



A Survey to Support "Evidence-Based Practice" in Special Libraries Serving Fire Service Personnel and Researchers in Public Safety and Homeland Security Areas

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The Project Overview

GSLiS

- Funded by the 2003 SLA Steven I. Goldspiel Memorial Research Grant and Campus Research Board Award, University of Illinois at Urbana-Champaign



The Project Overview



- Surveyed the Practices of Six Selected Libraries that Represent Significant Contributors of Information Services to Fire Professionals (Including Fire Service Personnel as First Responders and Researchers) in the United States
- Focused on Evidence-Based Research
- Expanded Our Knowledge about the Value and Impact of Information Services Provided by Special Libraries and the Special Librarians Who Manage Them for Firefighters and Researchers in the Fire Service
- Built the Knowledge Base of Special Librarianship, Particularly Demonstrating the Library's Critical Roles in Public Safety and Homeland Security



Statement of the Problem

- How Do Special Libraries Serving Fire Professionals Fit into This Component?
- Are They Used?
- Valued?
- Are They Efficiently Organized to Give Maximum Access to Their Resource Collections?
- What Impact Have Special Libraries Made on Information Use by Fire Professionals in Their Decision-Making?



Participating Fire Libraries

Fire Library-<i>Training</i>	Fire Library-<i>Research</i>
1) New York State Department of State's Office of Fire Prevention and Control, Academy of Fire Science	1) National Fire Protection Association (NFPA)
2) Illinois Fire Service Institute, University of Illinois at Urbana-Champaign	2) Fire Protection Publications/Oklahoma State University
3) Fire/EMS/ Safety Center-Minnesota State Colleges and Universities	3) Oklahoma City National Memorial Institute for the Prevention of Terrorism



Participating Fire Libraries



- Differed Somewhat by Site, but Remarkably Consistent in Many Areas
- Three of Them: State Fire Academy Libraries (the Only Three in the Nation), Supporting Statewide Training in Many Areas, Including Hazardous Materials, Arson and Fire Investigation, Firefighting Operations, Technical Rescue, Incident Command, Fire Instructor and Officer Development, Emergency Medical Technician, Unified Command, Environmental Health and Safety Training and Education Leadership, and State Sponsored National Fire Academy (NFA) Courses
- The Remaining Three Libraries: Unique Collections on Research



Participating Fire Libraries



- Houses the Archives and Resources on Fire Research, Prevention, and Suppression and the Promotion of Life and Building Safety
- Supports Production and Distribution of Fire and Emergency Services Training Materials
- Supports Research to Discover Equipment, Training and Procedures for Emergency Responders to Prevent Terrorism and Respond to it
- Four House Archives Collections
- Two Libraries: Located on a University Campus; Other Two: National or International in Scope
- The Study only Reflects Service to the Users in the United States and Not to International Users





Characteristics of Participating Libraries

Organization	Number of Titles					FTE staff		Facilities	Budget
	Monographs	Serials	Non-print ¹	E-resources	Archives	Librarians	Support staff	Square feet	
A	5,100	95	3,070	No Answer	No Answer	1	0	3,000	10,517
B	4,165	385	3,115	307	218	2	4	1,193	55,763
C	4,065	153	648	8,077 ²	202	1	1	1,500	20,000
D	10,923	230	334	No Answer	Historical archives	1	2	2,412	141,500
E	9,000	150	3,000	No Answer	Manuscripts & photographs	1	1	5,000	36,000
F	2,724	22	93	494	No Answer	1	4	285	No Answer

Note: 1. Non-print materials include videotapes, CD-ROMs, DVDs, slides, and transparencies. 2. Netlibrary ebooks.



Statistics of Participating Libraries for 2003

Organization	Reference	Circulation	Interloans Requested	Interloans Supplied	Library services
A	2,262	2,867	5	47	No Answer
B	1,530	1,468	81	421	Current awareness, OPAC training, listserv, reference, electronic document delivery
C	500	726	81	113	Online Fire Admin courses
D	1,500	Data not available	2	2	Document fulfillment, research
E	152	1,520	Data not available	Data not available	No Answer
F	45	120	12	12	No Answer



Methodology



Questionnaire Development

- Designed the Questionnaire to Measure the Impact of Information Provided by the Special Library on Fire Emergency Responses Related to Homeland Security and Public Safety
- Focused Specifically on the Impact of Information on Decision-making Behavior Rather than Specific Time or Monetary Savings
- Collected a Combination of Quantitative and Qualitative Data
- Used the Chicago, Rochester and SLA Study Instruments as the Basis for Designing Questionnaires to Measure the Impact of Library-Supplied Information on Practical Decision-Making and Applied Research



Conducted the Study

- 16 Months (September 2003 to December 2004)
- Phase I – Preparation and Set Up lasted about three months (September 2003-December 2003)
- Phase II – Data Collection: the longest and most challenging (January-August 2004)
- Phase III – Data Analysis and Research Report (September to December 2004)



Study Sample and Usable Returns

Organization	User Population	Total Response	Format	
			Hardcopy	Online
A	2000	59	39	20
B	2300	143	63	80
C	250	47	36	11
D	1440	53	43	10
E	152	28	26	2
F *	10	8	5	3
Unspecified (Through Web Responses)		5	-	5
Summary Total		343	212	131

Note: *The Library F only has a few walk-in patrons. There are about 40,000 hits on the library website each month. Even though the survey questionnaire was linked to the website, no response was received from this channel.



Today's Firefighters



- Crucial Roles Local Firefighters/EMTs to Save and Rescue Citizens' Lives.
- A Wide Range of Duties in Fire Fighting, Emergency Medical Care, Hazardous Materials (e.g. Toxic Incidents), Terrorism (e.g. Bio-Terrorism) and Other Emergency Responses
- Illinois Firefighters Acquire and Maintain an EMT License
- 60% Emergency Calls – Medical Related



ILLINOIS FIRE SERVICE REALITIES

GSLiS

1,293

Fire Departments

42,675 Firefighters
(Paramedics)

- 8,600 Officers
- 13,300 Paid

70%

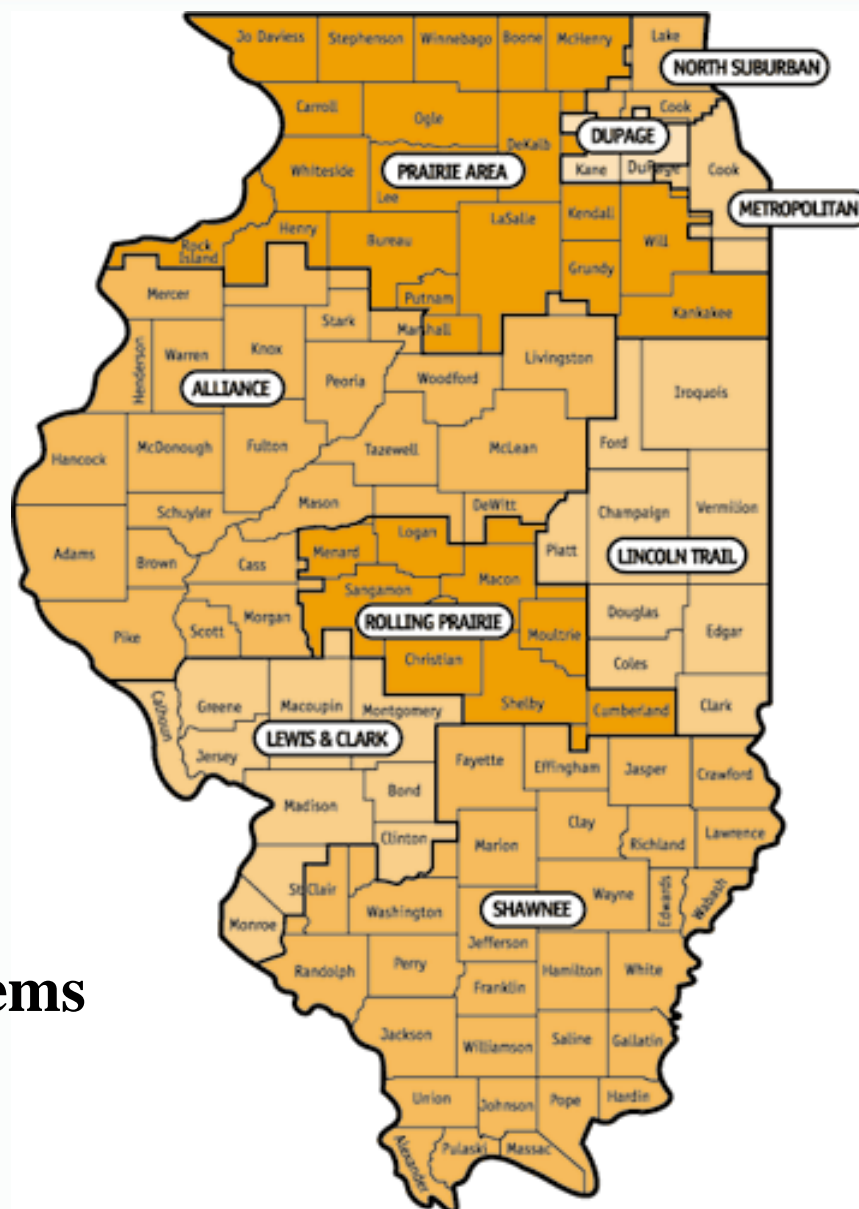
of all Departments
are **VOLUNTEER /
PAID ON CALL**

20%

Turnover Rate

CENTRALIA FIRE DEPARTMENT



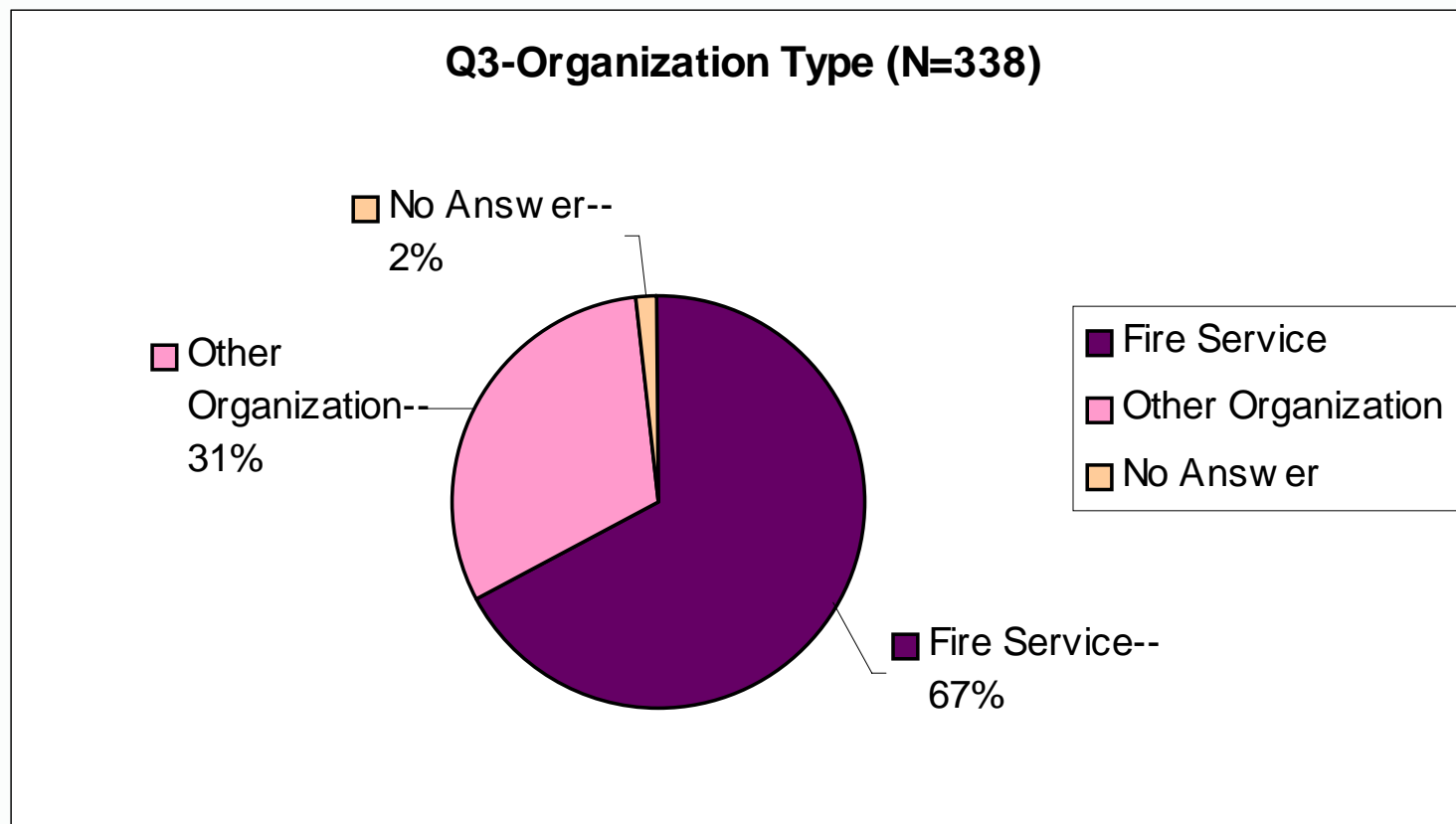


Library Systems in Illinois



Characteristics of Survey Respondents

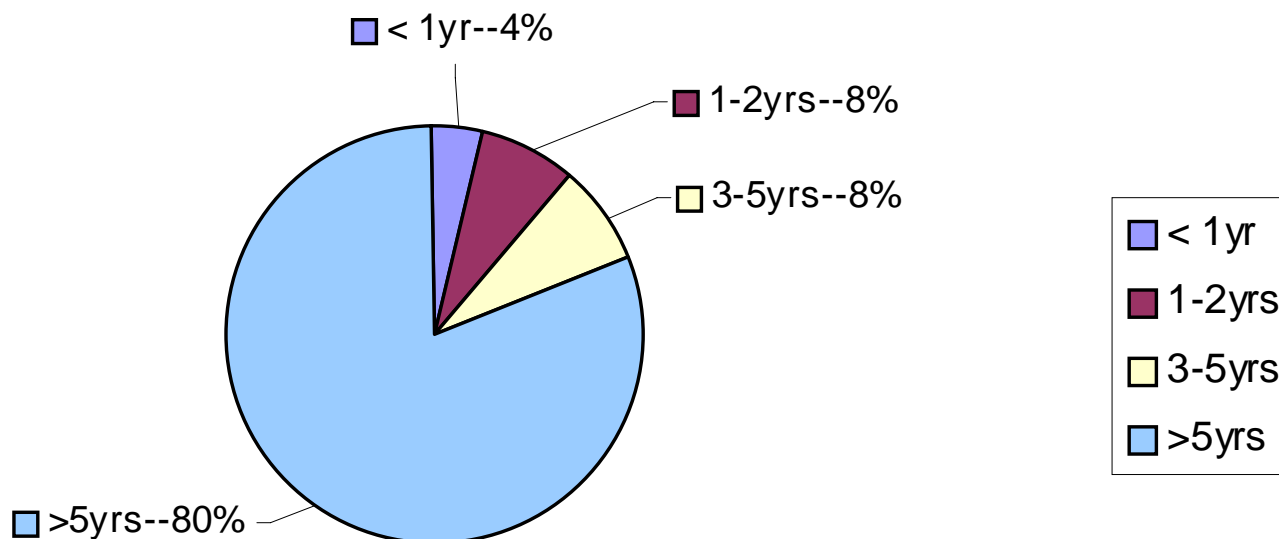
Organization Type





Characteristics of Survey Respondents Work Years

Q4-The length of time you have worked for fire service or fire related organization (N=333)

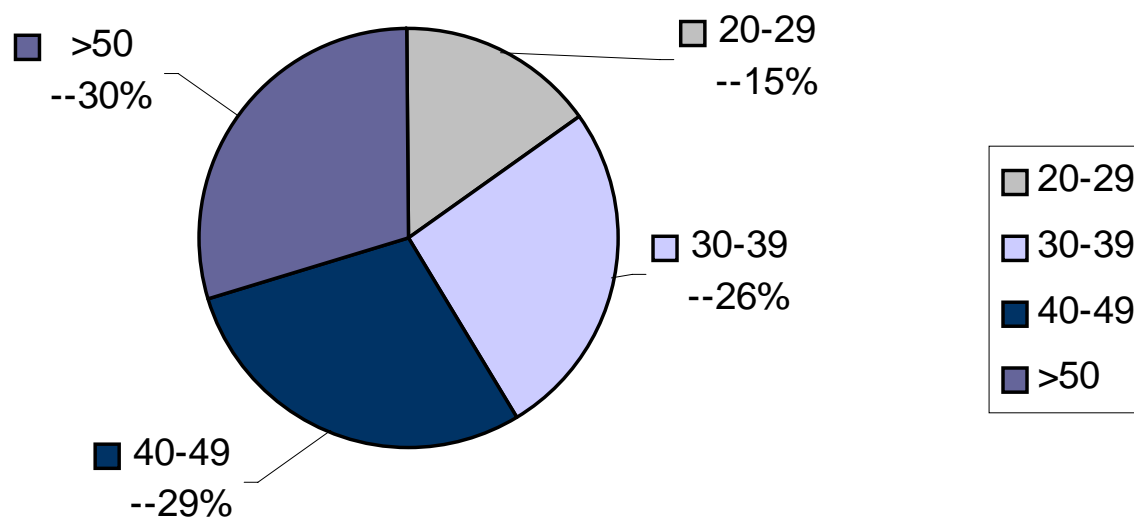




Characteristics of Survey Respondents

Age Groups

Q5-Your Age (N=343)

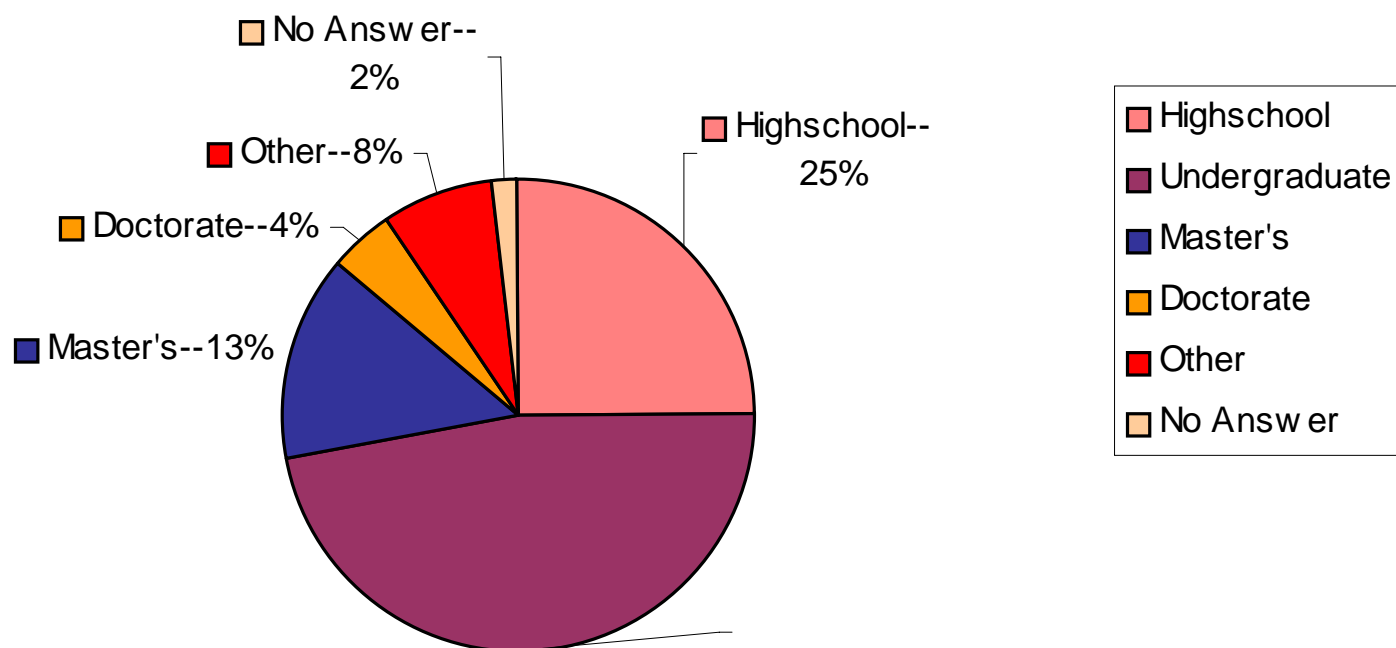




Characteristics of Survey Respondents

Degrees Obtained

Q7-Highest Degree Previously Earned (N=337)

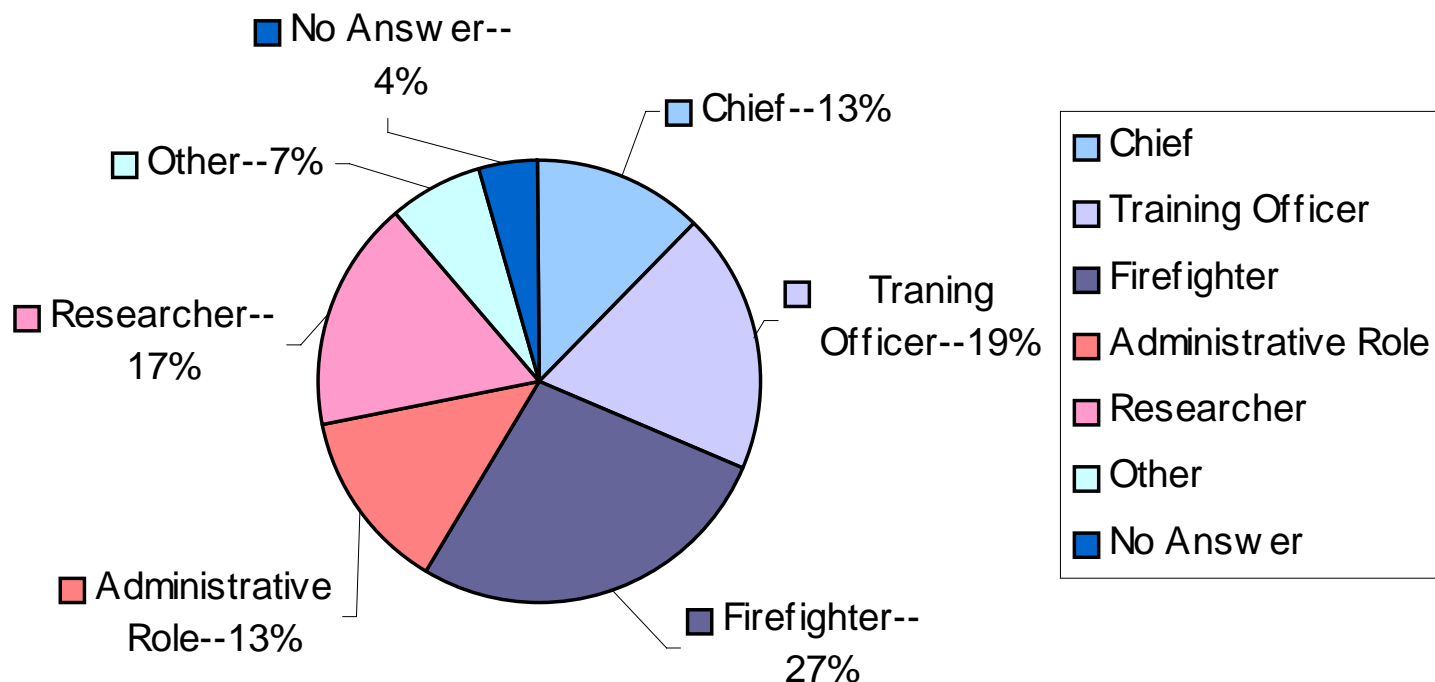




Characteristics of Survey Respondents

Personnel Type

Q6-Personnel Type (N=343)

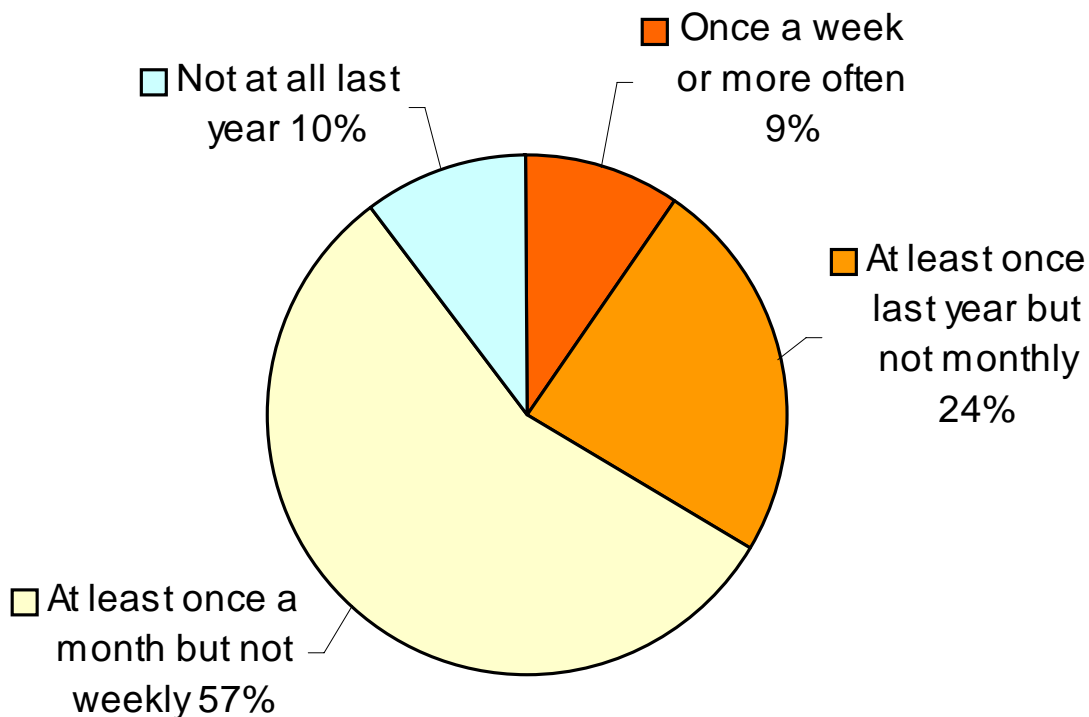




Characteristics of Survey Respondents

Usage of the Library

Q26-How often have you used the library in the past 12 months? (N=340)





Identified Information Need: Selected Questions Survey



Respondents Asked in the Current and Previous 12 Months

1) Research information for classes I was teaching .
2) Training information to present to a college class on the chemistry and physics of fire.
3) I had a list of books needed for a[n] upcoming Lt. Test .
4) A literature review for a project designed to mitigate behaviors associated with fatal smoking fires.
5) Information on the heat stress study.
6) Requested use of emergency response to terrorism instructor materials.
7) Materials on copyright laws and standard forms used.
8) What programs are out there on confined space training ?
9) Information regarding volunteer fire department retention and recruitment .
10) How does the fire/EMS distinction in career fire departments affect?
11) Material for search & rescue for interior fire operations .
12) Sources on the pros and cons of Quint apparatus .
13) Physical fitness for firefighters. Different examples and exercises specified.
14) Information linking CAD (Computer Aided Dispatch and Firehouse) systems.
15) Materials on the subject of structural fire fighting ?
16) Historical data on fires in places of assembly .
17) Information on protecting firefighters working on the road at a traffic accident .
18) Looking for firefighter fatalities information .
19) Research material on the ethics in a fire department .
20) Information dealing with citizen fire academies .
21) I asked for information on obtaining grants for my department.
22) Reports on high-piled storage fire testing .
23) Which organizations are working with health and safety problems in the fire service ?
24) Test reports and publications on suppression systems .
25) Requested training videos on pop-up roll bars and RIT [Rapid Intervention Team] .
26) Video case studies and material related to FAST/RIT [Fire Attack Strategy/Rescue] .
27) Information on fire station construction .
28) Biomechanics of firefighting (the effect of wearing SCBA [Self-Contained Breathing Apparatus]).
29) Information on policies and procedures related to performing fire station maintenance .
30) Information on the current threat of domestic right-wings extremist .
31) Reference materials on fire department budget development .

1) **Research** information for classes I was **teaching**.

2) **Training information** to present to a college class on the chemistry and physics of fire.

3) I had a list of books needed for a [n] upcoming Lt. **Test**.

4) A **literature review** for a project designed to **mitigate behaviors** associated with fatal smoking fires.

5) Information on the **heat stress** study.

6) Requested use of **emergency response to terrorism** instructor materials.



Identified Information Need:

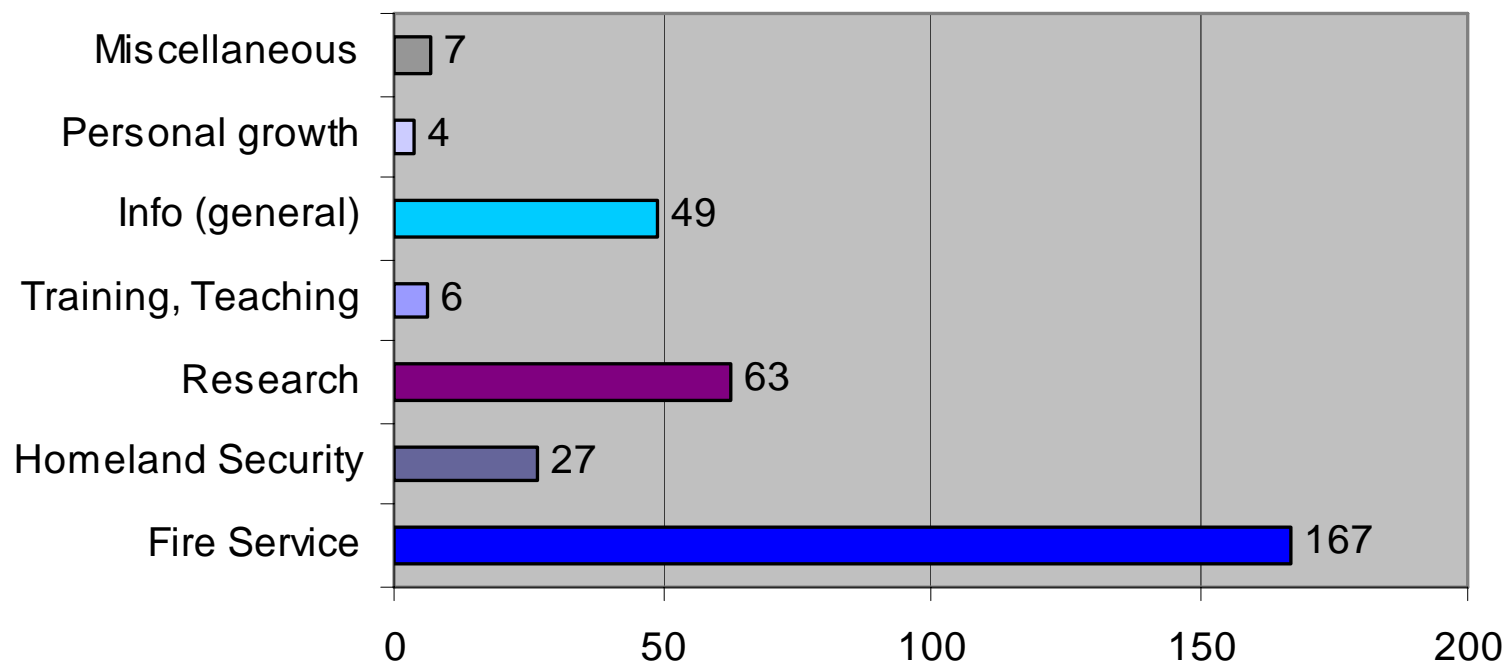
Sample Questions on Subject Areas

Subject Areas	Sample Questions
Personal Growth	1. Books to be used with the promotional process. 2. Books/video tapes for a promotional exam.
Info (General)	1. Information on copyright laws and standard forms used. 2. Assistance with overhead transparencies.
Training, Teaching	1. Reference books to students to use for classes. 2. Videos for a class. Research information for classes I was teaching.
Research	1. I need to research the history of the NFPA Standards Council. 2. What are various service levels for pedestrian movement as presented in J. Fruins research?
Homeland Security	1. Requested use of emergency response to terrorism instructor materials. 2. Information on how EMS [Emergency Medical Services] providers should respond to terrorism.
Fire Service	1. Information on arson. 2. Videotapes showing live fires.



Identified Information Need: **Subject Areas Asked by the Respondents**

Q1-Please briefly state the question you asked (N=323)





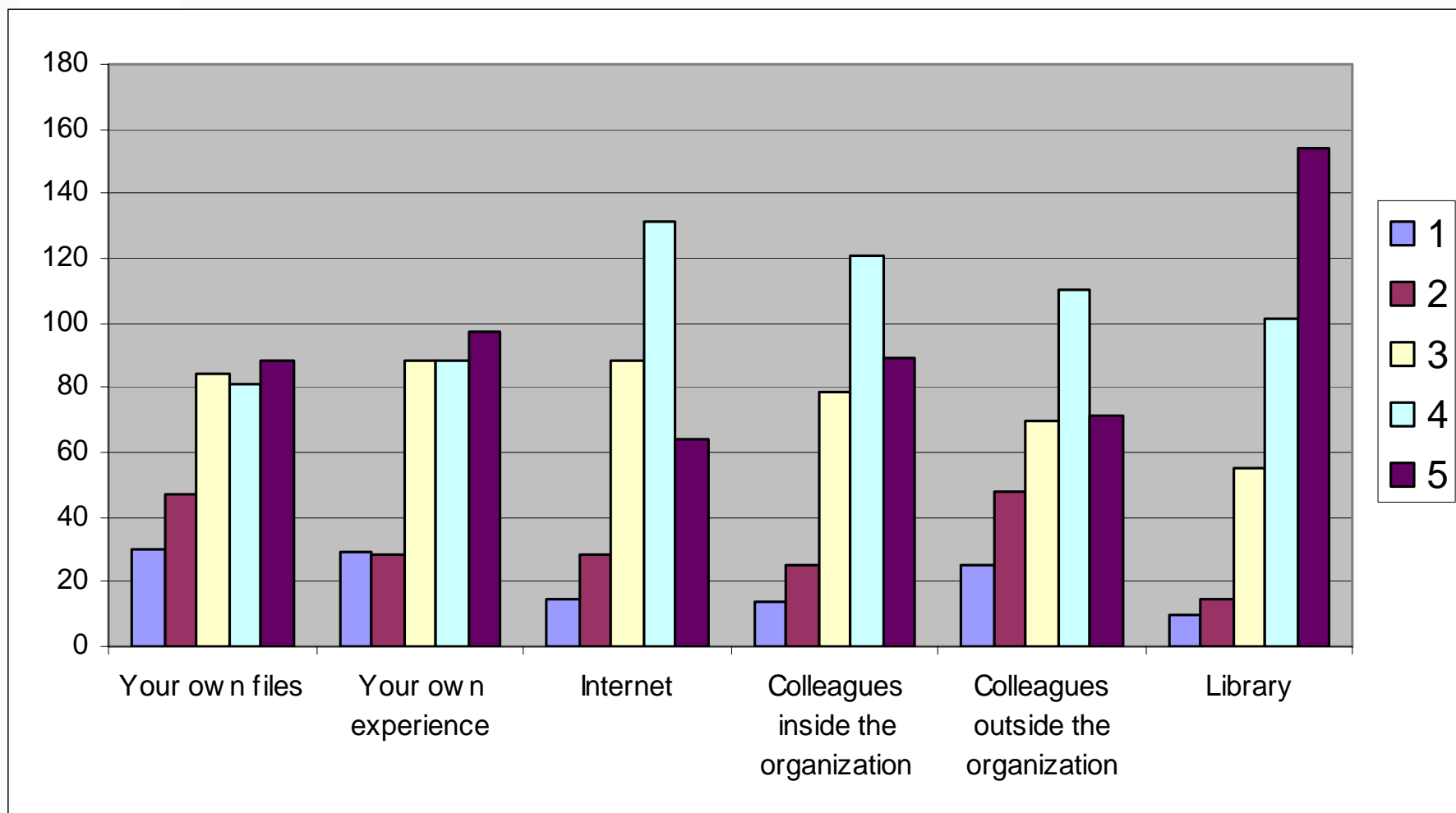
Importance of Different Information Sources

(A scale of 1 to 5 where 1=not very important at all; 2=of some importance; 3=of considerable importance; 4=of great; 5=of greatest importance)

Sources	1	2	3	4	5	Number	Mean	Standard Deviation	Median
Your own files	30	47	84	81	88	330	3.45	1.27	4
Your own experience	29	28	88	88	97	330	3.59	1.24	4
Internet	15	28	88	131	64	326	3.62	1.04	4
Colleagues Inside the organization	14	25	79	121	89	328	3.75	1.07	4
Colleagues Outside the organization	25	48	70	110	71	324	3.48	1.20	4
Library	10	15	55	101	154	335	4.12	1.03	4



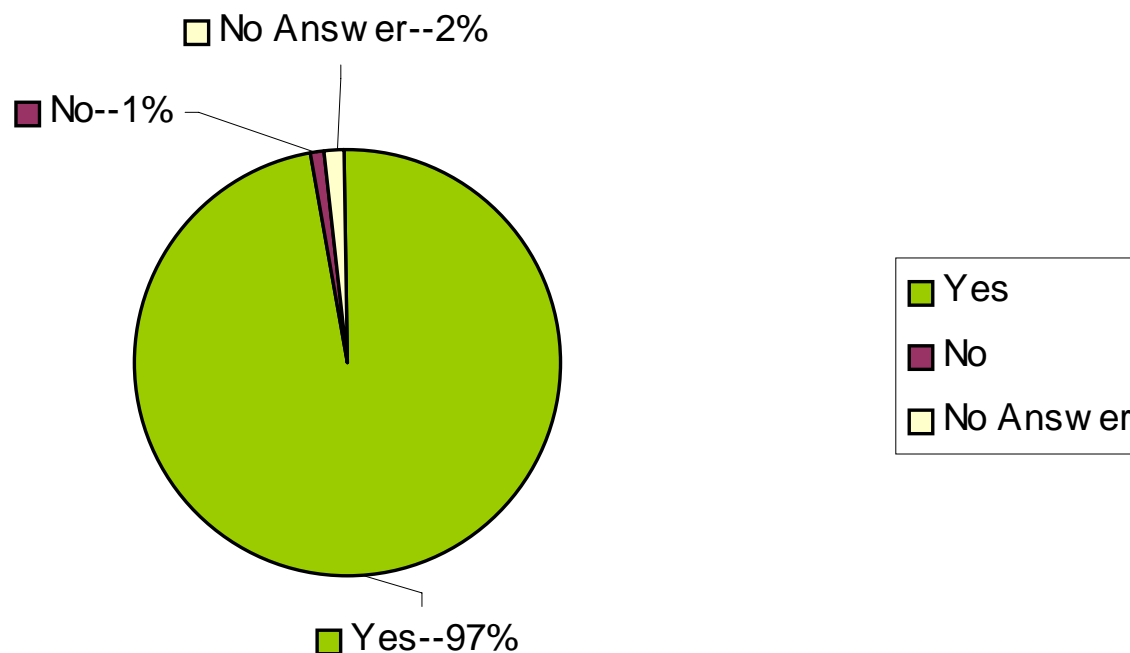
Importance of Different Information Sources





How Did Libraries Respond to Respondents' Needs? Library's Quick Response

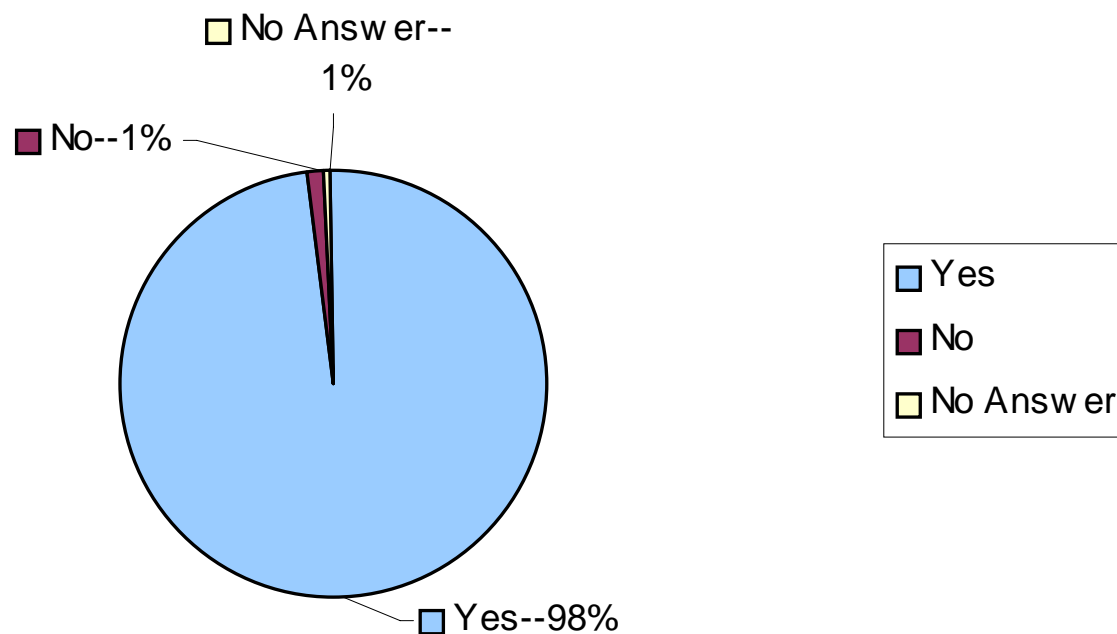
Q29-Did the library respond to your request quickly enough? (N=343)





How Did Libraries Respond to Respondents' Needs? Library Staff's Knowledge and Ability

Q30-Did library staff demonstrate the knowledge and ability to meet your information needs? (N=341)





How Did Libraries Respond to Respondents' Needs?

Different Groups and Library Staff's Knowledge and Ability

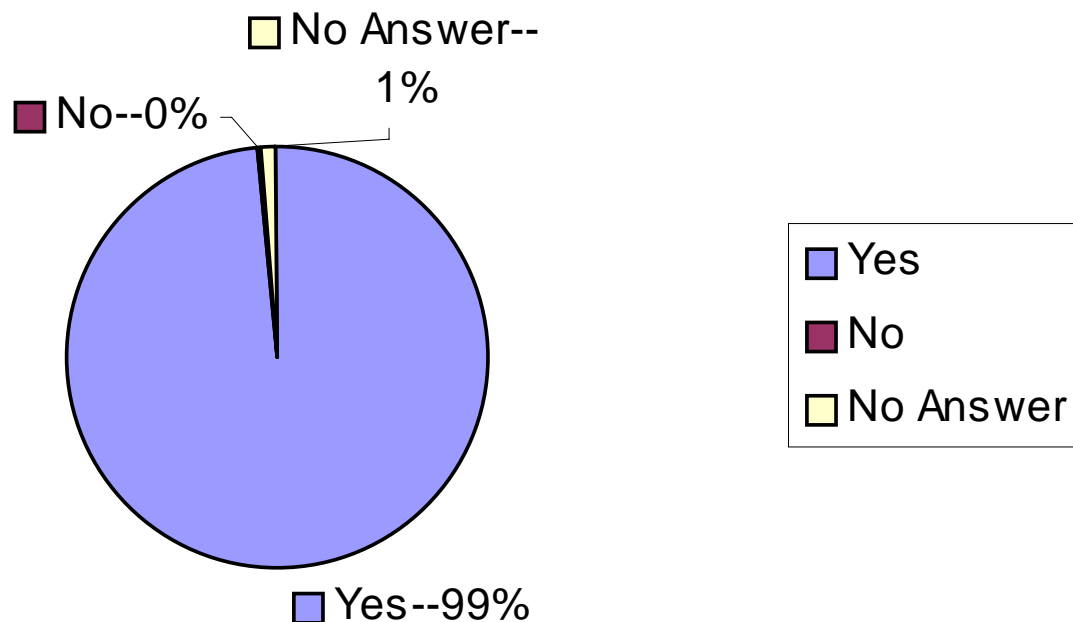
Q30-Did library staff demonstrate the knowledge and ability to meet your information needs?





How Did Libraries Respond to Respondents' Needs? Cooperative Library Staff

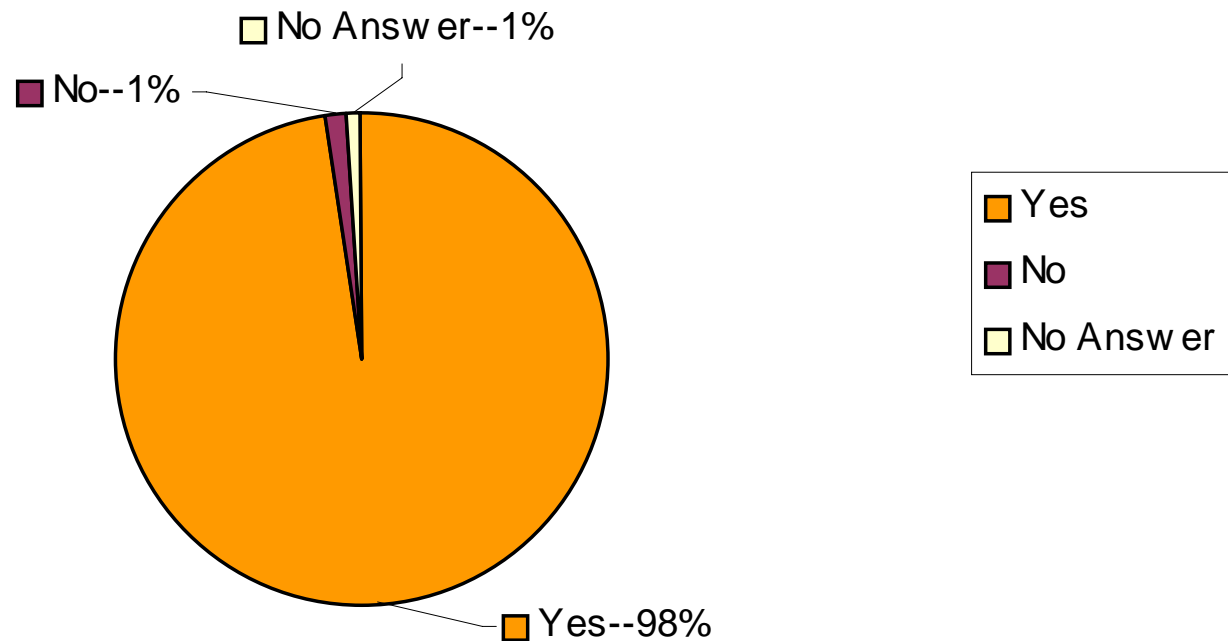
Q31-Was library staff cooperative in working with you?
(N=339)





Library's Overall Performance

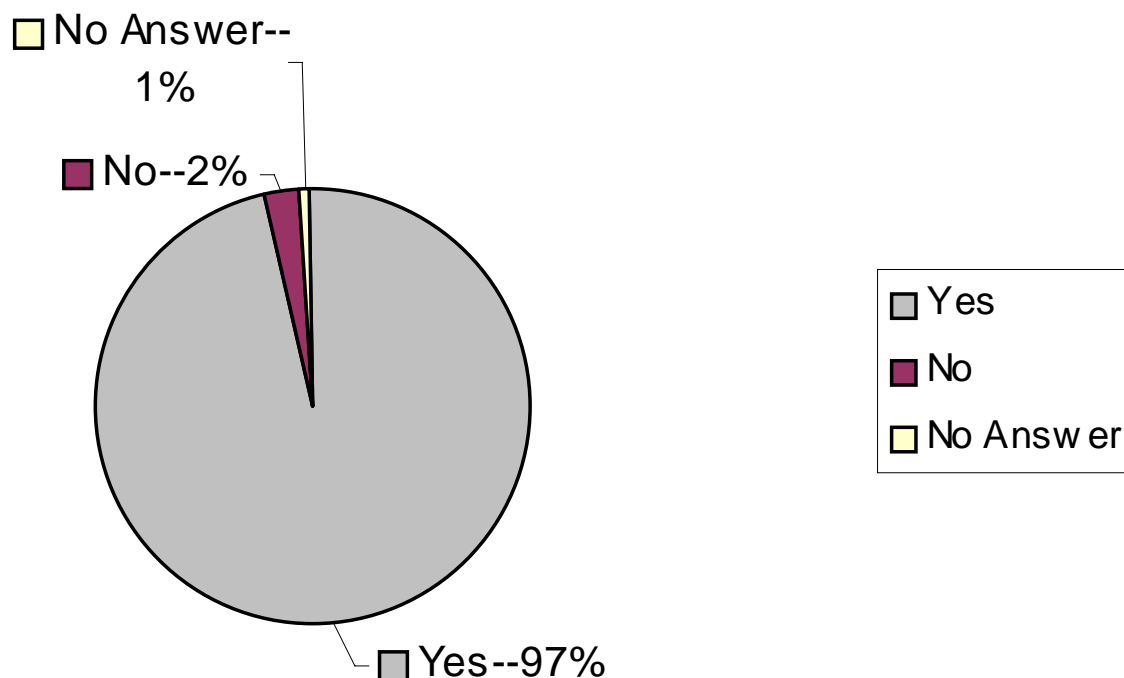
Q32-Was the overall performance of the library in providing information-on-demand for you satisfactory? (N=340)





Value and Impact of Information Services: Relevant Information

Q8-Was the information received relevant to your work?
(N=340)





Value and Impact of Information Services: Practical Value

Q21-Was the information of practical value? (N=343)

□ No Answer--
1%

■ No--2%

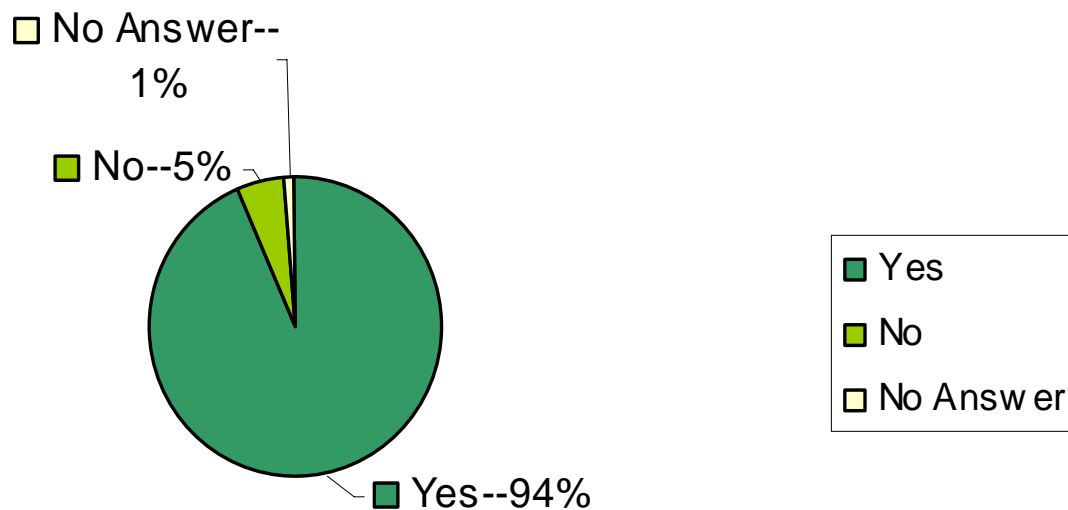
■ Yes--97%

■ Yes
■ No
□ No Answer



Value and Impact of Information Services: Better-Informed Decisions

Q10-Did the information received lead to better-informed decisions? (N=343)





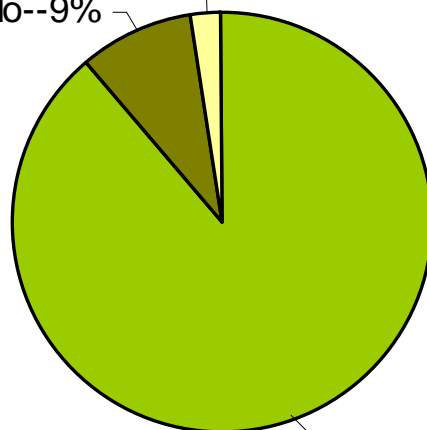
Value and Impact of Information Services: A Course of Action Taken

**Q11-Did the information enable you to take a
course of action? (N=343)**

■ No Answer--

2%

■ No--9%



■ Yes--89%

■ Yes

■ No

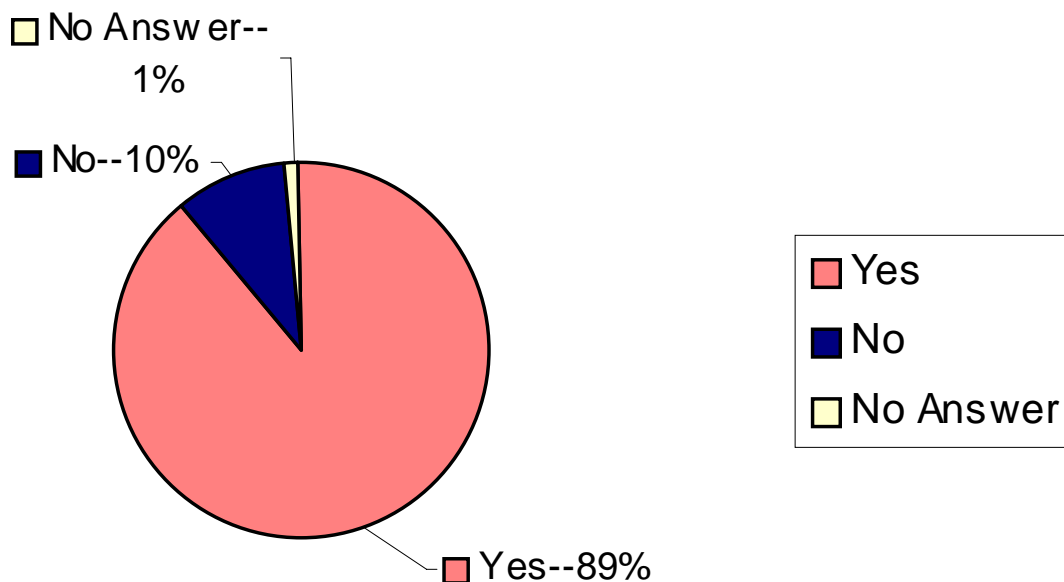
■ No Answer



Value and Impact of Information Services:

More Confidence Gained

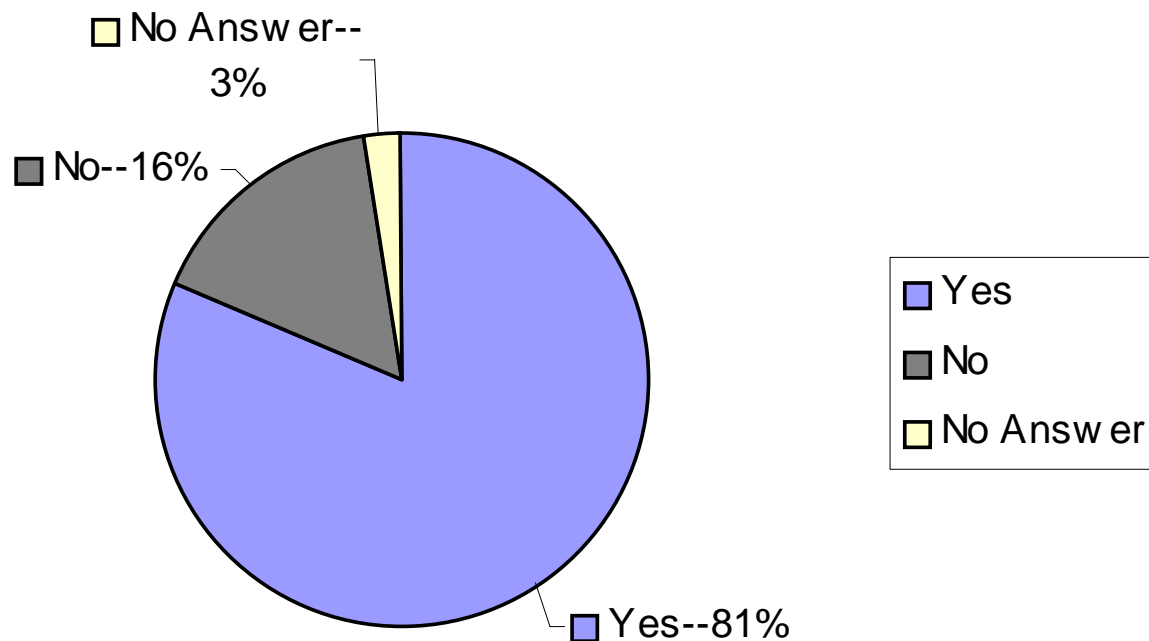
Q13-Did the information make you more confident about making a decision or recommendation? (N=343)





Value and Impact of Information Services: Research Value

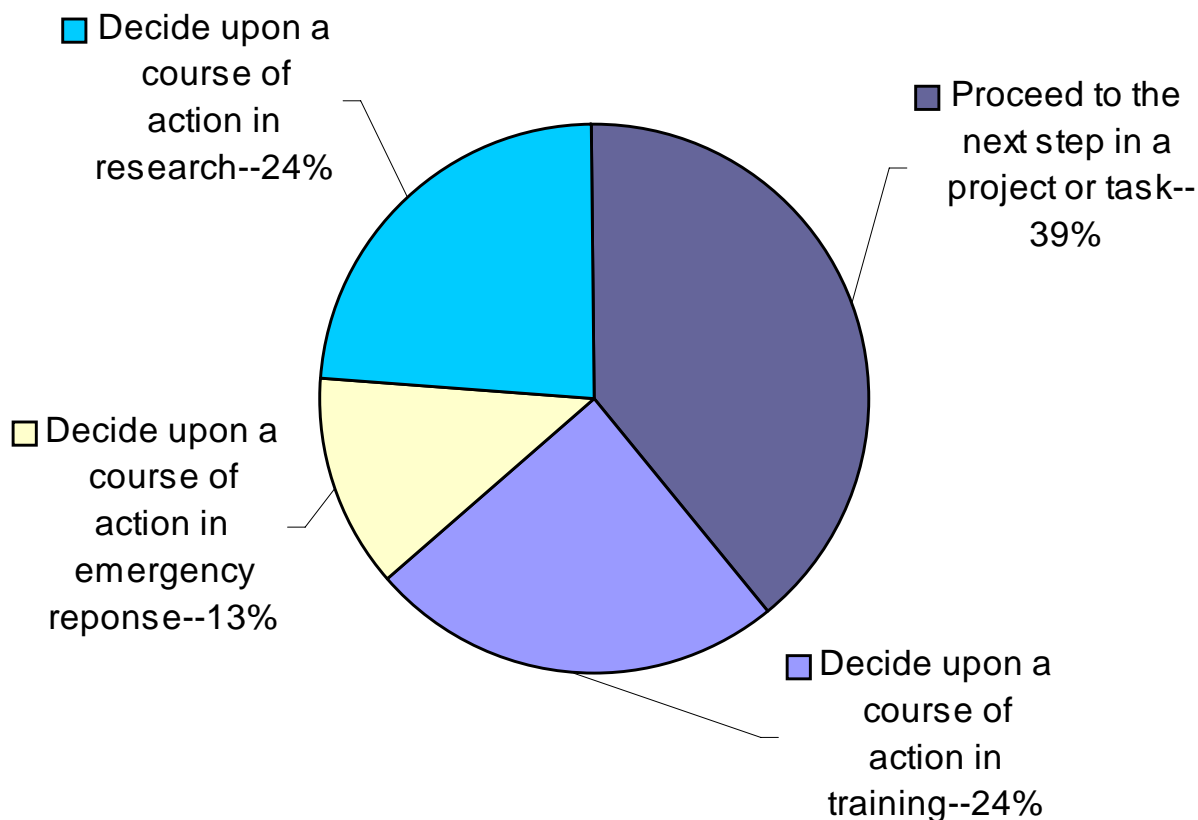
Q22-Was the information of research value? (N=343)





Value and Impact of Information Services: Specific Types of Decision-Making Situations

Q20-Did the information contribute to your ability to do any of the following: (check all that apply)? (N=318)





Limitations of the Study

- The Methodology: Emphasized Outcomes Related to Meeting Specific Information Needs
- Findings and Interpretation: Library Users with Specific Requests in Particular Situations
- No Feedback from Non-Library and Virtual Users



Limitations of the Study

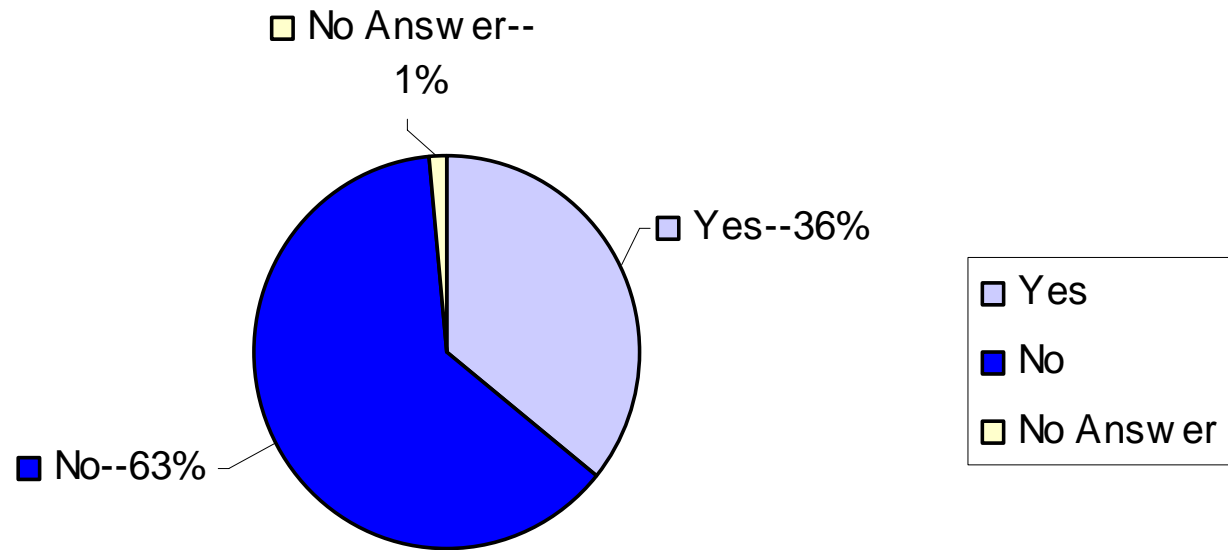


- Not Include Contributions from Other Fire-Related Libraries in Public and Private Sectors in the U.S.
- Challenge: Reach Sufficient Respondents in Solo Libraries Due to Limited Staff and Confidentiality Concerns
- The Long Time Frame May Introduce the Possibility of Incomplete and Inaccurate Recollections by Respondents.



Unaware of Library Services

Q28-Did the information about your library sent to you as part of this survey project make you aware of library service you did not previously know about? (N=338)





Lessons Learned

- The Challenge of Reaching Sufficient Respondents in Solo Libraries due to Limited Staff and Confidentiality Concerns
- The Challenge of Remote Distance and Invisible Users
- Low Level of Technology Infrastructure
- Busy Schedule



Ashley Fire Protection Distr. 9/21/00

9/21/00



The Role of Information Services in Emergency Preparedness

- Enhance Efficiency in Fire Fighting and Emergency Response
- Increase Safety, Both for Fire Emergency Service Professional and the Victims They are Assisting
- Enhance Planning and Training to Protect Both Fire Emergency Service Professional and the Communities They Serve



Significance of the Study

- Focuses on Measuring the Impact of Information Provided by Special Libraries on Users in the Public Sector rather than the Private Sector
- Systematic Evaluations of Library Services and Programs to Address Public Safety and Homeland Security Information
- A Beginning by Providing both Quantitative and Qualitative Data Analysis
- Based on the Results of the Study, Develop Services that Target Particular Types of Impacts, as well as Improving the Level of Impact in Various Areas



Future Research

- Non-Users: Including Those Eligible to Access Services but Who Do not Know How, and Others who would not Have Access at all Because There is no Library Providing Such Specialized Services
- Virtual Users: Accessing Services via a Library's Web Site, and Others Involved in Public Safety, such as Emergency Medical Responders
- Other Studies: Examine and Identify Skills, Attributes and Subject Knowledge for Librarians and Information Professionals Working in Fire Emergency Services and Homeland Security



The Full Report

- <http://www.sla.org/content/learn/scholarship/goldspiel/goldspiel2003.cfm> (only available for SLA members)



Other Conference Presentations

- 2005 Medical Library Association Meeting Symposium, entitled “The Role of Information services in Emergency Preparedness Planning,” San Antonio, Texas, May 15,
- 2005 SLA Annual Conference, Toronto, Canada, June 6