

Improving Educational Quality (IEQ) II Project

**El Salvador Technical Assistance Report
A Study of Child Rearing Practices in Two Areas of
Usulután**

IEQ II undertaken by:
American Institutes for Research
in collaboration with
The Academy for Educational Development
Juárez and Associates, Inc.
Education Development Center, Inc.
The University of Pittsburgh

Carried out by:
Fundación Salvadoreño de Salud y Desarrollo Social

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Contents

| | |
|--|-----------|
| Executive Summary | 3 |
| Background | 5 |
| Description of the IEQ Activity | 6 |
| The Role of IEQ in El Salvador | 6 |
| The Scope of Work | 7 |
| The IEQ Activities | 8 |
| The Research Process | 9 |
| Conclusions: Institutionalization and Impact on FUSAL | 17 |
| Lessons Learned | 18 |

EXECUTIVE SUMMARY

In January of 1998, IEQ II reached agreement with USAID/EI Salvador to support the Mission's efforts to alleviate rural poverty through investment in early childhood education by providing technical assistance in research methodology to the *Fundación Salvadoreña de Salud y Desarrollo Social* (The Salvadoran Foundation for Health and Social Development), or FUSAL. FUSAL, a local NGO, was to gather information on child rearing practices in homes and institutional settings of two rural areas to serve as a baseline for the design of a new USAID activity. As the organization had ample experience in delivering health services and training, but limited experience in research, IEQ was to assist in building the organizational capacity in this area.

IEQ provided two consultants to work with FUSAL researchers at important junctures in research design, data collection, data analysis, and the preparation of a final report. The consultants worked with a group of five FUSAL staff, including a research director and a team of four full-time researchers. The consultants provided guidance and training in the use of both quantitative and qualitative research methods. These methods included focus groups, in-depth interviews, direct behavioral observation, and a sample survey.

The consultants established a collegial relationship with the FUSAL team and discussed all the proposed research strategies, instrument and protocol design, and field-testing. The FUSAL team learned how to analyze the focus group data and use the findings for the design and field testing of in-depth interview protocols, survey questionnaires, and the checklists that were used for noting types and frequencies of interactions when observing behaviors in the home and outside settings.

The most challenging part of the research for the team was the management, reduction and analysis of the qualitative data. The manuscripts produced by the focus groups became massive, and the content analysis turned out to be time consuming. Since the time allotted to the analysis of the transcriptions was limited and the findings were redundant, a decision was made to reduce the number of focus groups. A valuable lesson learned by the team was to decide on the relative importance of each task, and to adjust the time needed to complete the specific tasks.

Another important skill learned by the team was to analyze the quantitative data by using SPSS. The IEQ consultants assisted with the management of data, selection of analytic procedures, interpretation of results, and the presentation of findings in the report. FUSAL team developed skills to design questionnaires, collect data, analyze results and report findings. The acquired skills can be applied to studies of health interventions and care-seeking behavior as well as areas related to basic education and child rearing practices.

The participants from FUSAL were asked to reflect on their experiences with the research, the procedures followed and to point out what they would have done differently. The following are lessons learned from the experience:

- Fewer focus groups should have been done and the number of in-depth interviews should have been smaller. The number of respondents for the survey was adequate to assure representative sample allowing valid comparison between Jiquilisco and Berlín.
- The data collected from a particular methodology should have been systematized, analyzed and the principal findings written up, before continuing the research using other methods. Fielding the survey prior to having the findings from the focus groups and the in-depth interviews would have helped reduce the size of the questionnaire and make the questions more comprehensible to the rural population.
- Researchers should participate in all research methods. This would enhance a better understanding of the research process and the identification of problems.
- When a number of consultants work with the team, there should be well-defined scopes of work and clear responsibilities to avoid conflicts and confusion, since no two individuals will have the same expertise and views..
- The field coordinator should have had greater liberty to resolve problems related to the fieldwork. Waiting for decisions to be made by FUSAL central office accounted for occasional delays.
- Scheduling IEQ consultants to work with FUSAL for short periods at specific intervals allowed for greater creativity for the local researchers. The consultant visits could have been better coordinated to coincide with specific stages in the research process, such as at the time when all the data have been collected.
- Having a number of consultants work with FUSAL provided different outlooks; and the team had the option to make their own decisions.

Background

Since the signing of the Peace Accords in 1992, El Salvador has made significant economic advances, but the potential for renewed instability continues to be a real possibility. The goal of U.S. policies and development efforts are to support continued economic growth to produce increased incorporation of the rural poor in productive activities. Improved social and economic conditions will lead to decreased illegal immigration to the United States, a reduced crime rate, improved protection of the environment, and ultimately greater social stability and a consolidation of democracy.

Although El Salvador has made considerable progress toward sustainable development and democracy, the country is not a candidate yet for graduation from U.S. assistance in the near future.¹ For example, education indicators show that the literacy rate is the fourth lowest in the region, and fewer than 50% of the school-age population graduate from the 6th grade. Although much still remains to be done, greater access to quality primary education has been achieved through reforms of the educational system, including decentralization and greater community and parental participation in school management. Now in its last year, the Strengthening Achievement in Basic Education (SABE) project has been credited for many of the advances in the education sector, and in FY 1999, USAID will continue its effort to alleviate rural poverty. In education, this will consist of a new focus on programs in early childhood education.

The early childhood educational activities will be designed to improve the child raising practices of those who care for children both in the home and institutional settings such as pre-school centers, child care facilities, health centers, etc. The new project will be carried out by the *Instituto Salvadoreño de Protección al Menor* (ISPM), a large Salvadoran NGO, and the Ministry of Education. The investigation discussed here was completed by the *Fundación Salvadoreña de Salud y Desarrollo Social* (The Salvadoran Foundation for Health and Social Development), or FUSAL, which gathered information on child rearing practices in two rural areas to serve as a baseline for the design of the new project interventions.

¹ El Salvador: US FY 1999 Congressional Presentation.

Description of the IEQ Activity

The Role of IEQ in El Salvador

Improving Educational Quality (IEQ) activity is to serve as a major vehicle for the Agency for International Development (USAID) in continuing assistance to developing countries to conduct research and utilize findings as the basis for innovations that hold promise for major improvements in the quality of students' learning experience. This IEQ II research project complemented USAID/El Salvador's efforts to support and expand Salvadoran early childhood activities by enhancing research capacity in El Salvador. IEQ II activities are also expected to lead to a better understanding of the factors that impact the learning of young children. Within the Agency's re-engineered framework, IEQ II is designed to contribute to Strategic Objective (SO) 1 of the Center for Human Capacity Development "Improved and Expanded Basic Education" and more specifically to Intermediate Result (a) "Education reform support."

The IEQ II activity includes the following five goals:

- Improve the understanding through applied research of the potential for using new and emerging information technologies to increase learning improvements.
- Enhance through applied research an understanding of how and why each country's classroom-based activities and approaches influence the development of basic learning competencies and the means to express and practice such competencies.
- Develop measurement tools for applied research and set up systems for monitoring education results and outcomes.
- Establish a sustainable process where by applied research on improving educational quality is translated into practice and whereby practices are evaluated and monitored systematically and continuously to identify ways to improve outcomes.
- Create opportunities for dialogue and partnership among researchers, educators, community leaders and other stakeholders seeking to improve education quality at local, provincial, national, regional and international levels.

This research project has achieved several of the goals mentioned above. It trained local Host Country Research Team (HCRT) in the use of a research methodology. The training expanded the team's repertoire of skills in designing and implementing educational research. The project provided data to inform policymakers about early childhood interventions and the materials needed to improve learning among 0- to 5-year-old children.

The Scope of Work

In January 1998, USAID/El Salvador awarded a cooperative agreement to the Fundación Salvadoreña de Salud y Desarrollo Social (FUSAL) to carry out a pilot program in early childhood family education. This program was designed as a “bridge” project between SABE and the new project in Early Childhood Family Education (EDIFAM) intended to start in FY 1999.

The purpose of the pilot program is to expand the existing knowledge about early childhood education in El Salvador. A number of studies have been completed in recent years, and the following have been published in the last two years:

1. FEPADE/USAID: *Niñez y Adolescencia en Situación de Exclusión Social*.
2. USAID/UNICEF: *Seminario Taller de Educación Inicial*.
3. Instituto Salvadoreño de Protección al Menor (ISPM): *Estudio/Propuesta de CBI*.
4. FEPADE: *Díagnóstico de la Juventud Salvadoreña en Exclusión Social*.

Although these studies present statistics on the economic conditions in which most Salvadoran children live and propose interventions to improve their health, education and living conditions, there is a shortage of information on the child-rearing practices in the home and child-care centers (*Centros de Bienestar Infantil % CBI*). Therefore, the pilot program was carried out to collect information about child rearing practices and early childhood education in the home and institutional settings, especially the CBI. The program examined the curriculum content and teaching methodologies in selected pre-school institutions. The dynamics between the families and pre-school staff were also investigated, in order to understand the links between the home and school.

The specific objectives for the cooperative agreement between FUSAL and USAID/El Salvador included the following:

- To learn more about the child raising practices in rural El Salvador by conducting an ethnographic study on that topic.

Related Activity: A study that provides quantitative and qualitative information about how Salvadoran parents raise their young (0 to 6 years of age), and the impact of children (7 to 12 years of age) on the young.

- To learn more about dynamics within the community, the pre-school, and the formal school; and to provide ISPM and USAID planners opportunities to observe the dynamics within selected pre-school centers.

Related Activity: A study that will allow project planners and contractors to identify the areas requiring priority attention.

- To learn more about communication and linkages between the community, the pre-school, and the formal school.

Desired Outcome: Three reports detailing the linkages between the community

and educational facilities.

- To develop materials and methods that will be useful for the education of illiterate rural parents.

Related Activity: field-tested materials that successfully communicate to rural parents about health, sanitation, ecology, gender awareness, breast feedings, psycholinguistic development, the appreciation of education, etc.

- To develop training methodologies that are appropriate for use with pre-school workers (madres cuidadoras) with limited educational and training background.

Related Activity: Description of training methods that have been field-tested and validated for effectiveness with pre-school workers with limited educational and training background.

The cooperative agreement was from January 1 to October 31, 1998, and the completed report should be submitted to USAID/EI Salvador by January 31, 1999.

The IEQ Activities

After FUSAL was awarded the cooperative agreement, discussions were held with IEQ to determine the need for technical assistance in carrying out the activities detailed in the scope of work. It was decided that IEQ would provide two consultants to work with FUSAL researchers at important junctures in research design, data collection, data analysis and the preparation of a final report.

The goal was for the consultants to provide guidance and training in the use of both quantitative and qualitative research methods. These methods included focus groups, in-depth interviews, direct behavioral observation, and a sample survey. Local researchers would acquire skills in the use of these methods; thus, FUSAL would gain experience in carrying out research into the field of parent/child attitudes and behaviors both within and outside the home settings.

The two consultants contracted by Juárez and Associates to work with FUSAL were Regino Chávez and Kjell Enge. Both have extensive experience in education research, ethnography, qualitative and quantitative methods, and computer assisted data analysis. Table 1 shows the dates the consultants worked with FUSAL and the specific activities completed during each of the visits.

Table 1: Consultant Activities
February 8-October 16, 1998

| Dates | Activities | |
|------------------------|--|--|
| | Chávez | Enge |
| February 8-14, 1998 | Worked with Host Country Research Team on study design | |
| March 15-20, 1998 | | Focus group data analysis and development of in-depth interview protocol and survey instrument |
| March 19-April 4, 1998 | Review of study design and instrument validation | |
| May 10-14, 1998 | | Refine survey instruments and observation protocols |
| May 12-16, 1998 | Refine survey instruments and observation protocols | |
| August 18-19, 1998 | Assist with data analysis | |
| September 17-22, 1998 | | Quantitative data analysis using SPSS |
| October 4-10, 1998 | Preparation and participation in workshop to present preliminary finding | |
| October 12-16, 1998 | | Assist with the organization and preparation of the final report |

The FUSAL Host Country Research Team (HCRT) consisted of a research director (Margarita Monroy) and four full-time assistants who scheduled and carried out all the data collection activities, contracted interviewers, household and institutional observers, data entry personnel and secretaries. Chávez and Enge established a collegial relationship with the HCRT by discussing at length all the proposed research strategies, instrument and protocol design, and field-testing.

The next section lays out the details of the research process from February through October of 1998.

The Research Process

Design and Instrumentation (February and March)

The HCRT with the assistance of Chávez and Enge designed the study of child-rearing and educational practices by outlining the research objectives, identifying the study sample, agreeing on the appropriate research methodologies, and drafted instruments for use in this exploratory study. As part of the initial design, the consultants accompanied by the HCRT visited two of the communities where the study was to take

place. This permitted all involved to identify the limitations to the types of instruments that could be used, the personnel appropriate for the study, the data collection strategies available for use and the factors that would affect scheduling of specific tasks and activities.

The team identified the types of instruments to be used in the exploratory study and developed four instruments of the seven needed. Among the instruments drafted were the following:

- Running Log (*Narrativo*)
- Materials Checklist (*Inventario de Materiales*)
- Observation Checklist - Home (*Observación en Hogar*)
- Observation Checklist - Institutional (*Observación en Institución*)
- Moderator's Guide (*Guía de Moderador*)
- Recruitment Screener - Parents (*Formulario de Reclutamiento*)

In addition, the team developed an outline for the final report and assigned tasks to each team member. USAID staff made the following suggestions:

- An outline of the final report should be written to assure that everyone is informed about what will be included in the document.
- Whenever possible, local people familiar with the study area should be used as interviewers and other data collection activities
- Meetings with HCRT and USAID should be scheduled in order to keep USAID staff informed of project progress.

During his March visit, Chávez and the HCRT reviewed the study design to determine the appropriateness of the original strategies. The team determined that the methodology was appropriate given the study objectives and no changes were made to the data collection strategies.

As part of the review and validation of instruments, Chávez accompanied the local FUSAL staff members on a site visit to El Jobal in Jiquilisco. During the visit, Chávez participated in an in-depth interview to test the interview protocol and observed several other interviews. In addition, FUSAL team members conducted a mini-group with mothers to obtain information related to child rearing and educational practices. During this visit, staff from USAID arrived at the study site and were given a tour of a nearby *Centro de Bienestar Infantil* (CBI). The group included Dr. William Harwood, Dr. Stephan Grant, Ms. Sylvia de Palma, Ms. Mary Sinnitt and Ms. Adriana Muñoz (consultant). The AID staff had an opportunity to talk with the local teachers and as well as with a staff member from the *Instituto Salvadoreño de Protección al Menor* who happened to be there carrying out supervisory functions.

Chávez also conducted a data analysis training session where he provided the FUSAL study team with an overview of qualitative data analysis. Dr. Gilda Parducci, who had been contracted to conduct focus groups, participated in the session.

After the overview, team members in conjunction with the advisor carried out exercises using data from the study's focus groups to initiate data analysis. The exercise included setting up a matrix for data display, identifying categories of responses for data reduction, and practice with data reduction, categorization, data analysis and interpretation.

During the week, Chávez worked with the team on reviews or revisions of the following instruments:

- Running Log (*Narrativo*): Suggestions included adding the usual header with names, location, and times to the instrument. Nine observers were trained in its use.
- Coded Observation Protocol (*Observación en Hogar*): The team developed a set of instructions for the use of this instrument and trained 9 observers in its use.
- In-depth Interview Protocol: The instrument was revised based on pilot testing of the protocol in El Jobal, a community in the Municipio Bahía de Jiquilisco, and in Berlín. The revision included adding probes and follow-up questions to assure that interviewers were clear about the information to be obtained. Interviewers were trained on Wednesday afternoon in the use of this instrument.
- Survey Protocol: A review of the survey protocol was undertaken to establish the parameters for the coding manual. During the review, several questions were dropped to reduce the time of administering the survey. In piloting the instrument, team members were taking from 35 to 90 minutes to complete the survey. As a result, five questions were dropped where information was available either through another item on the instrument or was not essential to the purpose of the study.

A one-hour debriefing session was held on April 2, 1998 with USAID staff including William Harwood and Roberto Gavidia. USAID staff expressed satisfaction with the project's progress. AID staff emphasized the following issues:

- That data obtained through the study would be relevant to policy issues. Study team staff reiterated that many of the questions being examined through this study are relevant to policy including practices used in the home that could serve to link the home and institutional environments providing care to 0- to 5-year-olds.
- That observation in the homes would reflect actual behaviors. Study team staff mentioned that the use of various strategies for data collection. Moreover, observations in the homes would be carried out over the course of a week to capture scenes of typical behavior.

FUSAL staff and Chávez expressed concern over the amount of work still to be conducted and the remaining time available for the technical assistance through IEQ II. USAID staff asked that FUSAL staff formally inform them of this concern so that they could initiate efforts to remedy the situation.

As of Monday, the 15th of March, the HCRT had completed four focus groups and had finished the transcriptions. The team worked with Enge to examine the results of the focus groups and to identify 13 broad categories, each with sub-components. The main problem was how to carry out the analysis and then use these data to refine the in-depth interview protocol and the survey instrument. The preliminary analysis yielded a wide range of responses that were categorized and enumerated. The group also decided to reduce the number of the focus groups, to 11 instead of 20.

The protocol, developed by the HCRT, was modified and expanded based on the findings from the analysis of the four focus group transcriptions. The protocol was tested with FUSAL staff and plans were made to field test the protocol on Thursday, the 19th of March, in Las Delicias, a rural community in the Municipio of Berlín.

The HCRT had also designed a draft survey instrument that needed considerable modification and testing. The tasks were to write additional questions based on the focus group results, and to modify the language in order to make the questions readily understandable to rural Salvadorans. The team members prepared additional questions to supplement the data generated by the focus group. Enge sorted and combined the questions in a preliminary instrument that would also be field- tested on Thursday, the 18th of March. Based on feedback from field-testing, the instrument was redesigned and many questions were rewritten while others were deleted. The revised instrument would be further tested with the assistance of Chávez.

A meeting with USAID was held on Wednesday, March 18th to discuss sampling issues, research design and the principal concerns of USAID. An overview of progress to date was given and the group then discussed issues related to how representative the two study sites were of Salvadoran rural populations in general. Flavia Chévez of FUSAL explained the differences between the coastal populations of Bahía de Jiquilisco and the uplands of Berlín and emphasized that these areas were fairly representative of the two basic kinds of populations in rural El Salvador. Since the research is using four basic methodologies (focus groups, in-depth interviews, survey and direct behavioral observation) important differences would in all probability be identified and many variables could also be quantified with a degree of statistical significance. It was also emphasized that once the research had been completed, USAID would have a series of tested methodologies that could be implemented in other parts of El Salvador, relatively quickly and cheaply. The USAID staff were in complete agreement with the research strategy and the sampling design.

In addition to discussing design and sampling, Harwood emphasized the fact that USAID's primary concern was with children between the ages of 0 and 3 years. Chévez acknowledged this interest and said the team would make any necessary modifications to the research design and the corresponding data collection instruments. It was also agreed that USAID staff would make additional field visits to observe the data collection.

Phase I Data Analysis and the Design of Phase II (May-June)

The IEQ II visit to San Salvador in May was undertaken to review the status of the data collection effort carried out during Phase I of the research project and to initiate data analysis of the information collected through:

- a survey of 400 inhabitants of Usulután (200 in Bahía de Jiquilisco and 200 in Berlín);
- focus groups with fathers, mothers and children in the two distinct research settings; in-depth interviews with 80 selected key informants; and
- observations of families.

The IEQ team assisted FUSAL staff in planning the Phase II research in institutional settings. Chávez and Enge worked with Chévez, Monroy and five other HCRT members on study design, data analysis, and instrument development. Enge conducted a workshop on SPSS for Windows version 8.0 with the HCRT team and other members of the FUSAL staff to acquaint them with the various procedures for using the program to analyze data from both phases of the study.

Enge assisted the HCRT team with setting up a coding scheme for the 400 surveys to be analyzed using SPSS. Although the survey consisted of 47 questions, multiple answers to most of the questions resulted in approximately 340 variables. Once the coding scheme had been agreed upon, the team designed a codebook to be used by the contracted data entry personnel.

On May 13, Enge gave a half-day seminar on the basic principles of doing data-analysis using SPSS. Taking into consideration the different levels of measurement, he showed basic variable design and analytic procedures. Using the demographic data, he showed how to design and enter data in a SPSS system file and how to carry out basic procedures on the data. In addition, he used sample data files from Guatemala to graphically show variable distributions, run basic frequencies, and two- and three-way cross-tabulations. Exercises were also carried out using some of the preliminary data from a limited number of completed surveys from Jiquilisco and Berlín.

Chávez carried out three distinct activities with the HCRT team during his 3-day visit. He held a session on analysis of the focus groups with data from the 16 groups carried out for the project. The team developed an outline for the focus group report. Another activity focused on examining data reduction and analysis of qualitative data. The team developed a coding scheme for data reduction exercises of the “running log” data by using information collected from the observations. The team also carried out data analysis exercises with the observation checklist. The final activity centered on a review of the conceptual framework for the project followed by further practical exercises with data analysis of the running log, observation checklist and in-depth interview protocol.

During this visit, staff from USAID were provided with a status report on the project progress and a meeting was held to discuss the FUSAL research project, explore additional avenues for research and possible collaboration between Salvadoran NGOs doing educational research.

On May 15, the HCRT team, including Chávez, met with Patricia Craig of the Harvard Institute for International Development (HIID). USAID was interested in developing links among all the various institutions that they are supporting. HIID is one of the institutions providing in-country assistance, and Dr. Craig mentioned that two qualitative research analysts would be part of a HIID training program.

Findings, Continued Data Analysis and the Final Report (August, September and October)

Chávez and the FUSAL team members reviewed the progress on the project during a meeting on August 18. The team reported that data collection was complete and some of the data had already been entered, although some error needed to be corrected still. Data sets for the survey and the in-depth interviews had been entered in SPSS. Qualitative data from the observations has been coded and in some cases, has been entered into matrices.

In subsequent sessions, the team expanded the original outline for the final report, detailing each section and discussed the possible approaches to producing the report. Chávez suggested that each team member participate in the writing, as each had in-depth knowledge of specific data sets. Undoubtedly, each member had formed hypotheses about possible relationships that could be fruitful to examine; and could contribute to making sense of what had taken place in terms of methodology and the interpretation of findings.

The HCRT with Chávez practiced running SPSS tables and conducting data interpretation. Each member of the team was responsible to take one series of tables run on the survey data and interpret them. It was, further, suggested that the team concentrate on finishing up data entry, since there was a possibility that not all team members would continue working with FUSAL after the end of August. Consensus was reached that Chávez would return to Los Angeles, and leave the remaining two days of his consultancy for October to assist with the final report. In the meanwhile, the team would concentrate on data entry activities during the remainder of the week, and Chávez would return when the team was ready and had drafts of sections for the report.

On September 17, the HCRT gave a complete briefing on the status of the data collection for both components (home and institutional) of the research. The survey data had all been entered in SPSS, the in-depth interviews had been categorized, coded and entered in SPSS. The home, CBI, parvularia, and health services observations and corresponding interviews had all been completed, the data from the corresponding checklists had been entered in Excel, and the narratives from the observations had been coded and entered.

Extensive discussions were held on the exact nature of the analysis plan, how to structure the presentation of findings, and the organization and content of the final report for USAID/EI Salvador. It was agreed that each of the subject areas of the research (affect, discipline, play, nutrition, health, etc.) be analyzed and tabulated by methods used to collect the information. Once comparative displays had been made, differences and similarities were explained in terms of the methods used to collect the data.

The organization of the final report was also discussed, and an outline was prepared. It was agreed that the introduction and the background sections be clear and brief. Each methodology used was described and the findings were presented prior to making extensive interpretations. The last sections would include the interpretations, the conclusions, and the recommendations and suggestions for additional studies.

The status of the analysis of the survey found that the preliminary frequencies had been run, all the outliers had been verified by checking the questionnaires, and when necessary, corrections were made to the data file. After the data were cleaned, a number of contingency tables were run to identify differences between La Bahía and Berlín and between male and female respondents. Since most of the variables were part of multiple response questions, variable groupings were made using the SPSS Tables module, and all the variables were tabulated and were ready for interpretation.

Exercises were also done on how to transfer publication quality tables produced by SPSS to Microsoft Word. Using a previous version of SPSS (6.1), the HCRT had learned how to transfer tables to Word via Excel, but with the newer version (8.0) considerable time and effort were saved by directly transferring tables and graphic images.

On September 19, an examination of the data set was carried out, and a number of errors were corrected by the HCRT. As with the survey, most of the questions had multiple responses that were aggregated in groups and analyzed using the SPSS Basic and General Tables modules. All the variables were grouped and tabulated ready for interpretation. A number of exercises were done to demonstrate specific ways to interpret tables and write relevant text pointing out the major trends without being overly repetitive.

The behavioral observations in 20 households consisted of a total of 160 minutes of observation per household divided into eight segments of 20 minutes each. Four of the eight segments were done using the checklist and the remaining four were described with detailed narratives. In both cases, the observations were tabulated and entered in Excel. In the case of the checklists, only the total number of observed behaviors were entered without distinctions according to the kind of behaviors observed. On the other hand, the coded narratives were summarized in terms of specific behaviors and the actors involved areas but comparisons between the two study locations were yet to be made. A plan was designed for the analysis and interpretation of these data.

The observations in the institutional settings were also done using checklists alternating with descriptive narratives. In addition, personnel in the parvularias, CBI, and health

services were interviewed using an in-depth protocol. Interviews were also done with seven community health promoters, nine traditional birth attendants and four religious pastors but without behavioral observations. The interview data have been tabulated, categorized and displayed in a matrix format. The HCRT wrote interpretative summaries of these interviews and interpreted the behavioral observations.

FUSAL contracted eight local consultants to assist with the interpretation of the research findings. Each consultant was an expert in one or more of the following fields: parent/child behavior in the home, focus group analysis and interpretation, pre-school education, and health care.

A meeting was held on September 21st to discuss the scopes of work of each of the consultants and to answer questions about the role of each specialist. It was concluded that more data analysis and interpretation would have to be completed before each one could examine the finding and interpret the findings. The HCRT agreed to distribute findings to the consultants as soon as they became available.

By the beginning of October, the consultants had finished their interpretations and had written their reports. Using the reports and their own interpretations, the HCRT wrote the text of the final report (see appendix for text of the report). Enge and Chávez assisted with the organization, some of the interpretations, and the graphical and tabular displays of the data, especially the behavior observation carried out in the home and in institutional settings.

Conclusions: Institutionalization and Impact on FUSAL

Since this IEQ activity was designed to assist FUSAL in designing and carrying out a study in two municipios using a mixture of quantitative and qualitative methods, institutionalization and impact has been examined in terms of FUSAL's capabilities to carry out additional research of this type. As mentioned above, FUSAL contracted personnel to carry out the research as well as involving their own personnel, and most of these individuals learned how to select a mix of appropriate methodologies based on the type of research to be done. Although some study participants left FUSAL when their work was complete, the involvement of permanent FUSAL staff helped assure a degree of institutionalization of the research methods and procedures.

For example, the focus groups with parents, mothers, and children provided data on the kinds of interactions parents have with their children, their attitudes toward education, their communities, and available services, including health and child care services. The HCRT learned how to analyze the focus group data and use the findings for the design and field testing of in-depth interview protocols, survey questionnaires, and the checklists that were used for noting types and frequencies of interactions when observing behaviors in the home and outside institutions.

Perhaps the most challenging part of the research for the HCRT was the management, reduction and analysis of the qualitative data. The manuscripts produced by the focus groups became massive, and the content analysis turned out to be very time consuming. Since the time allotted to the analysis of the transcriptions was limited and the fact that the findings were at times somewhat redundant, a decision was made to reduce the number of focus groups. A valuable lesson learned by the HCRT was to step back and make judgements about the time needed to complete specific tasks, and the relative importance of each, and then decide on the most prudent course for the remainder of the study.

Another important skill learned by the HCRT was quantitative analysis using SPSS. The IEQ consultants held workshops and assisted with the management of data, selection of analytic procedures, interpretation of results, and the presentation of findings in the report. FUSAL now has personnel with these skills who can design questionnaires, collect data, carry out the requisite analyses, and write up the findings. Furthermore, these skills can be applied to studies of health interventions and care-seeking behavior as well as topics related to basic education and child rearing practices.

Once the research was completed, the HCRT was faced with the considerable task of writing a final report and presenting their findings. This proved to be quite a challenge, especially on how to clearly present the quantitative findings from the 400 household surveys and the behavioral observations. With assistance from the consultants, the team was able to format and transfer tables from SPSS to the final report and make appropriate graphical displays showing the relative frequency of specific types of behaviors in the home and in child care facilities.

Lessons Learned

The participants from FUSAL were asked to reflect on their experiences with the research, the procedures followed and to point out what they would have done differently. The following are lessons learned from the experience:

- Fewer focus groups should have been done and the number of in-depth interviews should have been smaller. The number of respondents for the survey was adequate to assure representative sample allowing valid comparison between Jiquilisco and Berlín.
- The data collected from a particular methodology should have been systematized, analyzed and the principal findings written up, before continuing the research using other methods. Fielding the survey prior to having the findings from the focus groups and the in-depth interviews would have helped reduce the size of the questionnaire and make the questions more comprehensible to the rural population.
- Researchers should participate in all research methods. This would enhance a better understanding of the research process and the identification of problems.
- When a number of consultants work with the team, there should be well-defined scopes of work and clear responsibilities to avoid conflicts and confusion, since no two individuals will have the same expertise and views..
- The field coordinator should have had greater liberty to resolve problems related to the fieldwork. Waiting for decisions to be made by FUSAL central office accounted for occasional delays.
- Scheduling IEQ consultants to work with FUSAL for short periods at specific intervals allowed for greater creativity for the local researchers. The consultant visits could have been better coordinated to coincide with specific stages in the research process, such as at the time when all the data have been collected.
- Having a number of consultants work with FUSAL provided different outlooks; and the team had the option to make their own decisions.