# Why Does One Choose
# Sci-Tech Librarianship?
# Findings of a Survey

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**ABSTRACT.** A questionnaire survey was conducted to determine why librarians found themselves working in sci-tech library positions. Open-ended questions were included in the survey to solicit personal opinions and anecdotes regarding the choice of sci-tech librarianship. Three hundred eleven responses were received. Approximately 60% of the respondents indicated that they had some type of science background before becoming sci-tech librarians. Fifty-seven percent of the total pool replied that they intended to become sci-tech librarians from the start. Reasons for this choice are discussed, along with perceived expectations about sci-tech librarianship. This article builds upon a previous discussion of findings from this questionnaire, found in *College and Research Libraries*, v. 61 n. 5 (September 2000). *[Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@ haworthpress.com> Website: <http://www.HaworthPress.com> © 2002 by The Haworth Press, Inc. All rights reserved.]*

## *INTRODUCTION*

In the course of studying for an MLS, students must consider what type of library they would like to work in. Some students have a sense from the first day

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of classes what setting they envision themselves in once they complete their degree program. For others, it takes longer to determine their interests or niche. An e-mail questionnaire was conducted in May 1999 to gather information on sci-tech librarianship as a career choice. The questionnaire was sent to eight e-mail discussion lists (also known as listservs) for professional sci-tech librarians as well as to student discussion lists at eight American universities offering an MLS program. The professional discussion lists chosen included CHMINF-L (Chemical Information Sources Discussion List), ELDNet-L (Engineering Library Division of the American Society for Engineering Education), STS-L (Science and Technology Section of Association of College and Research Libraries, a division of the American Library Association), and SLA-ST (Science and Technology Division of the Special Libraries Association), among others. Universities chosen for student input included SUNY-Buffalo, University of California, Los Angeles, University of Maryland at College Park, and University of Texas at Austin, among others. Students and professional sci-tech librarians responded, giving their opinions regarding the profession and their reasons for choosing to become a sci-tech librarian. Questions were also asked that addressed their background and job expectations. Replies were received from 311 people (76% female and 24% male) in eight countries. Although respondents were given three weeks to submit the questionnaire, the majority returned their replies within four days. Most of the submissions were returned via e-mail, two were faxed, and one was airmailed. The respondents' e-mail domains were analyzed and included 60% from .edu, 21% from .com, and 3% from .gov, with the remainder from other domains. The Statistical Package for the Social Sciences (SPSS) was used to analyze the data and to create frequency tabulations.

Certain limitations were encountered by using this type of questionnaire. Only those librarians who use electronic mail, and subscribe to the sampled discussion lists, were invited to reply. Some MLS students are not aware of the existence of subject-oriented discussion lists for their desired fields, or if they are aware of them, might feel hesitant to reply, since they may not consider themselves part of the sci-tech librarian population before graduation.

This article examines in detail the answers given to questions probing the respondents' reasons for choosing sci-tech librarianship as a career. Respondents were encouraged to give short answers to the questions, and many of their comments are included in this article. The results presented expand upon the discussion of the entire survey, which was covered in a previous article (Hackenberg, 2000[1]). Hackenberg's article discussed details about demographics, the university attended for the MLS degree, and professional association membership, all of which are not addressed here. The focus of this article is a discussion of the opinions and comments expressed by the 311 respondents. No other meaning or intent is made regarding the replies received.

### WHY DO PEOPLE CHOOSE TO BE SCI-TECH LIBRARIANS?

For this question, the respondents were divided into two groups. Note that some respondents did not answer this question, therefore results do not add up to 311. The first group, 54% (169) of the 311 respondents replied affirmatively that they had intended to become sci-tech librarians from the beginning for the following reasons:
Of these,

- 47% had a background in the sciences
- 29% had no background but had an interest in the sciences
- 14% understood that it was easier to get a library job if they chose sci-tech librarianship
- 7% understood that the salaries were higher in sci-tech librarianship
- 5% understood it was easier to relocate and to find a job in a short time in sci-tech librarianship
  (Note: Results exceed 100% due to the option of selecting more than one choice.)

Forty-seven percent of this sub-group had some familiarity or knowledge in science before becoming sci-tech librarians (see Figure 1). This group of librarians had the strongest background for the profession. They saw sci-tech librarianship as a calling and where they could make the best use of their science background.

Twenty-nine percent of this sub-group had an interest in the sciences. Perhaps this is what caused them to seek out sci-tech library positions. The remaining librarians had practical reasons that motivated them to find sci-tech positions. It appears that they assumed that the demand for sci-tech librarians was high and that, overall, salaries were higher for sci-tech librarians than for other types of librarians.

For the second group, 35% (109) of the 311 respondents replied that they did not intend to become sci-tech librarians. Yet, more than half of this group did have some association with science although initially they did not have the intention of working as sci-tech librarians.
Of these,

- 23% needed a job and found one in a science library
- 14% had a background in the sciences
- 10% had no background but had an interest in the sciences
- 9% had an internship in a sci-tech library
- 2% understood it was easier to get a library job in this field

- 3% understood the salaries were higher in sci-tech librarianship
- 1% understood it was easier to relocate and to find a job in a short time in sci-tech librarianship
(Note: Results do not total 100% due to the option of selecting none of the choices given.)

Of this group, the majority of the respondents came to sci-tech librarianship by chance. Some of the responses were:

> I started out as a science teacher. Then, I became a school librarian. From this position, I became an academic librarian.

> Took a sabbatical. When I came back, I was asked to be the science bibliographer since the search had failed to obtain a person for the position.

> Wanted a career with a broader view of science than simply working in a lab as a technician. My intent was to work as a librarian for awhile and then go back to grad school in the sciences–but other aspects of life intervened and I've now been a librarian for 20+ years.

FIGURE 1. Reasons Given to Choose Sci-Tech Librarianship; from Those Desiring It at the Start of Their Careers
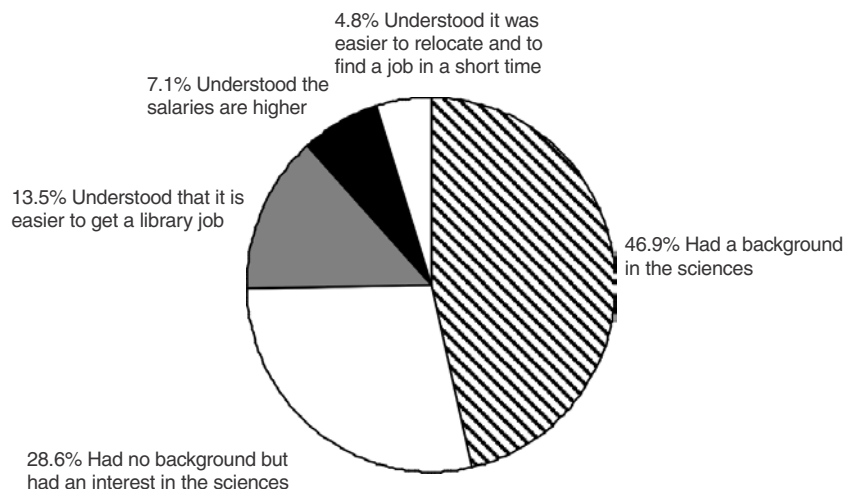
One of the questions in the survey asked, "Did you take a sci-tech reference course in library school?" More than half of the 311 respondents (57%) replied yes, they had. Although that reflected the experience of the majority of respondents, it is interesting to compare that figure with the percentage of respondents who said that their schools offered a sci-tech librarianship course: 75%. Why did more people opt not to take the sci-tech librarianship course, since it was offered to three-quarters of the respondent pool? It could be because this was not their career objective at that point in their course of study.

Is it possible that taking such a course might influence the decision to become a sci-tech librarian? There are two possibilities. One is that the student is initially uncommitted to the field and becomes interested by taking the sci-tech librarianship class. From there, he or she decides that this career would suit them. In the alternate scenario, the student knows already that sci-tech librarianship is their focus, so they take the course to be better prepared for their future career. This is an area which could benefit from further study on the impact of subject specialty courses on the career choices of graduating library students.

## IS A SCIENTIFIC BACKGROUND HELPFUL FOR SCI-TECH LIBRARIANS?

In reply to this question, about 60% (188) of the 311 survey respondents indicated they had some type of scientific background before becoming sci-tech librarians. In combining two of the choices for Question 1, "I had a background in the sciences" and "I had an interest/hobby in the sciences," the results show that 71% (221) came into their jobs with some degree of subject knowledge. In response to the question "Did you find this subject background helpful in your library position?" Seventy percent (216) replied "Yes, it was helpful" while 1% (four) said it was not, suggesting that subject background does make a definite contribution toward the performance of librarians as perceived by those responding to this questionnaire.

Positive responses from the respondents about the necessity of a subject background include the following:

> My undergraduate work (physics/geology) is highly applicable to my current job–in fact one of the main reasons I was hired. I'm a strong believer in relevant degrees for librarians.

> Absolutely, I am the subject specialist. If I did not already know the lingo, the databases, the journals, etc., my job would be impossible. Subject knowledge was a requirement for the job.

> Yes, very much. When I graduated, I had two job offers on the same day because of the background in physical science/engineering.

Other respondents commented on the usefulness, but not necessity, of a subject background in their jobs:

> No sci-tech background at all–often believe that it would be helpful, but my patrons are really great about explaining the chemistry, etc.

> I do not have a life science background, although I feel strongly that a degree or experience in biology would be useful for someone with my job.

> I have no sci-tech background, but it definitely would have helped if I had done some research in chemistry or engineering. I would have been aware of the pitfalls in hunting down certain types of info.

These responses indicate that having a subject background is an asset in becoming a sci-tech librarian. Some positions do require an undergraduate or even a masters' degree in science. Librarians in these positions are apparently expected to have a more in-depth understanding of the subject matter and, therefore, be able to deal with the patrons' needs in a more effective manner. This point was echoed by Williams[2] (1992), a Vassar science librarian. "My science background includes a B.A. in Biology, an M.S. in Botany, . . . I have found all of that invaluable in being able to help science students in the library." Stuart and Drake[3] (1992) stated it more strongly, "The quality of information services provided to scientists and engineers is less effective when the librarians serving them have little or no experience in these disciplines."

### *WHAT ARE THE CONCERNS*
### *FOR THOSE WHO HAVE A SCIENTIFIC BACKGROUND*
### *AND THOSE WHO DO NOT?*

Is there a difference of opinion between the two main groups of responders, those that came into their sci-tech library positions with some type of subject knowledge, and those that did not have that knowledge or background? It was expected that differences would be found between the two groups when recalling their feelings prior to their first sci-tech position. In the e-mail survey, one question asked participants to comment on science librarianship and whether their perceptions were subsequently found to be true in their experience.

To track and analyze the frequencies of comments, a file was created of all comments made by the survey respondents. Common themes emerged as these

opinions were sorted according to certain areas, such as "difficulties" or "expectations." After the remarks were grouped into common areas, the following major themes were revealed. Some concerns that were mentioned by persons with a sci-tech background were shared by those without a background. Here are explanations for each.

### Those Without a Sci-Tech Background

The most frequently cited area of concern prior to working in a science environment, for those who came to their job without science knowledge, was that they would be ill-prepared for a sci-tech library job without such knowledge or background.

> Thought I'd need another master's or a science degree to get a decent job.

> [I was] concerned about the difficulty of performing effectively without substantial subject knowledge. I am still concerned about this, but am pursuing a possible career in science librarianship nonetheless.

> I had a vague idea that it would be intimidating, technical, and that I would be in over my head.

> I didn't really think it was all that different (in an academic setting), but worried that I didn't have the appropriate subject background.

> I thought that my humanities background would be a problem for me as I thought that you would definitely need a science background to even understand the things people needed.

Some commented about their experiences after working in a sci-tech library. For many, their fears were unfounded, as they found that a good basis in librarianship could overcome a lack of science knowledge.

> My mentors and supervisors quickly put my fears to rest and I have followed in their footsteps in learning the ways to handle queries/collection development issues/etc., in many areas despite lack of the academic background.

> Commitment to good service and genuine interest in the patrons seems to make up for my lack of subject background.

Another concern was that the work would be difficult. Again, some respondents replied that after some on-the-job experience this concern was unfounded.

> I thought it would be very difficult and I would need to either go back to school and pick up more science background or study hard on my own.

> I do think it's unfortunate that more library students are turned off by science librarianship, especially those without science backgrounds. It is possible to be an effective science librarian without a science background.

> Librarianship in a way hovers above subject disciplines because our job is to organize the information not intellectualize about it or utilize it as a vocation. The focus is on handling the information rather than on comprehending the information.

Below are some additional positive general comments made by this group regarding their job experiences.

> As an intern in the science reference department, I found that I could provide reference and instruction in the sciences. This was surprising since I was a history major. However, I did find that science librarianship is very structured and set, using controlled vocabulary. While I am a Humanities Librarian, the skills that I learned as a science librarian have helped me tremendously.

> I had a very narrow view on science librarianship and on science in general. I've found that my humanities background has not been a hindrance.

> I figured that I didn't need the background to work as a science librarian. I believe it is possible to do so without a background in the subject area, but it would help me a great deal if I did have an engineering background. I still am able to assist patrons locating the information they need, but I cannot always tell if I've found the right thing because I cannot decipher all of the information, esp. [*sic*] if mathematics is involved.

The question of requiring a subject masters can be a thorny one. As indicated above, both sides were represented in the respondent pool. Further research into this question would benefit the sci-tech library community. A question regarding a subject (or second) masters was not included in this survey.

### *Those with a Sci-Tech Background*

Among those respondents who did have some scientific background or knowledge the most frequently stated opinion was that they wished to apply their science or technical knowledge in the field of librarianship. Librarianship was an alternate career choice for them. Some had acquired this knowledge in a prior career as a

scientist or researcher. Some just wanted to be involved in the field without receiving additional degrees that would have been either more difficult to get or more of an inconvenience at the time.

> I expected to assist patrons with science questions using my science background as an aid in understanding the questions and the terminology.

> I choose to become a science librarian after realizing that I was not cut out for a career as a biology professor. But I still wanted a job in academe and I wanted to remain in the sciences. Friends and colleagues pointed out that I was very good at and enjoyed library research. So I went to library school. I especially thought that my background would be an asset–both from a subject standpoint and from an experiential one.

> I guess I thought it would be a good place for me to combine my broad interest in the sciences with my people skills. I thought that a lab research job would be too isolated for me.

Another group of comments centered around the payoff that could come from being involved with scientists and researchers doing exciting and possibly cutting-edge work with possible benefits for the general public. Again some stated they loved the thought of this involvement, but without the need for acquiring advanced science degrees.

> I will be able to contribute to scientific research by providing information to scientists and engineers.

> The opportunity to support/help science students and faculty do research that could change the world (i.e., cure diseases, discover new knowledge, etc.). Exciting stuff!

> I figured that I would work in a science library somewhere. I liked science but couldn't cut the math necessary for grad school. This way I could still be involved in science but wouldn't have to do the math!!

> Primarily serving the needs of researchers. Thought I would need to keep current with research fronts in a number of disciplines.

One added that the reality was not as rosy as the expectation:

> I was naive, thinking that, as an academic librarian, I would be engaged in the pursuit of knowledge and a better understanding of our social and physical universe at an expanding and satisfying level. Instead, I am more of a travel agent showing the real scholars what route to take and which

tools and strategies to use. I had no idea that so much detailed management of librarianly task-work would dominate my life. Some days I can barely wait to get home to read and think about more interesting things.

### Additional General Opinions

A few additional themes emerged from the remainder of the comments that were sorted. One was that science librarianship would be (or was) no different than any other type of librarianship. Most made comments that drew from real-life experiences as a librarian in another discipline.

I thought that Sci/Tech Librarianship was basically like any other. There are some specialized materials that you only learn about on the job but a reference question is a reference question.

I think that subject knowledge is important, especially for reference and bibliography, and that the vocabulary is important for tech services, but overall, there is more the same than there is different.

Some comments compared the slight differences they encountered.

On my site the scientists are fairly independent. They have their own sources of information, be they colleagues or websites, and my work consists of putting information in front of them that they may not have seen. Much different from business or law where while they don't want everything done for them, they rely on you a great deal more than the scientists.

I assumed it would be the same as any type of librarianship; but I now realize you really need a good understanding of the subjects you are dealing with.

More than ten responses included the thought that science librarianship would be a challenge due to special terminology and the technical nature of the subject, although some stated that when they were in sci-tech positions this prediction was not found to be a concern.

I thought it was very technical and you must have a science degree to succeed. I think being a sci-tech librarian requires the ability to learn fast, and understand some technical content, but I do not think a degree is a requirement for success and skills.

Before I became one I thought I'd have to learn a heap of technical science and technical stuff. Yes, the jargon is important to know (and the acronyms) but the technical stuff you learn on a question by question basis, so you don't have to cram it in all at once.

> I thought you needed a science undergrad degree, and needed to understand the language in order to help the patron. As long as I ask for explanations, what something means or how it works, I get the answers my patrons need.

> [I thought it would be] Harder than regular librarian[ship] because you did need a science background in addition to the library background. I've found that it is different but not necessarily harder. A science background would be helpful but I've picked up quite a bit about physics in the last 3 1/2 years!

Finally, one other theme emerged from six respondents, the expectation that sci-tech librarianship would be boring. In reality, however, this was found to be incorrect, according to the comments below.

> I expected it to be difficult and somewhat boring . . . NOT AT ALL!!! It is fascinating and stimulating. We have all kinds of interesting customers with questions that let me learn new things every day. I love this job!!!

> I thought it was a little bit boring. The job was far more diversified than what I was thinking before.

> I thought it would be really boring and uninteresting. I've found Science Librarianship to be extremely challenging and have not been bored in the least.

## *CONCLUSION*

This survey revealed that the majority of the survey respondents working in sci-tech positions brought with them a subject background, either through formal education or personal interest in science, whether or not this was their intended career from the start. They chose such specialized careers as a result of having studied or having been exposed to science. Among those sci-tech librarians without a science background, the majority found themselves on this career path largely due to the fact that subject background was not a requirement for their initial positions.

Many respondents in this group did not find the lack of science knowledge to be much of a hindrance in their job performance. Possessing good research skills, on-the-job learning, and the ability to deal with the technical nature of the subject can overcome this initial drawback. However, it appears that librarians with a science background hold an advantage and can step into a sci-tech posi-

tion feeling confident from day one depending on the library setting they are in and how well matched they are with the position description. This idea is supported by Stuart and Drake[4] (1992), "The science or engineering degreed librarian with a grounding in subject material, practice in scientific and research methods, and a presumed enthusiasm for the subject discipline is more likely to establish valuable relationships with clients and be able to provide effective information services."

Further research in this area could be done to determine whether supervisors, at hiring, felt that candidates not having an appropriate science background would be a hindrance to the job performance of new hires. Another survey could be conducted to discover what portion of sci-tech librarians has a subject masters or doctorate degree, and whether this correlates with job expectation, performance, or salary.

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4. Ibid. p. 82.

## APPENDIX

### TEXT OF THE QUESTIONNAIRE

Cross-posted to multiple discussion lists. Reply to jmh7@acsu.buffalo.edu.

How did you feel about becoming a sci-tech librarian? Did you know what to expect, and did your expectations prove to be true? Fill out this survey and express your opinions.

This survey is for both current MLS students and librarians who are currently or have been previously employed in sci-tech libraries. Sci-tech includes biology, chemistry, engineering, physics, astronomy, mathematics, geography, geology and computer science, but not medicine, pharmacy, nursing and psychology. Those with experience in academic, corporate, public, government and special libraries are invited to participate.

Purpose: To determine why library students and practicing librarians choose sci-tech librarianship.

Thank you for participating. A summary of replies will be posted to this list. All replies will be kept confidential. Please reply before June 3.

Questions:

  1.  Are you (choose one or both)

  __ a sci-tech librarian
  __ a student

  2.  What is your title and/or position?

  3.  Prior to your first sci-tech position, did you know you wanted to be a sci-tech librarian?

   3a. IF YES, what were the reasons for this decision? (mark all that apply)

   __ I had a background in the sciences
   __ I had an interest/hobby in the sciences
   __ I heard it's easier to get a library job
   __ I heard there are higher salaries
   __ I heard it was easier to relocate and find a good job quickly
   __ Other: (please explain)

   3b. IF NO, and you did not originally intend to work in a sci-tech library, what factors caused you to change your mind? (mark all that apply)

   __ I needed a job, in any library
   __ I had a background in the sciences
   __ I had an interest/hobby in the sciences
   __ I had an internship in a sci-tech library
   __ I heard it's easier to get a library job
   __ I heard there are higher salaries
   __ I heard it was easier to relocate and find a good job quickly
   __ Other: (please explain)

  4.  What type of librarian did you want to be before your first library job?

  5.  If you have a sci-tech background, was this helpful in your job?

  6.  What were your thoughts/opinions about what science librarianship was all about?

6a.  Practitioners, were these proven to be true in your experience?

7.  If applicable, where is your MLS from?

8.  Did that school offer a science librarianship course?

9.  Did you take the course?

10.  What professional associations are you a member of? (mark all that apply)

__ SLA     __ ACRL     __ ASEE     __ Other (please indicate which ones)
__ ALA     __ ASIS     __ LITA

11.  Are you:     __ Female   __ Male

Thank you!
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