

CHAPTER 2

SURVEY AND DATA COLLECTION FINDINGS

The consultants conducted four surveys as part of the OnLine at PA Libraries evaluation project:

- One participating library survey in March 1997 to assess the participating libraries' expectations and issues concerning the OnLine at PA Libraries project (see Appendix B);
- One user survey in May 1997 to determine user satisfaction, demographics, and overall project/Internet assessment (see Appendix C); and
- Two training evaluation surveys, one each for the initial training session in October 1996 (see Appendix D) and the follow-up training session in April 1997 (see Appendix E).

This chapter details the methodologies used to conduct the surveys and presents survey findings.

PARTICIPATING LIBRARY SURVEY

The participating library survey was distributed to all 188 participating library directors in March 1997. Of the 188 surveys, 144 were returned for a 76.6% response rate. Office of Commonwealth Libraries staff, SIU staff, and selected librarians reviewed and commented on preliminary survey drafts. These comments and suggestions were incorporated into the final survey form (see Appendix B). SIU and Office of Commonwealth Libraries staff assisted with non-responding library follow-ups to encourage participation.

General Findings

As of March 1997, participating library OnLine at PA Libraries connections were operational for an average of 4.7 months, with connectivity ranging from .5 to 8 months (see Figure 2-1). The average monthly connection charge was \$30.15 per month, with monthly costs ranging from \$0.0 to \$350.00 (see Figure 2-1).

Figure 2-1. OnLine at PA Libraries Library Connection Costs/Months.

	Average
Average number of operational months for OnLine at PA Libraries Connection	4.7 months (range: .5 - 8 months)
Average monthly charge	\$30.15/month (range: \$0.0 - \$350.00)

Figure 2-2. Primary OnLine at PA Libraries Library Interest.

Original Interest	% Interest
Interest on part of library staff	42.5%
Community interest	32.2%
Availability of computing equipment	16.4%
Board interest	4.8%
Other	4.1%

Library directors indicated that the top three primary motivating factors for participating in the OnLine at PA Libraries project was interest on the part of library staff with 42.5%, followed by community interest with 32.2%, and availability of computing equipment with 16.4% (see Figure 2-2).

Overall, most libraries engaged in some formal advertising activities (e.g., stories in local papers, presentations to local groups) to promote the OnLine at PA Libraries project in their libraries. A vast majority of libraries had between one and five instances of formal advertising as of March 1997 with 82.6% (see Figure 2-3).

Figure 2-3. OnLine at PA Libraries Library Formal Advertising.

Number of Formal Advertising	% Advertising
0 times	9.7%
1-5 times	82.6%
6-10 times	5.6%
11-15 times	0.7%
16-20 times	0.7%
21 or more times	0.7%

Library Training/Users

The survey asked library directors to indicate the number of formal user training sessions the library conducted as well as the average amount of training time new users received from library staff. As Figure 2-4 indicates, a majority of libraries -- 63.2% -- did not provide formal user training sessions. On average, librarians spent 12.1 minutes with new workstation users, ranging from 0 to 35 minutes (see Figure 2-4).

Figure 2-4. OnLine at PA Libraries Library Formal Training Sessions.

Number of Formal Training Sessions	% Training
0 times	63.2%
1-5 times	25.7%
6-10 times	3.5%
11-15 times	0.6%
16-20 times	2.1%
21 or more times	4.8%
Average initial help (in minutes): 12.1 minutes (range: 0 minutes - 35 minutes)	

Figures 2-5 and 3-6 provide an estimate of OnLine at PA Libraries workstation users. As Figure 2-5 indicates, there is an average of 15.6 children and students uses of the workstation per week, 16.3 adults uses the workstation per week, and 10.4 library staff uses of the workstation per week (note: one session may not necessarily correspond directly to one user; one user may account for multiple sessions).

Figure 2-5. OnLine at PA Libraries Library Number of User Sessions/Week.

Types of Users	Average Number
Children and Students (through age 18)	15.6 (range: 0-160)
Adults (over 18)	16.3 (range: 0-100)
Library Staff	10.4 (range: 0-80)

Figure 2-6 presents some estimates of the number of users of the workstations per week. These estimates have the following limitations:

- (1) They depict a one-use, one-user approach. This may not be the case, as one user may account for more than one use.
- (2) They account only for an estimate of OnLine at PA Libraries workstation users and do not extend to other Pennsylvania public libraries providing public access to the Internet.

Figure 2-6. Calculating the Average Number of Users per Week.*

	Using the Average Number	Using the 3rd Quartile
Children and Students (through age 18)	2,933	3,800
Adults (over 18)	3,064	3,800
Total	5,997	7,600
* Issues: (1) Estimates based on use data collected in March 1997. (2) Estimates based on 188 participating libraries.		

(3) They use library director-provided estimates from March 1997. Other data collected as part of the evaluation project suggest that workstation usage since that time has increased significantly.

With those limitations, an estimated average of 5,997 users use the workstations per week. By using the 3rd quartile, rather than the average, an estimated 7,600 users use the workstations per week (see Figure 2-6).

Benefits and Issues

Library directors consider the top three primary benefits of the OnLine at PA Libraries workstation to be the expansion of available reference resources with 48.3%, followed by the attraction of new users to the library with 31.7%, the expansion of the scope of the overall library collection with 13.1% (see Figure 2-7).

Figure 2-7. OnLine at PA Libraries Library Benefits.

Primary Benefit	% Benefit
Expands availability of reference resources	48.3%
Attracts new users to the library	31.7%
Expands scope of overall collection	13.1%
Can answer specific questions	1.4%
Other	5.5%

Figure 2-8. OnLine at PA Libraries Library Assessment of the Internet and OnLine at PA Libraries Connection

Issue	Average Agreement
Providing public access to the Internet has greatly increased the visibility of the library	2.3
Library staff have very good knowledge and skills related to using the computing equipment provided through the OnLine at PA Libraries grant	2.8
Library staff have very good knowledge and skills related to using the Internet	2.9
Overall, we are impressed with the range, extent, and scope of reference material available on the Internet	1.9
We have had considerable difficulties with users accessing and reading pornography via the public access Internet workstation	4.5
Generally, the comments from the users of the public access Internet workstation are very positive	1.7
We have had very few technical difficulties with the equipment provided by the grant	2.3
1=Agree	5=Disagree

As Figure 2-8 indicates, the library directors rate the OnLine at PA Libraries project highly along a number of dimensions -- library visibility (2.3 out of 5, with 1 being "Agree"), collection expansion and augmentation (1.9 out of 5, with 1 being "Agree"), and user impressions (1.7 out of 5, with 1 being "Agree"). Of particular interest is that library directors indicate no problems with users accessing pornographic material (4.5 out of 5, with 5 being "Disagree").

Finally, although library directors view the OnLine at PA Libraries project as a success, few could afford to access the Internet without the project (see Figure 2-9). A vast majority -- 88.9% -- indicated that they would have been willing to pay for the workstation, but could not afford to do so.

Figure 2-9. OnLine at PA Libraries Library Purchase on Own.

Types of Users	% Purchase
Yes	2.7%
Yes, but unable to afford without the Bell Atlantic grant	88.9%
No	2.0%
Not Sure	6.2%

USER SURVEY

As part of the evaluation study, the consultants conducted a user survey in all participating libraries. The survey sought to obtain (1) an estimate of the number and types of users accessing the Internet via the OnLine at PA Libraries terminals in the participating libraries, (2) a description of that use, i.e., the types of resources and services users contacted, (3) an assessment of the usefulness of those resources and services contacted, and (4) an assessment of the usefulness of the OnLine at PA Libraries project as a means of access to the Internet.

Background

During a sample one week period in May, *all* 188 participating libraries assisted the investigators to collect data regarding the public's use of the Internet. Prior to that sample week period, a packet of information that included instructions and data collection forms were distributed to participating libraries at the OnLine at PA Libraries spring training sessions. Participants were also informed of the purpose, intent, and importance of the user survey to the OnLine at PA Libraries assessment project during these training sessions.

Data Collection Instrument

The consultants developed the two-page survey (see Appendix C) as a means for OnLine at PA Libraries workstation users to provide data concerning (1) their general familiarity with the Internet, (2) the utility of selected Internet-based resources, and (3) their impressions of the Internet in general and OnLine at PA Libraries project in particular.

Selected OnLine at PA Libraries project staff reviewed the initial survey. Based on comments from that review, the consultants revised the survey. The revised survey was then pre-tested by two MLS students at the School of Information Studies, Syracuse University. Comments and feedback from this pre-test were then incorporated into the final survey.

Survey Distribution Technique

During the one-week sample period in May, all participating libraries asked up to 25 users of their OnLine at PA Libraries workstation to complete a survey. A librarian or volunteer gave the users the survey, explained to them the purpose for collecting the data, and instructed the users in the completion of the survey.

The librarian or volunteer instructed the users to complete Part I of the survey *prior* to accessing the Internet, complete Part II *while connected* to the Internet, and complete Part III *after* their Internet session. At the end of the sample week or having completed 25 surveys (which ever came first), all completed questionnaires were returned to the investigators for analysis. Of the 4,700 distributed surveys, 1,925 usable surveys were returned for a 41.0% response rate.

User Demographics

As Figure 2-10 shows, slightly more females (51.8%) use the workstations than males (48.2%). The average user age is 29.1, ranging from 10 to 81 years (see Figure 2-10). A majority of users -- 56.6% -- have a high school or elementary education level, with the remaining 45.4% having a community college or higher level of education (see Figure 2-11). Readers should keep in mind that a substantial percentage of users -- approximately 35.3% -- are elementary and high school students.

Figure 2-10. OnLine at PA Libraries Users.

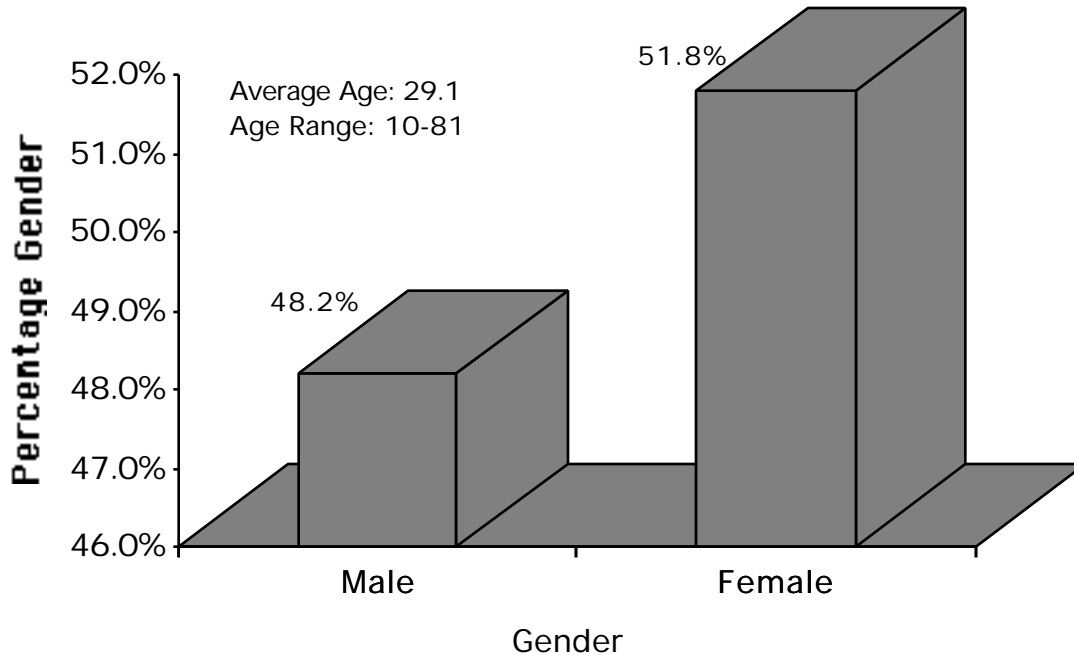
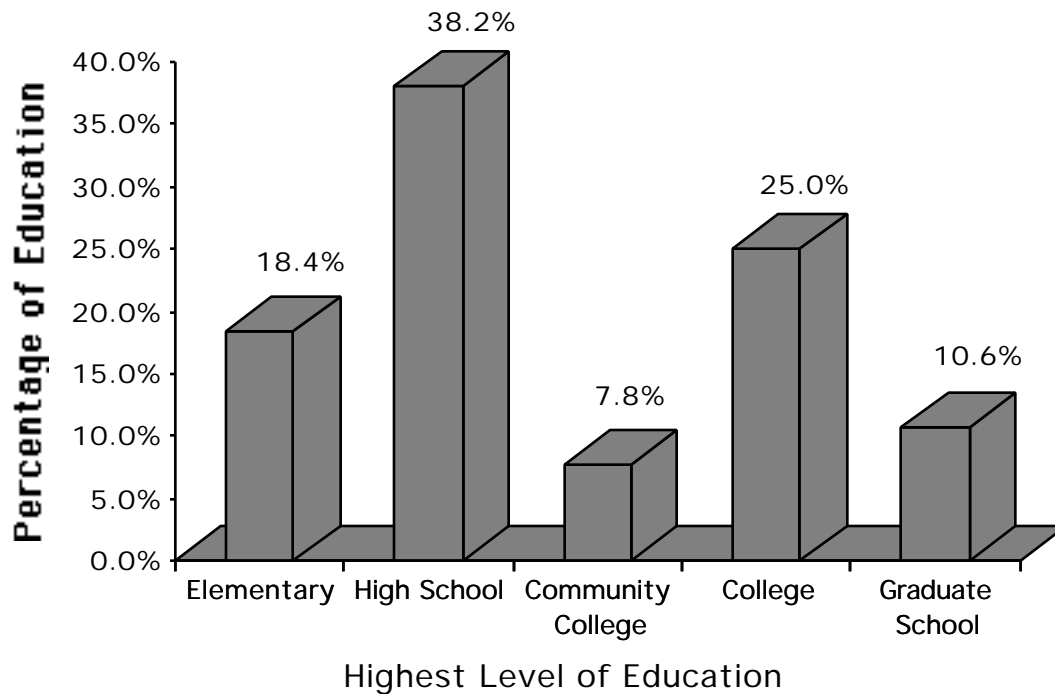


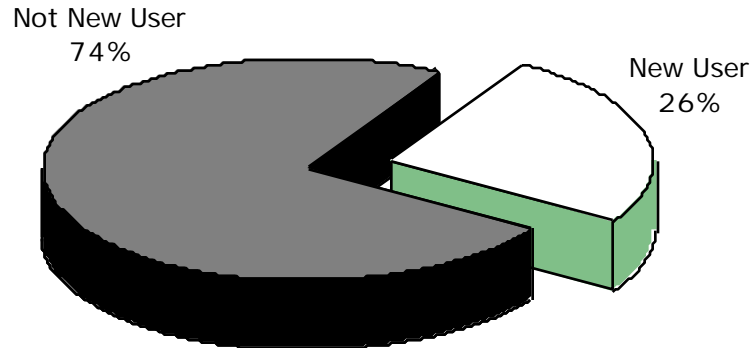
Figure 2-11. OnLine at PA Libraries User Education.



Users and the Internet

The OnLine at PA Libraries workstation attracted a substantial percentage -- 26.0% -- of new users to participating libraries (see Figure 2-12). Of all the users, 47.6% rate themselves as beginner users, 8.3% as intermediate users, and 44.0% as expert users of the Internet (see Figure 2-13). As Figure 2-13 also indicates, the typical user had an average of 8 months' experience in using the Internet and had used the library's OnLine at PA Libraries workstation 5 times in the past month. A vast majority of users had not formal Internet training with 64.7%, while 21.9% of users had between one and three hours of formal Internet training, and just 13.4% had more than three hours of formal Internet training (see Figure 2-14).

Figure 2-12. Percentage of New Users Due to OnLine at PA Libraries Program.



Of particular interest is that 34.5% of the OnLine at PA Libraries workstation users have no other Internet access means other than through the public library (see Figure 2-15). It is noteworthy, however, that 63.5% of the workstation users *do* have other means with which to access the Internet and continue to use the library's Internet connection.

Overall, users found their experiences with the OnLine at PA Libraries workstation and Internet to be positive, with ratings of their experiences ranging from 1.7 to 2.4 (with 1=Very Much So and 5=Not At All) (see Figure 2-16). Of particular interest is that users found the information they wanted on the Internet and found it to be useful, found the equipment/workstation easy to use, and would tell other members of the community about the library's Internet connection. It is also noteworthy that the users' ability to use the equipment and find the information that they wanted via the Internet was not affected by the level of formal Internet training that users had (see Figure 2-17). Indeed, users were able to make similar use of the workstation and the Internet regardless of the amount of formal training.

Figure 2-13. OnLine at PA Libraries User Expertise.

Average Internet Experience: 8 months
Average Number of Times Used Library's
Internet Connection in Last Month: 5 times

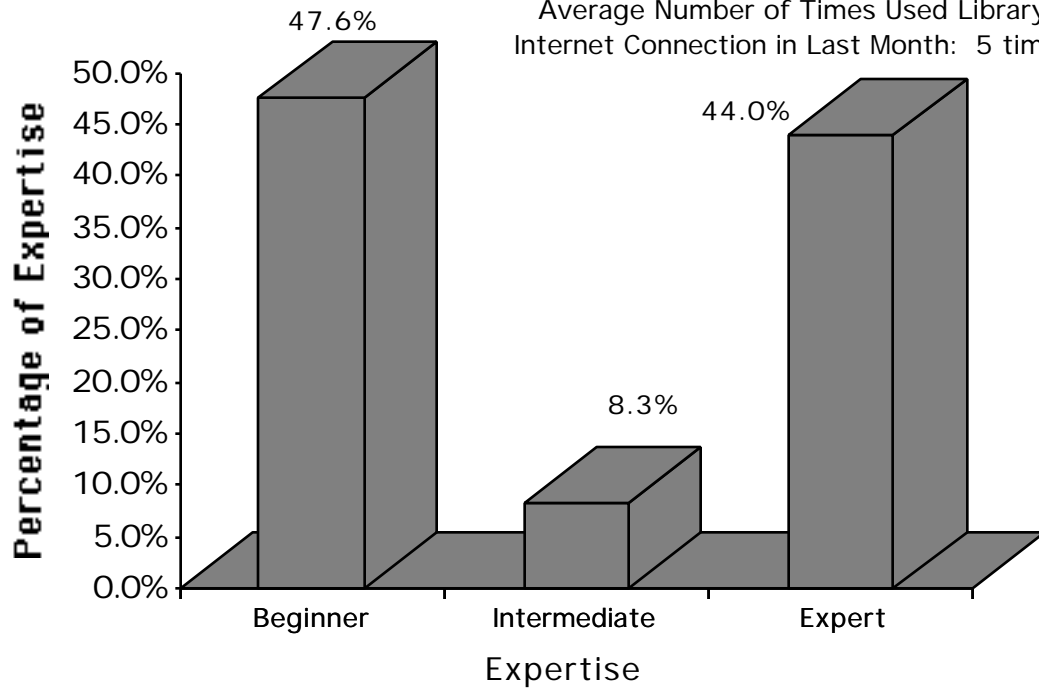


Figure 2-14. Formal Internet Training of Users.

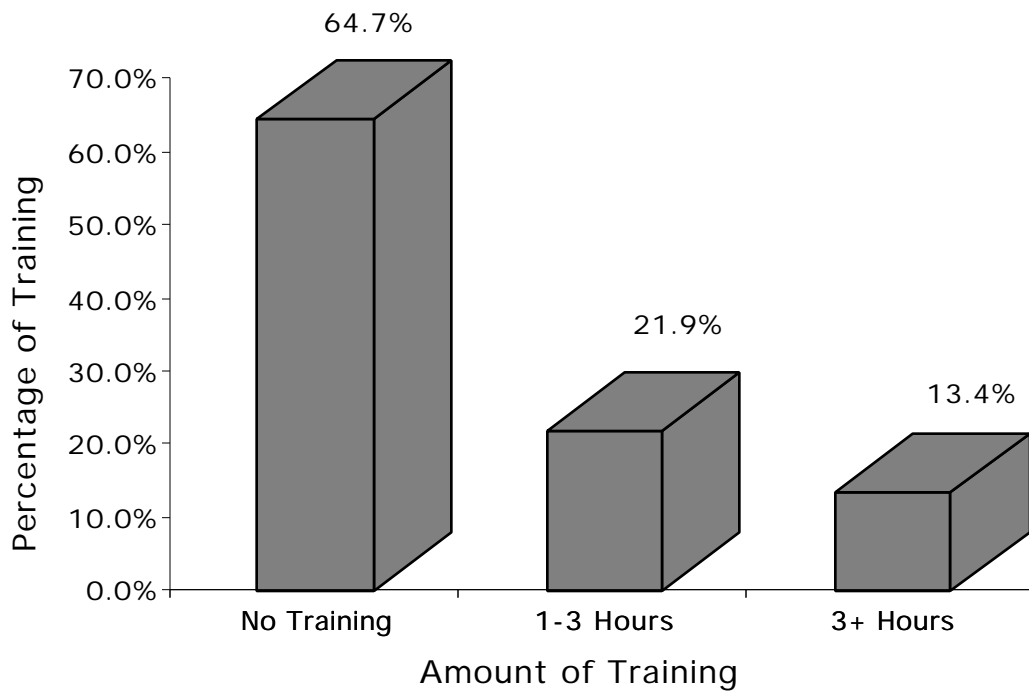


Figure 2-15. OnLine at PA Libraries User Other Access to the Internet.

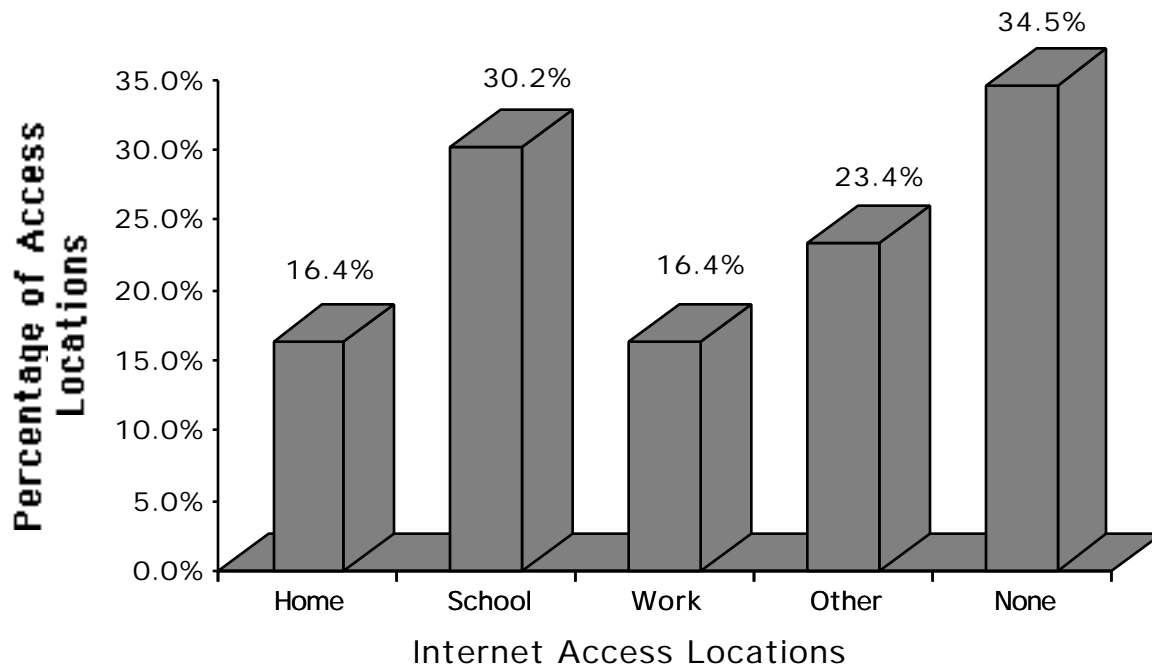


Figure 2-16. OnLine at PA Libraries User Assessment of the Internet and OnLine at PA Libraries Connection.

Internet Assessment	Average Assessment
While on the Internet, I found the information that I came to the library to obtain	2.2
While on the Internet, I found information that was very useful and interesting	1.9
The Internet information I located will assist me greatly	2.2
The Internet access provided by the library is relatively easy to use	1.8
Having access to the Internet via the library is very important to me	1.7
The computer and telecommunications equipment all worked very well	1.8
I found the speed of the Internet, e.g., loading graphics and downloading information, to be quite good	2.4
I would tell other members of the community about the library's Internet connection	1.7
I was able to use the Internet without library staff or other assistance	2.0
1=Very Much So	5=Not At All

Figure 2-17. OnLine at PA Libraries User Assessment of the Internet and OnLine at PA Libraries Connection by Amount of Training.

Internet Assessment	No Training	1-3 Hours Training	3+ Hours Training	Overall Assessment
While on the Internet, I found the information that I came to the library to obtain	2.2	2.2	1.9	2.2
The Internet access provided by the library is relatively easy to use	1.8	1.7	1.6	1.8
I would tell other members of the community about the library's Internet connection	1.7	1.6	1.5	1.7
I was able to use the Internet without library staff or other assistance	2.2	1.8	1.5	2.0
1=Very Much So		5=Not At All		

TRAINING SURVEYS

The consultants conducted two training surveys. The first survey occurred during the initial project training session in October 1996 (see Appendix D), and the second during the advanced training session during April 1997 (see Appendix E). The purpose of the surveys was to determine the:

- Extent to which the training sessions met the needs/anticipated needs of the attending librarians;
- Ability of attending librarians to apply training instruction in their libraries;
- Ability of attending librarians to begin and/or enhance ongoing Internet training activities in their libraries; and
- Overall impression of the OnLine at PA Libraries project in training participant libraries.

Together, these data serve to inform the project's training process for future training sessions.

Initial Training Session

All participating libraries had to send one participant to the initial training session in October 1996. This training session provided attendees with instruction on:

- Workstation configuration and general workstation operation;
- How to set up the workstation in the library;
- How to connect to an Internet Service Provider (ISP); and
- General Internet navigation.

The training session lasted one day.

Methodology

The initial training session began prior the commencement of the evaluation project. Thus, surveys could only be collected from participants at the latter training sessions. The consultants used the training lesson plan and documentation to develop a draft survey. Project staff provided feedback on the draft survey, and changes were made to the draft survey to reflect staff comments

and suggestions. Each attending representative received a copy of the training evaluation form at the end of the training session. Since only a portion of the training sessions received the survey, a total of 55 completed surveys were returned.

Findings

Of the attending trainees, 50.0% were professional librarians with MLS degrees, and 50.0% were non-professional library staff (sample titles included clerks, library administrator, and volunteer). The attendees had an average of 11.4 years experience, ranging from 1 year to 24 years.

Overall, attendees rated their Internet navigation skills as “below average” with 43.6%, followed by “average” with 38.2%, “above average with 16.4%, and “excellent” with 1.8% (see Figure 2-18). Attendees rated their computing skills slightly higher than their Internet navigation skills with 43.6% indicating “average” computing skills, 29.1% “below average” computing skills, 25.5% “above average computing skills, and 1.8% “excellent” computing skills (see Figure 2-18).

Figure 2-18. Initial Training Participant Internet and Computer Expertise.

Expertise Rating	Internet Navigation Skills	Computer Use Skills
Below Average	43.6%	29.1%
Average	38.2%	43.6%
Above Average	16.4%	25.5%
Excellent	1.8%	1.8%

Attendees strongly agreed that there is significant interest in the OnLine at PA Libraries project at their respective libraries (rating of 4.4, with 1=Strongly Disagree and 5=Strongly Agree). Similarly, attendees strongly agreed that having access to the Internet can be useful for rural libraries (rating of 4.7, with 1=Strongly Disagree and 5=Strongly Agree) (see Figure 2-19).

Figure 2-19. Initial Training OnLine at PA Libraries Project and Internet Assessment.

OnLine at PA Libraries/Internet Assessment	Average Assessment
There is a great deal of interest in this project at my library	4.4
Internet-accessible resources can be useful in a rural library context	4.7
1=Strongly Disagree 5=Strongly Agree	

Figure 2-20. Evaluation of Initial Training Components.

Training Component	Beginning of Day	End of Day	Ability in Library
URL Addressing	2.7	3.8	3.7
Netscape Navigation	2.6	3.8	3.8
Dialing Internet Service Provider	2.4	3.7	3.7
Setting Up PC/Printer	2.6	3.9	3.8
Printing Documents	3.3	4.0	4.0
1=Not At All 5=A Great Deal			

As Figure 2-20 shows, the training session successfully assisted attendees gain the necessary skills to set up the OnLine at PA Libraries workstation, connect to the Internet, and make basic use of Web-based resources.

Overall, attendees rated the training session highly (see Figure 2-21). Indeed, attendees found that the training met their goals, the presentation of the material was clear, the trainer was well prepared, and that they had a basic sense of how the Internet works (ratings ranging from 3.7 to 4.5, with 1=Not At All and 5=Very Much So). Attendees indicated some concern over the amount of material covered during the session (rating of 2.3); however, as comments and the self-assessments indicated, attendees possessed varying levels of computer/Internet sophistication. The training session was targeted to provide only basic Internet and computing skills, thus some attendees found the material relatively easy.

Figure 2-21. Initial Training Overall Assessment.

Internet Assessment	Average Assessment
My goals for this training session were met	3.8
The ideas presenting in this training session were very clear	4.0
There was sufficient opportunity to ask questions during the training session	4.5
Overall, the trainer(s) was well prepared	4.5
There was too much material covered in this training session	2.3
I feel like I now have a good basic understanding of how the Internet works	3.7
Please estimate the degree of difficulty you will have in configuring the hardware/software for this project when you return to your library	2.7
<p style="text-align: center;">1=Not At All 5=Very Much So</p>	

Spring Training Session

OnLine at PA Libraries project staff designed the spring training session, conducted in April 1997, to provide advanced instruction on managing Internet-based resources for library use. In particular, the training session covered such topics as:

- Using Web-based search engines;
- Constructing appropriate searches for particular Web-based search engines;
- Identifying and using Web-based reference resources;
- Downloading files and software from the Web; and
- Using Fortress, the security program loaded on each OnLine at PA Libraries workstation.

OnLine at PA Libraries project staff designed the training topics based on input from the participating libraries.

Methodology

Each participating library was able to send two staff members to the training session. Training occurred in multiple locations -- with adequate training facilities -- so as to minimize travel for library staff.

The consultants used the training lesson plan, documentation, and discussion with project staff to develop a draft survey. OnLine at PA Libraries project staff provided feedback on the draft survey, and changes were made to the draft survey to reflect staff comments and suggestions (see Appendix E for a copy of the survey).

Each attending representative received a copy of the training evaluation form at the end of the training session. A total of 368 completed surveys were returned.

Findings

The time lapse between training sessions, which allowed for librarians to develop familiarity with the Internet, had an impact on the Internet expertise of attendees. Overall, attendees rated their Internet navigation skills as "average" with 53.2%, followed by "below average" with 26.5%, "above average" with 18.9, and "excellent" with 1.4% (see Figure 2-22). Thus, as compared to the initial training session (see Figure 2-18 above), more attendees had greater Internet expertise.

As Figure 2-23 indicates, the training session was particularly successful in instructing attendees on how to search the Web, use Web-based search engines, access government documents on the Web, identify/use reference resources on the Web, and create and organize bookmarks. The session was less successful in providing attendees with instruction on downloading Web files, downloading Web-based software, and using Fortress (the workstation security program).

Figure 2-22. Spring Training Participant Internet Expertise.

Internet Navigation Skills	Percentage Skill
Below Average	26.5%
Average	53.2%
Above Average	18.9%
Excellent	1.4%

Figure 2-23. Evaluation of Spring Training Components.

Training Component	Beginning of Day	End of Day
Searching the Web	2.9	4.0
Using Web-based search engines	2.7	3.9
Accessing government documents on the Web	1.8	3.4
Identifying/using reference resources on the Web	2.4	3.7
Creating and organizing bookmarks	2.3	3.7
Downloading Web files to a diskette	1.7	2.7
Downloading software from the Web	1.7	2.5
Using Fortress	1.6	2.8
1=Not At All		5=A Great Deal

Figure 2-24. Spring Training Overall Assessment.

Internet Assessment	Average Assessment	
My goals for this training session were met	1.9	
The ideas presenting in this training session were very clear	1.7	
There was sufficient opportunity to ask questions during the training session	1.5	
Overall, the trainer(s) was well prepared	1.4	
There was too much material covered in this training session	3.5	
I feel like I now have a good basic understanding of how to use the Internet as a reference tool	1.9	
I will now be able to use the Internet to answer reference questions	2.0	
The Internet will be a welcome addition to our library's reference tools	1.4	
1=Strongly Agree		5=Strongly Disagree

Overall, the attendees rated the spring training session highly in all aspects (see Figure 2-24). Attendees found that the trainer was well prepared, the course material was presented clearly, participants were able to ask questions, and the course had the right amount of content. Perhaps more importantly, participants felt that the training would enable them to go back to their libraries and use the Internet as a reference tool.

The training also provided attendees with the necessary skills, desire, and willingness to begin and/or engage in increased user/librarian training activities. In particular, attendees indicated that they would provide training to other library staff (76.4%) and the public (70.9%).

Finally, attendees of the spring training session rated the OnLine at PA Libraries project as "very successful" (1.0, with 1=Very Successful and 5=Very Unsuccessful).

HELP DESK LOGS

The study team reviewed the help desk logs maintained by SIU staff from October 1996 through June 30, 1997. SIU staff designed the help desk logs (see Appendix F) to:

- Track problems and issues that participating libraries faced while using the project equipment;
- Track problems and issues that participating libraries encountered while using the Internet;
- Determine what, if any, trends in calls that the SIU received so as to design future training programs and interim help memos to distribute to participating libraries;
- Serve as a liaison between participating libraries and service technicians, thus be able to determine the necessary support for participating libraries -- SIU or other; and
- Plan for future project needs.

The logs, therefore, provided the SIU and other project managers with valuable feedback on the OnLine at PA Libraries project's implementation.

When the SIU received a help desk call, an incident report (log) was initiated. The problem was identified, described, and attempted to be resolved immediately. If immediate resolution was not possible, the incident report was considered open until formal problem resolution was attained.

Overall, a review of the help desk logs show the following trends:

- Calls received at the beginning of the project involved hardware/software set up and configuration issues, problematic hardware (e.g., bad monitors, faulty modems), and establishing an Internet connection;
- Calls received once the PCs were up and running expanded from set up to usage issues -- e.g., how to configure and use Netscape; and
- Although relatively few, some calls indicated the need for periodic PC reconfiguration to the original settings due to user-made modifications to the system configuration and librarian error.

These trends reflect the cycle of systems implementation issues -- from implementation to general usage.

SUMMARY

The data from the various surveys and help desk log file analysis indicate that the:

- OnLine at PA Libraries program is highly successful;
- Internet serves to increase the scope and range of library collections and reference material;
- Librarians are better able to answer patron questions;
- Public holds the libraries in higher regard due to the workstations, and want an *expansion* of the project through additional workstations, training, and facilities;
- Help desk log files can assist project managers determine project hardware, software, and configuration usage issues; and
- Training sessions (initial and spring) were successful in providing attending library staff with the skills necessary to install and use the workstation as well as how to best use the workstations for improved services delivery.

These data suggest that based on a number of different criteria, different surveys, and responses from different types of individuals, i.e., library directors, library staff, and the public, the OnLine at PA Libraries project accomplished its objectives and was very successful. Indeed, data presented in the next chapter that describes the site visits reinforces the findings presented from the surveys reported in this chapter.