



**Spirit Lake Consulting, Inc.**

*An Indian-owned business - "Making life better"*

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# CARING FOR OUR PEOPLE TRAINING PROJECT

**USDA Grant # 2005-33610-16156**

**Final Report**

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## **EXECUTIVE SUMMARY**

### **Description of the Research**

Our goal is to bring to commercialization products for delivering computer-integrated training in remote reservation communities where the usual prerequisites of effective computer-based training are not available. The content selected for the Caring for Our People (COPT) training is direct care services to persons with disabilities and chronic health conditions, as there is a documented need for employees to provide services within the rural counties where the training is delivered. In Phase II, we will complete the full suite of applications that Phase I showed were technically feasible.

In Phase I, a prototype assessment measure, an introductory website and CD-ROM were developed for training paraprofessionals to work on Indian reservations to work with people with disabilities and chronic health impairments. In Phase II, An Introduction to Caring for Our People is offered for all users. Branching out from the last module in this CD-ROM, users elect one of three ‘strands’, an Early Education CD, Special Education CD or Vocational Rehabilitation CD. The Introduction was revised based on Phase I test results and three additional CDs were developed and tested for training staff members in Special Education, Early Childhood Intervention and Vocational Rehabilitation. Each CD includes two common sections, a “Virtual Library” and “Commons Area”. The Virtual Library includes a Reference Section, Forms Library, Tribal Information and Media Resources. The Commons Area offers newsletters and community bulletin board.

### **Results**

Psychometric data indicate that the project was successful in creating four validated measures of knowledge of best practices, resources, interventions and prognosis for persons with disabilities. For each of four modules, the experimental group showed a statistically significant greater difference between pre- and post-test compared to the control group. Retention of the experimental group averaged 92% across the four modules tested.

These results are particularly noteworthy given the low mean educational level of the sample (87% had not completed a college degree, 20% had less than a high school education) and their lack of computer experience, only one-third of the participants had home Internet access and 50% did not use email. The Caring for Our People Training Project has clearly demonstrated the effectiveness of computer-integrated training in increasing the knowledge of disability, resources and best practices of rural staff members serving tribal members with disabilities and chronic illness.

**PROGRESS TOWARD ORIGINAL WORK PLAN**

**Technical Objectives**

The project has three technical objectives, further subdivided into specific aims and tasks.

These objectives are:

1. Develop a research-based integrated suite of training applications consistent with the needs, culture and constraints of the reservation environment
2. Develop a psychometrically-validated outcome measure for the training programs on each of the four CD-ROMs.
3. Empirically test the impact of the training program in a simulated practice setting

Comparison of accomplishments with objectives, specific aims and planned tasks is described below.

**Comparison of Actual Accomplishments with Project Goals**

Technical Objective #1: Develop a research-based integrated suite of training applications consistent with the needs, culture and constraints of the reservation environment

Specific aims are to:

- Develop a best-practice website for hands-on, on-site training.
- Develop four CD-ROM mirrors, each reflecting a specific path from our website for use in this training that identifies issues in healthcare service provision to American Indian adults with chronic healthcare needs, with an emphasis on reservations and other rural persistent poverty communities.
- Develop community features, including a regular e-newsletter and bulletin board.
- Develop a “reference desk” included on each CD-ROM to make reference and training materials available to those without Internet access.

Tasks scheduled in support of Objective 1 are shown in Table 1 below. All tasks were completed on or ahead of the proposed schedule.

**Table 1**

**Tasks Completed in Support of Technical Objective #1 of the COPT Project**

| Task                             | Personnel Responsible    | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|----------------------------------|--------------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|
| Revise website section 1         | De Mars, Davis, McDonald | █ | █ |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |
| Revise CD#1 modules              | De Mars                  | █ | █ |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |
| Create Commons Area              | De Mars                  | █ | █ | █ | █ |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |
| Create Virtual Library           | De Mars                  | █ | █ | █ | █ |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |
| Create CD #2 modules: Special Ed | De Mars, Klimpel         |   |   |   |   |   |   |   |   | █ | █  | █  | █  |    |    |    |    |    |    |    |
| Create CD #3: Early Childhood    | De Mars, Davis           |   |   |   |   |   |   |   |   |   |    |    | █  | █  | █  | █  |    |    |    |    |
| Create CD #4: Voc Rehab          | De Mars, Davis           |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | █  | █  | █  | █  |

A sample page for the website and CD-ROM under Phase I is shown in Figure 1. A sample from Phase II is shown in Figure 2.

## ADA - Why we need it



**Willie's Story** *I began my first search for employment before the adoption of the Americans with Disabilities Act (ADA). I had received my Bachelors degree in Social Work, an area where there should have been jobs available. I had a minor in Indian Studies and am an enrolled member of the Turtle Mountain Band of Chippewa, making me even more attractive as an employee to social service agencies serving Native Americans - or so one would think. After applying for 40 or 50 open positions, and still not receiving a job in Grand Forks, I left the city where I had lived for the past six years and moved back to my reservation. I was able to find employment as a Student Services Counselor at Turtle Mountain Community College. Fifteen years, and several positions later, I am still affiliated with the college, currently as part of the tribal vocational rehabilitation program. Since its passage, there have been many other part-time positions I have held that the ADA has assisted me, such as locating an office that was conducive to my needs while working as a Alternative Living Coordinator at the local Tribal Headquarters Complex . I also worked with the Tribal Maintenance to removed barriers (doors easier to open, bathroom stall made wider and accessible for person in wheelchair, etc.). Not only did these changes fit my work needs, but also the outcome made it more accessible to all tribal members.*

Willie's story illustrates the need for the Americans with Disabilities Act in several areas. There are five titles to the ADA. Each of these titles as established in the Act is intended to establish a clear and comprehensive prohibition of discrimination on the basis of disability. They are:


- Title I – Prohibits employment discrimination
- Title II – Prohibits discrimination in programs, activities, and services provided by state and local governments
- Title III – Prohibits discrimination in providing public accommodations, commercial facilities, and transportation
- Title IV – Requires common carriers of wire or radio to provide technological accommodations
- Title V – Prohibits retaliation or coercing an individual and encourages the use of alternative means of dispute resolution

His story also illustrates how hiring a person with a disability can be a positive outcome for the employer as well - Willie has remained on the job for fifteen years, moving into progressively higher levels of responsibility. His experience is consistent with statistics showing people with disabilities to generally have lower job turnover. In addition, the modifications made for him were also a benefit to other visitors to the Tribal Headquarters. Still, ADA is much more limited than you might think, particularly in Indian Country. Read the next page to find out how.

|   |  |   |   |
|---|--|---|---|
|  | <a href="#">Return to Introduction Home Page</a> |  | <a href="#">What ADA does not guarantee</a> |
|---|--|---|---|

**FIGURE 1: Website and CD-ROM Sample Page, Phase I**

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## Early Childhood Home

### Building strengths for young children with disabilities


*"It was once said that the moral test of Government is how that Government treats those who are in the dawn of life, the children; those who are in the twilight of life, the elderly; and those who are in the shadows of life, the sick, the needy and the handicapped." - Hubert H. Humphrey*

How do we treat our children, our elderly, our people with disabilities? Among the Dakota, who have traditionally considered children as "wakan" or sacred, having recently come from the spiritual realm, this moral test is generally passed well.

The purpose of this workshop is to provide staff members with more ideas, more strategies, for helping children with disabilities develop strengths in early childhood, overcome obstacles and begin a successful journey through life. It is not always easy. In writing the section on behavior disorders especially, grandmother's saying that, "Your children will need your love the most when they deserve it the least," came to mind over and over.


As Peter Ustinov said, "The only immortality we have is through our children." It is not only a moral test, but a matter of survival as well. For our communities to survive, we must build the strength of the next generation. Building that strength begins with early childhood. We would like to begin this training by thanking all of you who work with our children for the important work you do.

You can click on any topic at left that interests you. In our workshops, we begin with the first link at the top and go through the topics in order. We hope that the material we have put together here will be of assistance to you. We are here to meet your needs and are always happy to hear your advice. [Please click here to send any of your suggestions for improvement directly to our company president, Dr. Erich Longie.](#)




**Early Childhood Home**

- Early Childhood & Disability ▶
- Diagnosis ▶
- Preschool Modifications ▶
- What's an IFSP? ▶
- Developmental Stimulation ▶
- Language ▶
- Behavior Disorders ▶
- Personal Care ▶
- Health Impairments ▶
- Preventive Health ▶
- Early Childhood Resources ▶
- Virtual Library - EC
- Commons Area - EC
- COPT HOME



The project was supported by the Small Business Innovation Research program of the U.S. Department of Agriculture, grant number # 2004-33610-14307.






WWW  www.spiritlakeconsulting.com

FIGURE 2: Website and CD-ROM Index, Revised with Frames

In this first year of Phase II, we have solved some of the most significant technical and commercial problems. While the two web pages may not appear radically different, the addition of menus for navigation greatly reduced the difficulty of use for our test subjects. The COPT application is developed for individuals with very little computer proficiency. They were not familiar with the concepts of 'history' or cached pages and had great difficulty finding their way back to a previous page of interest or finding another module. While we had originally used frames for this purpose, more experienced computer users expressed a need for a distinct URL for each page to allow for book-marking and emailing reference links to co-workers.

The process of web page creation and maintenance has been automated, an essential change as we now have over 3,000 web pages and documents on our site. Templates are used to provide animated menus, a header and a footer on each site. A major benefit of these templates has been that when page modifications are made, a change in the templates 'cascades' through all pages to which it is attached, requiring only one page to be changed to affect 50-100 linked pages "Snippets" of code which perform common tasks, e.g., an image of a "NEXT" button with appropriate alternate text, our company contact information, are stored in a code library, expediting the task of creating new web pages. Checking broken links on the site is now done automatically as well, using Link Sleuth. The automation of these functions has been an essential development in moving the website to commercial capability.

A third issue was identification of the corporate sponsor, Spirit Lake Consulting, Inc. Workshop participants interested in attending additional workshops had difficulty recalling the name of the company or where to find information on additional workshops. The header on each page now links to our corporate home page. A footer at the bottom of each page now supplies company address, phone, fax and email.

As proposed, four CD-ROMS, "Caring for Our People Training: Introduction to Disability & Culture", "Caring for Our People Training: Special Education", "Caring for our People: Early Childhood" and "Caring for our People Training: Vocational Rehabilitation", have been developed and tested. Community features have been developed, with electronic newsletters emailed monthly to a mailing list of over 500 community members who include all workshop participants in Phase I and Phase II who had an email address, as well as those who signed up through our website and conference demonstrations of COPT. The community bulletin boards are up in a rough form. This is an area that will be further developed in year two. From the first two workshops, a substantial number of responses and suggestions for improved bulletin board features were collected and implemented. As a result, the Commons Area includes both monitored bulletin boards of tips for community members and a Spirit Lake Forum where anyone can post on topics related to disability.

Technological innovations enter the reservation community unevenly. We briefly considered pod-casting as a possibility in a staff meeting, until our president commented, "Not only do I not know of a single person on the reservation who owns an iPod, I have never even heard anyone mention one." Podcasting, then, is on the shelf for possible long-term future expansion. We have begun adding a few video clips and audio clips on our website that may eventually be expanded into podcasts. In contrast, incursions of such free services as MySpace and similar forums and weblogs are becoming common places. In response, we have added a synchronous community forum and blogs.

Our virtual reference desk now includes nearly 100 MB of text. This is being added to daily. Currently underway is development of the forms library to provide exemplary models of IEP, IFSP and other common forms for use by practitioners. A large collection of forms have been collected from around the country, the best examples selected and these are now being converted from paper to electronic format for inclusion on the CD-ROM and website.

Technical Objective #2: Develop a psychometrically-validated outcome measure for the training programs on each of the four CD-ROMs.

Specific aims are to:

- Create short answer and multiple-choice questions, requiring a low to moderate level of literacy, based on model case files, including diagnoses, symptoms, and family history, and with sufficient detail to be used in designing treatment recommendations.
- Using research literature and input from experienced clinicians, identify characteristics of optimal responses for treatment recommendations from direct staff, based on the factors in the case presented.
- Psychometrically validate assessment methods and materials using first a pilot sample and subsequently the

## Phase II intervention and comparison groups.

Four tests were developed, each following the same five steps.

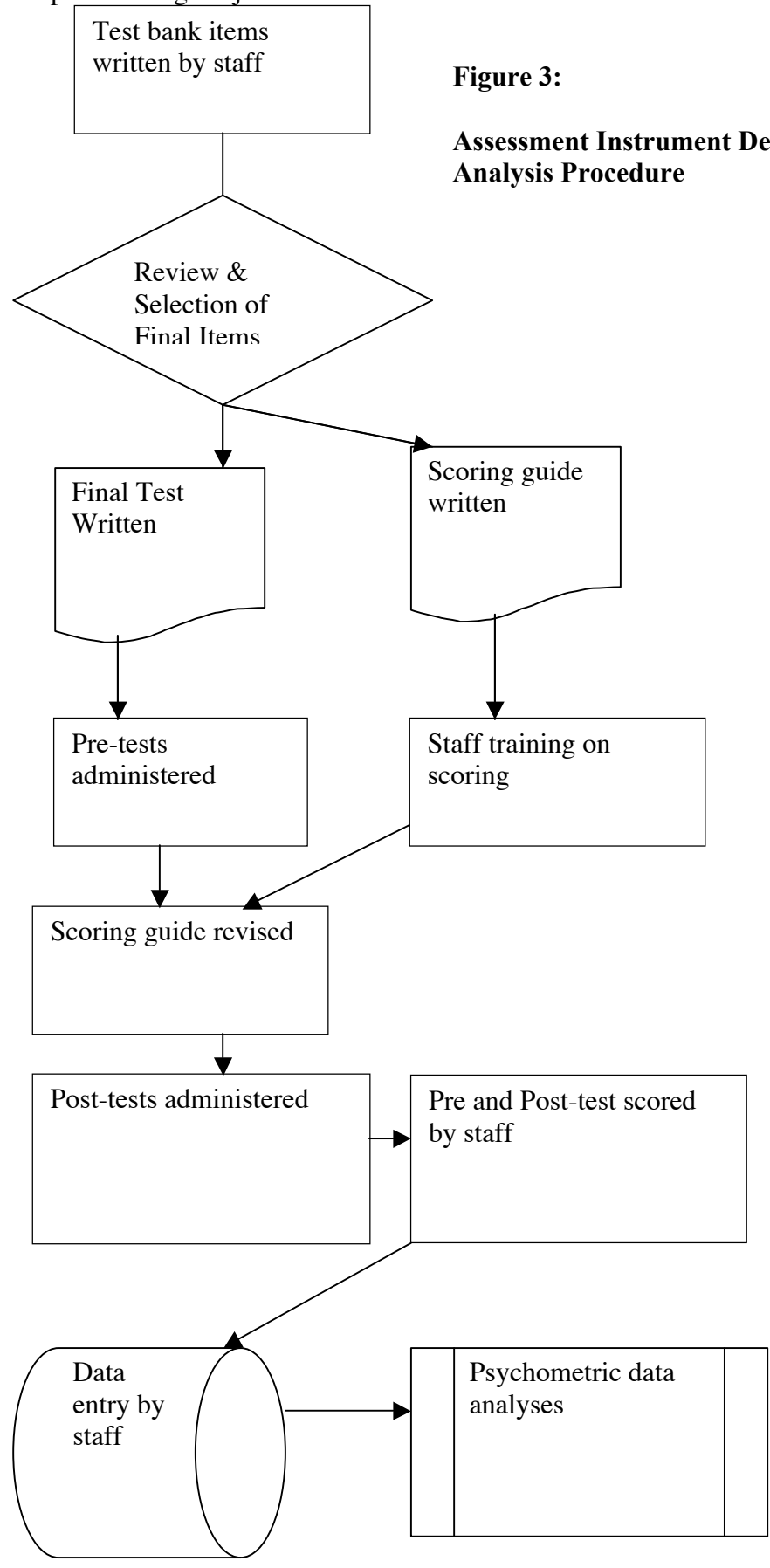
1. Design Assessment for CD
2. Conduct pre-test for CD
3. Pilot CD
4. Conduct post-test for CD
5. Analyze pre- and post-test data

For each test, the same procedure was followed, as diagrammed below in Figure 3. For each of the first two tests, five to six months were required to complete all five steps. By the fourth module, this timeline had been reduced to three months, as many tools for development had been created – programs written, a Virtual Library and Commons Area created. As with the first technical objective, reducing time to market and development costs are key in creating a commercially viable product.

This procedure is shown in detail as it is a factor in our success in creating extremely reliable instruments. This procedure, and the results, will, we believe provide COPT a marketplace advantage. Most training applications on the market include no assessment of effectiveness. They may include, at most, a short evaluation form rating the presenter and the presenters. With the current administration's focus under the No Child Left Behind Act on empirically validated methods for instruction, COPT is one of the very few products on the market that provides a standard assessment with validated instruments. Psychometric results for the exams are given in Table 3. Analyses were performed separately for all tests (N=140), pretests only (n=72), comparison (N=52) and trained (N=21) for both the introductory group and for the Special Education module test subjects (total N =105). With the exception of test-retest reliability, all of the subgroups produced essentially identical results, therefore, only the results for the total of all tests is shown in the table, again, with the exception of test-retest reliability.



**Figure 3:**  
**Assessment Instrument Design and Analysis Procedure**



**Table 2**  
**Descriptive and Reliability Statistics for COPT Assessment Instruments**

|                                     | Introduction<br>Module Test | Special Ed<br>Module Test | Early<br>Childhood | Vocational<br>Rehabilitation |
|-------------------------------------|-----------------------------|---------------------------|--------------------|------------------------------|
| N (Tests)                           | 140                         | 105                       | 120                | 114                          |
| Inter-rater reliability             | .96                         | .97                       | .92                | .99                          |
| Scorer #1                           |                             |                           |                    |                              |
| ▪ Mean                              | 44.2                        | 45.5                      | 39.0               | 22.5                         |
| ▪ Standard<br>Deviation             | 11.9                        | 12.7                      | 13.5               | 10.2                         |
| Scorer #2                           |                             |                           |                    |                              |
| ▪ Mean                              | 47.8                        | 47.1                      | 34.3               | 22.6                         |
| ▪ Standard<br>Deviation             | 12.2                        | 13.0                      | 11.9               | 10.5                         |
| Internal consistency<br>reliability | .74                         | .74                       | .76                | .81                          |
| Test-retest reliability             |                             |                           |                    |                              |
| ▪ Trained                           | .66                         | .49                       | .49                | .38                          |
| ▪ Control                           | .85                         | .86                       | .87                | .94                          |

The lower reliability on re-test of the trained group was to be expected. While the control group simply took the same test twice over a two-week period, the trained group had two days of on-site training as well as the opportunity to use the CD-ROM and website. Most of those attending the training showed an increase in scores, as discussed under the following objective.

**Technical objective # 3:**

Empirically test the impact of the training program in a simulated practice setting

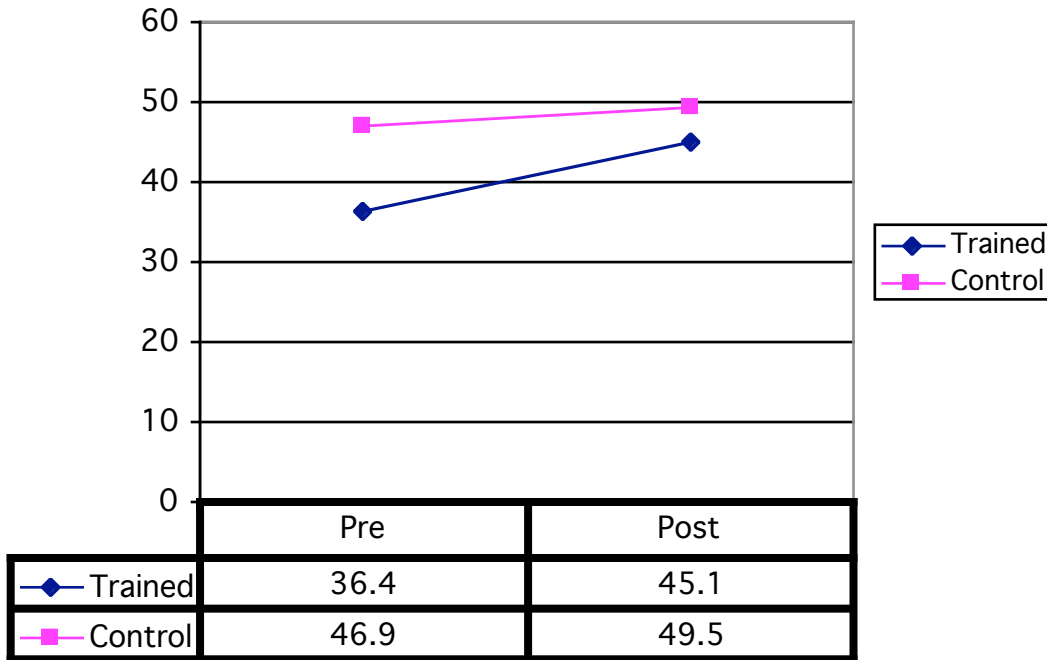
Specific aims are to:

- Determine whether the training provided increased the congruence between staff proposed treatment plans and best practices at a rate significantly higher than that experienced by the comparison group.
- Maintain a longitudinal database of participants in one, two, three or four workshops to assess a dose-response effect in terms of the magnitude of increase from the initial pretest.

Each of the module is discussed separately, including mean scores and significance of differences, followed by a summary of results across all four modules.

MODULE #1: INTRODUCTION TO DISABILITY - The comparison between pre- and post-test scores for the trained and control groups on the Introduction Module Test is shown in Figure 4. This difference was statistically significant ( $p < .01$ ).<sup>1</sup>

**Figure 4: Pre- and Post-test Introduction to Disability Module Scores for Experimental (N=29) and Comparison (N=34) Groups**



Two dependent t-tests found a significant increase ( $p < .0001$ ) from pre- to post-test for the experimental group trained on the introductory module and no significant change for the control group ( $p < .06$ ). Similarly, a repeated measures Analysis of Variance found a significant interaction effect of time \* group ( $p < .01$ ) with two levels of time, pre-test and post-test and two levels of group, Control and Experimental.

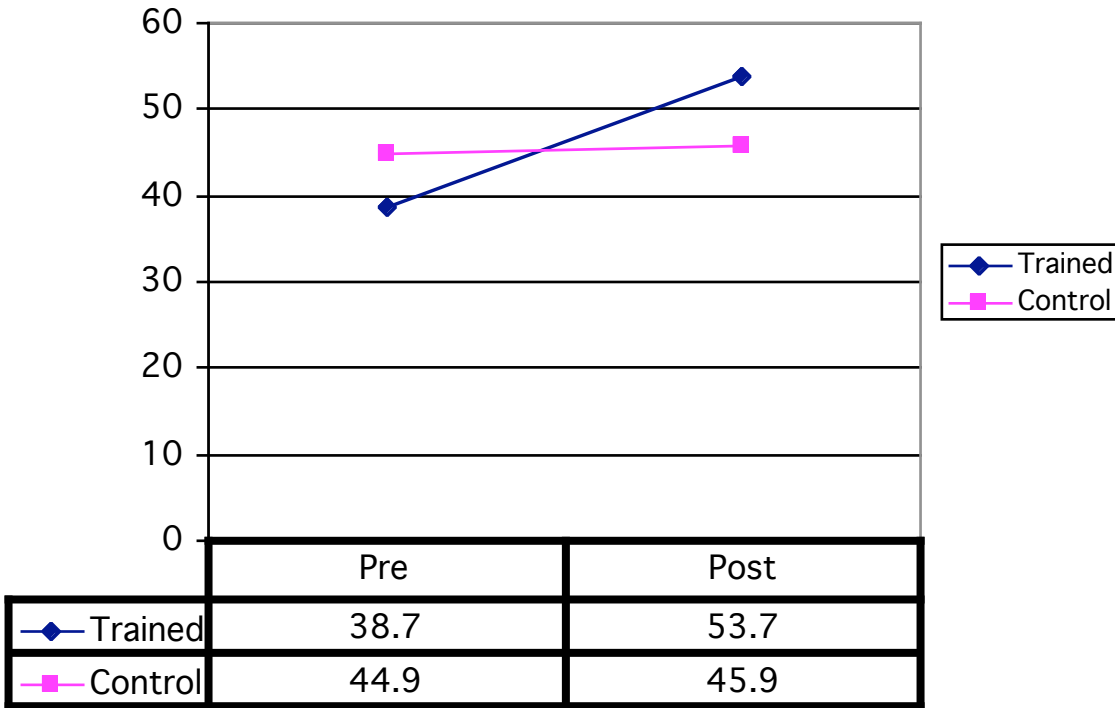
As will be seen in reviewing the results below, the absolute value of increases for the trained group rose substantially for later modules, as did the difference in change scores between the experimental and control groups. We hypothesized several reasons for this change. First, as the CD and website became more developed, with a larger number of documents in the Virtual Library, more comments from community members on the bulletin boards and more newsletter, COPT simply became a better product. Also, we hypothesize that there is a learning curve for instructors, with our instructors becoming more effective after the first module. After the Phase I pilot, and each workshop session throughout the two years of Phase II, a ‘de-briefing’ meeting was held among the consultants and with input from at least one participant in the session. The focus of these meetings was to develop a quality system for training and delivery of instruction.

MODULE #2: SPECIAL EDUCATION Comparison between the trained group and control group on the Special Education Module Test is shown in Figure 5. With a 15-point increase for the trained group and only a three-point gain for the control group, this difference was statistically significant ( $p < .001$ ). Of the trained group, 33% (N=10) had

<sup>1</sup> An interim report did not show a significant difference. It is our standard practice to conduct a data review prior to a final report or submission of article for publication. In the present case, nine experimental subjects, from one pilot test site, were found to be mislabeled as ‘control’. Consequently, data were re-analyzed and the corrected results given here.

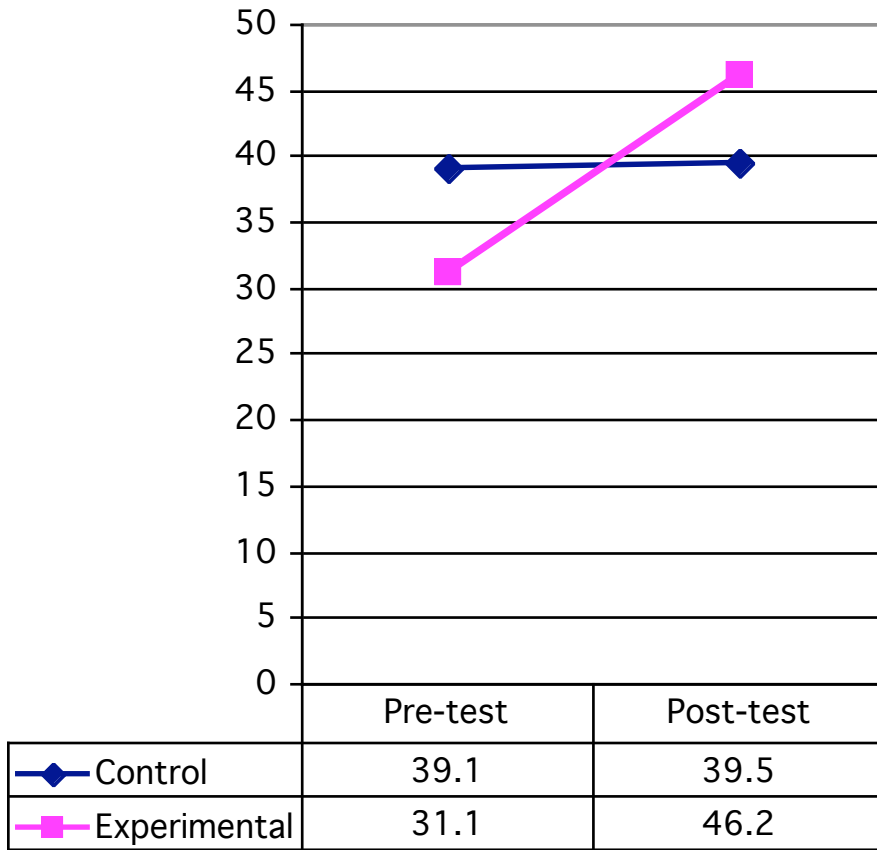
taken a previous training workshop from Spirit Lake Consulting, Inc., either the Introduction workshop, or the COPT pilot offered in Phase I. Only 20% of the control group had taken a previous workshop (N=5).

**Figure 5: Pre- and Post-test Special Education Module Scores for Experimental (N=29) and Control (N=20) Groups**



Pre- and Post-test results can be seen in Figure 6 for the Early Childhood module.

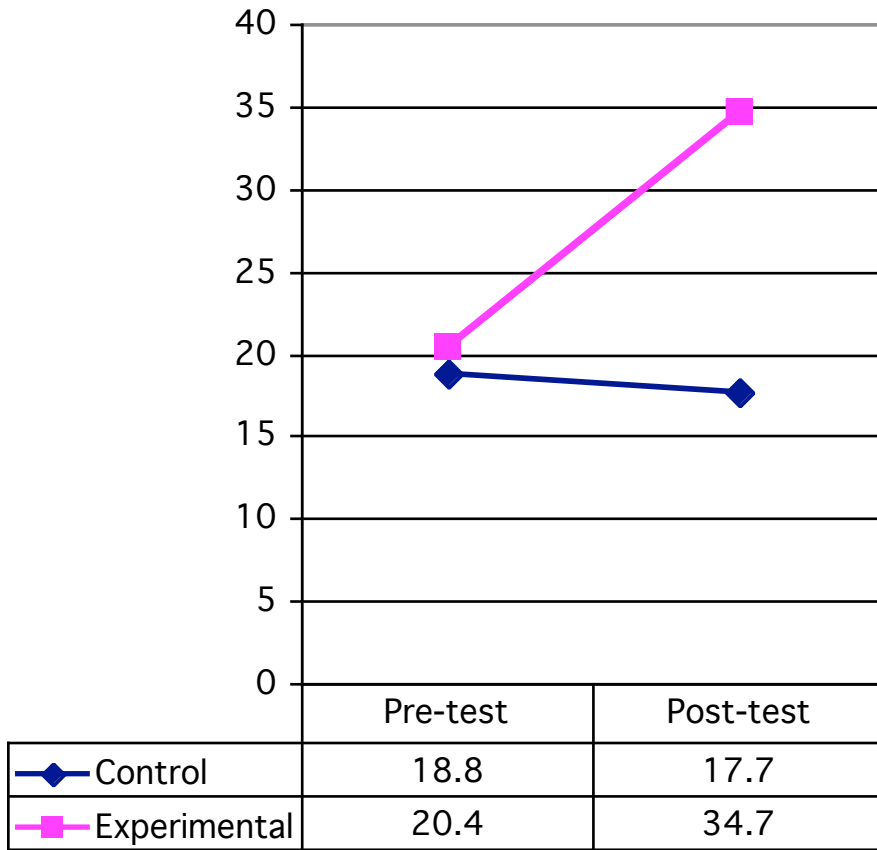
**Figure 6: Pre- and Post-test Early Childhood Module Scores for Experimental (N=33) and Control (N=29) Groups**



Two dependent t-tests found a significant increase ( $p < .0001$ ) from pre- to post-test for the experimental group trained on the early childhood module and no significant change for the control group ( $p < .60$ ). Similarly, a repeated measures Analysis of Variance found a significant interaction effect of time \* group ( $p < .0001$ ) with two levels of time, pre-test and post-test and two levels of group, Control and Experimental.

Pre- and Post-test results can be seen in Figure 7 for the Vocational Rehabilitation module.

**Figure 7: Pre- and Post-test Vocational Rehabilitation Module Scores for Experimental (N=27) and Control (N=27) Groups**



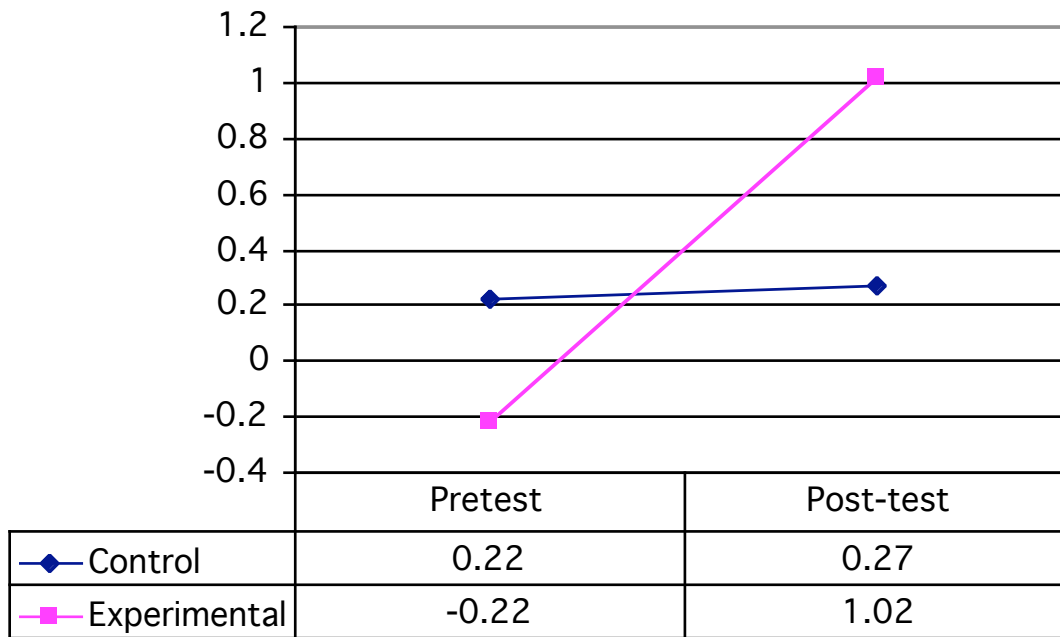
It is immediately evident that the pre-test scores were substantially lower on this than the other three modules, reflecting a lower level of pre-existing knowledge. Experience with disability in general, special education and early intervention programs on the reservation is much more common than with vocational rehabilitation. The tribal vocational rehabilitation project was established in 1997, in contrast to thirty years' experience with special education programs on the reservation.

Two dependent t-tests found a significant increase ( $p < .0001$ ) from pre- to post-test for the experimental group trained with the vocational rehabilitation module and no significant change for the control group ( $p < .14$ ). Similarly, a repeated measures Analysis of Variance found a significant interaction effect of time \* group ( $p < .0001$ ) with two levels of time, pre-test and post-test and two levels of group, Control and Experimental.

**AGGREGATED RESULTS**

To aggregate the results, all pre-tests were standardized to standard scores with a mean of zero and a standard deviation of one using the pre-test data. This produced a total of 226 subjects with complete pre- and post-test data, for a total of 452 data points. Pre- and Post-test results can be seen in Figure 8 for all modules combined.

**Figure 8: Pre- and Post-test Standard Scores for Experimental (N=112) and Control (N=114) Groups**



Differences between pre- and post-test means for the control group were small but still statistically significant ( $p < .05$ ), reflecting a slight testing effect. Differences between pre- and post-test for the experimental group were much larger and significant at  $p < .0001$ . A repeated measures Analysis of Variance, shown in Table 4 below, found a significant increase in the total score.

Of greater interest is the interaction effect of time \* group ( $p < .0001$ ) with two levels of time, pre-test and post-test and two levels of group, Control and Experimental, as shown in Table 5. This answers the primary question of interest as to whether there was an increase from pre- to post-test by time that depended on the group, i.e., was the difference observed in the increased scores between the mean for the experimental group and the control group statistically significant. As can be readily seen from Table 5, this question was answered in the affirmative.

**Table 3**  
**Repeated Measures ANOVA Results**  
**Dependent = Standard Score on Post-test measure**

| Source          | DF  | Sum of Squares | Mean Square | F Value | Pr > F |
|-----------------|-----|----------------|-------------|---------|--------|
| Model           | 1   | 32.76          | 32.76       | 29.62   | <.0001 |
| Error           | 223 | 246.63         | 1.11        |         |        |
| Corrected Total | 224 | 279.39         |             |         |        |

| R-Square | Coeff Var | Root MSE | z_total_post Mean |
|----------|-----------|----------|-------------------|
| 0.12     | 163.49    | 1.05     | 0.64              |

| Source | DF | Type I SS | Mean Square | F Value | Pr > F |
|--------|----|-----------|-------------|---------|--------|
| group  | 1  | 32.76     | 32.76       | 29.62   | <.0001 |

| Source | DF | Type III SS | Mean Square | F Value | Pr > F |
|--------|----|-------------|-------------|---------|--------|
| group  | 1  | 32.76       | 32.76       | 29.62   | <.0001 |



**Table 4**  
**Repeated Measures ANOVA Results**  
**Test of Total Score \* Group Effect**

| Repeated Measures Level Information |             |              |
|-------------------------------------|-------------|--------------|
| Dependent Variable                  | z_total_pre | z_total_post |
| Level of tot_score                  | 1           | 2            |

| Source           | DF  | Type III SS | Mean Square | F Value | Pr > F |
|------------------|-----|-------------|-------------|---------|--------|
| tot_score        | 1   | 50.15       | 50.15       | 139.23  | <.0001 |
| tot_score*group  | 1   | 40.93       | 40.93       | 113.64  | <.0001 |
| Error(tot_score) | 223 | 80.32       | 0.36        |         |        |

| MANOVA Test Criteria and Exact F Statistics for the Hypothesis of no tot_score*group Effect |            |         |        |        |        |
|---|------------|---------|--------|--------|--------|
| H = Type III SSCP Matrix for tot_score*group  |            |         |        |        |        |
| E = Error SSCP Matrix   |            |         |        |        |        |
| S=1 M=-0.5 N=110.5  |            |         |        |        |        |
| Statistic   | Value      | F Value | Num DF | Den DF | Pr > F |
| Wilks' Lambda   | 0.66242902 | 113.64  | 1      | 223    | <.0001 |
| Pillai's Trace  | 0.33757098 | 113.64  | 1      | 223    | <.0001 |
| Hotelling-Lawley Trace  | 0.50959571 | 113.64  | 1      | 223    | <.0001 |
| Roy's Greatest Root   | 0.50959571 | 113.64  | 1      | 223    | <.0001 |

### **Sample Description**

Tests can only be assumed to be valid for populations similar to those on which they were normed. Similarly, experimental results should be generalized with care to groups differing significantly from the research sample. All subjects included in the present study lived and worked on or near Indian reservations in the upper Great Plains. Of interest to the USDA, the research sample was selected from one of the most sparsely populated regions of the country.

Additional demographic variables were added after the first pilot test, of the Introductory module, thus, there are fewer respondents for questions on education, whether the respondent was employed by a disability services program and an enrolled tribal member.

**Table 5**  
**Sample Demographics**

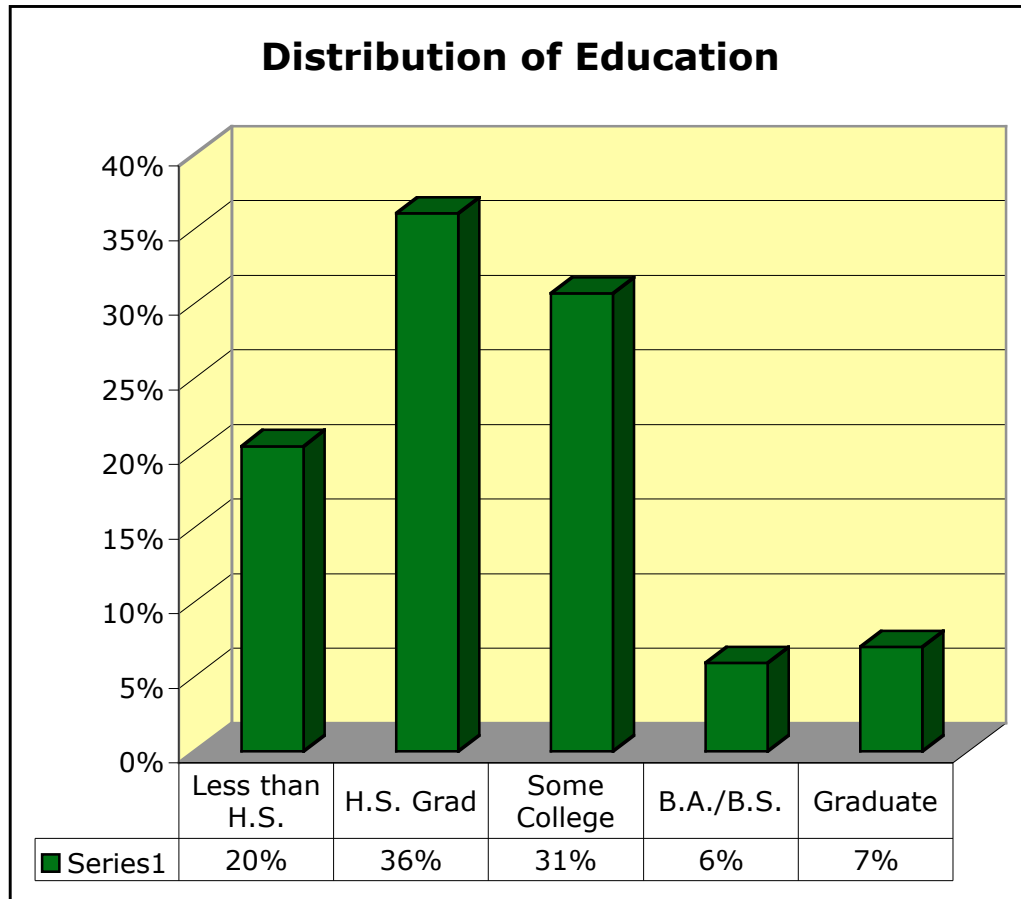
| <u>Variable</u>                               | <u>N</u> | <u>Mean</u> | <u>S.D.</u> |
|---|----------|-------------|-------------|
| Age   | 213      | 35.0        | 13.8        |
| Years of Education                            | 186      | 12.9        | 2.2         |
| <u>Variable</u>                               | <u>N</u> | <u>%</u>    |             |
| <b>Gender</b>                                 |          |             |             |
| Female  | 162      | 71%         |             |
| Male  | 65       | 29%         |             |
| <b>Self or Family Member has a Disability</b> |          |             |             |
| Yes   | 164      | 72%         |             |
| No  | 64       | 28%         |             |
| <b>Employed Providing Disability Services</b> |          |             |             |
| Yes   | 60       | 38%         |             |
| No  | 98       | 62%         |             |
| <b>Enrolled Tribal Member</b>                 |          |             |             |
| Yes   | 153      | 97%         |             |
| No  | 4        | 3%          |             |

The disproportion of female subjects was expected given the population sampled, i.e., employees and family members serving people with disabilities. The employment rate on the reservation is higher for females, and the 'helping professions' attracted to this training are predominantly female, e.g., special education, early childhood education and vocational rehabilitation.

The high mean educational level and high school graduation rate are also higher than for the reservation as a whole, another expected finding, given the targeted selection of individuals who were employed. The frequency distribution of educational level for participants is shown graphically in Figure 9. In a community where unemployment

typically ranges from 40-65%, those who are employed constitute a selective sample. That 31% had ‘some college’ reflects the availability of two-year institutions on all of the reservations served. None of the reservations have a local institution offering baccalaureate degrees, a fact related to the low proportion (13%) of those participants who had a college education, even among this relatively selective sample of staff members.

**Figure 9: Frequency Distribution of Educational Level of Participants**



An unexpected result was that the majority of participants did not come from programs specifically serving individuals with disabilities, such as vocational rehabilitation, but primarily (62%) from such programs as Head Start, tribal recreation programs and the Boys and Girls Club. While these programs were part of our intended target market, it was anticipated that it would take some time to convince these programs of the need for special education training.

**PROBLEMS ENCOUNTERED**

Three problems encountered were in inter-rater reliability and maintaining data integrity, both of which were solved by staff training, and recruitment of test subjects. Initial inter-rater reliability was low as raters tended to score only the example correct answers as correct and give zero scores to those that did not match the scoring rubric. After a three-hour training session, where the characteristics of correct answers were

discussed along with the exact meaning of ‘or similar correct answers’, inter-rater reliability improved dramatically.

A second problem was discovered mid-way through the project as some results appeared likely to have occurred if there was some contamination between the experimental and control groups, e.g., the test – retest correlation was lower than expected for the control group, the difference between the experimental and control groups was not as large as in other samples. A review of the data revealed that a few (less than 10%) of the subjects had been misclassified. Working on Indian reservations, the use of local personnel greatly facilitated our ability to recruit subjects and secure facilities for testing. The disadvantage was a limited pool of personnel with research experience. In future endeavors of this type, we will provide more extensive training for research assistants on site. It is expected that a two-day orientation and bi-annual follow-ups would be sufficient, to insure that data collection and data entry personnel are familiar with research procedures and terminology.

One problem in recruitment of test subjects was an unavoidable fact of doing business in North Dakota – blizzards and icy road conditions interfered with travel during the winter months. A second issue, though, has been overcome, as seen by the increase from the first to second workshop. Site coordinators have been instructed to oversubscribe the workshops as we have noted that a substantial proportion of those who pre-register do not attend. Also, as the testing has continued, the positive word-of-mouth has led to a decrease in ‘no-shows’ at the test sites, and, in fact, an increase in contacts to the project asking to be included as test subjects.

### **Commercialization Potential**

Commercialization is likely to occur in two markets. First, larger entities will contract for substantial amounts of training, from \$25,000 and over, for a several sessions distributed over a year or longer. Second, smaller organizations, such as tribal colleges and tribal programs will contract for one or a few modules, at least initially on a one-time basis.

During the SBIR Phase II, we have already one of each type of contract. Within the first grant year, a third reservation, not included in the Phase II application, paid for COPT training on their reservation. During this second year, the company received a \$98,000 subcontract from the Southwest Educational Development Laboratory for dissemination on reservations in the upper Great Plains. The IEP training in this package includes webpages and documents from the Caring for Our People Training.

Spirit Lake Consulting, Inc. has also been included in a grant submitted by the University of California for a \$125,000 subcontract to create a Virtual Library application used for training faculty in a teacher preparation program focused on another disadvantaged population, English language learners.

The market potential for these larger contracts hinges on establishing relationships with the universities and colleges, and delivering a product that addresses the deficiencies of existing market offerings. For example, the nation’s largest for-profit educational corporation, the University of Phoenix, recently paid \$9.8 million to settle a lawsuit by the U.S. Department of Education. Key factors in this case were the 93% drop-out rate experienced by the university, and the failure to assess student academic qualifications prior to enrollment.

Caring for Our People Training is a research-based method for effectively increasing the knowledge of individuals from a high-risk populations, as noted above 20% of participants had less than a high school education and 30% had only a high school diploma at the time of training. Establishing a reputation for successfully educating high-risk students will be an important factor in commercialization. Toward this end, SLC has adopted a two-pronged approach. First, staff members are working individually with representatives of two major universities to offer COPT courses and virtual library resources. Second, journal articles are being prepared to disseminate the results of COPT research to a larger academic audience.

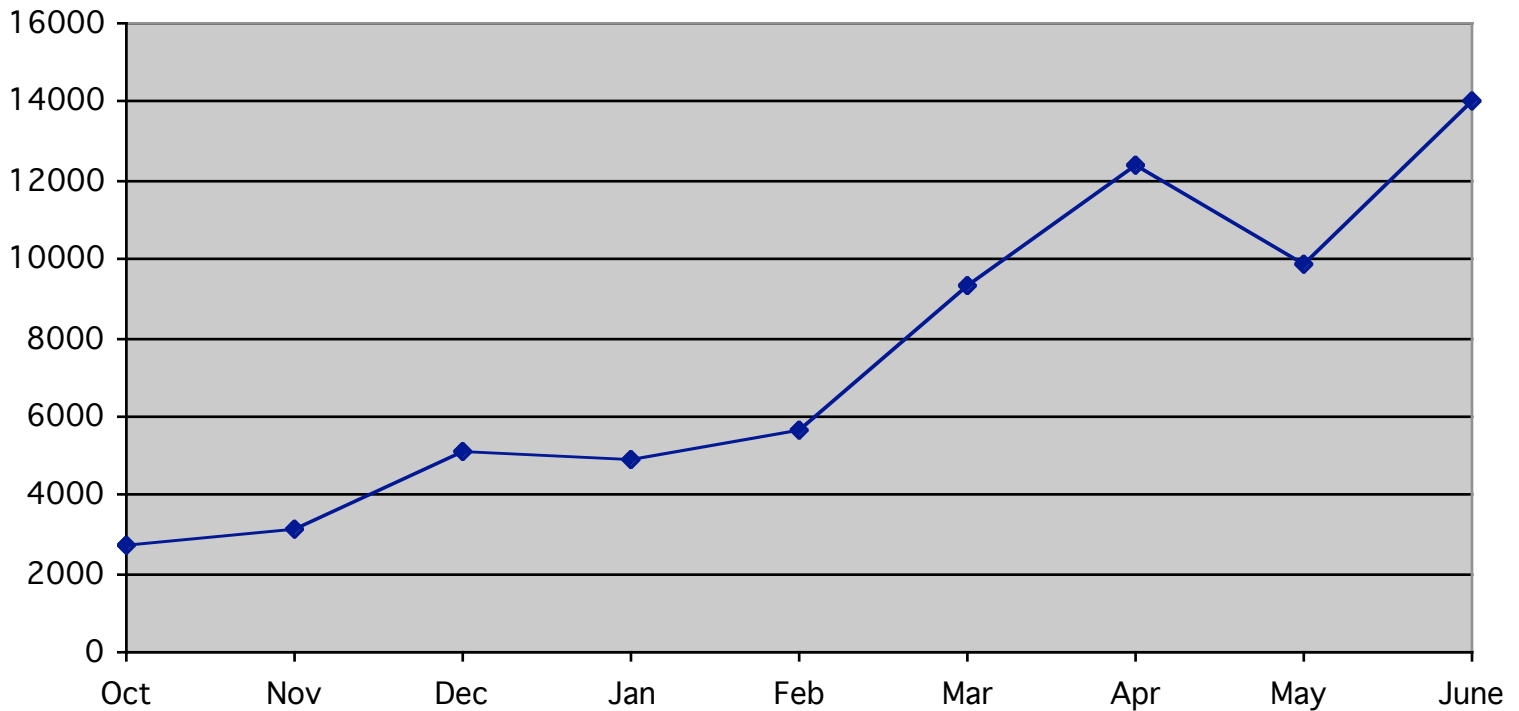
Commercialization potential for smaller, tribal programs is more difficult to assess and to obtain. Initial responses have provided some positive signals. While it was anticipated that some participation would come from programs such as Head Start, tribal recreation programs and the Boys and Girls Club, it was not anticipated that the majority would come from these non-disability programs as early as the development stage. In requesting, or, in some cases, requiring, their staff to attend training, the directors expressed concern that their employees had inadequate training to deal with the problems presented by children with disabilities who attended their programs. As the Director of one Boys and Girls Club stated,

*“Look, we know that the BIA school right up the road from us has over a quarter of the kids in special education. When they walk out that door and come over here it’s not like they left their disability at school. We have kids with attention deficit disorder, hyperactivity, learning disabilities, emotional disorders, and my staff has to deal with every one of them.”*

In addition, 122 subjects were recruited for participation in the experimental group, and 92% of these completed the workshop. With a combined adult population of the three reservations served of approximately 8,000 this represents about 1.5% of the total population of adult tribal members living on or near the reservation. The challenge is to continue the level of visibility gained during this project, expand to other reservations and turn the recognition into signed contracts for services. Spirit Lake Consulting, Inc. is pursuing a three-pronged approach to this end.

First, through electronic marketing. This is an area greatly under-utilized for Native American clients based on the inaccurate assumption that this population does not use the Internet. Our own research in the course of this project found that the subjects in the experimental and the control group found that 38% had a computer at home, 35% had Internet access at home and 50% had an email account, indicating use of the Internet either at home, school or work. The number of unique visitors to the Spirit Lake Consulting website from is shown in Figure 10, visits have grown dramatically from less than 3,000 in October to over 14,000 in the first three weeks of June. While it is true that 50% of potential clients do not have Internet access, and thus a web-only approach is inappropriate a web-based approach supplemented with additional techniques is currently being used by SLC.

## Visits to SLC Website, by Month

**FIGURE 10**

Third, the project staff is presenting at conferences to reach tribal program project directors, who, unlike the academic market, are far more likely to attend events with an applied focus than to read academic journals. One presentation was made at the annual meeting of the Consortium of Administrators of Native American Rehabilitation (CANAR) that has already resulted in an inquiry from an Alaskan native program regarding training. Two additional conference presentations on COPT have been accepted for the CANAR mid-year conference in Savannah, Georgia in August and the National Even Start conference in San Diego in October.

While some commercial sales are now being made, to be a more marketable product, further enhancements are highly desirable. The companies is in the process of developing two more SBIR proposals for product enhancements and has one meeting with an angel investor scheduled for next month.

**FINANCIAL STATUS REPORT**  
(Long Form)

*(Follow instructions on the back)*

|   |  |   |                  |  |                           |
|---|--|---|------------------|--|---------------------------|
| 1. Federal Agency and Organizational Element to Which Report is Submitted<br><b>USDA</b>  |  | 2. Federal Grant or Other Identifying Number Assigned By Federal Agency<br><b>33610161560539502</b> |                  | OMB Approval No.<br><b>0348-0039</b>   | Page of<br><b>1</b> pages |
| 3. Recipient Organization (Name and complete address, including ZIP code)<br><b>Spirit Lake Consulting, Inc.<br/>P.O. Box 663 Ft. Totten, ND 58335-0663</b>   |  |   |                  |  |                           |
| 4. Employer Identification Number<br><b>61-1445420</b>  |  | 5. Recipient Account Number or Identifying Number<br><b>B2739P1</b>                                 |                  | 6. Final Report<br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |                           |
| 7. Basis<br><input checked="" type="checkbox"/> Cash <input type="checkbox"/> Accrual   |  |   |                  |  |                           |
| 8. Funding/Grant Period (See instructions)<br>From: (Month, Day, Year)<br><b>9/1/2005</b>   |  | To: (Month, Day, Year)<br><b>8/31/2007</b>  |                  | 9. Period Covered by this Report<br>From: (Month, Day, Year)<br><b>9/1/2005</b>        |                           |
|   |  | To: (Month, Day, Year)<br><b>8/31/2007</b>  |                  |  |                           |
| 10. Transactions:   |  |   |                  |  |                           |
|   |  | I<br>Previously Reported  | I<br>This Period | III<br>Cumulative  |                           |
| a. Total outlays  |  | 246,880.00  | 51,495.00        | 298,375.00   |                           |
| b. Refunds, rebates, etc.   |  |   |                  | 0.00   |                           |
| c. Program income used in accordance with the deduction alternative   |  |   |                  | 0.00   |                           |
| d. Net outlays (Line a, less the sum of lines b and c)  |  | 246,880.00  | 51,495.00        | 298,375.00   |                           |
| <b>Recipient's share of net outlays, consisting of:</b>   |  |   |                  |  |                           |
| e. Third party (in-kind) contributions  |  |   |                  | 0.00   |                           |
| f. Other Federal awards authorized to be used to match this award   |  |   |                  | 0.00   |                           |
| g. Program income used in accordance with the matching or cost sharing alternative  |  |   |                  | 0.00   |                           |
| h. All other recipient outlays not shown on lines e, f or g   |  |   |                  | 0.00   |                           |
| i. Total recipient share of net outlays (Sum of lines e, f, g and h)  |  | 0.00  | 0.00             | 0.00   |                           |
| j. Federal share of net outlays (line d less line i)  |  | 246,880.00  | 51,495.00        | 298,375.00   |                           |
| k. Total unliquidated obligations   |  |   |                  |  |                           |
| l. Recipient's share of unliquidated obligations  |  |   |                  |  |                           |
| m. Federal share of unliquidated obligations  |  |   |                  |  |                           |
| n. Total Federal share (sum of lines j and m)   |  |   |                  | 298,375.00   |                           |
| o. Total Federal funds authorized for this funding period   |  |   |                  | 298,375.00   |                           |
| p. Unobligated balance of Federal funds (Line o minus line n)   |  |   |                  | 0.00   |                           |
| <b>Program income, consisting of:</b>   |  |   |                  |  |                           |
| q. Disbursed program income shown on lines c and/or g above   |  |   |                  |  |                           |
| r. Disbursed program income using the addition alternative  |  |   |                  |  |                           |
| s. Undisbursed program income   |  |   |                  |  |                           |
| t. Total program income realized (Sum of lines q, r and s)  |  |   |                  | 0.00   |                           |
| 11. Indirect Expense  |  |   |                  |  |                           |
| a. Type of Rate (Place "X" in appropriate box)  |  |   |                  |  |                           |
| <input checked="" type="checkbox"/> Provisional <input type="checkbox"/> Predetermined <input type="checkbox"/> Final <input type="checkbox"/> Fixed  |  |   |                  |  |                           |
| b. Rate<br><b>.2661</b>   |  | c. Base<br><b>235615</b>  |                  | d. Total Amount<br><b>62,760.00</b>  |                           |
|   |  |   |                  | e. Federal Share<br><b>62,760.00</b>   |                           |
| 12. Remarks: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation.  |  |   |                  |  |                           |
| 13. Certification: I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents. |  |   |                  |  |                           |
| Typed or Printed Name and Title<br><b>AnnMaria De Mars, Principal Investigator</b>  |  |   |                  | Telephone (Area code, number and extension)<br><b>310-717-9089</b>                     |                           |
| Signature of Authorized Certifying Official   |  |   |                  | Date Report Submitted<br><b>June 26, 2007</b>  |                           |