

WVU Research Group
#99032
PO: AB

NONPROFIT COLLABORATIVES TO FACILITATE
RURAL COMMUNITY NETWORKING

Evaluation Report compiled by:

Dong Pil Yoon, Ph.D.
Assistant Professor
University of Missouri

In association with:

Dr. Karen Harper-Dorton, Ph.D.
Dr. David Williams, Ph.D.
Principal Investigators
West Virginia University

January, 2004

TABLE OF CONTENTS

| | |
|---|-----------|
| Primary Focus | 3 |
| Secondary Focus | 3 |
| Matching Partners | 4 |
| Phase One: Survey of Technology Information and End Users' Access | 6 |
| Phase Two: Survey of Technology and Information Access Of Rural Nonprofit Agencies | 18 |
| Phase Three: End-Users Responses to Technology As a Result of the Project | 31 |
| Areas for Future Research | 43 |
| Summary and Discussion | 43 |
| Bibliography | 48 |

Project Evaluation:

Nonprofit Collaboratives to Facilitate Rural Community Networking

*A U. S. Department of Commerce funded Project
at West Virginia University*

Nonprofit Collaboratives to Facilitate Rural Community Networking Project is designed to reduce digital divide phenomenon of West Virginia residents and workers. West Virginia is a state progressing toward digital inclusion of its population despite its history of having high representation of rural, aged, and low income populations. "Non-Profit Collaboratives to Facilitate Rural Community Networking" is one of 41 projects in a pool of 700 proposals that were funded in late 1999. This three-year project was extended for a fourth year. The project website is open at www.as.wvu.edu/~npcollab

The primary focus of this project is to increase community networking and assist a broad range of nonprofit organizations and community-based adults in building capacities for informational and technological access throughout rural counties and isolated regions

The secondary focus of this proposed project is to expand education, cultural and lifelong learning activities. The media for delivery, components of the DTT site, extends preparedness and learning readiness via communication technology, including list serves and web-based communication, to end users.

Project end users include: (1) middle-and upper level managers of nonprofit agencies in each of 55 counties, an agency population of about 3000, (2) community-based service providers including welfare, health, education, community action, employment and corrections agencies, and (3) West Virginia children and families,

particularly low-income and welfare-to-work families, (4) WV National Guard members, and (5) rural elderly.

The project extends information and technology skills to agencies, community centers and homes. Full multi-media network of WV National Guard sites and other local sites is available. Innovative and replicable, the project provides technology information, education and management information to nonprofit organizations and rural communities.

Collaborative and matching partners in the project are:

- The WV National Guard
 - for cost of ATM multi-media delivery of training.
 - award of full Distance Telecommunications Training site
 - The state-of-the-art Distributive Training Technology Site in the School of Applied Social Sciences is one of the West Virginia National Guard Distributive Training Technology Sites, a full multi-media center with 18 computer stations, audio-video capacity, and ATM connectivity.*
- West Virginia Community Action Directors Association
 - for nonprofit management trainees
 - linkage to low-income and welfare-to-work consumers
 - networking with community agencies and client systems
- Governor's Office on Technology
 - for direction, publicity, and marketing and minimal funding
- Software Valley, Inc.
 - for technical consultation
- The Multi-County Community Action Against Poverty

- for nonprofit management trainees
- linkage to low-income housing projects with Internet access
- WV Governor's Cabinet on Children and Families
 - for networking with community agencies and client systems
- West Virginia University, grantee
 - for project implementation, leadership in technology education
 - expertise in delivery of distance education and information access

Project Evaluation

Evaluation is ongoing throughout the life of the project and is called for in project planning and implementation. Consistent with implementation of the project, phases of evaluation are: (1) Survey of Technology Information and End User Access, (2) Survey of Technology and Information Access of Rural Nonprofit Agencies, (3) End Users Response to Technology as a Result of the Project, (4) Overall formative and summative assessment. This evaluation provides quantitative and qualitative information. Public and nonprofit agencies entering the collaboratory respond to preliminary reports and provide organizational information. Demographic profiles and volume of usage and end users are reported and gaps and resources identified.

Formative and summative program evaluation assesses the process and content of program delivery and its overall success. Information is systematically fed back to inform project delivery and program response to identified needs and opportunities for improving programming and determining appropriateness and timeliness of project milestones as defined and achieved. Project evaluation is conducted by project faculty,

graduate assistants and experts external to the project and in association with project staff. Measurements, statistical sampling, data collection, data management, data analyses, and findings are protected for reliability and validity. Satisfaction and retooling of the proposed project's substance and delivery process is reported.

Phase One: Survey of Technology Information and End Users' Access

In order to better understand the information access capacities of participants and nonprofit agencies in West Virginia, two survey instruments were developed and administered in 2000-2001. First, data were gathered to develop baseline information and a population profile of technology training participants.

Survey Methodology

A technology training participant survey instrument was developed and distributed to the first 311 training participants. In this convenience sample, participants were asked to complete the questionnaire at the time of their initial enrollment. The instrument consisted of identifying demographic information, types of technology used, kinds of new technology desired in training, satisfaction of present technology skills, and overall access to computer and Internet resources. Surveys were administered as participants enrolled. Data collected were analyzed using the Statistical Package for Social Sciences. Cover Letter and Participant Survey are shown in Figures 1 and 2 as follow:

Figure 1: Cover Letter: Participant Survey

July, 2000

Dear Participant,

In a project sponsored by the U.S. Commerce Department, the West Virginia University Division of Social Work is conducting a research study on the technology access, technical skills, and interests in lifelong learning for West Virginia residents. We are requesting your participation in this survey to assist a broad range of nonprofit organizations in building capacities for informational and technological access throughout rural counties and isolated regions in the state of West Virginia.

Participation of this study is voluntary. Your responses to the questionnaire will be kept completely confidential and you will be not personally identified with the responses. If you complete the questionnaire, please put the questionnaire into the enclosed stamped envelope and mail it to us at West Virginia University Division of Social Work.

We greatly appreciate your cooperation and your kind help. The findings of this study will be important to us in looking at how we can be helpful to people around the state in using computer and Internet technology. If you have any questions about the survey, please contact us at the Division of Social Work.

Sincerely,

Karen Harper-Dorton, Ph.D.
Professor, Director of the Project
Office: 304 - 293 - 3501 ext. 3130

Sincerely,

Dong Pil Yoon, Ph.D.
Assistant Professor, Division of Social Work
Office: 304 - 293 - 3501 ext. 3114

Figure 2: Participant Survey Questionnaire

Please completely fill in your responses to the questions below. Your answers will be used for comparisons only and will remain confidential. Thank you for your participation.

Agency:

Is your agency: private nonprofit governmental other

Counties served:

Are you currently employed? Yes No

Your Position/Title:

Please circle the type of employment:

temporary part-time (less than 30 hrs/wk) fulltime

What is your salary range (in thousands)?

<20 21-25 25-30 30-35 35-40 40-45 45+

Please circle all of the sources of income and/or benefits that your household received in the last year:

Wages or salary Food stamps SSI benefits Social Security WV
WORKS/TANF/AFDC Unemployment benefits

Which age range do you belong to?

<20 21-30 31-40 41-50 51-60 61+

Your gender: Male Female

Circle the number of school age children in the household:

0 1 2 3 4 5+

Circle your current marital status:

Married Divorced Separated Widowed Single

Circle your highest level of education completed:

some high school high school some college college
some graduate school graduate school post-graduate

Are you interested in a nonprofit management certification?

Yes No

If so, at what level?

undergraduate graduate continuing education other/don't know

Do you have a computer at work? Yes No

Do you have a computer at home? Yes No

Years of employment (permanent job): _____

How frequently do you use a computer (either at home or in the office)?

- ◆ **At work:** Daily Weekly Monthly Rarely Never
- ◆ **At home:** Daily Weekly Monthly Rarely Never
- ◆ **Hours per week:** 0-5 6-10 11-15 16-20 21-25 26-30 30+

How frequently do other members of the household use a computer (anywhere)?

- ◆ **Hours per week:** 0-5 6-10 11-15 16-20 21-25 26-30 30+

How frequently do you use the web (either at home or in the office)?

- ◆ **At work:** Daily Weekly Monthly Rarely Never

- ◆ **At home:** Daily Weekly Monthly Rarely Never
- ◆ **Hours per week:** 0-5 6-10 11-15 16-20 21-25 26-30 30+

How frequently do you use email (either at home or in the office)?

- ◆ **At work:** Daily Weekly Monthly Rarely Never
- ◆ **At home:** Daily Weekly Monthly Rarely Never
- ◆ **Hours per week:** 0-5 6-10 11-15 16-20 21-25 26-30 30+

How many email accounts do you have?

Which of the following technologies do you use on a regular basis? (circle all that apply)

- 1) Fax 2) Phone 3) Cellular (digital or analog) 4) Pager 5) Email
 6) Internet 7) List-serves/chat rooms 8) Discussion forums

How many personal computers are in your household (including laptops)?

Who is your local home telephone provider (Bell Atlantic,...)?

Who is your long-distance home telephone provider (AT&T, MCI...)?

Choose the number (1-5) that best describes the following areas of your computer skills.

1. **Very unsatisfied** – I can't do most things I would like to do
2. **Somewhat unsatisfied** – I can't do many things that I want to do
3. **Neither satisfied or unsatisfied**
4. **Somewhat satisfied** – I can do most things I would like to do
5. **Very satisfied** – I can do everything I would like to do

| BASIC COMPUTER SKILLS | 1 | 2 | 3 | 4 | 5 |
|------------------------------------|----------|----------|----------|----------|----------|
| Turning the computer on & off | | | | | |
| Running a program | | | | | |
| Changing the look of a computer | | | | | |
| Looking up a help topic | | | | | |
| Saving a file | | | | | |
| Opening a file | | | | | |
| Printing a file | | | | | |
| Changing the text in a file | | | | | |
| Using toolbar buttons | | | | | |
| Creating a file/folder | | | | | |
| Moving a file | | | | | |
| Deleting a file | | | | | |
| Installing & uninstalling programs | | | | | |
| Playing a CD | | | | | |
| Connecting to the Internet | | | | | |
| Using email | | | | | |

If given the opportunity, to what extent would you choose to learn about the following programs/operating systems? (Check one in each category)

| General Computer Use | Not Really | Maybe | Some | A lot |
|---|-------------------|--------------|-------------|--------------|
| Computers, computer vocabulary, or Windows 95/98 | | | | |
| long file names, short cuts, the start bar, desktop | | | | |
| Window controls, and the control panel | | | | |
| Basic text editing and formatting | | | | |
| Creating and formatting tables. | | | | |
| Creating a table of contents. | | | | |
| Backing up files | | | | |
| Mail Merge. | | | | |
| Importing, exporting, and inserting files | | | | |
| Basic spreadsheet functions | | | | |
| Overview of spreadsheet program capacities | | | | |
| Review of calculations & built in functions in spreadsheets | | | | |
| Naming cells and ranges in spreadsheets | | | | |
| Applying styles to cells in spreadsheets | | | | |
| Sorting and filtering data | | | | |
| Basic MS Access | | | | |

Create a simple database
Modify a table in Access
Learn record navigation techniques in Access
Use the Find command
Create and use a data entry form in Access
Create a simple report in Access
Sort and filter data in Access
Using e-mail
Address books in email programs
Distribution lists for email
Signature files in email
Filters, and attachments of email
Working with web pages
Create a web page using basic HTML tags
How to use a web browser
Setting bookmarks in web browsers
Retrieving files
Creating and modify web pages
Editing web tables, forms, colors, backgrounds
Advanced search techniques
Downloading and decompressing archives
Audio visually enabled web browser

Playing MIDI music files
Creating effective presentations and visual aids
Editing and formatting text, clip art and pictures
Recoloring, cropping, and creating a custom background

Applying animation effects
PowerPoint presentation to a web-based presentation
Creating graphics for use on the World Wide Web
Modifying images to improve Web access

Findings

Survey responses are reported below and provide information about the population served. In Table 1, Demographic Characteristics of Respondents, the rural population served is identified. Technology interests and some self-assessment of skills as reported by respondents are shown as well. It is noted that among respondents, the

majority are employed full time with 61% of this mostly female population reporting salaries below \$29,696; a finding that is consistent with the wage structure existent in this rural state. According to Table 1, females comprised 78% of the sample and males comprised 22% of the sample. About one-third of the sample (35%) had a high school diploma, 29% had some level of college education, and 36% had a college degree or beyond.

Table 1: Demographic Characteristics of the Respondents

| | |
|---------------------------|---------|
| Gender | N = 299 |
| Male | 22% |
| Female | 78% |
| Age | N = 301 |
| Less than 31 | 17% |
| 31 - 40 | 29% |
| 41 - 50 | 28% |
| above 50 | 26% |
| Levels of Education | N = 298 |
| High school diploma | 35% |
| Some college | 29% |
| College degree and beyond | 36% |
| Annual Income | N = 252 |
| Less than \$20,000 | 61% |
| > \$20,000 | 39% |
| Employment | N = 305 |
| Yes | 91% |
| No | 9% |
| Type of employment | N = 270 |
| Full time | 89% |
| Part time | 8% |
| Temporary | 3% |
| Type of agency | N = 264 |
| Non-profit | 86% |
| Governmental | 10% |
| Other | 4% |

Sixty-one percent reported an annual income of less than \$20,000 and the remainder of respondents (39%) had an income over \$20,000. The majority of the respondents (89%) had full time jobs and worked at either non-profit agencies (86%) or governmental agencies (10%).

Descriptive analyses of survey data of both participants and nonprofit agencies provide information concerning participants from local communities and employees of nonprofit agencies who responded to recruitment advertisements to participate in various Microsoft office applications and Internet supported applications. Survey results from nonprofit agencies' responses provide interesting insight for the state of technology utilization among West Virginia nonprofit agencies in this sample.

Table 2: Basic computer skills of Respondents (N = 298)

| Variable | Basic computer skills (%) Unsatisfied /Neutral/ Satisfied | P - Value |
|----------------------------|--|-----------|
| Computer at work Yes/No | $\chi^2 = 26.92$ | .000*** |
| Computer at home Yes/No | $\chi^2 = 34.59$ | .000*** |
| Note: *** < .001 | | |

Table 2 provides a profile of basic computer skills of respondents. By and large, there is some association between usage of computers at work and/or home and basic computer skills, indicating that those who use computers at work and home are more likely to be satisfied with their basic computer skills than those who do not use both.

Table 3: Number of Computer and Connection to Internet by Annual Budget (N = 298)

| Variable | Annual budget High/Low | P - Value |
|------------------------------------|---------------------------|-----------|
| Number of computers High/Low | $\chi^2 = 105.5.$ | .000*** |
| Connection to Internet High/Low | $\chi^2 = 34.0$ | .000*** |

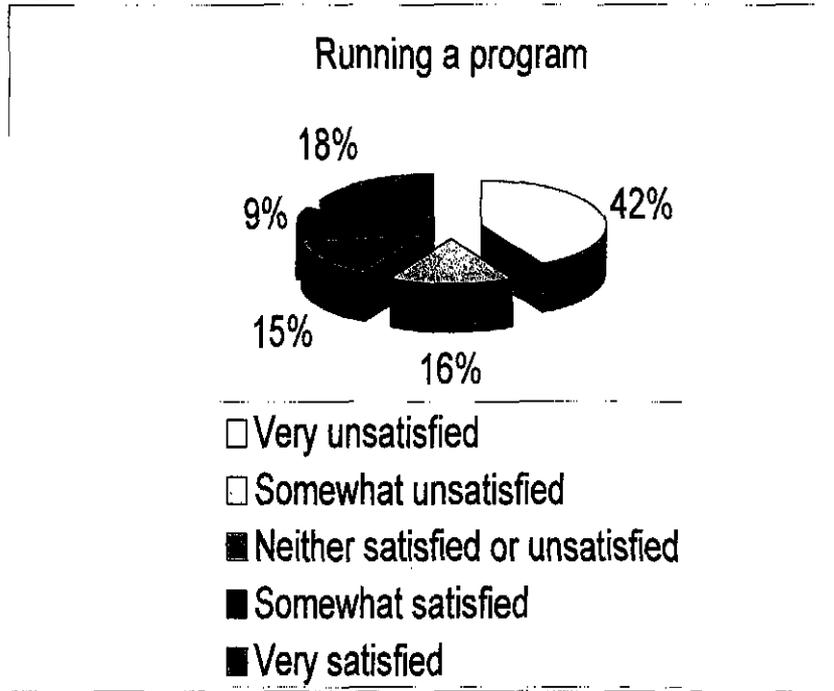
Note: *** < .001

Table 3 reports that there are some statistically significant differences between high annual budget and low annual budgets in terms of the number of computers and their connection to Internet, indicating that the higher the annual budget, the greater the possession of computer and connection to the Internet.

Of interest is the observation that respondent satisfaction with their level of technology information and skills upon entering training was low. Early observation of the first three training groups, about 60 individuals, found the audience to be: (1) older than initially expected with the oldest person being 68 and an overall average age being about 50 years; (2) having few computer skills with about 50% of those attending being mostly computer illiterate; (3) commonly reporting being motivated to “to e-mail my kids” and “to get a job.”

Figure 3 indicates that the level of satisfaction with running computer programs is rated at the level of very satisfied (18%), somewhat satisfied (9%), neither satisfied or unsatisfied (15%), somewhat unsatisfied (16%), and by 42% as being of very unsatisfied.

Figure 3: Satisfaction with Running a Computer Program



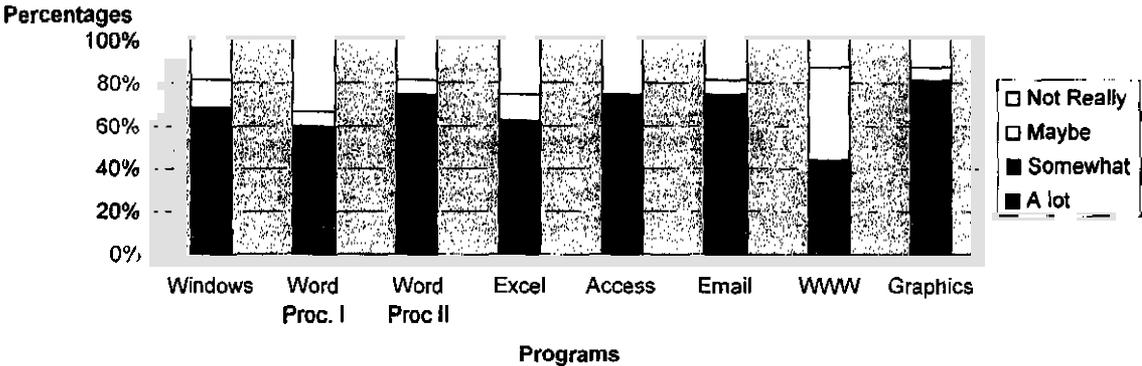
In this Figure the largest two groupings (60%) reflect a dissatisfied population. Data and results include profiles of nonprofit agencies' employee skills and interests in information technology training. This profile shows that project participants are surprisingly thin in terms of initial skills and abilities but they proved to be rich in willingness to enroll in a variety of training delivered by distance education via multi-media sites, which include interactive computer networks.

Self-Defined Learning Interests

At the outset of the project in 2000 the majority of the respondents varied in their interests in computer training. According to Figure 4, both Access and Email are rated at the level of "a lot" of interest (50%) while 20-22 % report "not really" being interested in Access and Email. Both WWW

and Graphics are rated at the level of "between a lot and maybe" (90%) and by another 10% as being of "not really." Surprisingly, interest in gaining skills in graphics is strong with 38% reporting "a lot" of interest. It is evident that respondents report interest in learning more intermediate or advanced skills instead of basic skills with only about 11% reporting interest in Word Processing I or Introduction to Microsoft Word. The need for Email is much higher in terms of "a lot" of interest, 50%. During training sessions, it became evident that for some participants the relationship of Email to the World Wide Web was poorly understood.

FIGURE 4: 2000-2001 Self-Defined Learning Interests



Observations and Lessons Learned

This initial survey provides helpful baseline data concerning the population and their interests in gaining technology skills and accessing information. This initial survey, early in the project, establishes demographics of the population served by technology training and information access. It can be anticipated that during the implementation phase of the project that the level of information and access to technology will become a more familiar and standard part of everyday work and leisure activity. As the utilization and growth of technology information evolve world wide, end-user skills and interests in faster access, higher-level skills and up-to-date software and hardware will increase as well. This survey finds the project serving

those it was intended to serve, community-based end-users with elementary technology skills for the most part and interests in training with little access to equipment and classes.

Phase Two: Survey of Technology and Information Access of Rural Nonprofit Agencies

This analysis reports findings from a 2000-2001 survey that was initiated to gain an understanding of the characteristics of nonprofit agencies' technological preparedness to carry out their own operations while contributing to capacity building with their consumers and families in rural communities. In order to examine the state of technology resources in rural nonprofit agencies providing social services and capacity building for workforce development, an exploration of on-line yellow page listings of social service agencies in West Virginia produced a population of 800 listings. Utilizing a table of random numbers, a random sample of 300 agencies was drawn from this list. Once selected, surveys were mailed to agency directors assuring anonymity and soliciting their voluntary participation. Only one mailing with repeat mailing of questionnaires returned with incorrect addresses was conducted. From this mailing, 151 (50%) surveys were returned—a strong response rate for mailed surveys.

Rural Nonprofit Agencies

The primary focus of this project is to increase information access for rural families and to assist a broad range of nonprofit organizations in building capacities for informational and technological access throughout rural counties and isolated regions. Secondly, education and lifelong learning goals are extended to communities,

nonprofit organizations and especially welfare-to-work families who are in need of new skills and information.

West Virginia is typical of rural areas in the nation. Factors such as isolation, poverty, and technology challenge many organizations and families where there is lack of access to Internet connections. For many in search of Internet access in rural areas, often small, privately owned telephone providers cannot support adequate bandwidth for current technology demands. For example, West Virginia's population of 1.2 million is served by eight or more separate telephone companies. The large major telephone carrier serves only about 2/3 of the state. Recognizing inadequate infrastructure support, finding ways to bring rural areas into the informational age with technology, economic assistance and technical support is an important means of economic development in present day operations and includes business incubation and extension of technology into rural classrooms (Hoffman, 1999; Baldwin, 1999).

Reasons for Surveying Rural Nonprofits

Experience in the project soon taught that information access and workforce development demands, particularly with welfare-to-work families, were being met almost solely by small rural nonprofit agencies located throughout most communities and in every county in the state. Gathering information concerning the state of technology and its utilization among nonprofit agencies in West Virginia was determined to be an important step in helping agencies to gain needed skills and increase information access for better serving their consumers. First hand information suggested that major technology gaps were present for many agencies. Field visits and personal inquiries provided information that small agencies were poorly equipped for the age of information

technology. For example, in one agency a staff person was assigned to manage all agency e-mail because only one computer was online. Other agencies had no computers, and some lacked Internet access. Further, outdated equipment prohibited efficient use, as did outdated software and a general lack of technology skills among staff.

The survey was designed to gather information concerning budget, training needs, size of organizations, and access to technology resources including hardware, software and Internet. This information gathering effort was relatively quick and inexpensive. It was selected as a reliable way to learn about technology information needs from a statewide random sample of nonprofit agencies. In addition, focus groups at community conference events produced qualitative accounts of efficiency needs that are useful additions to survey data.

Survey Methodology with Rural Nonprofits

This analysis reports findings from a 2000-2001 survey that was initiated to gain an understanding of the characteristics of nonprofit agencies' technological preparedness to carry out their own operations while contributing to capacity building with their consumers and families in rural communities. In order to examine the state of technology resources in rural nonprofit agencies providing social services and capacity building for workforce development, an exploration of on-line yellow page listings of social service agencies in West Virginia produced a population of 800 listings. Utilizing a table of random numbers, a random sample of 300 agencies was drawn from this list. Once selected, surveys were mailed to agency directors assuring anonymity and soliciting their voluntary participation. Only one mailing with repeat mailing of questionnaires returned with incorrect addresses was conducted. From this

mailing, 151 (50%) surveys were returned—a strong response rate for mailed surveys and one that is believed to be reflective of interest in technology and Internet resources.

Figure 5 reports the survey cover letter informing agency directors and supervisors of the intent of the questionnaire designed to assess the state of technology in nonprofit social service agencies throughout West Virginia that were randomly selected from a yellow pages listing. This survey has the purpose of aiding the project in determining whether small, nonprofit agencies served by the project provide technology resources, training, and/or access for the purposes of their operations and employees in serving their consumers. The survey is reported in the following Figure 6.

Figure 5: Cover Letter: Agency Survey

December 2001

Dear Administrator,

As part of the Nonprofit Collaborative to facilitate rural community networking, the West Virginia University Division of Social Work asks you to *please return the enclosed survey in the enclosed business return envelope*. Your participation will help the U.S. Commerce Department to identify nonprofit social service agency's technological capacity in the state of West Virginia.

Participation in the survey is voluntary, and your responses will be kept completely confidential. Your answers will in no way be personally identified with the responses. The data from the surveys will be used in the aggregate to help allocate national resources for technological capacity building.

We greatly appreciate your cooperation. The findings of this study will be important to Nonprofit Collaboratives in understanding the type of technological aid needed by nonprofit social service agencies in West Virginia. If you have any questions about the survey, please contact us at the Division of Social Work.

Sincerely,

Sincerely,

Karen Harper-Dorton, Ph.D.
Professor, Project Director _____

Dong Pil Yoon, Ph.D.
Professor, Project Analyst _____

The cover letter, questionnaire, and return envelope were all mailed according to agency information available in the yellow pages listings. Given the strong response rate and quick replies, only one mailing was deemed to be necessary. It is noted that identify information was removed from all mailings prior to data entry and analyses. Individual agencies were protected from disclosure of any individually identifying information.

Figure 6: Survey of WV Nonprofit Agencies Technology Access and Usage

NONPROFIT COLLABORATIVES
Survey of WV Nonprofit Agencies' Technology Access and Usage

Please circle the correct answer.

Section 1. Training.

1. Did your agency's employees take training courses offered by Nonprofit Collaboratives?
Yes No – **Skip to Section 2. Agency.**
2. Did your employees generally find the course useful or helpful?
Yes No
3. Would your agency use another Nonprofit Collaboratives course?
Yes No
4. How much has your agency's computer use increased since training with Nonprofit Collaboratives?
None A little bit Somewhat A great deal

Section 2. Agency.

5. About how many individuals work for your agency?
Less than 15 16 to 29 30 to 50 51 to 100 more than 200
6. What is your agency's approximate yearly budget?

Less than \$100,000 \$100,000 to \$399,999 \$400,000 to \$699,999
\$700,000 to \$999,999 \$1,000,000 to \$3,999,999 \$4,000,000 to \$6,999,999
more than \$10,000,000

7. Estimate approximately what percentage of your agency's yearly budget supports technology in your agency each year: _____ (For example: replacing computers, technical support, purchasing software, etc.)

Section 3. Technology Resources.

8. Which company provides your agency's telephone service?

9. How many computers are in your agency?

0 – Skip to Section 4.

Ownership: 1 to 5 6 to 10 11 to 20 21 to 50 51 to 100 101+

10. How frequently does agency staff use the agency's computers?

Daily Weekly Monthly Rarely Never

11. What operating system do the agency's computers use?

Windows 95 or higher Macintosh Other:

12. What word processing software do the agency's computer use?

Microsoft Word WordPerfect Corel WordPerfect

Other:

13. What proportion of your agency's computers are connected to the Internet?

None – Skip to Section 4.

Ownership. Less than 25% 25% to 50% 50% to 75% more than 75%

14. What type of connection to the Internet does your agency have?

Modems Cable-Modems DSL ISDN Satellite T1/T3/ATM

15. Who is your agency's Internet service provider?

16. Do your employees routinely use commercial email (like Yahoo! or Hotmail) for work?

Yes No

17. Does your agency have its own web page on its own server?

Yes No

18. Does your agency have its own server that provides agency email accounts? (i.e., *jdoe@youragency.org*)

Yes No

Section 4. Ownership.

Mark all that apply.

Mark all that apply.

- | | | | | |
|--|---|---|---------------------------------------|---|
| <input type="checkbox"/> Voicemail | <input type="checkbox"/> Overhead projector | <input type="checkbox"/> Fax | <input type="checkbox"/> CD burner | <input type="checkbox"/> Computer network |
| <input type="checkbox"/> Cellular phones | <input type="checkbox"/> Dictaphone | <input type="checkbox"/> Inkjet/Laser printer | <input type="checkbox"/> Listserve | <input type="checkbox"/> Computer projector |
| <input type="checkbox"/> Pager | <input type="checkbox"/> Laptop | <input type="checkbox"/> Video camera | <input type="checkbox"/> Satellite TV | <input type="checkbox"/> Palm Pilot |
| <input type="checkbox"/> Digital Camera | <input type="checkbox"/> Scanner | <input type="checkbox"/> Zip Drive | <input type="checkbox"/> Webcam | <input type="checkbox"/> Other: _____ |

Findings

Descriptive analysis of survey data offers helpful insights into the state of information access for this sample of rural nonprofit agencies. According to Table 4, agencies whose staff had taken training sessions offered by the Nonprofit Collaboratives project comprised approximately 19 percent of the random sample of nonprofit agencies statewide. Given the random nature of the sample, this finding suggests that a broad range of nonprofit agencies have participated in the project. There were many very small agencies among the respondents, 50.3% reported having less than 15 employees. Agencies with 16-50 employees comprised 21.2% and an additional 25.8% were larger than 50 employees.

The pattern of annual budgets fell out in quadrants as those agencies with less than \$100,000 yearly represented 23.2% of respondents; 21.2% were between \$100,000 to \$400,000 annually; 18.5% between 400,000 to \$1,000,000; and 31.3% above \$1,000,000. Considering the finding that nearly half of the agencies had budgets below \$400,000, it is not surprising that a

Table 4: Characteristics of the Nonprofit Agencies Study Sample (N = 151)

| Variable | Frequency | Percentage |
|------------------------------------|-----------|------------|
| Taking Training Courses | | |
| Yes | 28 | 19% |
| No | 121 | 81% |
| Missing | 2 | |
| Number of the employees | | |
| Less than 15 | 76 | 52% |
| 16 to 50 | 32 | 22% |
| More than 50 | 39 | 26% |
| Missing | 4 | |
| Annual budget | | |
| Less than \$100,000 | 35 | 25% |
| \$100,000 to \$400,000 | 32 | 22% |
| \$400,001 to \$1,000,000 | 28 | 19% |
| More than \$1,000,000 | 48 | 34% |
| Missing | 8 | |
| Number of computers | | |
| 0 | 9 | 6% |
| 1 to 5 | 54 | 36% |
| 6 to 20 | 52 | 35% |
| More than 20 | 34 | 23% |
| Missing | 2 | |
| Frequency of using the computer | | |
| Daily | 135 | 96% |
| Weekly | 5 | 3% |
| Rarely | 1 | 1% |
| Missing | 10 | |
| Connection to the Internet | | |
| None | 8 | 6% |
| Less than 25% | 33 | 23% |
| 25% to 75% | 34 | 24% |
| More than 75% | 66 | 47% |
| Usage of commercial email for work | | |
| Yes | 68 | 50% |
| No | 67 | 50% |
| Missing | 16 | |

| | | |
|-----------------------|----|-----|
| Ownership of web page | | |
| Yes | 74 | 55% |
| No | 61 | 45% |
| Missing | 16 | |
| Ownership of server | | |
| Yes | 58 | 43% |
| No | 77 | 57% |
| Missing | 16 | |

roughly similar proportion of agencies report having fewer than 15 employees, a finding indicating a strong representation of very small agencies with small annual budgets. Table 5 provides a profile of the technology resources by annual budget. By and large, there are some differences between high annual budget and low annual budget in terms of number of computers, ownership of web page and server providing email accounts. However, there is no difference between high annual budget and low annual budget in terms of usage of commercial email for work. Findings from this sample reflect provision of web page and server resources to mainly be association networks of member agencies, a provision that maximizes resources in terms of money and expertise.

Table 5: Number of Computer and Connection to Internet by Annual Budget (N = 298)

| Variable | Annual budget | P - Value |
|------------------------|------------------|-----------|
| High/Low | | |
| Number of computer | | |
| High/Low | $\chi^2 = 105.5$ | .000*** |
| Connection to Internet | | |
| High/Low | $\chi^2 = 34.0$ | .000*** |

Note: *** < .001

All but 9 (6%) agencies reported having computers. Agencies with 1- 5 computers comprised 35.8% and those with 6-20 computers comprised another 34.4%. It is noted that 34 (22.5%) agencies had more than 20 computers although 71 (47%) agencies reported having more than 16 employees with half of this group having more than 50 employees. These data suggest that employees in some agencies are either sharing workstations or foregoing using technology altogether. In 89.4% of the agencies, computers were used daily although about 27% of agencies had less than one-fourth of agency computers connected for Internet access. For 43.7% percent (n=66), more than three-fourths of agency computers had Internet access. Forty-five percent of the agencies reported using commercial email for work related tasks. Of respondents, 49% (n=74) and 44.4% (n=67) respectively reported having a web page and server. This finding is misleading in several cases for many individual agencies. Member agencies of larger associations of geographically spread agency networks do have web page and server support for their membership; and for some, data are regularly submitted on disks for entry at central locations. County and state member associations provide server support, in many cases, for small member agencies. Thus, neither server nor web page management is typically a task carried out independently by small agencies.

Table 6 provides a profile of the technology resources in nonprofit agencies and shows that more high-end technology resources are present only in a few agencies such as: web cam (14%), satellite TV (4%), palm pilot (4%), and digital camera (2 %). Figure 1: Nonprofit Agencies Work environment Resources shows the data differently.

Surprisingly zip drives (11%) and cellular phones (9%) are not very common. List serve (8%) and computer network (37%) are low and may be reflective of both funding and expertise. About a third of the rural nonprofit agencies report having a scanner (37%), CD burner (36%),

video camera (33%), and pager (29%) indicating that the remaining two-thirds of respondent agencies lack these resources. Considered common and low-end technology, most commonly reported resources include: inkjet/laser printer (61%), and overhead projector (61%). About half of the agencies have dictaphone (52%), laptop (49%), voice mail (48%), and fax (43%) equipment.

Table 6: Profile of technology resources used in nonprofit agencies (N =151)

| | Percentage |
|----------------------|------------|
| Computer Projector | 86% |
| Inkjet/Laser Printer | 61% |
| Overhead Projector | 61% |
| Dictaphone | 52% |
| Laptop | 50% |
| Voicemail | 49% |
| Fax | 43% |
| Computer Network | 37% |
| Scanner | 37% |
| CD Burner | 36% |
| Video Camera | 33% |
| Pager | 29% |
| Webcam | 14% |
| Zip Drive | 12% |
| Cellular Phones | 9% |
| Satellite TV | 5% |
| Palm Pilot | 5% |
| Digital Camera | 1% |

It needs to be noted that 85% of respondent agencies reported having a computer projector that is inconsistent with the state of technology resources generally available and is thought to reflect a misunderstanding concerning the nature of this item. Also, it is worth noting that 19% of respondent agencies' employees participated in NPCOLLAB training where the most frequently requested trainings were e-mail and Excel; skill levels that do not support computer projection equipment utilization.

In addition to survey data, focus groups at community conference events generally indicated having: (1) many outdated computers, (2) strong interest in learning how to download documents, (3) strong interest in data management, (4) training needs for spreadsheet management, web page design and e-mail. This additional qualitative information provides additional information about the state of technology usage among these rural service providers and is useful in planning future fact training and capacity building efforts.

Discussion and Reflections of Agency Survey

Gaining information on the state of technology and its utilization in rural nonprofit social service agencies, however enlightening, is a sobering experience. This survey adds to the scarce literature that suggests that nonprofit social service agencies are finding themselves competing for increasingly scarce resources to meet expanded demands of technologically supported reporting, accountability and even service delivery requirements. In the case of rural areas, historic problems of low density populations and increasing representation of elderly only compound the challenge of introducing and utilizing new technology in regions where funding and technological infrastructure are scarce.

Findings from this survey indicate that rural nonprofit agencies are moving toward greater utilization of information technology. However, it can be concluded that rural nonprofit agencies (1) are generally small; (2) lack adequate funding in general; (3) utilize common applications such as printers, dictaphones, and overhead projectors more than recent technologies such as scanners, CD burners, list serves, or digital cameras; and (4) indicate an overall gap in technology utilization.

Are rural nonprofits really important entities in retooling rural communities? The answer is an unequivocal "Yes!" Recent growth and potentials of nonprofit agencies are not

well known by everyone. Located somewhere between the comfort of public support and the competition experienced by private and for-profit agencies, nonprofit agencies have grown in size and expertise as service providers. Nonprofits often have considerable dependence on a volunteers and benevolent donors. These agencies provide a range of services that generally complement public social services. In many communities, youth programs, adult education, lifelong learning opportunities, and recreational programs fall under the auspices of various nonprofit organizations.

Known more for their images as traditional and dependable community supporters rather than as risk takers or cutting edge innovators, nonprofit agencies are generally not the first images that come to mind with information technology expansion. However, as the nonprofit sector changes in response to service demands and opportunities, challenges in meeting workplace efficiencies and developing service effectiveness are forces shaping demands for new technologies. Combining the instability of a voluntary workforce and often unstable funding, heavy investment in new technologies and training are understandably not undertaken quickly or without considerable long-range planning.

A recent study of managers drawn from a sample of 650 human service providers examines technology acquisitions of nonprofit and public sector agencies. In this study, Cored (2001) identifies seven factors that are consistent with the slow adaptation of new technologies in the nonprofit sector: (1) lack of economic resources; (2) slow adoption of new technologies due to lack of autonomy; (3) turnover in voluntary workforces; (4) donor commitments for investment in new technologies; (5) lack of governmental funding for investment in information technology; (6) gaps in technical expertise; and (7) attitudes of key personnel. These factors seem germane to the problem of adapting, utilizing and expand new information technologies in

nonprofit agencies, particularly for those small and sparsely located rural agencies. Again, research focuses mostly on acquisition of new technologies, almost to the exclusion of concerns about training and expertise in terms of efficiencies in applications.

However, important in learning more about the low budgets, small agencies, and need for technology upgrades, his small study is only one view of the state of information technology in rural agencies. As such, its scope falls short of providing information concerning bandwidth availability, age or capacity of equipment, and the actual skill levels of staff across multiple computer programs. The survey is somewhat weak concerning long range plans for introducing and implementing various information technologies in rural nonprofits in future months. Despite having identified these gaps in this small, time-limited project, this project has served to open the door for nonprofit agencies utilization of technology on campus and for increased awareness of higher levels of technology available for adoption by many small agencies that lack electronic data management supports. Findings from this survey suggest that rural nonprofit agencies in West Virginia are in general need of additional information technology resources.

Phase Three: End-Users Responses to Technology as a Result of the Project

Overall impact of the project and the effort of increasing exposure to communication and information technology were evaluated at the end of the four years of project implementation. A random sample of eighty end users were selected from a listing of 1000 participants entered into the data base August, 2003. Telephone calls were made from the list until 40 responses were collected. A qualitative study involving structured interviewing of individual end-users who participated in various technology training and distance education activities was conducted to determine the impact in their

Figure 6: Interview Format for Random Telephone Survey of Forty End-Users

1. Do you remember what training you had?
In general was the computer training helpful?
Was the instructor physically there or at a distant site?
How have your computer skills changed?
How have your Internet skills changed?
2. How has your use of computers changed--in other words, what do you use the computer for now that is different?
3. How has your use of Internet changed--in other words, do you use it?
Do you use it frequently?
What do you use the Internet for now that is different?
4. Did the training you did with us contribute to your learning more or has other computer training been more beneficial?
Overall, has your comfort level with using computers changed since you were with us?
Has your Internet comfort level changed since you were with us?
5. Would you describe any new or different computer related projects that you have attempted or do as a result of the training?
6. Since our training session, have you updated your computer? Hardware? Software?
Since our training session, have you updated your Internet Access? Hardware?
Software?
How long have you been in the workforce?
7. As a result of your interest in computers, can you estimate how much money you have spent on computer equipment, printers, or computer programs in the past 6 months?
8. Research shows that education and income affect use of computers and Internet. The average household income in WV is \$29,696; would you estimate your income to be above or below that average?
Is education of those in your household typically high school? College?

lives from their changed interaction with technology. Open ended questions left room for responses concerning overall changes in utilization and impact on daily life and work.

Introductory protocol for initiating each telephone interview used is reported in Figure 7 as follows:

Figure 7: Introductory Protocol for Telephone Survey

I am calling from WVU Nonprofit Computer Training Project. I am a Graduate Research Associate working with Dr. Karen Harper-Dorton. You attended one of our training sessions on computer and Internet skills. I am calling you because you were randomly selected from our training records to help us evaluate how we did on our training. I have a few brief questions that will take about 15 minutes. Is this a good time for you? Would there be a better time for me to call back? Also, I am required to let you know that your name will not be used in any way and that you and others whom we are calling will remain anonymous in reporting our results. You do not have to answer every question.

Top Survey: Post Training Responses of Project End-Users

Abstract

Telephone interviews of forty randomly selected end-users from a listing of 1000 end-users were conducted to determine how the technology training has benefited or changed participant perceptions of technology information and access in their lives at home and at work. Responses to predetermined interview questions, shown in Figure 6, were recorded, transcribed and analyzed descriptively and qualitatively as applicable. Overall findings are useful in reporting satisfaction, information and skills gained from a variety of end-users representative of the rural population served by the Nonprofit Collaboratives Project.

Overview of the Project

The overall purpose of the Nonprofit Collaboratives Project is to reduce digital division in West Virginia as more end-users become digitally informed and included in information advancement. Project implementation covering four years, spanned a time in advancement of technology worldwide, particularly in rural areas of the United States, perhaps the most technologically advanced society around the globe. Having served individuals and nonprofit organizations throughout the state, this telephone survey assesses perceptions of lasting helpfulness and usefulness of those served by the project.

Methodology included random sampling of 1000 end-users listed in the Project database. Random sampling was accomplished by applying a table of random numbers. Eighty end-users were identified in order to accomplish reaching 40 people by telephone calls. The study met Institutional Review Board standards for human subjects, and potential participants were assured confidentiality. Data collected were reviewed both quantitatively and qualitatively with descriptive statistics being applied to determine population characteristics and themes being identified to determine general sentiment toward benefits of having been involved in the Project.

Interviews were conducted with forty end-users from Nonprofit Collaboratives Project participation. The participants of this survey have had training within the past two years. Conducting interviews according to predetermined questions presented in Figure 6, the goal of the study was to learn how technology and information access training has affected participants and their computer use. The interview consisted of a series of closed and open-ended questions as presented in Figure 6. The telephone interview assessed whether the training was helpful, what training the person took, if the instructor was physically there or at a distant site, and how the participants use of computers changed since their course. Although the study was not

designed to assess how much money the participant spends on their own personal computer, we asked how much money participants have spent and will spend on hardware and software. These eight questions were asked to each participant and their responses were evaluated. Graduate Research Assistants conducted the interviews in association as part of the overall project evaluation.

Data Analysis

Analysis began with the authors reading the transcript of each interview. The authors defined descriptive codes that identified positive comments and negative comments toward the courses and whether the participant uses computers now or not. The range of years participants have been in the work force is 3 years to 55 years. The average years people reported working was eleven to fifteen years (25%). The majority of participants (58%) made above the average annual household income of \$29,696. Half had a college education, 40% had a high school education, and 10% had some college education. More end-users than anticipated had some college education.

Participants were asked to describe their computer training experience through a series of closed and open-ended questions. Most participants (77%) received training from an on-site instructor. It was a unanimous consensus that the participants felt the training was helpful. Twenty-nine out of forty said that their computer skills had improved greatly. Sixteen participants felt their computer skills had changed somewhat. Twenty out of forty participants reported that their Internet skills had improved greatly since the training. Six participants felt that their Internet skills had improved somewhat. Most participants reported that they use the computer for work related projects.

Table 7 reports frequencies of responses to interview questions. Descriptive statistics report frequencies in response to interview questions.

Table 7: Frequencies in Response to Interview Questions

Q1.A. Do you remember what training you had?

Descriptive Statistics

| | N | Sum | Mean |
|-----------------------|----|-----|----------|
| Basic | 40 | 17 | .42 |
| Excel | 40 | 15 | .37 |
| Net/Webdesign | 40 | 10 | .25 |
| Access | 40 | 7 | .18 |
| Powerpoint | 40 | 2 | 5.00E-02 |
| Word | 40 | 2 | 5.00E-02 |
| don't remember | 40 | 1 | 2.50E-02 |
| Valid N (listwise) | 40 | | |

Q1.B. In general was the computer training helpful?

Descriptive Statistics

| | N | Sum | Mean |
|-----------------------|----|-----|------|
| Yes | 40 | 40 | 1.00 |
| No | 40 | 0 | .00 |
| Valid N (listwise) | 40 | | |

Q 1.C. Was the instructor there or at a distant site?

Descriptive Statistics

| | N | Sum | Mean |
|-----------------------|----|-----|------|
| Yes | 40 | 31 | .77 |
| No | 40 | 8 | .20 |
| Valid N (listwise) | 40 | | |

Q1.D. How have your computer skills changed?

Descriptive Statistics

| | N | Sum | Mean |
|-----------------------|----|-----|----------|
| improved greatly | 40 | 29 | .73 |
| somewhat | 40 | 16 | .40 |
| No | 40 | 3 | 7.50E-02 |
| Valid N (listwise) | 40 | | |

Q1.E. How have your internet skills changed?

Descriptive Statistics

| | N | Sum | Mean |
|--------------------|----|-----|------|
| improved greatly | 40 | 20 | .50 |
| No | 40 | 14 | .35 |
| somewhat | 40 | 6 | .15 |
| Valid N (listwise) | 40 | | |

Q2.A. What do you use the computer for now that is different?

Descriptive Statistics

| | N | Sum | Mean |
|---------------------|----|-----|----------|
| home/work interests | 40 | 16 | .40 |
| Use more Internet | 40 | 14 | .35 |
| more documents | 40 | 12 | .30 |
| learned shortcuts | 40 | 6 | .15 |
| N/A | 40 | 4 | .10 |
| financial | 40 | 4 | 1.00E-01 |
| Valid N (listwise) | 40 | | |

Q3.A. How has your use of Internet changed-in other words, do you use it?

Descriptive Statistics

| | N | Sum | Mean |
|--------------------|----|-----|----------|
| Webbrowse | 40 | 23 | .57 |
| Didn't change | 40 | 8 | .20 |
| research | 40 | 6 | .15 |
| N/A | 40 | 5 | .13 |
| work | 40 | 1 | 2.50E-02 |
| Valid N (listwise) | 40 | | |

Q3.B. Do you use it more frequently?

Descriptive Statistics

| | N | Sum | Mean |
|--------------------|----|-----|----------|
| more frequently | 40 | 26 | .65 |
| No | 40 | 12 | .30 |
| N/A | 40 | 2 | 5.00E-02 |
| Valid N (listwise) | 40 | | |

Q3.C. What do you use the Internet for now that is different?

Descriptive Statistics

| | N | Sum | Mean |
|-----------------------|----|-----|----------|
| N/A | 40 | 18 | .45 |
| research | 40 | 8 | .20 |
| e-mail | 40 | 8 | .20 |
| Different/look up | 40 | 8 | .20 |
| Work | 40 | 5 | .13 |
| Browse | 40 | 2 | 5.00E-02 |
| Valid N (listwise) | 40 | | |

Q4.A. Did the training you did with us contribute to your learning more or has other computer training been more beneficial?

Descriptive Statistics

| | N | Sum | Mean |
|-----------------------|----|-----|------|
| ThisTraining | 40 | 28 | .70 |
| No | 40 | 6 | .15 |
| 1st training | 40 | 5 | .13 |
| Valid N (listwise) | 40 | | |

Q4.B. Overall has your comfort level with using computers changed since you were with us?

Descriptive Statistics

| | N | Sum | Mean |
|-----------------------|----|-----|------|
| comfort increased | 40 | 35 | .87 |
| somewhat | 40 | 5 | .13 |
| No | 40 | 0 | .00 |
| Valid N (listwise) | 40 | | |

Q4.C. Has your Internet comfort level changed since you were with us?

Descriptive Statistics

| | N | Sum | Mean |
|-----------------------|----|-----|----------|
| comfort increased | 40 | 27 | .67 |
| No | 40 | 7 | .18 |
| somewhat | 40 | 5 | .12 |
| 1st training | 40 | 1 | 2.50E-02 |
| Valid N (listwise) | 40 | | |

Q5.A. Would you describe any new or different computer related projects that you have attempted or do as a result of the training?

Descriptive Statistics

| | N | Sum | Mean |
|-----------------------------|----|-----|------|
| projects for work & home | 40 | 17 | .42 |
| none | 40 | 12 | .30 |

| | | | |
|-----------------------|----|---|-----|
| Feel more comfortable | 40 | 7 | .18 |
| web design | 40 | 6 | .15 |
| graphs | 40 | 5 | .13 |
| Valid N (listwise) | 40 | | |

Q6.A. Since our training session, have you updated your computer?

Descriptive Statistics

| | N | Sum | Mean |
|--------------------|----|-----|------|
| No | 40 | 22 | .55 |
| Yes | 40 | 18 | .45 |
| Valid N (listwise) | 40 | | |

Q6.B. Have you updated your internet?

Descriptive Statistics

| | N | Sum | Mean |
|--------------------|----|-----|------|
| No | 40 | 29 | .73 |
| Yes | 40 | 12 | .30 |
| Valid N (listwise) | 40 | | |

Q6.C. How long have you been in the work force?

Descriptive Statistics

| | N | Sum | Mean |
|--------------------|----|-----|----------|
| 11-15 | 40 | 10 | .25 |
| 16-20 | 40 | 5 | .13 |
| 6-10 | 40 | 4 | .10 |
| 46-50 | 40 | 4 | .10 |
| 21-25 | 40 | 4 | .10 |
| 1-5 | 40 | 4 | .10 |
| 31-35 | 40 | 3 | 7.50E-02 |
| Not working | 40 | 3 | 7.50E-02 |
| 26-30 | 40 | 3 | 7.50E-02 |
| 36-40 | 40 | 1 | 2.50E-02 |
| 51 & above | 40 | 1 | 2.50E-02 |
| 41-45 | 40 | 1 | 2.50E-02 |
| Valid N (listwise) | 40 | | |

Q7.A. How much have you spent on your computer in the last six months?

Descriptive Statistics

| | N | Sum | Mean |
|-------------|----|-----|------|
| Don't know | 40 | 18 | .45 |
| <4000\$ & < | 40 | 9 | .23 |
| <100\$ | 40 | 8 | .20 |
| <500\$ | 40 | 5 | .13 |

| | | | |
|-----------------------|----|---|----------|
| <1500\$ | 40 | 3 | 7.50E-02 |
| <2000\$ | 40 | 2 | 5.00E-02 |
| <1000\$ | 40 | 1 | 2.50E-02 |
| 0\$ | 40 | 0 | .00 |
| Valid N (listwise) | 40 | | |

Q7.B. How much will you spend in the next year?

Descriptive Statistics

| | N | Sum | Mean |
|-----------------------|----|-----|----------|
| <5000\$ and < | 40 | 23 | .58 |
| Don't know | 40 | 11 | .28 |
| <100\$ | 40 | 8 | .20 |
| <3000\$ | 40 | 4 | .10 |
| <1000\$ | 40 | 2 | 5.00E-02 |
| <4000\$ | 40 | 2 | 5.00E-02 |
| <1500\$ | 40 | 2 | 5.00E-02 |
| 0\$ | 40 | 1 | 2.50E-02 |
| <2000\$ | 40 | 1 | 2.50E-02 |
| <500\$ | 40 | 0 | .00 |
| Valid N (listwise) | 40 | | |

Q8.A. Research shows that education and income affect use of computers and Internet. The average household income in West Virginia is \$29,696; would you estimate your income to be above or below that average?

Descriptive Statistics

| | N | Sum | Mean |
|-----------------------|----|-----|------|
| Above \$29,696 | 40 | 23 | .57 |
| Below \$29,696 | 40 | 17 | .42 |
| Valid N (listwise) | 40 | | |

Q8.B. As for education, is the education in your household typically high school or college?

Descriptive Statistics

| | N | Sum | Mean |
|-----------------------|----|-----|------|
| High school | 40 | 16 | .40 |
| College some | 40 | 20 | .50 |
| College | 40 | 4 | .10 |
| Valid N (listwise) | 40 | | |

Data reported on Table 7 show that 87% of respondents reported that their comfort level with computers has greatly increased since the training. Thirteen percent report that their computer

skills have improved somewhat. Sixty-seven percent reported that their Internet skills have greatly improved since the training, and eighteen percent reported that their Internet skills had not improved since the training. Since the training, participants (65%) report using Internet more frequently. Responses on what participants do now on the computer since training fell into six categories: home and work interests, use more Internet, do more documents, learned shortcuts, do financial sorting, and not applicable.

The most common responses participants reported for using computers (40%) related to home and work interests. Responses on what participants do now on the Internet since training fell into five categories: "Browse the web, research, work related, didn't change, and not applicable." The most common response participants reported they do differently with the Internet (57%) is to browse on the Web. Participants were asked to describe any new computer related projects as a result of the training. Answers fell into five categories: (1) work and home related projects, (2) general feel more comfortable using computer, (3) web design, (4) graphs, and (5) none. People surveyed reported having done work and home related projects most (42%) following no projects (30%). Fifty-five percent surveyed reported they have updated their computer, and seventy-three percent reported that they have updated their Internet. In the past six months 18 out of 40 people interviewed said they did not spend any money, and eight participants who reported spending \$500 or less. Eleven people (27.5%) reported that they would not spend any money within the next year. Nine people reported not knowing how much money they would spend. Twenty-three (57.5%) reported having a higher income than the West Virginia average household income. Twenty participants (50%) said their highest education was college, sixteen (40%) graduated high school, and four (10%) had some college.

In conclusion, widespread computer training requires on-going efforts for resources. West Virginia has showed a need for computer technology knowledge. With computer knowledge West Virginians are likely to find more comfort using computers as well as take on new work and home computer related projects. Considering these implications Nonprofit Collaboratives Project has been successful in increasing digital inclusion for many throughout the West Virginia, particularly in rural areas and nonprofit human social service agencies.

Qualitative responses conveyed a general tone of satisfaction and new level of technology skills. For example, computer skills evaluations include: "improved immensely," "improved greatly," "constantly learning," "not afraid of computers," "I think an Excel class I took is more beneficial." "I can use templates now, it doesn't take as long." "statewide data management," "virtual meeting," "bad eyes, magnifying glass helps," "I e-mail people and browse." "very beneficial," "I generate more reports through networks and do more extensive use of spreadsheets." "My computer skills changed very much. I worked outside, which did not require the use of computers. Now I work inside and use computers." "building different list and projects in Excel," " use it daily," "more aware of what is available on the Internet," "disappointed that the program was cancelled," "attempted to use Access but feel the need for a training program," "Teacher taught that when the computer says there has been an illegal act that this does not mean that she did anything wrong." "setting up Excel spreadsheets, use the Internet to search and apply for grants," "not much change, do not use the computer much,"

Overall responses to telephone interview convey positive regard for the Nonprofit Collaboratives Project. The most helpful aspects of the project are reported as improvement in basic computers skills, confidence in utilizing computers and Internet, and general reports of carryover from training to home and workplace activities.

Areas for future research abound in the nonprofit sector, certainly in identifying acquisition and utilization of new technologies. For example, gaining information concerning nonprofit agency experiences with efficiencies and outcomes realized from agency data management and performance information systems designed for small and mid-sized agencies would be useful in monitoring expanding operations. Evaluating cost efficiencies of training modules suitable for electronic distribution and efficiencies of emerging communication modalities could inform agencies with large voluntary workforce training needs. Finally, as training and distance education cost efficiencies are realized, increases in local-national-global communication will become more commonplace in the emerging markets of the nonprofit sector.

Summary and Discussion

Overall evidence indicates that the outcomes intended as a result of this Project have been accomplished. Individual end-users and nonprofit organizations have grown in familiarity with basic computer usage and information access, their interests in managing their own server, developing in-house technical expertise, and having assistance with developing databases utilizing higher-end skills of Excel and Access. This project, spanning four years, has been a major resource, particularly to those many small agencies and low paid workers. Training, consultation training, and assistance with information technology needs have been without charge and accessible onsite or by distance delivery.

Dissemination throughout project implementation and evaluation has been accomplished well beyond expectations set out initially for this project. Being located at West Virginia University, the Nonprofit Collaborative Project has benefited from expertise and practices for dissemination consistent with higher education. Nonprofit agencies and end-users are requesting

assistance with database development and training for Excel and Access for use with higher level applications for service delivery and information management.

By the end of the project, end user requests are for higher end skills, data management skills, and database development. These types of requests represent the general public served by the project as well as the nonprofit social services arena where many poorly funded agencies serve clients and communities in need of resources. Observations throughout the project indicate that not only has satisfaction with personal skills and knowledge increased but requests for higher level training have increased remarkably.

Clearly the formative processes of program implementation and evaluation as reflected in the reports of end-users, technologies of interest, state of agency preparedness for technology based futures, and overall satisfaction of end-users trained in a variety of technology and information access applications are very positive as found through three survey efforts. Formative considerations that apply to this project suggest (1) that the project did reach community end-users and associated non-profit agencies throughout the state, (2) that during the four years of the Project not only were early objectives accomplished, but, that the requests for advanced skills and assistance with database development outpaced the expectations of the project from the outset. And, (3) the apparent under funding, understaffing, lack of access to Internet resources, and outdated hardware and/or software reflect the lack of economic resources both by individuals, small agencies, and by larger statewide networks where public access could be provided at lower cost and higher availability for all.

Having been predicated on a three-year timetable, it needs to be recognized that a one-year extension of this Project was essential to accomplish established objectives and to recover from losses experienced by two early and enthusiastic matching partners whose agencies gave

way to financial and accounting difficulties. Replacing these partners was time consuming but productive in that not only were the objectives of the Project accomplished, but also, that necessary cost share was gained. Overall, this Project was an economical model of reaching and involving end-users and nonprofit agencies throughout West Virginia in this important effort to increase digital inclusion for all.

BIBLIOGRAPHY

- Baldwin, F. D. (1999b). Teaching and learning online. *Appalachia*, 32, 4-9.
- Computer-assisted screening and intervention for alcohol problems in primary care. *Journal of Technology in Human Services*. 21 (1-2), 1-19.
- Carnes, K. H. (2000). The digital work force challenge. *Information Impacts Magazine*.
http://www.cisp.org/imp/april_2000/04_00carnes.htm
- Corder, K. (2001). Acquiring new technology. *Administration & Society*, 33, 194-215
- Cravens, J. (2003). Online mentoring: Programs and suggested practices as of February 2001. *Journal of Technology in Human Services*. 21 (3), 85-109.
- Dp-3. profile of selected economic characteristics: 2000. U. S. Census Bureau. Retrieved June 15, 2003, from
http://factfinder.census.gov/bf/_lang=en_vt_name=DEC_2000_SF3_U_DP3_geo_id=04000
- Dutta, S. , Lanvin, B. & Paua, F. (2003). The networked readiness of nations. In S. Dutta & A. Jain (Eds.), *The global information technology report 2002-2003 readiness for the networked World*. NY: Oxford University Press, 2003.
- Economics and Statistics Administration (ESA) and National Telecommunications and Information Administration (NTIA) (February, 2002). *A nation online: How Americans are expanding their use of the Internet*. Washington, DC: U. S. Department of Commerce.
- Economics and Statistics Administration (ESA) and National Telecommunications and Information Administration (NTIA) (February, 2002). *A nation online: How Americans are expanding their use of the Internet*. Washington, DC: U. S. Department of Commerce.
- Evans, K. (1995). Barriers to participation of women in technological education and the role of distance education. *The commonwealth of learning*. Retrieved June 30, 2003 from
<http://www.col.org/barriers.htm>
- Harper-Dorton, K. V. and Yoon, D. P (2002). information technology in rural nonprofit agencies: Local concerns and global potentials. *New Technology in the Human Services*, Vol 14, Nos 3 and 4, 24-33.
- Hile, M. G. (2003). Mental health and substance abuse screening in primary care. *Journal of Technology in Human Services*. 21 (1-2), 21-34.
- Hoffman, C. (1999). BIC makes it happen. *Appalachia*, 32, 18-23.

Horrigan, J., Rainie, L., Allen, K., Boyce, A., Madden, M., & O'Grady, E. (2003). *The ever-shifting internet population: A new look at Internet access and the digital divide*. Washington, DC: The Pew Internet & American Life Project. Retrieved June 30, 2003 from <http://www.PEWINTERNET.ORG>.

Independent Sector (2001). The impact of information technology on civil society: How will online innovation, philanthropy, and volunteerism serve the common good? *Facts and Findings*, 3(2), 1.

International Society for Technology in Education. (2001). Closing the digital divide. *Learning & Leading with Technology*, 28 (5).

Internet and world wide web simplified (1998). IDG Worldwide , CA: Foster City

Kids count data book 2002 (2002). Baltimore, MD: The Annie F. Casey Foundation.

National Telecommunications and Information Administration [NTIA], (1995). *Falling through the net: A survey of the "have nots" in rural and urban America*. (Retrieved August 1, 2002, from <http://www.ntia.doc.gov/ntiahome/fallingthru.html>

National Telecommunications and Information Administration [NTIA], (1998). *Falling through the net II: New data on the digital divide*. Retrieved August 1, 2002, from <http://www.ntia.doc.gov/ntiahome/net2/falling.html>

National Telecommunications and Information Administration [NTIA], (1999). *Falling through the net: Defining the digital divide*. Retrieved August 1, 2002, from <http://www.ntia.doc.gov/ntiahome/ftn99/acknowledgements.html>

National Telecommunications and Information Administration [NTIA], (2000). *Falling through the net: Toward digital inclusion*. Retrieved August 1, 2002, from <http://www.ntia.doc.gov/ntiahome/ftn00/Falling.htm>

Noel, J. G. & Epstein, J. (2003). Social support and health among senior internet users: Results of an online survey. *Journal of Technology In Human Services*, 21 (1-2), 35-54.

Pahwa, B. A. (2003). Team up to save lives: What your school should know about preventing youth suicide. (Review of software Team up to save lives). *Journal of Technology in Human Services*. 21 (1-2), 90-93.

Rural areas magnify "digital divide." Ryan-McGinn-Samples Research (1997). *Charleston Daily Mail*. Charleston, WV.

SEEDCO (2001). *The evolving role of information technology in community development organizations*. NY: Structured Employment Economic Development Corporation.

Smokowski, P. R. (2003). From mad to worse: Anger management for grades 3-4. (Review of software from mad to worse: Anger management for grades 3.4). *Journal of Technology in Human Services*. 21 (1-2), 89-90.

Technology tracking study of the nonprofit sector. (August 2001). *Gifts in Kind International*. Retrieved June 15, 2003 from www.giftsinkind.org.

Twist, K. (2000). *Addressing the demand for an information age workforce windows 98 simplified*. IDG Books Worldwide, CA: Foster City

WV kids count data book (1997). Kids Count Fund. Charleston, WV.

Young, J. R. (November 9, 2001). *Does 'digital divide' rhetoric do more harm than good? The Chronical of Higher Education*. A51-

Butler, S., Chiauzzi, E., Bromberg, J. I., Budman, S. H., and Buono, D. P. (2003). Computer-assisted screening and intervention for alcohol problems in primary care. *Journal of Technology in Human Services*. 21 (1-2), 1-19.

(<http://www.benton.rog/Library/Low-Income/intro.html>)

(<http://www.digitaldividenetwork.org/demand.adp>)

(<http://www.ntia.doc.gov/ntiahome/digitalddivide/factsheets/rural.htm>)

(<http://www.ntia.doc.gov/ntiahome/fallingthru.html>)

(<http://www.ntia.doc.gov/ntiahome/net2/>)