

CHAPTER 3: DATA COLLECTION AND ANALYSIS

3.1 Introduction

As already stated in section 1.4 the design of the current study is qualitative using ethnographic methods, including interviews and observation data. The investigation consisted of case studies of eight families whose children attended one of the first grade classes at Centro Telpochcalli. I interviewed eight families in their homes about their literacy practices. The following sections describe in more detail how the data was collected and analyzed.

3.2. Materials and Procedures.

3.2.1. Field Notes.

I wrote detailed field notes of all observations and interviews. As Bogdan and Biklen point out, field notes are “the written account of what the researcher hears, sees, experiences, and thinks in the course of collecting and reflecting on the data in a qualitative study (2003, p. 111).” It is not only important to record what happens, but also the context so that the researcher can attain a deeper level of understanding. The field notes included both descriptive and reflective facets. Bogdan and Biklen say that the reflective facet includes “speculation, feelings, problems, ideas, hunches, impressions, and prejudices” which are later used to help the researcher analyze the data more accurately (p. 114). Reflective field notes help the researcher to be aware of and “control observer’s effect (p.116).” I normally took notes during the visit and wrote the field notes immediately afterward. My data pool contains 38 field notes.

Figure 3.1. Example of reflective fieldnotes.

I entered the house and José Luís (pseudonym) was helping Abril (pseudonym) with her math homework (they were both standing up). I greeted them and the response was less than enthusiastic. **OC: José Luís didn't seem unhappy that I was there, but at the same time he was very reserved during the whole visit.** ... After the interview we talked very briefly and then we made an appointment for me to visit them on the 13th of February. José Luís walked with me to the main door. I said I hoped that my visits weren't a bother. I said little by little I'm learning about the literacy of the Mexican culture. He indicated that my visits were not a bother and that yes it takes a while to learn about another culture. We shook hands and said good-bye. **OC: José Luís works long hours so that could account for why he's friendlier on some visits than he is on others. Nohemí (pseudonym) was upbeat during the whole visit. (OC = Observer Comments)**

3.2.2. Observations

Observations are an important part of qualitative analysis. Analysis conducted for this study was partially based on observations already done by Teague (2004) of the first grade class of Gertrudis during the 2003-2004 school-year. Analyzing these observations gave me insight into the case-study students' literacy levels and attitudes toward literacy as expressed in a classroom context. These observations were participatory in that Teague (2004) interacted with the students, talking with them, helping them with school work, and playing games with them. I also observed the same first grade class about ten times over a two-month period in order to observe the case study students in their classroom and to prepare for the home visits and interviews I conducted for this study.

I also observed the families during home visits. The observations were also participatory in nature in that I interacted freely with the families. I read with the children and took part in other family activities, such as playing games and watching movies with the family. The field notes taken during these observations were used to

identify and analyze patterns in the participants' literacy practices, attitudes, and the reasons they do what they do with written language.

One purpose of the initial visits was to begin to foster mutual trust between the families and me, so the families would come to feel free to share information about their lives with me during the interviews which were to follow. Whenever possible, I tried to visit the family when the father was at home. This required making evening and weekend visits, since the fathers usually weren't home during the day on week-days. The visits were from a half hour to an hour and-a-half long depending on how much time the family had available. Sometimes the visits included eating a meal with the family and other activities such as reading and playing board games with the children, and eating *rosca* cake, a Mexican tradition. For example, on one visit with the Gutierrez family, Nohemí said that the two older children enjoy playing "Basta," which is a word game played with paper and pencil, with their cousins who live nearby. On the next visit I asked Abril and Juan to teach me the game, which they seemed to enjoy doing. Each family was visited about eight times over a period of a year.

3.2.3. Interviews

The interviews were semi-structured in nature. Although I had specific questions in mind I didn't limit the discussion to these questions. The form of the interviews was similar to that described by González and Moll (2002, p. 625), in which the interviews became "an exchange of views, information, and stories." I took notes during the interview and wrote field notes as soon as possible afterwards. I recorded some of the interviews which were then professionally transcribed. My data pool contains 28

transcribed interviews. I then checked the transcriptions and made any necessary changes. If, after reading and analyzing the field notes and transcripts, other questions came up, I asked the families for further information on the next visit. For example, on a visit with the Cano family, Mariela showed me the book that she, her boyfriend, and Roberto had made. When I read my notes I realized I hadn't asked for details. On the next visit I asked her about it and she explained how the three had made it for a special Day of Reading that was held at the school. I also analyzed interviews conducted by Teague (2004) with the teacher, Gerturdis, the case study students, and some of the parents. These interviews gave me insights to the personalities and abilities of the case study students before I conducted the interviews with the families and case study students.

3.2.4. Instruments.

Several of the instruments used in the current study were developed by the larger project. Because they were developed to be used in the same research community as the current study, they were contextually appropriate tools for the current study. The first instrument which was developed by the larger project, the Socio-Familiar form (see Appendix C), was used to gather basic information about education, employment, birth date, place of birth, and the literacy practices and languages spoken by family members. These interviews often lead to important information about the families' interests, views, and practices regarding literacy. This interview was conducted following the Linguistic Census form (see Appendix B), which is described in the second chapter of this thesis. I took notes during these interviews and then wrote up field notes after the interview.

Two other instruments originally developed by the larger project were also used. The first is a literacy inventory (see Appendix F) designed to gather information about home literacy materials, including books, magazines, phone messages, grocery lists, homework, and many other artifacts. The second instrument was used to conduct a semi-structured in-depth interview (see Appendix G) with the families regarding their literacy experiences, practices, and attitudes. The interview included such questions as: How did you learn to read? What do you read and write on a daily basis? Do you consider reading to be important? Interviews of both types were recorded with the families' permission.

I adapted the case study interview developed by Teague (2004) to interview the case study students. It included such questions as: Do you like to read? Do you read regularly at home? How is what you read at home different that what you read in school? (See Appendix E.) This interview was also recorded. I also developed a more quantitative type questionnaire on which the family members wrote their responses. (See Appendix D.) There was a section for each parent and another for each child in the family. This questionnaire included such questions as (for the parents): Did you like school when you were young? Did your parents help you with your homework when you were in school? and the corresponding questions for the case study child students: Do you like school? Do your parents help you with your homework? This questionnaire was developed so I could triangulate quantitative data with the qualitative data I was collecting and also gather data not easily collected by qualitative means.

3.2.5 Document Analysis

I also collected and analyzed home literacy documents as a supplementary source of data. These documents include a wide range of items, including graduation diplomas, homework assignments, book covers, recipes, and greeting cards. Since each family is different, the number of documents varies by family from about five to fifteen. In addition to these documents, I also had access to documents that were collected during classroom observations by Teague (2004). I used a digital camera to collect the home literacy documents and, when appropriate, I asked the family if I could borrow them to scan or photocopy. The documents helped me to understand the families' literacy interests, attitudes and abilities. They also helped me to compare the differences between the families in terms of the specific uses of literacy in their daily lives. Figure 3.2 shows an "historieta" that Mayra wrote for me. It is a story about a boy who is transported to a place where there are a lot of sweets to eat by means of a special machine. When he gets there he finds a giant cookie which scares him. The non-conventional spelling (*aya* for *allá*) and punctuation errors (no *espera* instead of *no, espera*) seem typical for her age, and the plot and sequence of ideas in this *historieta* show that Mayra's writing is developing well for her age. Figure 3.3 is an example from Hector's notebook. The first page is an example of writing words several times in order to learn the spelling and the second page is a dictation. The teacher reads a passage and the students write it in their notebooks. This example shows that Hector's writing ability is well developed for his age. His writing is legible and there are few spelling errors.

3.3 Data Analysis

As previously stated, the constant comparative method was used to analyze the data (see the Chapter One). As data was collected, I read and reread the data to identify common themes. For example, the data that showed parents attitude and concerns toward education was extracted for each parent. I read and reread the data looking for how different parents agreed and differed in this aspect. This also served as a basis for questions during subsequent home visits.

Miscue analysis was used to assess the oral reading ability of each case study student. Goodman (1996, p. 53) describes miscue analysis this way:

Miscues are points in oral reading where the *observed response* ... doesn't match the *expected response* ... Miscues provide windows on the reading process, because they show the reader attempting to make sense of the text. They reveal as much about the reader's strengths as they do about weaknesses.

Thus, miscue analysis provides a "model of the reading process." Miscue analysis "provides the listener with insights into the reader's knowledge of language cueing system and his or her proficiency in using reading strategies" (Goodman, 1998, p. 313). I included miscue analysis in this study because I wanted to have quantifiable data to complement the teacher's and the parents' assessments, and because standardized reading test scores are generally not available in Mexico.

The miscue assessment was conducted near the end of the study as the case study students were completing their second year of primary school. Each case study student was asked to read a text that was unfamiliar to him or her and the techniques of miscue analysis were used to assess whether their reading level was high, medium, or low. An undergraduate student conducted these assessments as part of a class project and she

shared the results with me. Each student was assessed only once, so the results are not conclusive, but they do provide an idea as to the students' reading proficiency at the time.

The procedures for collection of these data were as follows: The person conducting the miscue analysis followed along while the subject read aloud and listened for omissions of words, insertions of additional words, successful self-corrections, unsuccessful attempts at self-corrections, running starts or repetitions, slow reading, etc. Table 3.1 shows the results of the miscue analysis based on the following scale: 10-20 miscues, high reading ability; 21-33 miscues, medium reading ability; and 33 or more miscues, low reading ability. After the subject finished reading, the person conducting the miscue analysis checked for comprehension. Table 3.2 shows the results of that part of the analysis.

Table 3.1 Results of Miscue Analysis for Accuracy

Accuracy			
	Low	Médium	High
Roberto	X		
David	X		
Haydee	X		
Marco A.	X		
Héctor		X	
Abril		X	
Esaú			X
Isela			X
Alicia		X	

Table 3.2 Results of Miscue Analysis for Comprehension

Comprehension¹			
	Low	Médium	High
Roberto			X
David			X
Haydee	X		
Marco A.	X		
Héctor	X		
Abril	X		
Esaú		X	
Isela			X
Alicia		X	

¹Comprehension assessment based on retelling of story in student's own words.

Tables 3.1 and 3.2 show Isela scored high in both accuracy and comprehension. However, a case study student's oral reading can result in enough miscues for his oral accuracy reading to be classified as low, although his comprehension is rated high. This was the case with Roberto and David. Teachers in the research area have been found to subject oral reading "to intense scrutiny with the expectation that this performance should be flawless" (Jiménez, Smith, & Martínez-León, 2003, p. 503). Since parents' beliefs tend to reflect the beliefs of teachers, it is probable that many parents share this viewpoint. Therefore, the assessment that teachers and parents have made of the case study children's reading levels as discussed in chapter two are probably influenced by this belief. However, it could be argued that comprehension is more important, which is my professional belief. As mentioned, I included miscue analysis in this study because it reveals aspects of a student's reading ability that other assessments do not show.

The computer software NVivo was also used to analyze the data. NVivo allows the qualitative researcher to code his or her field notes, interviews and other documents

according to categories that make sense to the particular research study he or she is conducting. As the project progresses he can add and change, and collapse categories. The software gives the researcher the ability to search the data by individual categories and by any combination of categories. This allows the researcher to see the data from different perspectives.

Early in the project I read my field notes, noting possible categories and groupings. I then reread the field notes to see if these categories and groupings made sense. After deciding on the categories, such as attitude toward learning, reading habits, etc, I then entered them into the NVivo project. The software allowed me to code data segments by category, called nodes by NVivo. I could then produce a report which showed all the data segments coded to a certain node. This facilitated finding common and contrasting themes. Some of the data, my field notes, are in English and some are in Spanish, the transcribed interviews. Since I am bilingual I was able to code data without having it translated.

Figure 3.4 shows the data code under “David, case study student, reading ability. I have highlighted the salient data segments which helped me to understand David’s reading ability.

Figure 3.4 Data coded under node “David - Case Study Student – Reading Ability”

Section 0, Paragraph 11, 48 characters.

he certainly **read well** the last time I was there

Document 'CV-022~oct28~2004', 1 passages, 289 characters.

Section 0, Paragraph 9, 289 characters.

The last time I was there he read from his second grade Spanish book and he read quite well. **The Despierta was harder and he stumbled over more words.** When he brought that book his mother said: That book again. I said that kids often enjoy reading the same book or story over and over.

Document 'CV-032~jan13~2005', 1 passages, 477 characters.

Section 0, Paragraph 9, 477 characters.

I asked David if he felt like reading with me. He said, “Me da igual.” He went and got a book. It was a simplified version of Olive Twist. I told him that when I was in high school Charles Dickens was my favorite author. **He read the first page. It appeared that it was a little advanced for him. His mother and I helped him with the words he didn’t know.** I especially helped with the English names. After he read the first page, we talked a little about the characters.

Document 'Interview DavidFather16feb~2005', 1 passages, 177 characters.

Section 0, Paragraphs 67-70, 177 characters.

Christopher: qué cosas leen ustedes o los niños, diariamente?
 Javier: qué leen?
 Christopher: ustedes y los niños?, los dos
 Javier: pus a veces eh, a veces libros de aventuras

Document 'InterviewDavidMar18~2005', 1 passages, 123 characters.

Section 0, Paragraphs 361-364, 123 characters.

Christopher: ¿lee rápido?
 David: no
 Christopher: ¿entiendes todo de lo que lees?
 David: algunas veces sí, y algunas veces no

Document 'InterviewDavidParents14jan2005', 1 passages, 123 characters.

Section 0, Paragraphs 23-29, 123 characters.

Christopher Ajá ... y lean ... **David lee las instrucciones?**
 Lila **si**
 Christopher si?
 Lila entre los 3 leen

Document 'InterviewwithDavidsparents', 1 passages, 205 characters.

Section 0, Paragraph 13, 205 characters.

Lila sat at the table and helped him with words he didn’t know. He read about 8 pages from the book. **He reads quite well for his age.** When he finished I thanked him and told him that he read wells.

Table 3.3 shows the way I coded the data. Certain categories were divided individually by family members while others were coded at the family level. The characteristics that directly answered the research questions were divided by family

members and other issues, such as ability to speak English, were left at the family level. Many data segments were coded to two or more categories. For example, one case study student stated in a very enthusiastic manner that he enjoyed doing homework. This was coded under case study student's "personality" and "attitude/ability toward learning." As the data was coded I examined print outs of the coded data. For example, I could print out the detail of all the case study students reading habits in order to compare them.

Using the NVivo software, it was easy to compare the mothers' attitude/concerns toward education with those of the fathers, for example. Using this method also helped me to identify where data were thin or otherwise unsatisfactory, so I could revisit the families and ask additional questions. For example, when analyzing data relating to the reading habits of the case study students I realized that I didn't have any data on the reading habits of a particular case study student and I was able to collect the data on the next visit.

The category "personality" was used to code characteristics of the participants which helped me to understand their behavioral patterns. Such observed events as fighting with another student in class, offering me a cup of coffee during a home visit, and shyness were coded under "personality." The teacher's and parents' comments about the case study students' and siblings' reading and writing skill as well as my observations were coded under "reading ability" and "writing ability." "Reading habits" included self-report and parents' comments about what, where and how often the participants engaged in reading. "Attitude/ability toward learning" included comments the case student made about school and learning in general and also comments made by the teacher and parents.

For the category parents' "attitude/concern about education" I included comments they made that helped me understand how they viewed their children's education. For example, one father said he was concerned that one of his sons didn't want to study. This helped me to see that this father wanted his son to succeed in school. This same father said he was glad his son Eric, who doesn't like to read, was spending a considerable amount of time playing a computer game that required him to do a lot of reading in order to play the game. The father thought this would help his son develop his reading ability.

Table 3.3 Coding Structure

Case study student	Personality
	Reading ability
	Writing ability
	Reading habits
	Attitude/ability toward learning
	Other interests/activities
Siblings	Personality
	Reading ability
	Writing ability
	Reading habits
	Attitude/ability toward learning
	Other interests/activities
Father	Personality
	Reading ability
	Writing ability
	Work
	Education
	Reading habits
	Other interest/activities
	Reading to children
	Attitude/concern to education
	Help with homework
Mother	Personality
	Reading ability
	Writing ability
	Work
	Education
	Reading habits
	Other interest/activities
	Reading to children
	Attitude/concern to education
	Help with homework
English	
Transnational ¹	
Family activities	
Mexico profundo ²	
Socio-eco status	
Computer use	
Religion	
Literacy materials	

1 Has anyone in the family lived in another country and/or do they have relatives who live or have lived in another country?

2 Does the family have connections with indigenous cultures?