Native American Interest, Access and Delivery Methods for Distance Education:

National Indian Justice Center (NIJC) Survey Results and Findings

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INTRODUCTION

Distance education technologies are expanding at an extremely rapid rate. Too often, instructional designers and curriculum developers have become attracted to the latest technologies without dealing with the underlying issues of learner characteristics and needs, equity of access to interactive delivery systems, and the new roles of teacher, site facilitator, and student in the distance learning process.

The National Indian Justice Center (NIJC) received a grant from the U>S> Department of Commerce, Public Telecommunications Facilities Program (PTFP) to conduct a planning project studying the need, feasibility and strategies for establishing a distance education infrastructure between the NIJC Regional Justice Center in Santa Rosa, California and centers serving Native American Clientele. NIJC is committed to providing independent, intensive evaluations to measure the effectiveness of its activities, organization and products is clear, as is the need to establish a baseline of measurement for future Programming the organizations programs and activities.

The goals of the grant was to produce a tribal community needs assessment, a technology feasibility study, course content, and potential student profiles. The methods chosen were to develop a survey instrument to answer critical questions before the establishment of useful distance learning program for NIJC that was responsive to identified interests of California Native Americans. Further, the design of the survey was also directed to reveal differences and similarities for key characteristics of the clientele according to the capability, access, subject interest and geography of specific cohorts targeted in the study.
NIJC PTFP Study

Under the management of its Project Manager, Raquelle Myers, the project proceeded along guided by an advisory group and professional consultants. NIJC, and currently the framework being implemented today, is presented below in both descriptive and visual formats.

NIJC PTFP Study Diagram:

- National Indian Justice Center
- NIJC Board of Directors
- NIJC Principal Investigator and Staff
- Advisory Board
- Tribal Communities Participating in the Survey

Public Communications Facilities Program Project:
- U.S. Department of Commerce

Key Characteristics of Targeted Population:
- Course Content Interests
- Age
- Reservation On/Off
- Access Capability and Preferred Delivery
After reviewing of the results of the NIJC/PTFP survey conducted in the Fall of 2006, the most apparent controlling factor in understanding potential differences focused on whether they resided on a reservation or lived off a reservation. The survey also revealed the effect of age on both skill levels and course interest. However, before we present the results highlighting these relationships in developing an effective distance education program we present the background characteristics that breakdown those surveyed into unique groups.
Characteristics of Respondents

We identified 446 valid survey responses that formed the basis of this analysis. The following presents the breakdown for:

GENDER OF RESPONDENTS

Female 289 (73.16%)
Male 106 (26.84%)

The breakdown for the number of males and females that responded to the survey instrument is presented in Figure 1. It is important to note that, while gender was used as a controlling variable throughout the analysis, differences between males and females were not significant on responses to any of the questions. Therefore, in terms of gender results do not differ based on whether the respondent is male or female.

Figure 1. Gender Breakdown of Respondents
RESPONDENT RESIDENCE (LIVING ON/OFF THE RESERVATION)

On Reservation 194 (43.50)
Off Reservation 252 (56.50%)

This characteristic variable is very important to the study, and most of the results seek to answer questions about whether there are differences on a number of variables and resources between those living on the reservation and off the reservation. Because of the sample size of each group, the analysis displays a high level of power in answering these questions, as presented later in the report. However, resources to access distance education activities are substantial greater for those off the reservation, than on the reservation. Also, whether you live on the reservation or off yields differences of interest in topic areas for distance areas courses.

Figure 2. Proportion of Respondents Living On and Off Reservations
AGE GROUPS

Figure 3. Age Groups of Respondents

More than any other background characteristic, age is a determining factor across many of the questions we wanted to answer about access, experience and interest in distance education courses. The elder group of those 56 and above consistently responds in the survey in significantly different ways from the two younger groups. This should help design targeted approaches on delivering distance education materials to the different age groups that cover content they identified as important to each age group.

1 We recoded the age categories to reduce them to three groups to balance the number of respondents in each group.
DISTANCE EDUCATION EXPERIENCE

Since only 29% of the respondents have participated in distance education, presently or in the past, the remaining 70% should be fertile ground for expanding distance education opportunities to tribal communities (see Figure 4). We analyzed distance education experience for the respondent characteristics of “residence,” whether they live on or off the reservation, and for comparison between age groups, and to analyze whether the differences between groups are significant.

First, the analysis of whether you live on the reservation or not produces overall technical skills scores of:

Living on the Reservation = 47 respondents have experience (119 did not)

Living off the Reservation = 75 respondents have experience (169 did not)

This result indicates a much higher number of respondents with distance learning experience for those living off the reservation, and the difference are statistically significant at the .001 level.
Next, we sought to determine whether age of respondent made a difference as to whether respondents had distance learning experience. Using the three age groups established for the process of analysis, the results revealed significant differences between all age groups. The youngest age group (30 and Under) reported 26 respondents with experience and the oldest age group (56 and over) only reported 10 respondents with experience. Interesting for the study was the middle age group (31 to 55) who represented the largest group of respondents with experience amounting to 88 respondents.
Do respondents have access to computers?

A very positive result of the study shows that 77% of respondents own a computer. This should indicate that they are able to participate in distance education through computer access. Additionally, most of the respondents who did not report owning a computer are 56 and older, with somewhat less interest overall in distance learning. An opportunity does exist, however, to deliver distance education materials to the elder group (56 and older) that does owe a computer, but do not have internet access, through the use of CD/DVD media.

Figure 5. Proportion of Respondents that Own Computers
Respondents’ Access to Services

Beyond access to a personal computer, the present survey sought to examine respondents’ access to a range of other technological services that could enable distance learning programs. The following charts illustrate respondents’ reported access to these service types, broken down across age-groups and reservation residency status. Of particular interest, across all groups, respondents reported greater access to both computer and internet services than to cable or dish-based TV.

![Access to Services Chart](chart.png)

Figure 9. Access to Distance Learning Services by Residence and Age
A closer look at the internet access data reveals some additional, noteworthy results (Figure 10). In particular, those who reported that internet access was entirely unavailable were twice as likely to live on a reservation. Respondents living on a reservation were also less than half as likely to have access to some form of high-speed internet connection (e.g., DSL, Cable).

Figure 10. Internet Access by Residence, On and Off Reservation
**Respondents’ Technological Skill levels**

Whether assistance and or learning can be directed and achieved through distance education services depends not only on access to resources, but on respondents’ technological know-how. To broadly assess respondents’ technological skill levels, we developed a composite index of all technical skills under investigation. This composite score makes it possible to examine general skill levels across groups who live on or off of a reservation, as well as across age groups.

First, partitioning respondents into groups based on residency on or off of a reservation produces overall technical skills scores of:

Living on the Reservation = 22.610

Living off the Reservation = 26.719

This result indicates a much higher skill levels for those living off the reservation, and the difference are statistically significant at the .001 level.

Next, we wanted to answer the question whether age of respondent is related to overall technical skill levels. Duncan’s Multiple Range Test was used to determine whether the differences between groups were significant. Using the three age groups established for the process of analysis, the results revealed a significant difference between the oldest age group (56 and older) and the other two groups (under 30; and 31 to 55) at the .001 level of statistical significance. However, differences in technical skills between the two younger groups are not significant, although the composite score for 30 and under was quite higher than the next older group. The overall technical skills scores were:

Ages 30 and under = 28.062

Ages 31 to 55 = 25.873

Ages 56 and over = 17.807
The following charts break down respondents’ reported technological skills into groups reflecting general computer skills, and skills with mobile devices. Figure 11 presents results on a range of computer-related skills for those On and Off Reservation, across each age group:

Figure 11. Respondents Computer Skills by Residence and Age
Figure 12 presents reported skills with mobile devices across the On and Off Reservation groups, as well as each of the age groups.

**Figure 12. Mobile Skills by Residence and Age**

<table>
<thead>
<tr>
<th>Mobile Skills</th>
<th>Reservation, Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off, &lt;30</td>
<td>2.44 (1.83, 1.06)</td>
</tr>
<tr>
<td>Off, &lt;55</td>
<td>2.54 (1.48, 0.64)</td>
</tr>
<tr>
<td>Off, &gt;55</td>
<td>2.14 (0.93, 0.22)</td>
</tr>
<tr>
<td>On, &lt;30</td>
<td>2.39 (1.70, 1.11)</td>
</tr>
<tr>
<td>On, &lt;55</td>
<td>2.39 (1.23, 0.56)</td>
</tr>
<tr>
<td>On, &gt;55</td>
<td>2.23 (0.54, 0.13)</td>
</tr>
</tbody>
</table>

Legend:
- **Blue**: Cell Phone
- **Red**: Text Messaging
- **Green**: Ipod
Respondents’ Preferences for Distance Education

It is important to consider respondents’ learning preferences for participating in distance education. Regardless of the potential for emerging technologies, if participants are unwilling or uninterested in utilizing a technological resource it is unlikely that the modality will have the desired effect. Figures 6 through 8 illustrate respondents’ preferences at various levels of analysis. It is apparent from these charts that it is important to consider both age and residency on or off of a reservation when considering respondents’ learning preferences. In particular, it appears that while all respondents were unlikely to prefer mobile devices, older respondents residing on a reservation were especially unreceptive to digital modalities, indicating that it may be important to consider other means of communication when targeting this group.

Figure 6. Distance Learning Preferences to Participate in Distance Learning Activities
Figure 7. Distance Learning Preferences by Residence, On and Off the Reservation
Figure 8. Distance Learning Preferences by Residence and Age Breakdowns
Respondents’ Interests in Distance Education Courses

In this section, we present the results for overall interests in distance education courses and content. What kinds of subjects are you interested in? Analysis included nine (9) topic areas:

1. Technical Skills Development:
   - Basic and Intermediate Computer Skills
   - Multi-media Arts (video, audio, graphic design)
   - Creating Virtual Field Trips

2. Health:
   - Fetal Alcohol Syndrome
   - Health

3. Civil and Criminal Justice:
   - Civil Law and Procedure
   - Criminal Law and Procedure
   - Environmental Justice
   - Hate Crime Prevention
   - Violence Prevention
   - Juvenile Justice

4. Tribal Law Development and Issues:
   - Federal Indian Law
   - Tribal Courts
   - Tribal Sovereignty
   - Repatriation and Religious Freedom
   - Revising Tribal Codes and Constitutions

5. Community Enhancement:
   - Parenting and Relationship Skills
   - Storytelling
   - Youth and Elder Interactions
   - Documenting Oral History
   - Native American Cultural Topics

6. Roles and Duties of Gaming Commissioners

7. Museum Studies

8. Fundraising and Grant Writing

9. Career Development
The presentation of results places each topic area in a rank ordering by: (1) overall for all respondents; (2) residence on/off the reservation; and age groups. This should provide a useful means for targeting distance education opportunities to different groups, as well as identifying areas that all groups are interested in participating.

The rank ordering of Course Topic Areas for all respondents:

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Overall Ranking of Course Topic Areas for all Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Community Enhancement</td>
</tr>
<tr>
<td>2.</td>
<td>Tribal Law Development and Issues</td>
</tr>
<tr>
<td>3.</td>
<td>Technical Skills Development</td>
</tr>
<tr>
<td>4.</td>
<td>Civil and Criminal Justice</td>
</tr>
<tr>
<td>5.</td>
<td>Fundraising and Grant Writing</td>
</tr>
<tr>
<td>6.</td>
<td>Health</td>
</tr>
<tr>
<td>7.</td>
<td>Museum Studies</td>
</tr>
<tr>
<td>8.</td>
<td>Career Development</td>
</tr>
<tr>
<td>9.</td>
<td>Roles and Duties of Gaming Commissioners</td>
</tr>
</tbody>
</table>
Table 2
Rankings of Course Topic Areas for Respondents

<table>
<thead>
<tr>
<th>Living Off the Reservation</th>
<th>Living On the Reservation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Tribal Law Development and Issues</td>
<td>2. Technical Skills Development</td>
</tr>
<tr>
<td>5. Fundraising and Grant Writing</td>
<td>5. Health</td>
</tr>
<tr>
<td>6. Health</td>
<td>6. Fundraising and Grant Writing</td>
</tr>
<tr>
<td>7. Museum Studies</td>
<td>7. Career Development</td>
</tr>
<tr>
<td>9. Role and Duties of Gaming Commissioners</td>
<td>9. Role and Duties of Gaming Commissioners</td>
</tr>
<tr>
<td>Table 3</td>
<td></td>
</tr>
<tr>
<td>Rankings of Course Topic Areas of Respondents</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ages Thirty (30) and Under</th>
<th>Ages 31 to 55</th>
<th>Ages 56 and Above</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Health</td>
<td>5. Fundraising and Grant Writing</td>
<td>5. Fundraising and Grant Writing</td>
</tr>
<tr>
<td>6. Fundraising and Grant Writing</td>
<td>6. Health</td>
<td>6. Health</td>
</tr>
<tr>
<td>9. Museum Studies</td>
<td>9. Role and Duties of Gaming Commissioners</td>
<td>9. Role and Duties of Gaming Commissioners</td>
</tr>
</tbody>
</table>
Figures 13a and 13b Combine Residence and Age into a single analysis. These illustrations demonstrate the extent to which interests in distance education participation varied across both age and reservation residency.

Figure 13a. Respondents Course Interests by Residence and Age
Figure 13b. Respondents Course Interests by Residence and Age
Summary of Findings

This summary focuses on the critical questions to be answered from the results of the responses to the survey.

1. **Do respondents have access to resources that would make it possible to participate in distance education activities?**

   There appears to be considerable variation in the degree to which respondents have access to resources that would enable distance education. Differences are especially apparent between those living on and those living off of a reservation, with those living on reservations tending to have more limited access to technological resources. While most respondents reported access to some type of telephone, those reporting access to a computer and/or internet connection varied considerably. For instance, among respondents less than 30 years of age, nearly 85% who live off of a reservation reported access to a personal computer, while less than 65% of those who live on a reservation reported access to a personal computer. This highlights the fact that while younger individuals may be more technologically skilled, they may to be able to take advantage of digital resources.

2. **Do respondents know how to utilize these resources?**

   Differences in technological skills across tribal communities indicate that all methods of communication may have some utility for distance education. Whether assistance and or learning can be directed and achieved through distance education activities by providing a DVD or an online course depends not only on access to resources, but on respondents’ technological know-how. These results therefore provide critical
information to target and reach different audiences with methods appropriate for successful delivery of services.

As in other areas, there was great diversity in levels of technical know and skills among the respondents. The middle age group, 31 to 55, appeared to have both knowledge and technical skills to participate in distance education activities followed closely by the youngest group, 30 and under, who were especially interested attained more technical skills through distance education methods. The oldest group, 56 and above, and many of those living on reservations are looking for less technical methods to participate in distance education activities because of technical skill limitations.

3. How would respondents prefer to access distance learning activities?

Despite the tremendous emerging potential to reach individuals via mobile technologies, it appears that respondents remain either unaware or uninterested in accessing distance learning content via this modality. In contrast, interest in access to distance learning via the internet is consistently elevated relative to interest in access via the other modalities surveyed. It is interesting to consider the possibility that as the internet becomes increasingly accessible via mobile technologies, interest in use of mobile devices to access internet-based distance learning content will also increase. In the meantime, it will also be important to provide those who lack internet access with alternative modalities such as CD/DVD-based content.
4. **Are respondents currently enrolled in a distance learning program, and do they have previous distance education experience?**

   As noted earlier twenty-nine (29) percent of the respondents are currently enrolled or have previous experience with distance education activities. Additionally 88% of the respondents are interested in accessing distance education activities, leaving only 12% that are not sure if they would participate. This finding suggests that there should be numerous opportunities to meet tribal community needed whether participants live on or off the reservation.

5. **What interests do respondents have in topic areas for distance education activities?**

   The preferences and rankings by respondents of distance education subjects and content they would like to have offered provides useful information to design and establish targeted strategies for different groups across tribal communities. A number of communalities were identified between those living on and off the reservation, as well as for different age groups. This findings suggests that core topics for distance education could everyone’s needs, if different methods of delivery are developed – for instance more technology applications where resources exist, especially those that are living off the reservation, and other standard methods requiring fewer technical requirements.
Conclusion

Overall, findings of the present report suggest that the National Indian Justice Center has made positive progress toward its goal of identifying and clarifying both need for, and basis to move forward in its ability to delivery distance education materials and courses to tribal communities. This is especially true regarding development and implementation of distance education curricula for training stakeholders in improving their tribal communities. Examination of survey results collected and analyzed produced useful information the next step in producing distance education curricula and activities by NIJC.

Although the findings presented in this document identify some components of the educational curricula that may benefit from revision or increased intensity of focus, continued outreach to respondent groups who would benefit from more targeted educational interventions will go a long way toward meeting the NIJC’s intended objectives. The present results highlight the wonderful opportunity that exists for distance education among tribal communities, as well as the need for further development and implementation of these activities by NIJC, as there is ample evidence that interventions of this sort may eventually produce a substantial positive impact within these communities.
References

**Distance Learning**


Sponder, B. (1990). Distance education in rural Alaska: An overview of teaching and learning practices in audioconference courses. (University of Alaska Monograph Series in Distance Education No. 1.) Fairbanks, Alaska: Alaska University, Center for Cross-Cultural Studies.


**Key Field and Survey Research Sources**


**Evaluation and Methodology**


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