 Library School students throughout North Carolina with real-world special library experience during their graduate studies. The program has provided and continues to provide students the opportunity to gain experience in cataloging, reference, interlibrary loan, online literature searching, and the government document publication process. Interns also often have the opportunity to participate in special projects outside of these areas, such as library marketing and outreach.

Students who have participated in the program, regardless of the library/libraries in which they worked, generally indicate high levels of satisfaction, but those who worked in both the EPA and NIEHS Libraries during their internships report the highest levels of satisfaction. Nearly all (95%) of respondents went on to work in information/library science for at least some length of time after the conclusion of their internships, and 82% of respondents continue to work in the now. More than two thirds

of respondents believed that the internship program played a significant or very significant role in obtaining their first jobs in information/library science.

Former interns work and have worked in a variety of library settings since the completion of their internships, the most popular being academic libraries, special libraries, and health sciences libraries. Respondents also perform a variety of tasks in their current information/library science positions. The most commonly performed tasks are the provision of reference services, collection development, instructional services, management/supervisory responsibilities, marketing and outreach, online literature searching, and web authoring and design.

Slightly less than a quarter of respondents have worked in either a federal or state library since the completion of their internships, and the majority of respondents deal with government and scientific information sometimes, quite often, or very often in their current positions. Ninety percent (90%) of respondents have been involved in professional organizations in information and library science since the completion of their EPA/NIEHS Libraries internships. Former EPA/NIEHS Library interns indicated that they are in lucrative positions in the field of information/library science, with an estimated mean salary that exceeded the median salary of the Association of Research Libraries University Libraries in 2007-2008 (Kyrillidou, 2008). However, this number was less than the mean salary for the Special Libraries Association (2008) *2008 Salary Survey and Workplace Study*. Twenty-three percent (23%) of respondents believed that their internship had some impact on their overall careers, while 67% indicated that they believe their internship had a strong or very strong impact on their overall careers.

Overall, former interns of the EPA/NIEHS Libraries internship program appear to have a positive perception of the program. All parties who have worked so hard over the years to provide this unique opportunity for North Carolina Library students should be applauded.

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APPENDIX A

Email: Potential Interviewee Initial Contact

Subject: Invitation to participate: EPA/NIEHS Library internship study

Dear [name]:

I am a current graduate student pursuing my Masters of Science in Library Science at the University of North Carolina's School of Information and Library Science (SILS). I am also a current library intern at the Environmental Protection Agency Library in Research Triangle Park, North Carolina. For my master's paper, I am investigating the careers of former Environmental Protection Agency (EPA) and/or National Institute of Environmental Health Sciences (NIEHS) Library interns to ascertain what types of jobs they are doing now, whether or not they deal with scientific or government information in their current jobs, and the degree to which they believe the EPA/NIEHS Library internship impacted the course of their careers.

In addition, I am also writing a history of the EPA and NIEHS Library internships. I have gathered a significant amount of information through research of available documents thus far, but would like to supplement this information by interviewing individuals who played key roles in the creation, development, and/or maintenance of the EPA and/or NIEHS Library internships. You have been contacted due to the significant role you have played in one or both of these internships.

Participation in this study is completely voluntary. For detailed information on the study, please see the attached "Consent to Participate in a Research Study" form. There is no need for you to complete this form at this time; it is intended to provide you information about this study so that you may determine whether or not you would like to participate.

If, after reviewing the "Consent to Participate in a Research Study" form, you decide that you would like to participate, please contact me so that we may set up a time and location to conduct an interview.

Thank you for taking the time to read this e-mail. If you have questions or concerns, you may contact me with any questions at (336) 601-7999, or by email at (westmore@email.unc.edu).

All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject you may contact, anonymously if you wish, the Institutional Review Board at 919-966-3113 or by email to IRB_subjects@unc.edu.

Sincerely,

Laura A. Westmoreland
MSLS Candidate May 2009
UNC School of Information and Library Science

APPENDIX B**Interviewee Consent Form**

University of North Carolina-Chapel Hill
Consent to Participate in a Research Study
Adult Participants
Social Behavioral Form

IRB Study #08-2073

Consent Form Version Date: January 13, 2008

Title of Study: The Environmental Protection Agency and National Institute of Environmental Health Sciences Libraries Internship Program: Its History and an Analysis of Former Interns' Careers

Principal Investigator: Laura Westmoreland

UNC-Chapel Hill Department: School of Information and Library Science

UNC-Chapel Hill Phone number: (336) 601-7999

Email Address: westmore@email.unc.edu

Faculty Advisor: Barbara B. Moran

Faculty Advisor Phone number: (919) 962-8067

Faculty Advisor Email Address: _moran@ils.unc.edu

Study Contact telephone number: (336) 601-7999

Study Contact email: westmore@email.unc.edu

What are some general things you should know about research studies?

You are being asked to take part in a research study. To join the study is voluntary.

You may refuse to join, or you may withdraw your consent to be in the study, for any reason, without penalty.

Research studies are designed to obtain new knowledge. This new information may help people in the future. You may not receive any direct benefit from being in the research study. There also may be risks to being in research studies.

Details about this study are discussed below. It is important that you understand this information so that you can make an informed choice about being in this research study. You will be given a copy of this consent form. You should ask the researchers named above, or staff members who may assist them, any questions you have about this study at any time.

What is the purpose of this study?

The purpose of this research study is to learn about former Environmental Protection Agency (EPA) and/or National Institute of Environmental Health Sciences (NIEHS) Library interns' careers, and how their EPA and/or NIEHS internship might have affected their careers. This information will be gathered from former interns' via a questionnaire.

An additional aspect of this study is to provide an historical background of the EPA and/or NIEHS Library internship programs and the federal government's partnership with UNC's School of Information and Library Science (SILS) to create these internships. You are being asked to be in the study because you have played a key role in either the creation, development, or maintenance of the EPA/NIEHS Library internship programs. If you elect to participate in this study after reading the information included in this form, you would be interviewed about the EPA/NIEHS Library internship programs as they were when you were involved in them for the purpose of gathering historical information to be included in the study.

How many people will take part in this study?

If you decide to be in this study, you will be one of approximately 7-10 people who will be interviewed this research study.

How long will your part in this study last?

Should you choose to participate in this study, the length of your participation would end in April of 2009. The interview itself would ideally take place between December 2008 and February 2009, and should take no more than one hour of your time. The reason your participation may continue through April 2009 is that you will be provided the option to review any direct quotes (and the context in which they are used) included in the study prior to its completion. Your name will not be used in this study. Should you deem any portion of the quote to be contradictory to the meaning you intended, you may strike the comment, and I will paraphrase the information to more accurately reflect the meaning you intended.

If you do not select the option to review direct quotes, your participation in this study will conclude at the end of your interview.

What will happen if you take part in the study?

If you choose to take part in this study, the following will occur:

- You will respond to this e-mail at which point we will arrange a time and location at your convenience during which the principal investigator of this study will administer an interview.
- You will meet with the principal investigator, who will conduct your interview. You will sign this consent form at that time, and the principal investigator will provide you your own copy. You may elect that your interview is not audio-recorded if you so choose. You may also elect to be able to review any of your direct quotes used in the study before its completion. This will allow you to strike quotes that you feel do not accurately reflect your intended meaning, and the

principal investigator will rephrase the information to accurately reflect your intended meaning. Your name will not be used in the study, but your job title as it pertained to the internship program and/or the role you played in the internship program will likely be indicated.

- The interview will be conducted, and should take no more than one hour.
- If you elected to review any of your direct quotes used in this study before its completion, you will be contacted prior to the completion of the study if any direct quotes are used. You will have the opportunity to strike any quotes you feel do not accurately reflect your intended meaning. The principal investigator will then rephrase the information to accurately reflect your intended meaning. Your name will not be used in the study, but your job title as it pertained to the internship program and/or the role you played in the internship program will likely be indicated.

What are the possible benefits from being in this study?

Research is designed to benefit society by gaining new knowledge. You may not benefit personally from being in this research study.

What are the possible risks or discomforts involved from being in this study?

Your name will not be used in this study, but your job title as it pertained to the internship program and/or the role you played in the internship program will likely be indicated. Considering the relatively few people who have been involved in the creation, development, and/or maintenance of the internship program, there is a risk of deductive disclosure of your identity based on the information you provide.

How will your privacy be protected?

Only the principal investigator will have access to raw interview materials such as notes and audio recordings. All electronic files (audio and text) will be saved on a secure server accessible only to the principal investigator. All physical files (audio and text) will be stored in a locked cabinet accessible only to the principal investigator.

Participants will not be identified in any report or publication about this study. Although every effort will be made to keep research records private, there may be times when federal or state law requires the disclosure of such records, including personal information. This is very unlikely, but if disclosure is ever required, UNC-Chapel Hill will take steps allowable by law to protect the privacy of personal information. In some cases, your information in this research study could be reviewed by representatives of the University, research sponsors, or government agencies for purposes such as quality control or safety.

With your permission, your interview will be audio recorded. The files/recording will be destroyed at the completion of the study in April 2009. These recordings will be accessible only to the principal investigator. If you choose to allow your interview to be recorded, you may request that it be turned off at any point during the interview.

Please indicate whether or not you wish your interview to be recorded. Check the line that best matches your choice:

- OK to record me during the study
 Not OK to record me during the study

Will you receive anything for being in this study?

You will not receive anything for taking part in this study.

Will it cost you anything to be in this study?

There will be no costs for being in the study except your time.

What if you are a UNC employee?

Taking part in this research is not a part of your University duties, and refusing will not affect your job. You will not be offered or receive any special job-related consideration if you take part in this research.

What if you have questions about this study?

You have the right to ask, and have answered, any questions you may have about this research. If you have questions, or concerns, you should contact the researcher listed on the first page of this form.

What if you have questions about your rights as a research participant?

All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject you may contact, anonymously if you wish, the Institutional Review Board at 919-966-3113 or by email to IRB_subjects@unc.edu.

Title of Study: The Environmental Protection Agency and National Institute of Environmental Health Sciences Libraries Internship Program: Its History and an Analysis of Former Interns' Careers

Principal Investigator: Laura Westmoreland

Participant's Agreement:

I have read the information provided above. I have asked all the questions I have at this time. I voluntarily agree to participate in this research study.

Signature of Research Participant

Date

Printed Name of Research Participant

Signature of Person Obtaining Consent

Date

Printed Name of Person Obtaining Consent

APPENDIX C**Interview Schedule**

Questions to be asked of individuals who played key roles in the development and maintenance of the EPA/NIEHS Libraries internship program.

1. During what years were you involved with the EPA/NIEHS Libraries internship program?
2. In what capacity were you involved with the EPA/NIEHS Libraries internship program?
3. Please provide an overview of the internship program as it was while you were involved, including number of full-time staff members (contractors and federal) and number of interns as best you recall.
4. Can you offer any information on the initial creation of the internship program?
5. Please indicate what rotations were available to students in the internship program when you were involved.
6. Please describe any challenges the internship faced during the time in which you were involved.
7. Can you suggest other individuals I might interview to gain more historical information about the internship program?

APPENDIX D

Email Implied Consent Letter

Subject: Requested survey participation of former EPA/NIEHS Library Interns

Dear Former EPA/NIEHS Library Intern:

I am a current graduate student pursuing my Masters of Science in Library Science at the University of North Carolina's School of Information and Library Science (SILS). I am also a current library intern at the Environmental Protection Agency Library in Research Triangle Park, North Carolina. For my master's paper, I am investigating the careers of former Environmental Protection Agency (EPA) and/or National Institute of Environmental Health Sciences (NIEHS) Library interns to ascertain what types of jobs they are doing now, whether or not they deal with scientific or government information in their current jobs, and the degree to which they believe the EPA/NIEHS Library internship impacted the course of their careers. As a former EPA and/or NIEHS Library intern, you are invited to participate in this study. Your participation is completely voluntary.

To participate in the study you would complete a questionnaire online (see hyperlink at the end of this e-mail). Completing any portion of the questionnaire grants your consent to be a participant in this study. The questionnaire is composed of questions regarding your experiences as an intern at the EPA and/or NIEHS Library, your current work status, the types of jobs in which you have worked since completing your internship, and the impact you believe your internship had on your overall career path. Completion of the questionnaire should take no longer than 10 to 15 minutes. You are free to answer or not answer any particular question and have no obligation to complete questionnaire once you begin.

The only information that will link you to your questionnaire response will be the Internet Protocol (IP) address of the computer on which you complete the questionnaire. The information you provide through the questionnaire will be viewable only by me, and the inclusion of the IP address is not intended to identify you individually. It is used by the survey management software being used for this study to provide a unique identification number for each response, and the IP address will be deleted after all potential participants have had the opportunity to complete the questionnaire. All data obtained in this study will be reported as group data. No individual can be or will be identified. In addition to completing the requirements for my master's paper, the results of this study may also be published in library and information science journals.

The questionnaire will be available for your completion from [date] to [date]. Because I want to encourage the participation of as many former interns as possible, I will be sending you a reminder e-mail approximately one week after you receive this e-mail.

There are no anticipated risks or benefits to you from participating in this study, if you choose to do so. However, there will be professional benefit from this study, as the information obtained will be valuable to the SILS community by providing an understanding of the types of jobs for which the EPA and/or NIEHS Library internships equip students. The study will also be useful to the information and library science community as a whole, as it will illustrate the potential impact of a program such as the EPA/NIEHS Library internship. With the exception of your time, there is no cost to you or financial benefit for your participation.

You may contact me with any questions at (336) 601-7999, or by email at (westmore@email.unc.edu).

All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject you may contact, anonymously if you wish, the Institutional Review Board at 919-966-3113 or by email to IRB_subjects@unc.edu.

Thank you for considering participation in this study. We hope that we can share your views with the greater professional community and use your response to gain understanding as to how the EPA/NIEHS Library internship program shapes future professionals in the field of information and library science.

Sincerely,

Laura A. Westmoreland
MSLS Candidate May 2009
UNC School of Information and Library Science

APPENDIX E

Web-based Questionnaire to Former Interns

Default Question Block

In which year did you begin your internship at the Environmental Protection Agency (EPA) Library and/or the National Institute of Environmental Health Sciences (NIEHS) Library?

[drop-down menu with years]

In which year did your internship at the EPA and/or NIEHS Library conclude?

[drop-down menu with years]

In which library did you work as an intern? Please select only one response.

- Environmental Protection Agency (EPA) Library
- National Institute of Health and Environmental Sciences (NIEHS) Library
- I worked at both of the libraries listed above during my time as an intern
- Don't Know / Unsure

Please indicate your overall satisfaction with your experience as an intern at the EPA and/or NIEHS Library.

- Very Satisfied
- Satisfied
- Somewhat Satisfied
- Somewhat Dissatisfied
- Dissatisfied
- Very Dissatisfied
- Don't know / Unsure

Are you currently employed in the field of information and library science?

- Yes
- No
- Don't know / Unsure



⊗ If Yes Is Selected, Then Skip To **How significant do you believe your e...**

If you are not currently employed in information and library science, have you previously been employed in the field of information and library science (other than your internship at the EPA and/or NIEHS Library)?

- Yes
- No
- Don't Know / Unsure



If No Is Selected, Then Skip To **End of Survey** Edit

If Yes Is Selected, Then Skip To **End of Block** Edit

How significant do you believe your experience as an EPA and/or NIEHS Library intern was in obtaining your first job in information and library science?

- Very significant
- Significant
- Somewhat significant
- Insignificant
- Don't Know / Unsure
- Not applicable

Which of the following best describes your current employment situation?

- I am employed full-time.
- I am employed part-time, but looking for full-time work.
- I am employed part-time and am not looking for full-time work.
- I am unemployed and looking for work.
- I am unemployed and not looking for work.
- I am unable to work due to a disability.
- I am retired.
- Other (Please indicate)
- Don't Know / Unsure

Please indicate the types of libraries in which you have worked since the completion of your internship at the EPA and/or NIEHS Library. Please select all that apply.

Special Library

Academic Library

Public Library

Law Library

Health Sciences Library

Corporate Library or Information Center

School Media Center

Other (Please indicate)

Don't Know / Unsure

Not applicable

Please briefly describe your current job and the institution in which you work, excluding specific names and locations. If you are not currently working, please briefly describe the setting in which you most recently worked.

[text box]

How often do you deal with scientific information in your current position (or, if you are not currently working, in your most recent position)?

- Very often
- Quite Often
- Sometimes
- Rarely
- Never
- Don't Know / Unsure
- Not applicable

Not including your current position, have you worked in previous positions that dealt with scientific information since the completion of your internship at the EPA and/or NIEHS Library?

- Yes
- No
- Don't Know / Unsure
- My current position is the first I've held since completing my internship / Not applicable

How often do you deal with government information in your current position (or, if you are not currently working, in your most recent position)?

- Very often
- Quite often
- Sometimes
- Rarely
- Never
- Don't Know / Unsure
- Not applicable

Not including your current position, have you worked in previous positions that dealt with government information since the completion of your internship at the EPA and/or NIEHS Library?

- Yes
- No
- Don't know / Unsure

- My current position is the first I've held since completing my internship / Not applicable

Since the completion of your internship at the EPA and/or NIEHS Library, have you at any point worked in either a state or federal government library? Please include your current position in determining your response.

- Yes
- No
- Don't Know / Unsure
- Not applicable

What types of activities do you perform in your current position (or, if you're not currently working, in your most recent position)? Please select all that apply.

Reference services	Collection development
Instructional services	Management/supervisory responsibilities
Interlibrary Loan services	Marketing and/or Outreach
Online/Literature Searching services	Database administration
Cataloging services	Other (Please indicate)
Systems support services	Don't Know / Unsure
Web authoring and design	Not applicable

Are you or have you been involved in professional organizations pertinent to your career in information and library science?

- Yes
- No
- Don't Know / Unsure
- Not applicable



⊗ If No Is Selected, Then Skip To **Please select the category that m...**

Please indicate professional organizations in which you have been involved. Please select all that apply.

Special Libraries Association	State-level professional organizations
American Library Association	Other (Please indicate):
Society of American Archivists	Don't Know / Unsure
American Society of Information Science and Technology	Not Applicable
Association for Library and Information Science Education	

Please select the category that most accurately reflects either current annual salary, or, if you are not currently employed, your most recent annual salary:

- Less than \$19,999
- Between \$20,000 and \$29,999
- Between \$30,000 and \$39,999
- Between \$40,000 and \$49,999
- Between \$50,000 and \$59,999
- Between \$60,000 and \$69,999
- Between \$70,000 and \$79,999
- Between \$80,000 and \$89,999
- Between \$90,000 and \$99,999
- \$100,000 or more
- Don't Know / Unsure
- Not applicable

Please indicate the strength of the impact you believe your internship at the EPA and/or NIEHS Library has had on your overall career path.

- Very strong impact
- Strong impact
- Some impact
- Minimal impact
- No impact
- Don't Know / Unsure
- Not applicable



| If **Very strong impact** Is Displayed, Then Skip To **End of Survey** Edit

Former Info Lib Sci Block

How significant do you believe your experience as an EPA and/or NIEHS Library intern was in obtaining your first job in information and library science?

- Very significant
- Significant
- Somewhat significant
- Insignificant
- Don't Know / Unsure
- Not applicable

When you were employed in the field of information and library science, how often did you deal with scientific information in your job(s)? Please do not include your internship at the EPA and/or NIEHS Library in answering this question.

- Very often
- Quite Often
- Sometimes
- Rarely
- Never
- Don't Know / Unsure
- Not applicable

When you were employed in the field of information and library science, how often did you deal with government information in your job(s)? Please do not include your internship at the EPA and/or NIEHS Library in answering this question.

- Very often
- Quite often
- Sometimes
- Rarely
- Never
- Don't Know / Unsure
- Not applicable

Since the completion of your internship at the EPA and/or NIEHS Library, have you at any point worked in a federal or state government library?

- Yes
- No
- Don't know / Unsure
- Not applicable

Please indicate the types of libraries in which you have worked since the completion of your internship at the EPA and/or NIEHS Library. Please select all that apply.

Special Library	Corporate Library or Information Center
Academic Library	School Media Center
Public Library	Other (Please indicate)
Law Library	Don't Know / Unsure
Health Sciences Library	Not applicable

Please indicate the strength of the impact you believe your internship at the EPA and/or NIEHS Library has had on your overall career path.

- Very strong impact
- Strong impact

- Some impact
- Minimal impact
- No impact
- Don't Know / Unsure
- Not applicable

We thank you for your time spent taking this survey.
Your response has been recorded.

APPENDIX F

Request for E-mails of Former EPA/NIEHS Library Interns

Subject: Requesting e-mail addresses of former EPA/NIEHS Library interns

Dear SILS Alumni:

I am a current graduate student pursuing my Masters of Science in Library Science at the University of North Carolina's School of Information and Library Science (SILS). I am also a current library intern at the Environmental Protection Agency Library in Research Triangle Park, North Carolina. For my master's paper, I am investigating the careers of former Environmental Protection Agency (EPA) and/or National Institute of Environmental Health Sciences (NIEHS) Library interns to ascertain what types of jobs they are doing now, whether or not they deal with scientific or government information in their current jobs, and the degree to which they believe the EPA/NIEHS Library internship impacted the course of their careers. All former EPA and/or NIEHS Library intern are invited to participate in this study. Participation is completely voluntary.

The purpose of this e-mail is to request current e-mails of former EPA and NIEHS library interns who would be willing to complete the questionnaire. The questionnaire is not included. If you choose to participate, it will be e-mailed to you on [date]. The questionnaire is composed of questions regarding your experiences as an intern at the EPA and/or NIEHS Library, your current work status, the types of jobs in which you have worked since completing your internship, and the impact you believe your internship had on your overall career path. The full details of the study will be explained at that time, so that you may determine whether or not you wish to participate. If you wish to provide your current e-mail address, please simply e-mail it to me at westmore@email.unc.edu.

Thank you for taking the time to read this e-mail. If you have questions or concerns, you may contact me with any questions at (336) 601-7999, or by email at (westmore@email.unc.edu). You may also contact my faculty advisor, Dr. Barbara Moran, at (919) 962-8067, or by email at moran@ils.unc.edu.

All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject you may contact, anonymously if you wish, the Institutional Review Board at 919-966-3113 or by email to IRB_subjects@unc.edu. Should you contact the Institutional Review Board, please reference Study #08-2073.

Sincerely,

Laura A. Westmoreland
MSLS Candidate May 2009
UNC School of Information and Library Science

APPENDIX G

Email Reminder of Questionnaire Close Date

Subject: Reminder: Questionnaire for EPA/NIEHS Interns available until [date]

Dear Former EPA/NIEHS Library Intern:

This e-mail is a reminder that the questionnaire for EPA/NIEHS interns regarding former interns' careers since the completion of their internships will be available until [date]. If you wish to participate in this study, please complete the questionnaire by this date.

For your convenience, please see a description of the study below:

I am a current graduate student pursuing my Masters of Science in Library Science at the University of North Carolina's School of Information and Library Science (SILS). I am also a current library intern at the Environmental Protection Agency Library in Research Triangle Park, North Carolina. For my master's paper, I am investigating the careers of former Environmental Protection Agency (EPA) and/or National Institute of Environmental Health Sciences (NIEHS) Library interns to ascertain what types of jobs they are doing now, whether or not they deal with scientific or government information in their current jobs, and the degree to which they believe the EPA/NIEHS Library internship impacted the course of their careers. As a former EPA and/or NIEHS Library intern, you are invited to participate in this study. Your participation is completely voluntary.

To participate in the study you would complete an online questionnaire (see hyperlink at the end of this e-mail). Completing any portion of the questionnaire grants your consent to be a participant in this study. The questionnaire is composed of questions regarding your experiences as an intern at the EPA and/or NIEHS Library, your current work status, the types of jobs in which you have worked since completing your internship, and the impact you believe your internship had on your overall career path. Completion of the questionnaire should take no longer than 10 to 15 minutes. You are free to answer or not answer any particular question and have no obligation to complete questionnaire once you begin.

The only information that will link you to your questionnaire response will be the Internet Protocol (IP) address of the computer on which you complete the questionnaire. The information you provide through the questionnaire will be viewable only by me, and the inclusion of the IP address is not intended to identify you individually. It is used by the survey management software being used for this study to provide a unique identification number for each response, and the IP address will be deleted after all potential participants have had the opportunity to complete the questionnaire. All data obtained in this study will be reported as group data. No individual can be or will be identified. In addition to completing the requirements for my master's paper, the results of this study may also be published in library and information science journals.

The questionnaire will be available for your completion from [date] to [date]. Because I want to encourage the participation of as many former interns as possible, I will be sending you a reminder e-mail approximately one week after you receive this e-mail.

There are no anticipated risks or benefits to you from participating in this study, if you choose to do so. However, there will be professional benefit from this study, as the

information obtained will be valuable to the SILS community by providing an understanding of the types of jobs for which the EPA and/or NIEHS Library internships equip students. The study will also be useful to the information and library science community as a whole, as it will illustrate the potential impact of a program such as the EPA/NIEHS Library internship. With the exception of your time, there is no cost to you or financial benefit for your participation.

You may contact me with any questions at (336) 601-7999, or by email at (westmore@email.unc.edu).

All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject you may contact, anonymously if you wish, the Institutional Review Board at 919-966-3113 or by email to IRB_subjects@unc.edu.

Thank you for considering participation in this study. We hope that we can share your views with the greater professional community and use your response to gain understanding as to how the EPA/NIEHS Library internship program shapes future professionals in the field of information and library science.

Sincerely,

Laura A. Westmoreland
MSLS Candidate May 2009
UNC School of Information and Library Science