

Page 8

Respondent # _____

3. Do you have any suggestions for improvement of the following areas?

Instruction:

Counseling:

Services:

Textbooks:

Facilities:

Students:

Administrators:

Teachers:

Other Personnel:

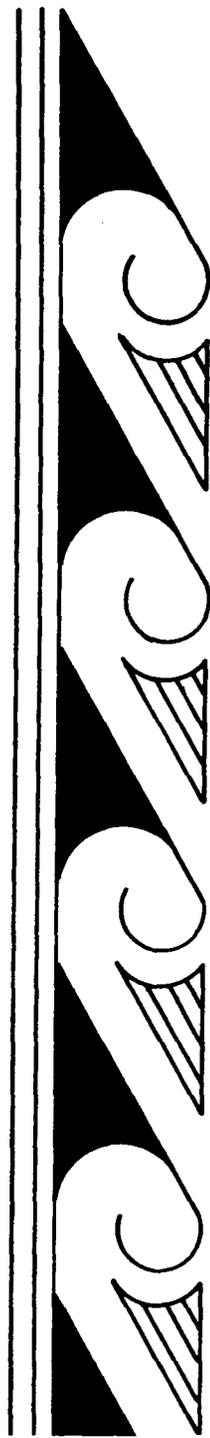
Cultural Activities:

Extra-curricular Activities:

Policies:

Funding:

4. Do you have any other comments?



Chapter 3

SURVEY RESEARCH

A survey is a method of collecting data in a consistent way. Survey research is useful for documenting existing community conditions, characteristics of a population, and community opinion. In this chapter, you will find an outline of the steps needed to conduct surveys using both the questionnaire and interview methods. Details on preparing questionnaires and interview schedules are presented, along with a comparison of both methods for different community-based situations. Survey data is not only useful for immediate community development purposes, but it can also serve the future of a community efforts by providing the baseline data needed later to demonstrate progress.

Surveys are one of the most common forms of research to reach native communities, to the point that the common community reaction is "Not another survey!" Such a reaction is usually due to the hundreds of surveys conducted by academic researchers and federal agencies, where the results rarely came back to the community directly. In these times of change, many community groups are conducting their own surveys and participating in the definition of the questions asked by the surveys of other researchers. This type of cooperative survey effort can be a strong tool for community development.

More specifically, surveys can be useful for:

- * Determining the characteristics of a population or a community
- * Defining existing conditions in a community or region
- * Documenting community opinion
- * Comparing groups of communities

All of the above purposes for conducting surveys can be directly applied to the development and management of community resources.

More specifically, a survey is a method of collecting data in a consistent, or systematic, way. This usually involves constructing a set of questions that are either asked by means of a questionnaire or through an interview. In relation to the methods presented in the previous chapter, needs assessments often use survey techniques. This chapter will present a broader view of the uses and techniques of the survey.

TYPES OF SURVEYS

There are several different approaches to conducting a survey. One very common approach is the **cross-sectional survey**, where a set of information is collected for a sample at one point in time. Data may be collected from a sample of the population or from the entire population or community. When the data can be collected from an entire population, as may be the case in the small community or tribe, then the survey is sometimes called a **census**. When the data are analyzed from a cross-sectional survey, the results can vary from tabulations of answers on single questions to a more complex analysis exploring the relationships between variables. Even though the data are collected at one point in time with the cross-sectional survey there are methods of comparing items or looking for change. For example, the questions asked may be **time-ordered**, referring to events in the past, present, or the future. The responses on such questions can provide a basis for looking at change, but with the disadvantage that the person answering the questions may distort impressions of an event over time.

The **longitudinal survey** provides another means of looking at changes

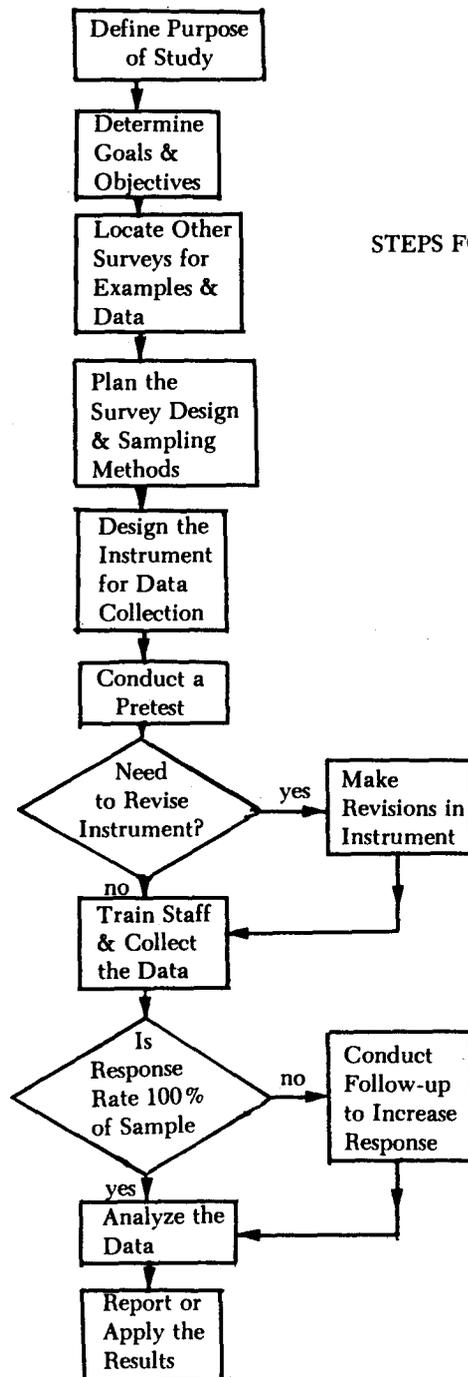
over time. With this type of survey, the data are actually collected at different points in time. This can be accomplished by either sampling from a population at different points in time, or by following-up on a group of individuals at different points in time. The main problem seen with follow-up on a group of individuals is loss of participants (also known as drop-out or attrition). With the small community, it may be possible to follow-up with nearly the entire population and tracking those who may have moved through the community network. Sometimes it may be possible to use the results of a previous study for a past perspective, followed up with the same questions in a current study. Although this method carries the advantage of reduced time and funds, it also requires caution in seeing that the questions are asked in the same way for the different points in time. An example of a longitudinal survey would be a study of native language use within the community, where questions on language use are asked five years apart to see if there had been any change in the amount of language use. Such a study might look at reasons for decreased or increased language use and relate these changes to cultural change. The data obtained from such a study could be useful in documenting the structure of a bilingual education program.

Several distinctions are sometimes made within the longitudinal survey design. With the **trend study**, a general population is sampled at more than one point over time. While the same individuals are not surveyed each time, the assumption is made that each sample represents the same population. During the **cohort study**, a specific population is followed over a period of time. For example, high school graduates at different years might be surveyed to note changes in this group over the years. For a **panel study**, a specific sample of individuals is followed at different points in time. Attrition tends to affect this last type of longitudinal study.

Although many researchers are in favor of the more complex survey design, it cannot be overemphasized that even the most descriptive tabulations of simple responses on culturally appropriate questions are more valuable than complex, statistically sophisticated analyses on questions that may be inappropriate to the community. A basic, descriptive design is also often a good first step toward finding direction for a more complex design later on. The most important factors in choosing a design are the needs and the resources of the community.

STEPS FOR CONDUCTING A SURVEY

The following steps are intended as a general outline of the methods generally used in conducting a survey. Consideration of these steps is useful in completing the survey design before the actual research begins. An overview of the steps involved in the survey process is given in the following diagram.



Step 1: Defining the purpose of the survey is an important first step in developing the research design. The more tightly focused the study, the more useful the results are likely to be for community development. One common mistake made in a community survey is to collect a wide range of data that does not relate to a specific purpose. This is different from conducting a multi-purpose survey, where several different goals are decided upon and the questions are designed to address the different goals. Since the time involved with conducting a survey is usually extensive, it may be more economical to the community to design a multi-purpose survey that could be used for planning and development efforts in several areas. For example, a survey to determine existing health levels might be directed at development of a health care delivery system and an alcohol treatment center as well. Deciding the general purpose of the study is usually a step that enables a group to begin focusing the project.

Then, determining the goals and objectives of the project further focuses the purpose of the study to the point that the methodology can be developed. Goals are long-term general outcomes; whereas, objectives are short-term, and more specific (review of Chapter 1). For example, in the language survey sample carried throughout this chapter, the goal of the survey would be: "To examine the extent to which use of the native language is maintained in the community." Specific objectives would be: "To determine language use of adult community members," "To determine present language use of children in the community," "To determine the first language acquired by children in the home," and "To determine the domains of interaction where native language is used in the community." The results of such a survey might be used to develop adult language classes or bilingual education programs. Other educational programs might be developed with the use of such data, for maintenance of the native language is often used as an indicator of retention of traditional culture. Objectives can also reflect relationships between variables.

Step 2: Locating previously conducted surveys on similar topics is a step that enables the researcher to discover examples of different types of survey designs and instruments to collect data. Research results are often published through some of the library and data base sources listed in the chapter on LIBRARY AND INFORMATION SERVICES. Materials that were prepared in conjunction with a survey project, such as training manuals or complete instruments can often be obtained by writing to the author. Other types of studies conducted with the survey population can also yield valuable information for the project.

Step 3: Deciding on the type of survey design that will best accomplish the goals and objectives of the project is a very critical step in the survey process. One common mistake made in research efforts is to begin design-

ing an instrument to collect data before the overall research design is planned. The appropriate survey design will vary according to the goals of the project, the time limits that may exist, and the resources available to the project. For example, if documentation is needed on the socio-economic conditions of an area for the purpose of immediate development work, then a cross-sectional survey might provide the best design. Or, if existing conditions in two communities (perhaps two Indian communities or an Indian and a non-Indian community) are to be compared at the present time, again the cross-sectional approach can be considered. If the purpose of the project is to see if change is occurring over time, then the longitudinal method would be the more appropriate design. For example, if a community is implementing an economic development project, a survey effort might be useful in documenting socio-economic conditions at the start of the project and then at a later date to see if improvement has occurred. Evaluation projects often use the longitudinal survey approach.

One of the practical decisions of choice relates to the resources available. Longitudinal studies require continuity of staff and funds over time. Turnover of personnel and loss of interest in the study are some of the more frequent reasons why longitudinal efforts fail to reach completion. Often a two-year or a three-year funding commitment can be gained for the study in advance, if the research design is developed before the start of the project. Follow-up on individuals takes a great deal of attention, rapport, and the development of a good tracking system. Yet, the strength that many project gain from demonstrating change over time is a very valuable development asset. In addition to documenting the effectiveness of new techniques, the ability of showing change over time increases accountability to the community.

Step 4: Selecting the sampling methods to be used relates to the type of survey design and to the population included in the study. The first step in choosing the sampling method is to define clearly the population to be reached. Is the population included in the study a community, a tribe, or a whole region? The resources available, in terms of both personnel and funding, are important considerations. It may be more useful in documenting socio-economic conditions to have a completed survey of a well-sampled community, rather than a less-thorough survey of the larger population or tribe. If differences between communities (for example, economic, environmental, bands or other groupings) are not great, the study of one community can provide an example and often serves as a starting place or a pilot study for expanding the study to other communities. Common mistakes in survey sampling are: 1) not narrowing-down or focusing the sampling enough to accomplish the objectives of the study. 2) focusing on a well defined sample, but choosing a sample of

individuals that cannot provide the information needed for the survey, and 3) selecting the sample by convenience (persons most readily available), rather than selecting a random or a representative sample.

Sampling becomes much more of a challenge in rural communities, where the conventional sampling techniques developed for urban areas often do not apply. In the later chapter on STATISTICS, the problems of random sampling in Indian communities are discussed. One successful technique for the small community is exhaustive sampling, or including all of the households in the community. When an exhaustive sample is possible, the use of descriptive statistics is simplified. There are few studies available that present methods for sampling in Indian communities; however, one survey effort, "Survey Sampling on the Navajo Reservation" (see bibliography under John Hubbard) provides an example study. The research team developed a sampling technique by using maps and dividing the reservation area into grids. Within the grid system, a certain number of families were then selected from each grid. In choosing a representative sample from the community, these variables may provide a guide for keeping a balance within the sample: 1) age, 2) sex, 3) geographical location, 4) tribe or band, 5) clan, 6) religion, 7) income level.

The type of survey design also affects sampling considerations. The cross-sectional survey often uses subsamples within the larger sample for comparison purposes. Care should be taken that each of these subsamples are representative of the total population. And for statistical purposes, each of the subsamples should include a substantial number of people. In sampling for the longitudinal survey, the total number in the initial sample should take into account the drop-out, or loss of participants that is bound to occur over time. Although there are no set rules for the adequate sample size, one rule of thumb often used is that the total sample size would comprise 10% of the total population. In determining the sample size and procedures, when an exhaustive sample is not possible, it is wise to consult a statistician. (Note: Statisticians, or specialist in statistics, can usually be found at universities, colleges, state or federal agencies, and private consultant firms.)

Step 5: Deciding on a method of collecting the data is an important step in designing the survey. The more common methods of data collection are the questionnaire and interview schedule, although this type of data is sometimes supplemented by organizational records, census data, and the data from previously conducted surveys. A questionnaire is a set of questions that are answered directly on paper by the respondent, while an interview schedule is a set of questions that are asked to the respondent by an interviewer. These questions can be listed with highly structured responses (closed form), or may be open ended (open form), allowing for

additional comments. In choosing between the questionnaire and the interview methods, some of the factors to consider concerning appropriateness for community use are: whether a mailed questionnaire would be returned, literacy levels of respondents, language dominance of respondents, and the advantage of the more personal interview contact. If the target group of respondents is school administrators, the questionnaire method might be appropriate; whereas, for a rural community survey, the interview method is more likely to succeed. Details on constructing an instrument for data collection are given in the next section.

When the research design is prepared, generally a preliminary instrument for data collection is prepared with the understanding that the final instrument would be developed at the start of the project. Time for development and pretesting of the instrument, as well as staff training to use the instrument, needs to be allowed in the project timetable. These tasks can take several weeks. Research projects usually develop a new instrument to test a new idea; however, the many instruments now in existence can serve as a starting place for ideas. During the literature search for related work, references to instruments from previous studies can be located.

Step 6: Conducting a pretest with the questionnaire or interview schedule is a step to minimize problems before the actual data collection begins. One of the first ways to check over the instrument is to read it over yourself to see if there are any uncertain or vague questions. Then, after this preliminary check, a pretest or trial run of the data collection method should be conducted. For the pretest, a sample of individuals similar to those planned for the survey sample are chosen. Generally, about ten to twenty respondents are asked to participate in the pretest. The pretest provides an opportunity to see if the data collection methods are culturally appropriate, easily understood, or complete. The questionnaire or interview schedule is generally revised, or rewritten, if the pretest indicates that changes are needed. Certain federal offices require approval of the data collection instrument before use, so funded projects might be wise to check into the current policies.

Step 7: Collecting the data involves effective use of the instruments developed for data collection. Techniques that might be incorporated into the research design for the community-based effort are often less formal and more culturally sensitive than in many academic projects.

A letter of introduction, sometimes called a transmittal letter, is an important aid in gaining cooperation for the questionnaire. A good explanation of the purpose of the project (and why the respondent is important to the project) is one of the more important factors in obtaining a high response rate. Likewise, the introduction provided by the interviewer is a very critical point in gaining cooperation for the interview.

Giving back to the community while collecting the data is one of the most effective ways of reciprocating during a study. Although an explanation of the benefits expected to come to the community from the study is one form of sharing, the offering of information or services at the time of the data collection is a more immediate demonstration of the thoughtfulness put into the project. For example, information booklets on available services can be produced very inexpensively and given to families at the time of the interview or mailed with the questionnaire. Such a booklet can also contain an explanation of the purpose of the survey and the plans for applying the survey results to develop further resources. Another means of giving to community members in exchange for their time is to provide transportation to a needed service. Particularly if two interviewers are working together, the interview may be conducted on the way to the destination. For example, in conducting a survey of existing health conditions, an offer of transportation to obtain health services might be appropriate. Two pitfalls to watch for in this type of exchange are: 1) skewing the sample by gaining cooperation from a population segment that is more apt to seek out a particular type of service, or 2) becoming involved as a transportation provider to the extent that the survey effort becomes neglected. When there are available funds for the project, it may be possible to pay the respondent for the time taken during the interview. The introduction of money into the exchange may be less culturally appropriate than other forms of sharing, and may make the respondent feel as though all questions must be answered. Time given by community members is a valuable contribution, and the extent to which this is recognized by the researcher, the better the project is likely to be accepted in the community.

Maintaining confidentiality of the data, or keeping the identity of the respondent unknown, is an ethical consideration in the data collection process. If safeguards are taken to protect the identity of the respondent, it will often put him at ease to explain these either on the letter accompanying the questionnaire or during the interview. The most common form of protecting the respondent's identity is through the use of a respondent number. That is, a master list is kept of respondent's names, addresses, and assigned numbers by the research project staff. Only the respondent number appears on the data record sheets and the master list is then kept in a locked or confidential place. For a returned questionnaire, the name of the respondent is usually identified to enable a follow-up in the case of non-responses. The respondent number can be used in recording the data, though, to provide confidentiality when the data are processed and the results reported. The anonymous questionnaire, where the respondent does not reveal his identity, may be necessary for collecting very sensitive types of data; however, the follow-up is difficult, if not impossible when this technique is used. A system for maintaining confidentiality is particularly important for the interview method, where

the interviewer is visible in the community. Explaining the system by which the data will be kept confidential often helps to gain the trust of the respondent.

The collection of data is one of the most time consuming and expensive parts of the survey project. In addition to plans for the actual data collection methods, the research design must adequately provide for staff time and funds to complete the project. The questionnaire method requires funds for questionnaire duplication, preparation of the letter of introduction, postage and envelopes for both the initial contact and return of the completed instrument, duplication and postage for follow-up on non-responses, payment to participants involved in the pretest, materials given to respondents, as well as funds for the data analysis. The interview method requires funds for duplication of the instrument, payment of the pretest participants, salary for the interviewers (initial contacts and follow-up), transportation for the interviewers, and materials given to respondents, in addition to the costs of the data analysis. The amount of time required for each interview can be estimated from the pretest interviews, and transportation time can be calculated according to the average distance to be travelled. A timetable for the research design (see chapter on RESEARCH PROPOSALS AND REPORTS for examples) is a good planning measure and later provides a valuable guide for staff members to follow during the project.

Completion of the data collection plan is critical to the survey effort, for failure to complete any segment of the plan due to shortage of time or funds would severely affect the sampling for the project. Adequate attention to this task in the research design cannot be overemphasized. A more specific discussion of data collection instruments and methods for their use is given in the section that follows.

Step 8: Follow-up is an important step to plan for in the survey process, for a certain number of respondents frequently do not mail back questionnaires or cooperate on the interview at the first try. With the questionnaire method, and initial response rate of less than 50 percent may indicate problems with the questionnaire or the method of communicating with the respondent. In some survey efforts, a completely new approach needs to be tried if the response rate is extremely low. In most surveys, however, a follow-up letter with another copy of the questionnaire and a self-addressed, stamped envelop will increase the return rate.

Follow-up with the interview approach can become more complex, for there are several different reasons that can be the cause of the non-interview:

- 1) In one type of situation, there is no one at home at the residence. Contacting the respondent in advance by telephone or by mail to arrange a time for the interview decreases the likelihood of this situation. Call-backs increase the response rate when the interviewer finds no one at home.
- 2) A related situation occurs when the respondent is not at home. This may happen when the chosen respondent is to be the head of the household or an adult. Arrangements may be made with other members of the family for a return visit.
- 3) Another non-interview situation occurs when the respondent is not available. If the person is busy or ill, but willing to cooperate, then arrangements can usually be made for a later date.
- 4) An outright refusal on the part of the respondent can be for several different reasons, yet the end result is the same. Since refusals introduce bias into the survey effort, interviewer training to deal with those hesitant to cooperate is important.

Whether using the questionnaire or the interview method, a record keeping system for follow-up is important to include in the research design. Follow-up is an expensive step in the survey process, and funds are usually budgeted for this additional effort. Beyond a good follow-up effort, the researcher needs to accept the fact that, for a variety of reasons, some people will not respond. Remember that people have the right to refuse the respond, and don't take such refusals personally!

Step 9: An outline of how the analysis of the data will be conducted is an important part of the research design. This step is interrelated with the design of the data collection instruments, for the data must be collected according to a certain format (such as numerical or descriptive) to allow for certain types of summaries. One of the more common mistakes in survey research occurs when the data collection instruments are designed without giving thought to the techniques that would be used to summarize or tabulate the data. Well-coordinated data collection and analysis plans allow for the maximum use of the data. For example, whether data are collected in a numerical, grouped, or ranked format, they will allow for different statistical analysis. Many uses of the data may be lost if the data are collected and then a statistician is approached later to help with analysis. In a section below on this topic, some special considerations that are related to data analysis in survey research are discussed.

Step 10: Reporting or sharing the results of the survey is a vital step in returning the efforts to the community. These are a few of the items that help complete the survey report:

- * Purpose of the study
- * Review of previous studies or surveys
- * Survey method (population, sampling method, sample size, data collection method, method of data analysis, attrition rate, examples of questionnaires or interview schedules used)
- * Analysis of data (presentation of data, interpretations)
- * Conclusions (overview of the study, results, recommendations)

To enable the reader of the report to use the study results effectively, the data should be presented in a clear manner. This is most commonly done in the form of tables where the responses to questions are summarized. Whenever a table is included, a clear presentation includes mention of the purpose of including the data and the interpretation of the data. One common mistake that loses the reader is cluttering the report with too much data, or with data that is not interpreted in relation to the findings. Again, we emphasize that writing the clear report may make the difference between the study that is useful to a community or the study result that sits on a shelf.

More Common Mistakes Made During Survey Research

These are a few of the mistakes more frequently made in community-based survey efforts:

- * Specific goals and objectives are not defined for the project, reducing the effectiveness of the data gathering
- * Comparisons between groups are overlooked
- * Sampling is not representative
- * Sample group does not have the information needed for the study
- * Questionnaire method is used in a community where attitudes are not receptive to the less personal method and the return rate is low
- * Questionnaire method is used where the literacy level of the community members is low, thus preventing completion of the form in a large number of cases
- * Questionnaire is too long, causing the respondent to become impatient
- * Questionnaire is worded in a vague or unclear manner, causing differences in interpretations among respondents
- * Questionnaire contains researcher bias
- * Either questionnaire or interview schedule is not pretested to discover problems

- * Coding format is not developed before the data collection, for purposes of summarizing the data numerically
- * Interview format is not structured enough to allow for the collection of the same kinds of data for each case included in the sample
- * Interviewer is not effective due to association with certain factions in the community
- * Interviewer is not trained in interview skills
- * Interviewer shows bias during the interview, swaying the responses
- * Follow-up not conducted on no-responses, for either questionnaire or interview method
- * Confidentiality is not kept on respondent data
- * Checks not conducted to test the reliability of data
- * Survey report contains too much jargon, or technical words, for community use

Adequate planning of the survey design can help the research staff in avoiding these possible problem areas.

DATA-COLLECTION METHODS

The tools used for data collection are aimed at obtaining information in a consistent way for all participants in the survey. This means that a particular set of questions must be asked, or a particular kind of data collected, for all of those included in the study. The more common instruments used to collect survey data are the questionnaire and the interview. Questionnaires and interviews provide a means of obtaining data by asking people rather than by observing them behave. As a shortened method of data collection, use of these instruments is a practical way to gather data. An important disadvantage to remember about self-reported data is the possibility of distortion on the part of the respondent. For example, the respondent might in a certain situation give the response that he thinks the researcher wants to hear, rather than his own opinion.

There is one major difference between the questionnaire and the interview. While the questionnaire consists of a set of questions that the respondent answers on paper by himself, the interview consists of an interviewer asking the questions and recording the responses. This section focuses on the design and use of both research techniques. Other types of data are often used to supplement the survey data collected, such as information available from organizational records, case studies, observations, testing results, and the data from other existing surveys.

In designing the effective instrument to collect data, questions need to be worded clearly. A first step in wording questions clearly is to understand the *importance* of each question in relation to the objectives of the survey. This will enable you to envision a more exact wording, rather than a vague expression of an idea.

Figure 3.2

COMPARISON OF QUESTIONNAIRE AND SURVEY METHODS

CHARACTERISTIC	QUESTIONNAIRE	INTERVIEW
FORMALITY	More formal, less personal/ May seem cold to community persons or respondent may be suspicious	More personal, friendly/ Greater response likely in community efforts
TIME	Time to complete questionnaire minimal/ Respondent may skimp on time or fail to respond to some questions	Interview is time consuming/ Completion rate usually higher than with questionnaire
EDUCATIONAL/ EXPERIENCE LEVEL OF RESPONDENT	Educational level may affect interpretation of questions	Educational or experience level less of an effect because interviewer explains questions
LITERACY	Literacy required	Literacy not required
LANGUAGE RESTRICTIONS	May be limited to English or a written language	Interpreter may be trained for the interview
BIAS	Questions may contain bias---usually detected during the pretest	Interviewer may influence the responses or cause tension---training may prevent this

CHARACTERISTIC	QUESTIONNAIRE	INTERVIEW
ADDITIONAL DATA	Respondent can add comments, but usually does not take the time	Tends to yield more complete data/ Interviewer able to encourage and note comments
COST	Cost primarily involves duplication, postage, and data processing	Besides copies of instrument for noting responses and data processing, additional costs are salary of interviewers and travel
TRAINING	Training for persons to code and process data, if needed	In-depth training needed for interviewers in addition to data preparation
DATA ANALYSIS	Increased chance of non-responses may introduce bias into the study	Data summaries from open-ended questions difficult to summarize
RECIPROCATION	More difficult to give back to the respondent, unless materials are mailed	Services, materials, or payment can be given to the respondent at the time of the interview
APPLYING RESULTS	Respondent may not identify as closely with the project, due to the less personal nature of the method	Cooperation for future involvement of the respondent may be gained through the personal contact/ Respondent may feel more like a participant and take an interest in the results

Questions can be direct or indirect, depending on how straightforward a question is in asking for a specific kind of information. While the direct question is more likely to result in a very specific response, a disadvantage of the approach is possible offense to the respondent. An example of the direct approach is the question: "Do you feel that teachers are presenting cultural materials correctly? _____"

Worded indirectly, the same question could be: "What is your opinion of the way cultural materials are presented in the classroom? _____" The indirect wording is likely to yield data that is less specific, yet the wording gives the respondent a broader range of options for responding.

These recommended points¹ for wording of the question can serve as a checklist:

- * **Making items clear** increases the chance that all respondents will interpret the questions in the same way. To accomplish this, avoid vague terms in the words of the questions and the responses. In particular, terms that refer to time can have very different interpretations to different people. For example, the term, "frequently" could be interpreted as either "several times a day," "twice a day," "once a week," or "once a month" by different people.
- * **Keeping questions relevant** to the purpose of the study will encourage enthusiasm on the part of the respondent. If the value of the question to the objective of the study is clear, the respondent's comments will offer more information. Cultural relevance is another point to consider; that is, if an activity does not occur in the target culture, then the question will be considered useless by the respondent. Topic relevance is another consideration. Are the respondents informed on this topic or will they be likely to guess at an answer? For example, asking parents about the fine details of the school administration may not result in meaningful data and may frustrate the respondents.
- * **Short questions** are easier to understand by the general population and offer less chance for misinterpretation. When the items can be read quickly, the respondent is less likely to become "bogged down" or discouraged with the questionnaire or interview.
- * **Avoiding jargon**, technical terms, or slang keeps the wording of a question at a level that all respondents will understand. When specialized terms are used, these can be defined in the question. The interviewer can provide explanations if asked but the questionnaire must stand alone.

- * **Negative terms** are likely to be misinterpreted by a sizeable percentage of the respondents. For example, the sentence "What are your reasons for feeling that the program is not adequately training staff?" could be easily misinterpreted if the word "not" is overlooked. An exception to this may occur when an agreement scale is used to ask whether the respondent agrees or disagrees with the statement (see *NEEDS ASSESSMENT*, Chapter 2, for examples).
- * **Complex questions** expressing more than one idea cannot be answered easily by the respondent. For example, the question "Are your mother and father employed?" might be answered with "yes" on one part and "no" on the other part, thus preventing a single answer by the respondent. A general rule of thumb is to avoid questions that have the word "and" in them. This is one of the keys to simplifying a complex question.
- * **Biased or leading questions** should be avoided. Sometimes when the researcher is intensely involved with an issue, a bias toward a certain viewpoint can subtly enter into the wording of questions. One way of guarding against bias is through review of the questions by other persons, asking for opinions on possible bias.
- * **Threatening or offensive questions** are the most serious to avoid, for one threatening question can end the participation of the respondent. For example, respondents of a particular income level might be very sensitive about questions concerning source of income. Questions regarding sex (from "Are you male or female?" to questions about one's life or sexual preference, etc.) can be offensive in some cultures, particularly if the interviewer is of the opposite sex of the respondent. Again, a review of the questions by other persons can help point out any threatening questions. In avoiding a threatened reaction on the part of the respondent, a detailed explanation of why the potentially sensitive question was included usually softens the impact.

The structure of the responses is another critical element of question design. Questions written in the closed form specify a list of possible responses. With the open form, the respondent expresses the response in his own words. The open-form or open-ended question can be designed for the unstructured response. The question is asked, and then a space is provided for the response to be written in. For example, "What do you think are the major employment training needs in your community? _____"

Although data gathered through the open form question are hard to summarize, valuable opinions can be recorded through this method. A

combination open and closed form approach is the fill-in response. A question is asked in a way specific enough to narrow the response to a word or a phrase. For example: "What type of occupational training program have you attended? _____"
The limited range of responses makes this method easier to summarize than the unstructured response. Questions asking for numerical answers, such as "Age _____" often use the fill in response.

Although the closed form carries the advantage of being readily quantified or summarized numerically, the researcher must be careful to include a complete list of responses for this form. One technique for closed for responses is the multiple choice format. A list of possible responses is developed for each question, intended for the respondent to select one response. Particularly when the responses are numbered, coding the data for analysis becomes a much easier task. The list of responses can be fully developed by asking a small group of respondents to add to the list, if it is incomplete. Further responses may be added to the list during the pretest. After this is tried, another alternative is to add a category called "Other _____", with a space for writing in other responses. Yet another technique in question design combines both the closed and open form in one question, to gain the advantages of both. For example:

___ Type of Healing Preferred

1. Traditional
2. Modern
3. Combination of both

Comments: _____

This technique may be too lengthy for every question, yet useful for a few items where comments greatly expand the knowledge gained by asking the question.

All questions are not easily structured for a single response. In some instances, a checklist is needed to record all responses. For example:

Sources of Support for the Past Year:

- ___ Job
- ___ Unemployment Compensation
- ___ Disability or Workman's Compensation
- ___ Public Relief (Welfare)
- ___ Treatment Program
- ___ Husband or Wife
- ___ Other Relative
- ___ Friends
- ___ Other (specify)

For this format, the responses to each item in the checklist can be recorded as a "yes," or a "no" depending on whether the item was checked.

The ranked response asks the respondent to rank according a criterion. For example, a scale developed according to the criterion of agreement might read:

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Neither Agree nor Disagree
- 4 = Agree
- 5 = Strongly agree

There are many alternatives within the question and response format to choose from, depending on the information needs of the project. Planning ahead on format is an invaluable step in assuring that the right type of data is collected and in a form that can be summarized. After the questionnaire is returned or the interview conducted, it is too late to recover missing data.

Questionnaire Format

The appearance and clarity of the questionnaire affect the respondent's decision to complete the questionnaire and therefore greatly affect the success of the research project. A few of the major points to watch for in finalizing the questionnaire follow.

- * The questionnaire that is neat and clearly duplicated will be more attractive to the respondent. In working with a community population, there are sometimes advantages to avoiding the typeset or formal layout that tends to look bureaucratic. Art work can often open up the respondent's receptiveness to the form.
- * By **grouping questions** covering similar topics together, the respondent can respond with more ease once on a particular train of thought.
- * The **layout of questions** should be as compact as possible, yet spaced clearly enough to avoid confusion or clutter. Duplicating on both sides of the paper may cut mailing costs in half and reduce printing costs considerably.
- * Include **identifying information** for return purposes on the questionnaire, such as the name and address of the person in charge of the project. Even if the self-addressed envelope is lost, this information may increase the return rate.

- * **Instructions** to the respondent can include a description of the purpose of the study, an emphasis on the importance of the respondent, and brief descriptions of how the responses are to be selected. For example some questions may require only one answer, while others may have a checklist of responses where more than one can be selected. An important instruction to include is that *all* questions should be answered, unless the question specifies otherwise.
- * If the first items in the questionnaire are interesting and less personal, the respondent is more likely to complete the entire questionnaire.
- * **Important items** should not be placed at the end of a long questionnaire, in case the respondent tires of answering questions.
- * Keeping the overall length of the questionnaire as short as possible will increase the completion rate.

Use of the Questionnaire Method

In pretesting the questionnaire, valuable comments can be gathered by allowing a space for the respondent to write comments. Instructions to the respondents can encourage them to look for certain trouble areas, such as vague questions or possible responses that are not listed for specific questions. If questionnaires are not returned, this may demonstrate the need for explanation of the survey's purpose in order to stimulate enthusiasm about participation in the project, or the lack of response may indicate that the level of the question wording is not appropriate. If a question is not answered the way responses were intended (for example, if more than one response is selected when only one was intended), then additional explanations are needed on the questionnaire. Sometimes questions may stimulate insightful suggestions for further questions, if space is provided to record them.

The completed pretest data results give the researcher a good opportunity to code and analyze the data to find any further problems with the instrument. Summarizing answers may be easier for the closed-form question, where the possible responses are listed, than for the open-form question. This initial summary provides a good time to discover any problems with the chosen format and make revisions. It should be noted, though, that if the revisions are extensive, another pretest may be necessary. With the trial run over, the data collection can proceed to the larger survey sample.

The effective letter of introduction (or transmittal letter) is brief, yet contains enough information to describe the purpose of the survey and the importance of the respondent in the survey plan. For the community-

based effort, the letter should be friendly and convey a knowledge about the community. The following checklist includes useful items for the letter of introduction:

- * Purpose of the study
- * Importance of the expected results
- * Reasons why the respondent's participation is important
- * List of the items enclosed in the packet (questionnaire, stamped returned envelope, information booklets, etc.)
- * Date by which the questionnaire must be returned (usually one to two weeks)
- * Explanation of when and where the survey results will be available
- * Expression of thanks to the respondent for cooperating
- * Signature of researcher

The length of the letter is usually limited to one page and should be written on project letterhead. Although original typing for each letter may be too costly for the project, a personal effect can be accomplished by machine copying and typing in the respondent's name and address. A further personal message can be gained by emphasizing why the respondent is the carrier of special knowledge that makes him important to the survey project. This may be due to experience in service delivery, membership in a professional group, or community involvement. The sample letter of introduction is presented in Figure 3.3 includes the recommended points. Promise to make the results available should be kept out of respect for the participants. Any neglect to do this will also affect future research efforts in the community.

The complete package that goes out with the questionnaire should contain:

- * The letter of introduction
- * The questionnaire
- * A self-addressed, stamped envelope
- * Additional materials given to the respondent

Return postage is an important item to remember, for it greatly increases the chance of the questionnaire's being returned.

Use of the Interview Method

The instrument used to collect interview data is called the **interview schedule** or the **interview guide**. For a structured interview, the questions tend to be of the closed form. The sample interview schedule² given at the end of the chapter is of the closed form. A less structured interview might

Figure 3.3 SAMPLE LETTER OF INTRODUCTION

(organization's letterhead paper)

January 2, 1981

Robert Smith
12 Elm Street
North Bend, Oklahoma

Dear Mr. Smith:

The enclosed survey is concerned with the value of the curriculum in encouraging the expression of cultural identity among students. As part of a larger study, the North Bend school district is cooperating with a project conducted by the Education Department at South State University. It is expected that the results of this project will be useful in developing cultural programs for our school district.

Your experience as a community member and as a parent is extremely valuable to this survey effort. The questionnaire included in this packet has been pre-tested with a group of parents, and revised to gain the maximum of community opinion through the questions asked. The time required to fill out the questionnaire averages about 20 minutes, according to those testing the survey. In answering the questions, do not hesitate to add any additional comments to your responses. All such comments will be recorded and are considered very valuable to the survey results.

To provide a contribution to the survey effort, please complete the questionnaire and return it in the enclosed stamped envelope before January 15th. The project is trying to meet a close time schedule, since the data must be analyzed before they can be used to improve community resources. Your participation is very important to the overall project and we look forward to any comments that you might have concerning needed programs. A copy of the results and an implementation plan will be available at the community library and at the school by June 25th, or a short summary would be mailed to you upon request.

Thank you again for your cooperation.

Sincerely yours,

William Brown, Project Director

contain either both closed and open form questions, or just open form questions. A place for noting additional comments is a common part of the interview schedule. Unstructured interviews do not follow a set format, but rather a general topic plan. This last type of interview is seldom used in survey research, except where case studies are analyzed to supplement the survey data.

The pretest for interviewing tries both the format of the questions and the interview techniques. If several questions are needed to communicate one basic inquiry, this may indicate that the wording on the original question should be revised. If the respondent refuses to respond to a particular question, then reasons (such as cultural inappropriateness or need for privacy) should be explored. Sometimes the response rate to a sensitive question can be increased by changing the wording, by explaining possible benefits that the information will have for the community and by explaining the importance of the question to the study. For example, income level tends to be a very sensitive question. An explanation of how the income level data will be used can often help set the respondent at ease.

The technique of the interview is important to pretest, particularly if the interviewer is inexperienced. A friendly and culturally appropriate introduction helps establish communication or rapport. The pretest is an important opportunity to try out an introduction that encourages cooperation. Is the pace of the interview slow enough to allow the respondent to give a full comment? Is the pace of the interview fast enough to prevent the respondent from becoming bored or worried about the time taken? Does the respondent feel as though his privacy is respected? If the interviewer is uneasy, this feeling is apt to transfer to the respondent. The pretest experience gives the interviewer a chance to become confident about the interview exchange. One valuable technique for teaching interview methods is to tape record the test interview, and then critique or offer suggestions to the person learning how to interview. Any interview suggestions arrived at during the pretest should be noted for the interview manual that will be used to train other interviewers. This practice not only eliminates the repetition of mistakes, but also gives consistency to the way data is collected by several interviewers.

Possible sources of bias in the interview method stem from the interaction between interviewer and respondent. For example, the respondent may try to please the interviewer by second-guessing what the interviewer wants to hear. Or, the opposite reaction may happen, with the respondent becoming displeased with the interviewer and withholding information. Tone of voice, gestures, and the speed with which questions are asked can affect the respondent's reaction to the question. Response effect is any difference between the answer given by the respondent and the correct response. If training of the interviewer emphasizes the

interview interactions that cause distortion, then response effect can be greatly reduced.

An interviewer's manual is usually developed for training purposes. By documenting the essential information needed, the researcher provides the project with a standardized set of procedures that contribute toward the data being collected in a consistent way. Such a manual might include:

- * A description of the purpose of the survey
- * A sample introduction
- * A copy of the interview schedule
- * Suggestions for interpreting the interview schedule
- * Guidelines for interacting with respondents
- * Methods for follow-up

It is not uncommon for staff turnover to occur during the period of the survey. The existence of the training manual can greatly reduce the time needed to train new interviewers and can add continuity to the project.

A log book is often developed for interviewer use. In a separate log, it is possible to note information that might make the respondent uncomfortable during the interview. For example, the respondent's name, address, receptiveness to the interview, length of the interview, notes on other persons present, and overall impressions of the interview might be noted. The information in the log is useful during the analysis to determine the quality of the data and to gain valuable information about interview methods.

To learn the interview process, the interviewers should review the materials developed for the survey and then conduct practice interviews. One valuable resource for the practice interview is the tape recording. Hearing one's own technique often leads to suggestions for self-improvement. Suggestions from an experienced interviewer are also part of the training process. In some survey situations, tape recording the actual interview is an effective way of collecting the data. An advantage of this method is that the conversation is not interrupted by the interviewer stopping to take notes. For community-based surveys, the presence of a tape recorder may cause suspicion. In general, the less personal the survey questions, the less uncomfortable the respondent will be with either note taking or tape recording.

An alternative to the face-to-face interview is the telephone interview. This approach is usually more successful with organizations than with individuals. Although a less personal method, it carries the advantages of saved time and the opportunity for tape recording.

During an interview, the respondent gives generously of his time. Whenever possible, a return gesture should be made to the respondent in

the way of useful materials, transportation, a copy of the survey results, payment, or an expression of appreciation. Giving back to the community in all phases of the research process opens cooperativeness and communicates the researcher's intentions in action research.

ANALYZING THE DATA

When the data collection is completed by questionnaire, and follow-up has yielded a total return rate of less than 80 percent, the non-responding group may introduce bias into the study. A good procedure to follow, although time-consuming, is to contact some of the non-respondents to see if a difference exists between the respondents and the nonrespondents. For example, those with a lower educational level or persons representing programs that are having difficulties may have failed to respond. If the cause of the non-responses can be identified, then the reasons for bias can be explained in the research report. An identification of the reason for bias will assist later researchers with points to watch for in their research designs.

Once the data are collected, the information is then prepared for analysis. It is wise to prepare the data as soon as the questionnaires or interviews are completed, for any problems can then be detected early. If the closed-form approach was used to construct questions, then summaries of the responses are easily tabulated. For large amounts of data, use of a computer may be the most efficient means of tabulating data. Another considerable advantage of the computerized data processing is the ability to tabulate breakdowns of one variable against another, or crosstabulations. There are many packaged computer programs available to calculate frequencies, crosstabulate, and complete statistical calculations. To prepare the data for computerized processing, a coding system is used to code the data numerically. Ideally this step is accomplished at the time that the data collection instrument is developed. For more information about the processes of data preparation, developing coding systems, and using computer program packages, see the later chapter on COMPUTERS.

If the open form is used to construct questions, the analysis may present more of a challenge. One technique for open-form responses is content analysis. To conduct a summary by content, the responses are scanned and a tally is kept according to the topic, frequency, or other basic information expressed in the response. Summaries often reflect a breakdown of responses for all respondents, supplemented with a few quotes from certain responses that express a point clearly. The combination of breakdowns and quotes is often used for the combined closed and open format questions.

Devising a means for presenting the data is also a part of the survey analysis. Large amounts of data are usually collected during a survey

effort and the effective survey report is usually selective about the information included, otherwise, the reader would become bored and miss the findings! Summaries of single variables are valuable for the purpose of describing the general population. Breakdowns of two or more variables may indicate differences or similarities in different subgroups. For example, a breakdown of data that might be collected in a household survey for the variables "Age of Husband" by "Speaker of Native Language" is presented in Figure 3.4 below. The data displayed would indicate a trend toward retained use of the native language by age group. Additional information on analyzing and displaying data can be found in the later chapter on STATISTICS.

For displayed data to be meaningful, a discussion of the trends that the data indicate always needs to be presented in the survey report. How boring is the research report that presents hundreds of pages of data with no discussion! This information is part of the analysis and sharing it with those reading the survey results will make the data meaningful to them.

APPLYING THE RESULTS

One of the more powerful uses of the survey results is in showing similarities and differences within populations and between populations. Through comparisons, socio-economic conditions can be demonstrated, needs documented, successes and failures shown. Often the characteristics of a community or a tribe are not obvious from a larger census or regional survey. Community members may feel that they were "lost in figures" or classified as "other." Once the characteristics of a community are known, they can be compared to available regional or national characteristics. Such comparisons are invaluable for the development of community resources.

Sometimes it may be possible to obtain data from a larger survey effort, or to work with researchers to obtain a breakdown of the data for your community or reservation. Such a step may maximize your resources by providing additional data or statistics for comparison purposes. Some of the common questions asked by those who administer resources for program development are "Who do you represent?" and "What are the characteristics of that community?" The emphasis of this line of thinking is on "demonstration of the facts," rather than on "trust." Although this attitude may be frustrating to those who hold the value of trust, it is one that must be dealt with if structured sources are to be used for community development.

During these times of change, documentation can also provide useful information for the generations to come. To document change at a later point in time, there must be baseline data to identify characteristics at the previous point in time. Not only are community surveys valuable for immediate use, but their value for the future can be considered part of the overall effort.

Figure 3.4 CROSSTABULATION OF "SPEAKER OF NATIVE LANGUAGE" BY "AGE OF HUSBAND" FOR HOUSEHOLD LANGUAGE SURVEY

SPEAKER OF NATIVE LANGUAGE	AGE OF HUSBAND (in years)					Totals	
	Under 20	21-30	31-40	41-50	Over 50		No response
Only English	5	3	2	1	0	0	11
Mostly English	4	3	2	1	0	0	10
English and Native Language Equally	2	8	12	15	2	0	39
Mostly Native Language	3	7	8	10	3	0	31
Only Native Language	0	0	3	2	7	0	12
No answer	1	0	0	0	0	0	1
No husband in household	2	3	2	1	2	0	10
Totals	17	24	29	30	14	0	114

NOTES

1. Adapted from Walter Borg and Meredith Gall, *Educational Research* (New York: Longman, Inc., 1979) pp. 297-298 and Earl Babbie, *Survey Research Methods* (Belmont, CA.: Wadsworth Publishing Company, Inc., 1973) pp. 142-144.

2. This sample survey is of the household type to determine the extent of language use. For a bibliography of language assessment instruments see: Nancy Locks, Barbara Pletcher, and Dorthy Reynolds, *Language Assessment Instruments for Limited-English-Speaking Students* (Washington, D.C.: National Institute of Education, 1978). Such instruments are useful for documenting language program needs to qualify for programs under the Lau Compliance.

ADDITIONAL SOURCES

Babbie, Earl R., *Survey Research Methods* (Belmont, CA.: Wadsworth Publishing Company, Inc., 1973).

This clearly written text includes such topics as 1) survey research as a method of social science, 2) types of survey designs, 3) survey sampling, 4) instrument design, 5) data collection, 6) interviewing, 7) data processing, 8) pre-tests and pilot studies, 9) the logic of measurement and association, 10) analysis, 11) reporting survey research. The examples given in the text apply to a broad range of uses of survey techniques.

Berdie, D. R., and J. F. Anderson, *Questionnaires: Design and Use* (Metuchen, NJ: Scarecrow Press, 1974).

This tool for the development of questionnaires gives valuable information on the effective construction of questions and responses. Helpful features of the text include samples questionnaires and an extensive bibliography.

Borg, Walter and Meredith Gall, "The Methods and Tools of Survey Research" in *Educational Research* (New York: Longman, Inc., 1979) pp. 282-325.

This chapter of a text on research methods discusses the survey as a form of educational research. Topics covered include: types of surveys, data collection methods, questionnaire surveys, the interview as a research tool, and mistakes often made in survey research. An annotated bibliography provides sources for both the questionnaire and interview approaches. Also, other chapters of the text, such as a discussion of statistics and quantitative methods add to the useful information on survey methods. Examples are directed toward educational research problems.

Hubbard, John, "Survey Sampling on the Navajo Reservation," *Human Organization*, Vol. 38, No. 2, pp. 187-189.

This article presents a technique developed for sampling by using maps and dividing the rural area into grids. Families were then selected for the sample for each section of the total area. With maps of rural areas readily available, this technique has potential for community-based research.

National Indian Management Services of American, Inc., *Field Interviewers Manual: Adult Indian Education Survey* (P. O. Box 605, Philadelphia, MI 39350, n.d.).

The manual presents a good example of clearly written instructions to the interviewer. Sections explaining the nature of a sample survey, techniques for building interviewing relationships, sampling procedures, using the questionnaire, stimulating discussion, recording the interview, and call-back strategies may be adapted for other projects.

Survey Research Center, *Interviewer's Manual* (Ann Arbor, MI: Institute for Social Research, University of Michigan Press, 1976).

The text provides a guide for all steps of the interview process, such as establishing contact with respondents, structuring and asking questions, eliciting additional information, and documenting responses. The examples presented can be of great value in constructing the interview format and conducting the interview.

SAMPLE COMMUNITY LANGUAGE SURVEY

_____ Interviewer _____ Date
 _____ Family Identification Number _____ Settlement

___ Person Interviewed in Household

- 1 Husband
- 2 Wife
- 3 Grandparent
- 4 Other relative
- 5 Other adult

___ Do you know (understand, not speak) an Indian language? (husband)

- 1 None
- 2 Know English better than Native language
- 3 Know Native language and English equally well
- 4 Know Native language better than English
- 5 Can not answer question
- 6 No spouse

___ Specific Indian language(s) understood by husband

___ Language other than English or Indian language understood by husband

___ Do you know (understand, not speak) an Indian language? (wife)

- 1 None
- 2 Know English better than Native language
- 3 Know Native language and English equally well
- 4 Mostly Native language
- 5 Only Native language
- 6 No spouse

___ Specific Indian language(s) understood by wife

___ Do you speak and Indian language? (husband)

- 1 Only English
- 2 Mostly English
- 3 English and Native language equally
- 4 Mostly Native language
- 5 Only Native language
- 6 Can not answer question
- 7 No spouse

___ Specific Indian language(s) spoken by husband

___ Language other than English or Indian language spoken by husband

___ Do you speak an Indian language? (wife)

- 1 None
- 2 Know English better than Native language
- 3 Know Native language and English equally well
- 4 Mostly Native language
- 5 Only Native language
- 6 No spouse

___ Specific Indian language(s) spoken by wife

COMMUNITY LANGUAGE SURVEY

___ Language other than English or Indian language understood by wife

- 4 Yes, stay with during working hours
- 5 Live with grandparents

___ What language do husband and wife speak at home to each other?

- 1 Only English
- 2 Mostly English
- 3 English and Native language equally
- 4 Mostly Native language
- 5 Only Native language
- 6 No spouse

___ Language other than English or Indian language spoken by wife

___ What language do you use when speaking to your children?

- 1 Only English
- 2 Mostly English
- 3 English and Native language equally
- 4 Mostly Native language
- 5 Only Native language

___ When you speak to your children in your Native language, what language do they answer in?

- 1 Only English
- 2 Mostly English
- 3 English and Native language equally
- 4 Mostly Native language
- 5 Only Native language
- 6 Do not speak to children in Native language

___ Number of children

___ Language children under 10 speak during play

- 0 No children under 10 years of age
- 1 English dominant
- 2 Both languages equally
- 3 Native language dominantly

___ Do your parents (or another adult person) live with you?

- 1 No
- 2 Father
- 3 Mother
- 4 Both mother and father
- 5 Other adult relative
- 6 Friend

___ Language children over 10 speak during play

- 0 No children over 10 years
- 1 English dominant
- 2 Both languages equally
- 3 Native language dominantly

___ In what language do you speak to your parents? (husband)

- 1 Only English
- 2 Mostly English
- 3 English and Native language equally
- 4 Mostly Native language
- 5 Only Native language
- 6 No parents
- 7 No spouse

___ What language do the grandparents speak with your children?

- 1 Only English
- 2 Mostly English
- 3 English and Native language equally
- 4 Mostly Native language
- 5 Only Native language
- 6 No parents

___ In what language do you speak to your parents (wife)

--same code as above--

___ When the grandparent speak to your children in their Native language, what language do your children answer in?

- 1 Only English
- 2 Mostly English
- 3 English and Native language equal
- 4 Mostly Native language
- 5 Only Native language
- 6 No grandparents
- 7 Grandparents do not speak to children in Native language

___ Do your children stay with their grandparents or other relatives?

- 1 No
- 2 Yes, but rarely (less than once a month)
- 3 Yes, often (once a month or more)

