

## DOCUMENT RESUME

ED 341 968

CS 010 844

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TITLE Community Knowledge and Classroom Practice: Combining Resources for Literacy Instruction. Technical Report.  
INSTITUTION Arizona Univ., Tucson. Coll. of Education.; Development Associates, Inc., Arlington, Va.  
SPONS AGENCY Office of Bilingual Education and Minority Languages Affairs (ED), Washington, DC.  
PUB DATE Sep 90  
CONTRACT 300-87-0131  
NOTE 332p.; Innovative Approaches Research Project. Faint type on several pages will contribute to marginal legibility. Best available copy.  
PUB TYPE Reports - Research/Technical (143)  
EDRS PRICE MF01/PC14 Plus Postage.  
DESCRIPTORS \*Bilingual Education; Case Studies; Classroom Research; Ethnography; \*Family Environment; Family Influence; \*Family School Relationship; Instructional Effectiveness; Intermediate Grades; \*Literacy; \*Mexican Americans; School Community Relationship; Teacher Student Relationship  
IDENTIFIERS Arizona (Tucson); Language Minorities

## ABSTRACT

A study examined simultaneously household and elementary classroom life, and collaborated closely with teachers to develop implications for the teaching of literacy. The study consisted of three main, interrelated activities: an ethnographic analysis of the use and transmission of knowledge and skills within and among households (represented by 24 males and 29 females) in a Latino community in Tucson, Arizona; implementation of an after-school site where researchers and teachers examine classroom practices and use local resources to experiment with literacy instruction; and classroom observations examining existing methods of instruction and exploring how to change instruction by applying what was learned at the after-school site. Results indicated that: (1) the working-class, Hispanic households possessed ample funds of knowledge that become manifest through household activities; (2) in contrast to households, most classroom (and most teachers) function in isolation not only from other classrooms but from the social world of the students and the community; (3) the key to the development and implementation of any innovation was the involvement of teachers in the research process; and (4) teachers can take advantage of these funds of knowledge in a number of ways, including inviting parents to contribute to lessons. Findings suggest that reading and writing lessons be reorganized to become more interactive or participatory, emphasizing the children's use of literacy to obtain and communicate meaning. (Nine tables and four figures of data are included; 105 references are listed. The appendixes include a table of background characteristics of the sample households, fieldnote samples, evaluation instruments, and reading and writing samples. (RS)

ED341968

A Technical Report from the Innovative Approaches Research Project

CS 010 844

# Community Knowledge and Classroom Practice

## Combining Resources for Literacy Instruction

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### Technical Report

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September 1990

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# *Community Knowledge and Classroom Practice*

## *Combining Resources for Literacy Instruction*

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**Final Technical Report  
Community Knowledge and Classroom Practice: Combining Literacy Resources for Literacy Instruction**

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**This research was supported by the Office of Bilingual Education and Minority Languages Affairs of the United States Department of Education under contract number 300-87-0131. The views contained in this technical report do not necessarily reflect the positions or policies of the U.S. Department of Education.**



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## Executive Summary

This project was an attempt to study simultaneously household and classroom life, and collaborate closely with teachers to develop implications for the teaching of literacy. The design of the project consisted of three main, interrelated activities: (1) an ethnographic analysis of the use and transmission of knowledge and skills within and among households in a Latino community in Tucson, Arizona; (2) implementation of an after-school site where researchers and teachers examine classroom practices, and use local resources to experiment with literacy instruction; and (3) classroom observations in which we examine existing methods of instruction and explore how to change instruction by applying what's learned at the after-school site. The goal was to identify, coordinate, and "mix" resources from these three domains to advance the literacy instruction of students. Each component can be summarized as follows:

(1) Households. The emphasis of our analysis has been on understanding the social and cultural dynamics of household life. In particular, we are interested in understanding the social relationships that facilitate what Milardo (1988) has called the complex "interconnections bonding families to their social environments of kin, friends, neighbors, co-workers and acquaintances"(p. 9). These social relationships or networks are central to the households' functioning, particularly during difficult economic periods, because they facilitate the exchange of numerous resources, particularly the exchange of knowledge (Greenberg, 1989; Vélez-Ibáñez, 1988). Through household observations and interviews, we have documented the history, development, and social distribution of this knowledge, which we term "funds of knowledge." Our household data also highlight the multi-dimensional, "thick" social relationships that constitute life outside the classroom. These multiple relationships contrast sharply with the singular teacher-child relationship common in classrooms.

One of our principal tasks in the project, therefore, has been to elaborate the implications of this concept of funds of knowledge for classroom instruction. In this

chapter we will use our household data to make three key points: (1) the abundance and diversity of knowledge found within and among these working-class households; (2) how this knowledge is accessible through social networks, that is, through strategically created social ties; (3) the importance of the social and cultural character of learning; how teaching and learning in households is usually participatory, with the children taking active part in the learning and in the manipulation of knowledge. This information forms the basis for a much needed re-definition of working-class households as important resources for classroom instruction.

The after-school lab. We were also fully aware, however, that household resources become pedagogically useful only through the work of teachers. For these purposes we created a lab/study group with teachers to analyze instruction and to develop innovations in the teaching of literacy. This after-school setting represents a social context for informing, assisting, and supporting teachers' performances; it is an activity setting where teachers and researchers get together to study teaching (how teachers teach and why they teach the way they do), to learn about the households, about each other, and to develop instructional innovations (for similar arguments, see Berliner, 1985; Tharp & Gallimore, 1988). Through the work in these groups we understood better the difficulty of introducing innovations into practice. Teachers face various constraints including district goals that must be accomplished, and a curriculum to follow with the usual requirements of following a specific sequence with an emphasis on the teacher as the holder and transmitter of knowledge, and the students are relatively passive recipients of this knowledge. We have come to appreciate Langer and Applebee's (1987) conclusion that traditional instructional practices make introducing innovations into classrooms a very difficult task. In addition, many teachers have unexamined assumptions about what constitutes appropriate instructional practices, especially for language minority children, and about how

children learn to read and write. These assumptions that may represent formidable obstacles to implementing instructional innovations.

Therefore, a basic argument in this chapter, one that we will reiterate often, is that providing teachers with recipes for change do not work; consequently, we offer no prescriptive mandates, no set curriculum for teachers to follow. Teachers must work with each other to think, analyze, and create the conditions for change within their specific circumstances that relate to their personal or professional needs. We believe that teachers' study groups are the key vehicle for this involvement.

Classroom research. The third and final part of our study involves classroom research. Our goal here was two-fold: analyze the existing organization of instruction and document the work of the teachers involved in the project. We relied on our classroom observations to develop the instructional case studies that form the bulk of this chapter. We have also collected data and reading and writing in English and Spanish in all of the classrooms. Below will report selected aspects of these data that help clarify the process of reading and writing in two languages, with important implications for instruction.

We can summarize our conclusions as follows:

(1) The working-class, Hispanic households in our study possess ample funds of knowledge that become manifest through household activities. Thinking of families in terms of funds of knowledge not only captures an essential aspect of household and community life, but helps define (and in many respects re-define) these families as important social and cognitive resources for education. We have every reason to believe that these findings are equally relevant to other populations.

(2) In contrast to households, however, most classroom (and most teachers) function in isolation not only from other classrooms but from the social world of the students and the community. Classroom literacy instruction, whether bilingual or otherwise, is generally characterized by teachers following a prescribed curriculum that usually relies heavily on basal readers and worksheet writing assignments.

Within these "self-contained" classrooms, there is little opportunity for students to use literacy actively in obtaining and communicating information of personal or intellectual interest, and the intellectual level of the curriculum is usually low; similarly, there are few opportunities or reasons to take advantage of the funds of knowledge available outside the classroom to create new, advanced circumstances for literacy use within the classroom.

(3) The key to the development and implementation of any innovation is the involvement of teachers in the research process. We are convinced of the importance of teachers' study groups as settings that help teachers to support each other in conducting the intellectual and social work necessary to obtain change in their classrooms. Innovations must not be imposed by researchers or administrators, but co-developed with teachers so that the new practices becomes credible and useful.

(4) Teachers can take advantage of these funds of knowledge in a number of ways, including inviting parents to contribute to lessons, but we recommend making connections through the concrete academic activities of the students. This requires that reading and writing lessons be re-organized to become more interactive or participatory emphasizing the children's use of literacy to obtain and communicate meaning. It is within these more authentic and flexible classroom contexts for the use of literacy that multiple connections with the social world makes sense to teachers and to students. These more activity based, meaning-centered lessons allow students and teachers to take advantage of all of their (bilingual) resources, whether inside or outside the classroom, and create circumstances for the children's use of literacy in ways that far exceed what is currently offered in classrooms.

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## **Introduction**

A major goal of our a project has been to analyze everyday household activities and what they reveal about the uses of knowledge. We have also attempted to derive implications from these household examinations for classroom practice. It is an unusual characteristic of our study that we have conducted simultaneously research in households and classrooms, allowing us to derive instructional implications from our work not in a vacuum, but in the context of what we were learning in both domains of study; that is, by constant reflection upon the concrete activities of families and teachers. The connecting thread between our household and classroom analysis, our linchpin, so to speak, has become an after-school study group with teachers in the project. As we will emphasize throughout this report, connections between homes and classrooms are always mediated through the work of teachers. Any efforts at developing and introducing innovations into classroom must include the teachers as collaborators in the work. A teachers' study group serves as an "joint activity setting" where such collaborations can take place.

The guiding principle of our work is that the students' community, in this instance, Mexican households in Tucson, Arizona, contain ample "funds of knowledge" that represent important social and cognitive resources for schooling. As we elaborate in this report, the concept of funds of knowledge refers not only to the categories and content of knowledge found in households, but to how this knowledge is grounded, embedded, in the "thick" social and cultural relations that make up family life (see, Greenberg, 1989; Vélez-Ibáñez, 1988). We believe that both the content of this knowledge and its socially situated nature have significant implications for understanding and changing classroom instruction. It is clearly the case, however, that present classroom arrangements, with their emphasis on basal readers, a highly structured and prescribed curriculum, and rote-like, low level instruction, do not allow easy access to resources that exist either outside or within the classroom. Most classrooms remain insular, self-contained entities, mostly isolated from the social



world outside. Moreover, such classroom arrangements ignore the "funds of knowledge" that children and their families possess and that could form the bases of their schooling. Much of our research, therefore, concentrated on creating opportunities for teachers to analyze critically how they were teaching, and to identify or develop more advanced circumstances (than commonly found in classrooms) for the children's uses of literacy.

The goal of this report is to present selected aspects of our work that convey the essence of our methods and findings. We will summarize results from each of the three domains of study. From the households we will highlight the breadth of knowledge found in these homes and the strategic role of social networks in facilitating for family members the identification and exchange of this knowledge. From what we call the after-school "at" or study group we will emphasize the importance of creating a social context that allows teachers to think, reflect, and plan change in their practices. And from the classrooms we will extract examples of "participatory" instruction, forms of teaching in which the children and teachers are active co-creators of the classroom's literate and intellectual life.

The project has helped us understand better the need for fundamentally different views, what we call re-definitions, of teaching, of learning, and of the resources available to promote instruction. It has forced upon us an acute understanding how, as educators, we ignore the valuable social and cognitive resources for instruction found in households such as the ones we studied, and how easily and uncritically we accept notions of limitations and deficits. Further, it helped us re-define teachers as thinkers, as intellectuals, that can assume control over their work, not simply follow curricular prescriptions, and give their work direction and intellectual depth. And it helped us elaborate a re-definition of teaching and learning as a profoundly social and cultural practice. All classrooms are artificial creations, where under the best conditions, teachers and students actively co-create contexts for thinking, for exploration, and mutual learning that such settings should represent. Taking the

project as a whole, then, we argue for a model of teaching literacy that is highly contextualized, grounded, situated, in the funds of knowledge of families, teachers and students.

a. How the report is organized

In what follows we elaborate on the above. We start with a summary of practical factors that motivated our work, most prominent among them is our concern with the rote-like, reductionist instruction that characterizes working-class schooling, whether bilingual or otherwise. This type of instruction, we believe, traps students (and teachers) into low levels of literacy work and represents a major obstacle to learning in these classrooms. We follow with a review of the literature, discussing research that influenced our design and methods of study. In particular, we will emphasize what is a central theme in our work: the importance of understanding the social conditions under which people use literacy to create meaning.

With the above as background, we then describe our research design and methods. Throughout we favored qualitative methods of study, in particular participant observations as a way to immerse ourselves into the social and cultural dynamics of household and classroom life. Our constant preoccupation was with social context: making sense of households by situating our observations in the social and cultural practices that constitute family life; helping teachers by creating a social context for collaboration and support; promoting innovations in literacy instruction as specific socio-cultural practices and contexts that teachers and students create. We then turn to our findings within each domain of study. We first present selected aspects of our household analysis of funds of knowledge, explaining in more detail this key concept and its implications for understanding household resources and for understanding our work in the other domains of study. We then explain our work in the after-school lab and study group as the fundamental link between households and classrooms. And then we describe our classroom work. Rather than provide a general narrative about this work, we have opted to present specific case studies of three teachers' classrooms. We

should mention that these case studies were co-authored with the teachers and each represents a social situation for learning developed by students and teachers. In each case study we emphasize organizing lessons or activities that help students, children or adults, make meaning through literacy.

As part of the project we collected considerable data on the children's reading and writing. We follow the case studies with a section summarizing these data, especially what they reveal about literacy in two languages and about the possibilities of creating successful literacy instructional practices for the children. We conclude with a general discussion of the project, including its educational implications, and a summary of results.

b. Practical concerns

The stratification of schooling by social class is a well established fact. It seems inarguable, for example, that working-class children, in general, receive a very different type of classroom instruction than students from wealthier classes (see, e.g., Bowles & Gintis, 1976, 1988; Giroux, 1983; also see Mehan, 1989). Anyon (1980, 1981) and others (e.g., Lubeck, 1984; Page, 1987; Ramsey, 1983; Wilcox, 1982; Willis, 1977; see also, Gamoran & Berends, 1987) have clarified and elaborated this relationship between social class and schooling by studying ethnographically the nature of classroom instruction, especially in working-class schools. Their results show that the so-called "hidden curriculum" (see, e.g., Giroux, 1983, Ch. 2) is not so hidden after all; as Goodlad (1984) has suggested, "If at all hidden, it usually is only slightly obscured" (p. 197). In general, working-class children receive rote, drill and practice instruction, work that is mechanical and primarily limited, as Anyon (1980) pointed out, to following the steps of a procedure. As the social class of the community increases there is a concomitant shift in instruction from rote to more process oriented teaching, from simplicity to complexity, and from low to high expectations.

Recent research (Oakes 1986), focusing on tracking and using a national data base, reached a similar conclusion about the social context of schooling: there is an unequal distribution of schooling that favors the already-privileged; white and affluent students receive more of what seemed to be effective teaching than do other groups; minority and poor students receive an emphasis on low-level basic literacy and computational skills. As Oakes noted, "There is no presumption that high-status knowledge is equally appropriate for all" (p. 74).

How do these findings compare to classroom activities with Spanish dominant or with bilingual students? In general, a similar reduction of the curriculum occurs in these classrooms. Lessons rarely extend beyond the classroom or incorporate ideas, interests or activities of the students and their families. Literacy instruction is heavily dependent on basal readers, which reinforces the use of a "recitation script" (Tharp & Gallimore, 1988), and what is read or written is usually imposed and student interests are rarely considered. Furthermore, with important exceptions, as we mention below, the intellectual level of the lessons is low; we have observed infrequently activities that are clearly intellectually challenging to the students or activities requiring research or investigation on the part of the students (see, e.g., Díaz, Moll, & Mehan, 1986; Goldenberg, 1984; Moll, 1986, 1988; Walsh, 1987; also see Knapp & Shields, 1990). It is these social arrangements for learning that prompted Greenberg (1989) to call classrooms "zones of underdevelopment."

In classroom observations conducted as part of this project, we've found many of these practices, but we have also found much more diversity of instruction, and possibilities for change, than we anticipated. That is, in all classrooms we have observed some lessons that were advanced, interesting, or demanding of the students. I quote from the notes of one of our classroom observers (KW), which makes this diversity clear:

Although the teacher (6th grade, bilingual) speaks of the value and importance of challenging the students with high level materials, this belief is limited in practice. Regardless of the students' tested placement levels which may be below grade level, the

top reading groups works with high level (adult) trade books and the middle reading group reads from a sixth grade level reading basal. Following reading of the trade book or basal, however, the subsequent activities are rote in nature and do not challenge the students' to use high level thinking skills such as comparison, interpretation, synthesis, or analysis. Rather, the students are asked to summarize, respond to textbook comprehension questions and fill-in workbook blanks. There is no use of hands-on activities or student-oriented demonstrations of learning. All activities are developed from text books and no textbook extensions such as projects, experiments or integrative activities are present.

Also consider these observations from another of the classrooms:

Instruction in this (third grade, bilingual) classroom...occurs through a structure that encourages children to be responsible and independent. There was no whole group instruction or teacher directed activity. Rather, the students know what to do and proceeded with very little help from the teacher. The students were working on individual contracts for this (Ancient Egypt) theme so they each made decisions about what to do for the extended period of time, set about doing it and only conferred with the teacher about free time requests or help with materials...The concept of negotiation is strong in this classroom. Present in the negotiation process is the attitude that the students are very involved in developing their own curriculum. The teacher verbalized the negotiation process with the students both in a large group and individually and checked that the students kept their end of the bargain.... The intellectual level is quite high and challenging in this classroom and the teacher feels it is better to have high expectations for all the students than to limit their progress. The expectation is set for the highest abilities and then the teacher and the aide help the students achieve their best given that expectation. The teacher says there are very few children who have difficulty meeting her high goals. The curriculum involved in the current Ancient Egypt theme was impressive in that the amount of content is so high. The (students') contract represents that content in its depth and difficulty. It appears to me that the intellectual level of this third grade classroom is higher than many classrooms at the 4th, 5th and 6th grade levels.

These more advanced lessons, although unusual, are clearly not unique (see, Moll, 1988). All lessons are not automatically rote-like and not all teachers' questioning request some form of factual recitation from the students; the teachers try to create variety within their classrooms, sometimes, as we will show, with remarkable success. It is this variety that made us optimistic that social conditions can be found or developed to engage students in more advanced literacy instructional activities.

### c. Review of literature

One of the most productive research approaches in education relates and integrates knowledge about students' home and community practices into improvements in classroom instruction (see, e.g., Díaz, Moll & Mehan, 1986; Gallimore, 1985; Jacobs & Jordan, 1987; Heath, 1983, 1986; Moll & Díaz, R., 1987; Morris & Louis,



1983). This socio-cultural approach, as we've come to call it, has produced important instructional innovations, especially with children characterized as language minority students. Two recent reviews of educational research refer to this approach as among the most promising developments in the field (Cole & Griffin, 1986; LCHC, 1986).

Hispanic students, especially those whose first language is Spanish, are generally considered to be among the highest at-risk groups in the country (Steinberg, Blinde, & Chan, 1982). This is true for Arizona. For example, a recent report indicates that there are approximately 40,000 LEP students in schools in Arizona, close to 50% of whom were judged as being below district standards in reading and writing (Arizona Department of Education, 1987). In Tucson, within the school district that we conducted the work, approximately 25% of the students have a primary home language other than English and 15% of these same students have been classified as LEP. Throughout the district there is widespread concern for the academic development of these students. Viewed nationally or locally, the educational situation of Hispanic and other language minority students demands action.

#### 1. The community as a resource for change

Several recent studies have examined different aspects of social life within language minority communities (see, e.g., Anderson & Stokes, 1984; Delgado-Gaitan, 1990; Heath, 1986; Language Policy Task Force, 1980, 1982, 1984; Levin, 1990; Ogbu & Matute-Bianchi, 1986; Philips, 1983; Schensul, Schensul, Gonzalez & Caro, 1981; Smith, 1981a, 1987; Vélez-Ibáñez, 1988). The research we review below concentrates on those studies that have used such community information to change or improve literacy instruction (see, Cazden, 1983). These studies show that re-organizing lesson contexts to make them sensitive to cultural and linguistic variations can promote educational excellence. These studies also suggest that many current classroom practices seriously underestimate and limit what language minority children can perform intellectually. When the same children succeed under modified

instructional arrangements it becomes clear that the problems they face in school are primarily a consequence of institutional arrangements which constrain children and teachers by not capitalizing fully on their talents, resources, and skills. Put another way, the strategic application of cultural resources in instruction both improves academic performance of language minority students and demonstrates that there is nothing about these children's language, culture or intellectual capacities which should handicap their schooling (Moll & Díaz, S., 1987).

The best documented set of studies applying this strategy are the decade-long, interdisciplinary efforts at the Kamehameha Early Education Program (KEEP) in Hawaii (Au, 1980; Jordan, 1985; Tharp & Gallimore, 1988). The KEEP program demonstrates how knowledge of students' language and culture can help them academically. Their approach involves creating classroom settings that permit students to apply language and task-completion skills already in their repertoire. In a well-known example (Au, 1980), they incorporated a native Hawaiian speech event, the "talk story," into the discourse of reading lessons to include the children's experiences into the lessons' reading discussions. This intervention was a deliberate attempt to help students use their experiences to make sense of text and to use text to make sense of their experiences. This is also a key point in other studies we review: the importance of organizing lessons or activities to help students make meaning through literacy.

What is transferrable to our project from KEEP's work and from other studies reviewed is not only their specific findings, which certainly inform our efforts, but a principled means of developing culturally and linguistically compatible and instructionally effective educational innovations. In a recent review of KEEP's research program, Gallimore (1985) pointed out several factors that were essential to their success and provided suggestions for research studies which seek to influence instruction. He observed that most researchers underestimate how difficult it is to go from promising idea to successful instructional practice. For example, KEEP

researchers documented the sharp contrast between Hawaiian children's competence at home and their seeming incompetence in school. Their observations lead them to a sensible instructional approach that capitalized fully on the children's skills and abilities by using cultural research to guide a program of instructional innovations. Their initial efforts, however, were unsuccessful because they underestimated the difficulties of translating research findings into practice. They soon realized that they needed to incorporate three key elements into their work. First was the development of an intimate collaboration with practitioners. Although researchers had in-depth knowledge of the home and community culture of the students, none had been extensively involved in the classroom and school culture they were trying to influence. Second, was the creation of a place where teachers and researchers could try things out, document their attempts, and learn from successes and mistakes. Third, was the commitment of resources over an extended period, providing time to experiment and to work on problems until they solved them. The present proposal incorporates all of these elements into its approach.

Another successful example of the socio-cultural approach is the research of Heath (1983). She worked with parents and educators to modify classroom lessons of working-class, black children having academic difficulties. Using ethnographic observations, Heath analyzed how black adults and their children interacted in home and community settings, focusing on ways of asking and responding to questions. These verbal strategies contrasted with typical ways of interacting in classrooms. Heath's intervention, in part, consisted of having teachers incorporate these community-based interrogatives into their classroom discourse to increase the children's participation in lessons and to help them make sense of lessons. The use of this technique in early stages of instruction generated active responses from previously passive and "nonverbal" students. Here again we see an effort at changing the social context of instruction to increase the students' interest and participation in lessons.



Heath (1982) suggested that two components were necessary to make community information useful for instruction. First was for teachers to conduct research. In doing research the teachers explored and discovered "how and why data on everyday behaviors - their own and that of others - can be useful in bringing about attitude and behavior changes" ( p. 126). The teachers' data collection activities, when combined with data from the community, "led them to ask questions of their own practices and to admit other practices which would not necessarily have emerged otherwise" (p. 127). The second component was the collection of community data that could be applied to classroom practice. Ethnographic results influenced the conduct of lessons only in so far as the findings were considered pedagogically relevant by the teachers (also see, Heath, 1981). Both points are central to our approach.

In a study of how community writing could be used to improve classroom writing among adolescent Anglo, Black and Hispanic students in Philadelphia, Morris and Louis (1983) stress the importance of close collaboration of researchers with teachers and students as well as sensitivity to classroom conditions. Their goal was to encourage students as "purposeful writers" who could draw on the range of experiences they possessed as language users and members of a speech community. They trained teachers to use an ethnographic-like approach both in the design of curriculum and in evaluation, helping teachers combine their concerns about grammar, punctuation, and spelling with an emphasis on communication and content. For example, as an initial intervention the researchers capitalized on the students' interest in music. Music was central to much of the students' activities outside of school and was an activity often accompanied by various literacy events. The researchers had observed students reading magazines and music reviews as well as writing lyrics with diligence and enthusiasm. The researchers provided the teachers with ethnographic data demonstrating that writing tied to music was similar in process and product to the writing teachers wanted to foster in the classroom. Once teachers became convinced of the potential of music as an important writing topic they began to include it in their

curriculum motivating students to write consistently and well. Their interventions resulted in increased talking and writing about topics proposed by the teacher, greater commitment of non-school time on assignments, and frequent reliance on peers for assistance. Teachers reported improvements in organization, spelling and syntax as a result of the students increased interest in writing. These results suggest that as the boundaries between school and community became less distinguishable, classroom writing acquired greater meaning for the students and they started to demonstrate a sense of ownership for their writing. An important consequence of this blurring of boundaries, as the authors put it, is that "once students were able to establish ownership and to rely on their prior knowledge about writing, they were more willing to accept the direction of the teacher in acquiring fundamental language skills" (p. 105).

Our work has proceeded along similar lines (e.g., Díaz, Moll & Mehan, 1986). We have analyzed problematic educational situations usually characterized by children failing. But we have not stopped there: we drew on participants' cultural resources (e.g., their bilingualism or information about their communities) to reorganize instruction in ways more advantageous for teachers and students. The key point here is that our goal, in line with the work reviewed above, was to manipulate instructional procedures to improve the conditions for learning.

Our research has been influenced by the work of educational anthropologists who have examined in great detail the interactional dynamics of various educational situations (e.g., Au, 1980; Erickson, 1982; Mehan, 1979, 1989). Central to our research is the study of what Erickson (1982) calls "immediate environments of learning"; namely, the analysis of how instructional contexts are socially constituted by adults and children. We have supplemented what we have learned from these "micro-analyses" with ideas about learning and development borrowed from socio-cultural psychologists who also emphasize the critical role of social interactions in

learning. (e.g., Moll, 1990; Olson, 1986; Scribner & Cole, 1981; Vygotsky, 1978; Wertsch, 1985; ).

Vygotsky (1978), for instance, wrote that forms of cooperation between child and adult were the central element of the education process. In his famous discussions of the zone of proximal development, he stressed how one can get a qualitatively different perspective of children's abilities by contrasting what they do when working alone with what they can perform when working in collaboration with others. And he suggested that for instruction to be effective it must lead students. In our interpretation, it must not only redress difficulties manifested in individual assessments, but draw on strengths that are displayed most readily in collaborative activities.

Following this perspective, we view literacy primarily as a social or communicative activity. The role of adults in literacy instruction is to facilitate mastery and control over literacy processes; hence, the social and cognitive functions of literacy are inseparable. The instructional implications of this position is that the cognitive consequences of literacy are viewed as intimately related to how one uses reading and writing to accomplish specific tasks or activities. That is, they are a function of the social practices one engages in with literacy (Langer & Applebee, 1987; Scribner & Cole, 1981; Resnick, 1990).

This perspective has influenced the nature of our literacy instruction research. For example, in a study of reading in a bilingual program (Moll & Díaz, 1985), we documented how the focus of instruction and the instructional procedures varied among ability groups. In brief, the teachers organized lessons in both classroom according to a hierarchy of reading skills. Particularly clear was the assumption that decoding must precede comprehension of text and that advanced forms of comprehension (what we've called "text-free") could not be taught until simpler, text-bound skills were mastered. This instructional bias, a skills-based approach ranging from simple to complex was particularly problematic in the English-language classrooms. Here the

emphasis, regardless of ability grouping, was on decoding. Even students who were among the better readers in Spanish were treated in English as low level readers. We have suggested that because the children decoded in English with an obvious Spanish accent, the students never quite sounded right to English monolingual teachers who responded by organizing plenty of decoding practice to get the students ready for more advanced reading.

We should be clear, we are not blaming the teachers. We believe that the "model of learning" implicit in these classroom, as well as other organizational constraints, helped misguide the teachers into treating their classrooms as self-contained environments. As a result, there was no transfer from Spanish to English reading (a goal of most bilingual education programs) because the organization of instruction was such as to make reading in English dissimilar from reading in Spanish. Comprehension, the key to reading, did not enter in any important way into English reading lessons.

Our "intervention," therefore, consisted of creating instructional conditions where the children could fully display their reading abilities regardless of language. These procedures may be summarized into four steps. First, we asked the regular English language teacher to teach a lesson with the children classified as the low reading group. We knew from our observations in the Spanish-language classroom that these children read with differing ability but that they could all read in Spanish with comprehension. The reading lesson in English typified the deliberate, slow pace of lessons with students in the low reading groups. The children had difficulties when required to report verbally what they had understood from the reading; they were tentative in their speech and their answers were fragmentary. Even to an experienced observer or teacher it seemed reasonable to conclude that these children could not read at this level.

Second, immediately after the lesson, one of the researchers sat with the children and asked comprehension questions in Spanish about what they had just read in English.

It became obvious that the children had understood the story. Oral language and decoding difficulties in English notwithstanding, the students understood much more about what they were reading in English than they could display solely in that language.

Third, building on our findings, we asked the teacher to provide us with text-books at grade level. We knew from the observations in the Spanish-language classroom that the children could understand more complex text, and we wanted to try matching that level of reading in their second language. Next, we asked the students to concentrate primarily on comprehension, rather than pronunciation. Finally, we decided that the students and we, the teachers, could switch to Spanish as needed to clarify the meaning of the text. We labelled this strategy providing children with bilingual communicative support in comprehending English text.

We started by reading the story to the students, removing all potential decoding constraints from the students' concentration on comprehension. After the reading, we sought to clarify the meaning of the text, and to find out how much the students had understood. By the third lesson, the students were able, with our bilingual assistance, to answer comprehension questions required of English monolingual readers at grade level. And by the third lesson we no longer read to the students, we transferred the responsibility for decoding to the them (for examples, see Moll & Díaz, 1985). We do not claim that we turned the children into competent English readers with minimum assistance. Our claim was that reading and communicative resources can be strategically combined to enable children to participate profitably in reading lessons. This point, we believe, has to do with the social organization of instruction. The level of the lessons need not be lowered to accommodate the children's English language constraints. That there are reasonable and credible ways to take advantage of the children's Spanish language and literacy skills to facilitate their performance in English.

In another project, a writing study conducted with Hispanic LEP students (Moll & Díaz, R., 1987), we explored ways of using community information to improve the

teaching of writing, collaborating with 12 teachers from three junior-high schools. To get in closer contact with community realities, we created a research site within the community and met with the teachers every two weeks to discuss applications of the latest research information to improve writing instruction. Few LEP students were doing any extended writing. Most classroom writing was in response to teachers' questions or to worksheets. As in the reading study, the students were assumed not to possess the necessary English skills to participate in essay or expository writing. We also found that most of the writing in homes was very functional, e.g., a shopping list, a telephone message, and so on. Most of the literacy-related events in the home were in response to the students' homework assignments. All of the parents stated that they valued education and writing highly. Further, all of the parents were eager to discuss problems and issues of their community, such as immigration problems, gangs and drugs.

Part of our research task became to maximize the use of available resources to overcome reductionist instructional practices. We used state-of-the-art information (e.g., Graves, 1983) in helping teachers to teach writing as communication. We then asked them to select as topics for writing community issues identified in our the field study. We wanted to change not only the process of writing but the motive for writing: it was to become an activity to communicate about something that mattered. The teachers were initially reluctant to use community-related issues in their lessons. However, once they had some success, they agreed to implement a series of writing activities in which community information collected through homework assignments would be used to produce and revise text. The teachers asked the students to write about an issue of significance to them or their community (e.g., societal bilingualism, cheating). They then helped the students create questionnaires to elicit opinions about the topic. The students interviewed parents, peers, siblings, neighbors, and adults in the school. The teachers helped the students compile this information in ways that could be useful to their writing.



Our results, as in the studies reviewed above, point to the importance of having teachers participate actively in research. We also learned, as others have, the importance of conducting a critical analysis of existing instructional practices. The extent to which teachers may take full advantage of community or field information in the classroom depends upon constraints imposed by instructional methods. Effective combinations of community and classroom resources is always a matter of changing the social context of learning (Moll & Díaz, S., 1987; Morris & Louis, 1983). In the study described, we were able to organize lessons that minimized the students' lack of fluency in their second language, while maximizing the use of their skills to get them to write for communication. Whether students were fluent or not in English, they participated in comparable, demanding intellectual activities. Although instructional methods varied depending on the characteristics of the students and the resources available for teaching, the goal of writing for communication remained invariant (for additional results see, Trueba et al 1982).

The studies we have reviewed indicate that the ways we routinely organize instruction limit children's thinking and uses of literacy. We have shown, however, that this does not have to be the case. Changes in the social context of learning can produce important changes in the students' academic and literate performance. We now turn to the design of our project.

**Project Design : a three-part system**

In this section we describe our research design and methods of study. Although we present each area of study separately, the essential analytic task is to understand the systemic whole and its consequences for literacy instruction. Consequently, our research plan included methods of data collection, management, and analysis that facilitated the integration of the three research areas (see, Moll et al, 1988a & b). In the household study, in documenting the development and functioning of the after-school setting, and in analyzing classroom instruction, we relied primarily on observational data. We supplemented these data with interviews and with several indicators of individual change in the children's reading and writing. The study included coordinators for each study area to facilitate quality control in the gathering of information and we centralized our data management procedures to ensure proper control, categorization, and coordination in data analysis within and across study areas.

Table 1 presents a summary of our research design. Stated briefly, during the first year or phase of study (3 months) we initiated our household study, including the recruitment of families, and created a summer site that served as the prototype of the project's after-school lab. During the second year (12 months), we continued the household study and implemented the after-school lab in the computer resource room of one of the participating schools. We also initiated observations in what we called implementing and comparison classrooms. A total of 9 classrooms, including 3 comparison classrooms, were observed during this phase. During the third year of the project (9 months), which we completed recently, we concentrated our efforts in developing and implementing a study group with the teachers in the project. We became convinced that such study groups are the single most important strategy for analyzing instruction and introducing innovations into classrooms. We also collected data in collecting observational data from 12 classrooms (3 are comparison classrooms) and collected "pre- and post" reading and writing samples and test data on



reading comprehension. Below, we provide additional information on each project component.

**Table 1: Research Design**

Time	After-school Lab	Implementing Classrooms	Comparison Classrooms	Household Study
Year 1	Preparation	Start Baseline Observations		Prep. & Obs.
Year 2*	Experimenta- tion	Implementa- tion**	Observations	Ethnographic Observations
Year 3***	Development of teachers' study group	Observations & Implementa- tion	Observations	Impact Assessment

\* A formative evaluation of the classrooms and lab will be conducted.

\*\* Three teachers from the target school participated in the lab in the fall semester; a total of 9 classrooms were observed.

\*\*\* A summative evaluation of the classrooms and lab will be conducted. Household data collection will be curtailed but data analysis will continue during this phase.

a. Household study. We build on the idea that every household is, in a very real sense, an educational setting in which its major function is to transmit information that enhances the survival of its dependents. As we describe in this report, the content and manner of this transmission are the central features of the ethnographic study. We selected at the beginning of the project a total of 30 students (and their families) to participate in the household study. All of the students were 4th graders in the fall of 1988 so that we could follow their development over the course of the project. Approximately half of the households had children in the implementing school and half in the comparison school. We collected household data primarily through participant observation, including fieldnotes, questionnaires, and literacy checklists (see Moll et al, 1988b). On most occasions, a three-person research team consisting of a senior

researcher and two graduate students conducted the household visits. This approach allowed for a division of labor wherein researchers alternated chatting informally, taking notes, and conducting interviews. When we felt that we had established an appropriate, trusting relationship with the families, we allowed our research assistant to collect data without our immediate supervision.

b. After-school site. In order to analyze the instructional relevance or potential of the household data, we created an after-school setting, an intermediate step between the community and the classrooms, within which researchers, teachers and students (ranging from 6 to 15 students) meet to analyze and experiment with the teaching of literacy. We think of this setting as an educational "laboratory" whose function is to address specific instructional issues in novel, yet practical ways (Moll & Díaz, S., 1987). This idea has much in common with Berliner's (1985) notion of pedagogical laboratories where teachers would have "students to teach concepts to, where expert teachers can provide critiques of the lessons, and where the peers of the novice teacher and the children themselves can join in the analysis of the teaching activities that just occurred" (p. 6). Our project, however, combines this concept of a "lab" idea with household and classroom analyses. The goal of the after-school lab was to work collaboratively with teachers to experiment with literacy instruction while creating strategic connections with classrooms and the surrounding community. In particular, this after-school site was to function as a filter through which to run community data to make it useful for classroom practice. During the course of the project we implemented two after-school components and documented their functioning. We first developed a setting in which we met with children twice a week and invited teachers to help us plan and conduct activities with them. Although this strategy was partially successful, teacher attendance and participation was sporadic. Consequently, during the final phase of study, building on our analysis of a successful module or theme study implemented in the previous phase, we developed a study group where the project's teachers could meet, help each other think, analyze instruction, and plan changes in

their classroom teaching. It is this latter group, a teachers' study group, that proved most successful and that has become central to our work and suggestions for replication, as we will explain later in this report.

c. Classroom analysis. The purpose of the classroom component was to document current literacy instructional practices and changes in instruction that we could introduce into classrooms. In order to introduce innovations into classrooms, we developed jointly with teachers a series of "literacy modules" or activities intended to facilitate a connection between the household analysis, work at the after-school lab, and classroom practices. That is, these modules were way to conduct "formative" or "teaching" experiments in classrooms and their development was closely monitored, especially through participant observations (see, Moll, Vélez-Ibáñez & Greenberg, 1988a & b; also see Moll & Díaz, R., 1987). The modules took into account the specifics of each classroom, the teacher and the students, and instructional constraints which the teachers may face and specific goals they want to attain.

Our interest, however, and a theme of our work, was in creating collaborative activities with the teachers, as distinct from imposing on the teachers a pre-specified curriculum to follow. The after-school setting (both the lab and study group) and its activities, therefore, served as new and constant sources of ideas to support and extend teaching and learning. Through our regular contact with teachers and through our classroom observations, we became increasingly aware of outstanding literacy activities taking place in some of the classrooms. We therefore adjusted our task to not only create innovations but to document and support exemplary practices as developed by the teachers. In particular, we were interested in classroom practices that created ideal conditions to develop further innovations.

As part of our classroom work, we also collected data on the students' reading and writing. These data were a combination of standardized tests and reading and writing samples (see section on Methodology for more details).

#### **d. Settings and samples**

In this section we provide more information on the characteristics of the community, the households, and the schools that formed part of our study. We will also provide additional information within the Results section, when we summarize the household analysis and present the case studies of the classrooms and the after-school settings.

1. The community. Both our study's households and schools are located within a Hispanic, predominantly Mexican<sup>1</sup>, working class community in Tucson, Arizona. Economically and socially, Tucson can be described as a highly stratified city with a dual class structure. For example, 75% of the Mexican population occupies the lower paid craft, assembly, service and laborer occupations. Mexican wages are 80% that of Anglos and Mexicans are twice as likely as Anglos to be below the poverty line. The working class segment of the Mexican population is three times larger than both the middle and upper economic class segments, while the opposite relationship is true of the Anglos' class distribution. Further, 75% of Mexicans have incomes (average annual income of \$14,500) that are within the lowest 25% of the Anglo incomes. In fact, Mexicans earn less even when the effects of education are controlled statistically. This dual economy in great part determines where people live and contributes to the geographic separation and ethnic concentration of the populations in the communities and the schools (see information below on classrooms). Residentially, about 75% of the Mexican population is concentrated in "barrios" located in the city's south side. This social and economic stratification is also reflected educationally. For example, only 27% of Mexicans have a median level above 13.3 years, in contrast to 73% for the Anglo population. (see, Vélez-Ibáñez, Greenberg & Johnstone, 1984).

2. The households. We selected 30 households to participate in the study, all from the immediate community surrounding what we called the "implementing" and "comparison" schools (see below). At the beginning of the project, and with the assistance of third grade teachers at these schools who already knew the children, we

contacted the parents of children who were going to be fourth graders in the fall. Half of the children attended school at the implementing school and half at the comparison school. Most parents agreed readily to an initial interview at which time one of the researchers and a teacher explained the purpose and nature of the study and requested the families' participation. As the study progressed, we had some attrition of households as people moved, children switched school, or occasionally when parents decided that they did not want to be interviewed further. As attrition occurred, we recruited new families to maintain an active sample of or close to 30.

We have included a summary of the background characteristics of the household sample in Appendix A. Here we present only the most salient ones. Eighty one percent of the sample was born in Mexico, mostly in the state of Sonora, while 11 percent was born in the United States, with the rest in other countries in Latin America. Only 4 percent of the sample was born in Tucson, although practically the entire sample (97%) has relatives in Tucson, with a mean number of 6.5 related households in the vicinity. The mean age of the 53 household heads (husband and wife) was 40 years, with a mean education level 7.6 years, most of whom had gone to school in Mexico.

Sixty-two percent of the parents are employed, 69 percent fulltime and 23 percent part-time. Most of the sample consists of "unskilled" laborers, although 15 percent of the men and 25 percent of the women work as skilled laborers. The majority of the women as homemakers. The average income for the sample was \$1212 a month (\$14, 544 annually), which differs little from comparable community age cohorts. In this respect, the sample is representative of the broader community.

3. The classrooms. All of the classrooms are from elementary schools (K-6) located within the same general community. In total, 13 classrooms from 6 schools participated in the study. The enrollment in the schools was predominantly (90%) Mexican or Latino, with the exception of one of the schools that is a magnet school (K-3) and receives children from different neighborhoods in the city. Nevertheless,

enrollment at this school was approximately 50 percent Mexican. All of the classrooms formed part of bilingual components within the schools. The breakdown of classrooms by schools is as follows:

School A: 3 classrooms (4th, 5th, and 6th grades)

School B: 3 classrooms (4th, 5th, and 6th grades)

School C: 3 classrooms (all 4th grades)

School D: 1 classroom (5th grade)

School E: 1 classroom (3rd grade)

School F: 1 classroom (6th grade)

We initially recruited the teachers in schools A and B by presenting the project to the staff and inviting 4-6 bilingual teachers to participate. School A was designated as the implementing school and School B the comparison. After the initial sample was secure, we contacted and presented at the other schools, all located in the same general community, to invite additional teachers. In addition to these 12 teachers, 3 teachers joined our after-school setting during the course of the study because they were interested in the work. Although these teachers participated in the study group, they did not officially form part of the project and we did not collect data in their classrooms.

All of the teachers were certified bilingual instructors and had been teaching for at least 2 years. The twelve teachers included 7 women and 5 men. All of the teachers are of Mexican background, except for one male and one female teacher who were Anglos. All are bilingual in English and Spanish.

#### e. Methodology

1. Households. The primary methodology employed in the household study was a combination of participant observation, interviews (both informal and structured), and questionnaires. Four types of data were collected during the household visits: observational fieldnotes, tape recordings of interviews, pencil responses to questionnaires, and a literacy checklist. Visits to the households were always arranged



by telephone ahead of time. On most occasions, a three-person research team consisting of a senior researcher and two graduate assistants conduct the visit. This approach allowed for a division of labor where the researchers can alternate chatting informally, taking notes, observing, and conducting interviews. It is also a way of monitoring closely the work of the research assistants before they were allowed to conduct visits by themselves.

As mutual trust developed between the families and the researchers, the observers adjusted their roles accordingly. For example, at the invitation of the families some attended rituals or social functions such as weddings, baptisms, anniversaries, quinceañeras (coming out parties for adolescent girls), and even a funeral. One researcher travelled to Arizona and Sonora border cities to visit relatives of the household or attend social functions, and at time, accompanied household members on buying trips to other town in the region.

Occasions for observations and talk included the daytime chores of females in the households (e.g., cleaning, cooking, repairing, or re-arranging furniture), social interactions between male and female head of households during retelling of genealogies, discussions of household expenditures, labor and work history, social mobility, and discussions of household expenditures and purchasing. Other activities in which we observed or were present included school meetings, medical and legal appointments, financial discussions with lending agencies, job interviews, and recreational and religious meetings. Frequent household activities included planting and tending gardens, repairing automobiles and home appliances, and the construction of additions to the home. As well, there were observations of social interactions between adult household members and children and infants, and between children. There were frequent visitors in the households, including relatives and friends, and they were included in discussions or interviewed, especially about the connections among households in the vicinity.



Fieldnotes were written-up and expanded following each visit (see Appendix A for an example of notes). Some notes were generally descriptive to provide context and background information, whereas others focused on topics of specific relevance to the project, such as the participation of children in a household activity, or the use of literacy. All notes were formally prepared using the outline program, PC Outline, as soon after a visit as possible and generally within 48 hours. A field work coordinator was responsible for debriefing the graduate assistants and offering feedback on the consistency, completeness, and depth of their fieldnotes. Additionally, a computer data bank for the fieldnotes was set up to facilitate the rapid retrieval of information in a variety of ways. A uniform file-naming system, monitored through a Lotus 1.2.3 file, helped keep track of approximately 150 data files. These data files were also indexed to facilitate the recovery of information on particular topics. For analyses and the preparation of reports, the locator program Gofer also proved useful. This program allows the quick grouping and retrieval of information for further analysis.

We also designed questionnaires to administer to one or both of the household heads. Questionnaire items elicit information on the household composition, daily routines, children's participation in household activities, reading practices of the parents in Spanish and English, and assessments of reading and writing skills. Draft versions of this questionnaire were pretested, first employing graduate assistants as mock respondents, and second, using cooperative "practice families" who were not in our sample. The information gained during pretesting not only served to refine the questionnaire but also to train graduate assistants in uniform procedures for administering the instrument.

We also developed a codebook to use during the scoring of questionnaire responses and trained all staff members in the coding procedures. For quality control, the fieldwork coordinator checked each questionnaire to be sure that it had been coded according to the guidelines established in the codebook, and when necessary corrected coding mistakes. Coded responses were then entered into a D-Base III plus data file.

This data base is available for the generation of D-Base reports and statistical analyses through SPSS.

We also used a literacy checklist (see Appendix A) adapted from Gallimore & Goldenberg (1988). The checklist has columns for recording both literacy materials observed by the researchers and any literacy materials mentioned by household members during the course of a visit. For example, materials listed include items such as books of various types, bills, calendars, legal documents, schedules, school homework, and writing paper. Literacy checklists were completed by the research team immediately following most household visits. These data were entered into a Lotus 1.2.3 spreadsheet file for analysis.

At the conclusion of the household study (September, 1989), we had made over 130 visits to households in the community. We visited 36 households at least once, 29 at least twice, 20 at least three times, and 11 households four times or more. As the study progressed, we concentrated on those households that we designated as "core" households, which had multiple connections to other homes and were central to their social network. We also concentrated, as is usually the case, on those households that were particularly rich in information and whose members were especially helpful and cooperative. Some of these households we visited up to 18 times during the course of the study. In sum, the average number of visits per household was 3.6, with a range from 1 to 18 visits.

2. Classrooms. As with the household study, in studying classrooms we relied upon participant observations and interviews (both formal and otherwise), and used the same procedures for writing up the field notes and entering them into computers to facilitate retrieval and analysis. After the initial visits to the classrooms, we developed an outline to guide and structure the observations and to ensure that we were collecting information related to the goals of the project. We instructed the research assistant to use the outline flexibly, deviating as needed and creating new categories of observation as necessary. The outline included categories on background information,

an abstract of the observation, changes in the physical setting, the daily routine, the social organization of the classroom activities, teacher questioning, intellectual level of instruction, literacy programs, teacher perspectives, student perspectives, classroom languages, testing, technology, and interpretations (see Appendix A for a sample of field notes).

The teachers were called ahead of time to schedule visits which usually lasted from two to three hours per observation period. In some cases, as is common in classroom research, the observations were called short because of unanticipated deviations from the class routine (e.g., the children leaving on a field trip or attending an assembly). Although we originally planned to observe equally in all classrooms, we modified our plan to spend more time in classrooms in which the teacher was more active in the project. In total, we estimate that we conducted 130 classroom visits.

In addition to the observations and interviews, we collected data on the children's reading and writing. Consistent with our theoretical emphases, we selected tasks that would reveal the most about the dynamics or processes of reading and writing, with a special focus on the students' development of meaning. We should emphasize that we regard any instrument or "measure" as a sampling device. That is, data gained from the use of instruments, standardized tests included, must be viewed in relation to the social context in which the data are collected and the purpose for their collection. The focus of our research, as our case studies illustrate, is on persons as interactive parts of their environments, in fact, creating their environments. The primary units of study, therefore, are individuals-engaged-in-activities, rather than the study of adults or children apart from specific social situations and educational activities. Consequently, we designed our procedures to provide us with maximum information about the social contexts of teaching and learning and used the reading and writing data to assess the consequences of these instructional arrangements for the children's uses of literacy. Our goal, then, is not to separate the analysis of changes in the students from the nature of the activities that we documented, as is common in classroom

research. Instead, we wanted to contextualize the assessment of students within specific circumstances that would allow the children to display as much as possible their reading and writing strategies.

Our data collection involved three different levels or layers of data, ranging from tests that are more distant to the classroom activities to assessments that form part or resembled the literacy instructional practices in the classroom (e.g., reading samples). These three levels can be described as follows:

(1) Standardized reading comprehension tests: We collected reading comprehension test data in both languages from the classrooms that participated in the project. The English test was the reading comprehension subtest of the California Test of Basic Skills (CTBS); its Spanish equivalent was the Spanish Assessment of Basic Education (SABE). These tests were administered during the final phase of the project on a pre-post basis by the project's staff to a total of approximately 360 students, including the comparison groups.

(2) Reading samples: We also collected (on a pre- and post-test basis) during the final year of the project individual reading samples in both English and Spanish from a randomly selected sub-sample of students in each classroom. These reading samples are based on student retellings of stories, one of the most sensitive indices of comprehension, and are individually administered and audiorecorded. As Salvia and Ysseldyke (1985) have noted in their comprehensive manual on assessment, "In our opinion, the best way to assess comprehension is to ask students to state or paraphrase what they have read" (p. 343). The procedures are as follows:

(a) Reading of story: The student reads aloud a story (preselected by the researchers) to the researcher.

(b) Unassisted retelling: At the conclusion of the reading, the researcher asks the student to retell (without any help) what the story was about.

(c) Assisted retelling: After the unassisted retelling, the researcher will provide cues to extend the student's retelling or to help clarify the retelling.

(d) Cross-language check: After the assisted retelling, the researcher switches to the students other language and ask whether there is anything that he or she wants to add to the retelling.

(e) Once the researcher determines that the retelling is over, he or she will verify it with the student and conclude the session.

Depending on the researcher and the child, the entire procedure took about 45 minutes. The cross-language check (d) is an innovation that takes into account the dynamics of bilingual reading. It is often the case that a student can, for example, read a story in English, not be able to retell it in that language, but is capable of retelling it in Spanish, thus demonstrating comprehension of what was read. According to our procedures, if a story was in English, the unassisted and assisted retellings were in English, followed by a cross-language check in Spanish, and vice-versa if the story was in Spanish.

During data collection in the Fall, we collected reading retellings (in English and Spanish) from approximately 10 to 15 students per classroom (selected randomly), anticipating some attrition. During the Spring data collection, in an effort to accommodate to time and logistical constraints, we reduced the sample to 5 students per class (of the one's previously selected). In particular, the students were being tested by the district at about the same time that we were scheduled to collect the reading samples. At the teachers' request, and given the extent of our sample, we reduced the scope of work. Nevertheless, we collected retellings in English and Spanish from approximately 60 students, for a total of 120 retellings. The analytic procedures and a summary of findings from these retellings are presented in the Results section of this report.

(3) Writing samples: We also collected pre- and post-writing samples from the implementing and comparison classes, also in English and Spanish, and from the other participating classes. The procedures (which took about 30-45 minutes) for the collection of these samples were as follows:

(a) The researcher explains the procedures to the student and, rather than impose a topic that may be of no interest to the students, he or she asks them to brainstorm on topics of interest to them. From the original list, the students are asked to select 5 topics and to write on one.

(b) The students are asked to write freely and for as long as they want.

(c) The writing samples are then collected for analysis.

We will describe analytic procedures and findings in the Results section of this report.

The research assistants were trained in the collection of reading and writing samples by experienced colleague(see Appendix A for sample instructions for the collection of reading samples), and a classroom not in the study was used to practice.

After-school setting. We also relied on participant observations to document the work in the after-school setting, and we supplemented observations with videotapes and audiotapes of the sessions, and with both formal and informal interviews. We patterned data reduction and management procedures after the household study.

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<sup>1</sup> Following Vélez-Ibáñez (1988), we are using the term "Mexican" to designate native-born of Mexico as well as those of Mexican parentage born in the U. S. This designation is also consistent with the self-descriptions of the persons, regardless of generation, in our study sample.



## **Results**

In this section we present findings from the project. We first present the work conducted in the households, providing case study examples from the observations, explaining the central concept of funds of knowledge, and summarizing key outcomes. The insights we gained from this analysis has influenced greatly our perceptions of instruction and of the resources available for positive change.

We will then turn to a summary of the classroom work and the after-school activities. We have chosen to present these as one because their interrelationship. Rather than provide a general summary of results, we have opted to present and discuss specific case studies. Our goal in presenting case studies is to include for the reader as much of the social context as possible. We want to take the reader vicariously to where we did the work and understand the social and cultural dynamics of the situations we studied or developed. The project was divided into three phases. Here we'll discuss the last two phases. As part of the first phase we will present two case studies conducted with children and teachers, and explain the role of the after-school setting in developing the innovations. As part of the second we present additional case studies that illustrate how the project developed and how a teachers' study group became central to our study and to our recommendations. In these case studies we highlight only a handful of teachers, so in a separate section we will summarize the work of the other teachers in the project, including the teachers who worked in the comparison classrooms.

Finally, we turn to the test data and the reading and writing samples, explaining our analysis, findings, and implications for the teaching of literacy.

### **a. Household analysis**

The emphasis of our analysis has been on understanding households as social structures, with a special focus on activities and relationships within households and among networks of households. As La Fontaine (1986) has commented, "The structure of the household is also a structure of social relations, a social world in which the



children have their place" (p. 25). Thus, consistent with our theoretical orientation, we are attempting to situate the study of children and of literacy within the social contexts created by these complex household relationships. These relationships, in turn, are influenced by a variety of factors, such as the personal and labor history of the family. Particularly important in our work has been to understand the households as economic units, how they function as part of a wider, changing economy, and how their material and intellectual resources are obtained and distributed through both internal and external social relationships (Vélez-Ibáñez, 1988).

Our approach represents a positive view of households as containing cognitive resources with great potential utility for instruction (see, Moll & Greenberg, 1990; Moll, Vélez-Ibáñez & Greenberg, 1988a). This view of households, we should emphasize, contrasts sharply with the prevailing and accepted perception of working class and poor families, as evident in the following comments by a leading educational psychologist:

...there are gaps and qualitative limitations in ("disadvantaged" students') development of cognitive and metacognitive tools for processing and making sense of their experience, transforming and storing this information in the form of codified knowledge, and accessing and applying it in relevant future situations...disadvantaged children tend to have fewer interactions with family members of the kind that develop and exercise their capacities to use thought and language for building knowledge.

In brief, this author concluded that these children have severe disadvantages in their "funds of background experience." These comments are also revealing because this researcher is well-known for his classroom analysis and studies of teaching but, to our knowledge, has never conducted a household study that would substantiate his views. In fact, he is not reporting results of his studies, but summarizing general assumptions about the deficits of these families and their children; assumptions that are well accepted and rarely challenged in the field of education (however, see, McDermott, 1987; Moll & Díaz, 1987; Taylor & Dorsey-Gaines, 1988).

In this section of the report we summarize our household findings. We start by explaining the concept of funds of knowledge and by two other theoretical concepts that help clarify its educational relevance: social capital and the zone of proximal

development. This is followed by a presentation of household findings, in particular, two case studies that summarize the essence of our results. We then conclude by discussing some educational implications of our findings, including data about the uses of literacy in the homes.

### 1. Funds of knowledge

In previous reports and articles we have introduced the notion of funds of knowledge in relation to households' social networks that facilitate the exchange of resources (see, e.g., Greenberg, 1989; Vélez-Ibáñez, 1988). We have highlighted that these networks serve as a buffer against uncertain, difficult, and changing economic circumstances. In particular, the networks facilitate different forms of economic assistance and labor cooperation that help families avoid the expenses involved in using secondary institutions, such as plumbing companies or automobile repair shops, and help conserve and control existing resources. For families at the bottom of the social order, these networks are a matter of survival. These networks also serve important emotional and service functions, providing assistance of different types, most prominently in finding jobs and with child-care and rearing that releases mothers to enter the labor market. In brief, these networks form social contexts for the transmission of knowledge, skills, information, and assistance, as well as cultural values and norms (Vélez-Ibáñez, 1988; Wellman, 1985).

For our purposes, the most important function of these social networks is that they share or exchange what we have termed "funds of knowledge." Greenberg (1989), following the work of Wolf (1966), suggests that an important way to understand funds of knowledge is in relation to other funds that households must manipulate for subsistence and development. The most basic are caloric funds, needed to furnish minimum caloric intake to sustain life. There are others, such as funds of rent, a charge on the households' production resulting from a superior claim on the land or housing. This charge, depending on the situation, may be paid in money, labor, or produce. There are also replacement funds, which represent the amount needed to

replace or maintain minimum equipment for production and consumption, and ceremonial funds, which sustain symbolic aspects of social relationships, such as marriage ceremonies and other rituals found in the social order. Each of these funds, and others we could mention, entail a broader set of activities which require specific knowledge of strategic importance to the household's well-being. These bodies of knowledge are what we call funds of knowledge. Greenberg (1989) has referred to funds of knowledge as an "operations manual of essential information and strategies households need to maintain their well being" (p. 2).

The important point here is that funds of knowledge form an essential part of a broader set of activities, social relationships, related to the households' functioning in society. These social relations facilitate reciprocal exchanges among people. The functions and content of these exchanges are varied and certainly not unique to the Hispanic community we are studying. Mechanisms of exchange constitute a general characteristic of households. We are analyzing the specific manifestations of a general phenomenon: funds of knowledge as they occur and exist in the specific socio-historical conditions of our study population. Similar analyses are possible in other communities, as previous work has shown (see, e.g., the work of Stack, 1974, in the black working class community; Wellman, 1985, in Anglo middle class communities; Vélez-Ibáñez, 1983a&b, in Mexican communities in Mexico and the United States).

Coleman (1987), based on his sociological analysis of schools and communities, has proposed the concept of "social capital" to capture something similar to what we are calling funds of knowledge. He explains it as follows: "What I mean by social capital in the raising of children is the norms, the social networks, and the relationships between adults and children that are of value for the child's growing up. Social capital exists within the family, but also outside the family, in the community" (p. 36). Coleman (1988) suggests that social capital comes about through the social relations among persons that facilitate action, "social capital inheres in the structure of relations between actors and among actors. It is not lodged either in the actors

themselves or in the physical implements of production" (p. 98). Social capital is not a possession or a trait of people, but social resources for persons, resources that can be used to achieve certain interests.

As an example Coleman (1987) provides an analysis of the reasons why the drop out rate is much lower in Catholic schools than in public or other private schools. He points out that the lower drop out rate was not the result of a better curriculum or other factors within the school, but of the social capital available in the relation between school and community. He explains it as follows:

We concluded that the community surrounding the Catholic school, a community created by the church, was of great importance in reducing the dropouts among students at risk of dropping out. In effect, this church-and-school community, with its social networks, and its norms about what teenagers should and should not do, constituted social capital beyond the family that aided both family and school in the education of the family's children (p. 36).

Religious organizations are among the few remaining organizations in society, beyond the family, that cross generations. Thus, they are among the few in which the social capital of an adult community is available to children and youth" (p. 37).

There are several important points in Coleman's (1987,1988 ) analysis that relate to our work. One is that social capital is not found in individuals but in relations among individuals. In fact, he emphasizes the very same reciprocal social networks that we are studying as facilitating the development of social capital. The key to the social networks is the flexibility that permits resources used for a purpose in one situation to be re-directed to assist in another context. This means that social capital from outside the school could be used, often in combination with other resources, to influence the structure and outcomes of education, as Coleman (1987, 1988) has suggested.

Thus, Coleman's work makes the case for the importance of the families' and community's social capital in shaping educational outcomes, namely, staying in school or not dropping out. What our analysis contributes to the concept of social capital is a direct examination of its context and content. From our perspective, social capital consists of funds of knowledge. We should point out, however, that our analysis of funds of knowledge is very different from Coleman's analysis of social capital. While

Coleman relies on quantifiable indexes to depict social capital, we rely on developing a qualitative understanding of the socio-cultural dynamics of funds of knowledge. We do not use procedures that would, for example, quantify funds of knowledge because we believe that quantification would lead to the reification of what is a dynamic concept, would be misleading, and produce misapplications in educational practice. (See Gould [1981] for an illuminating discussion of the massive problems with the quantification, reification, and gross misuse of the concept of intelligence.)

Our work shows how funds of knowledge are constituted through the historical experiences and productive activities of families and shared or distributed through the creation of social networks for exchange. These productive and exchange activities involve or influence children in a variety of ways and are often intergenerational and transnational, as we will discuss below. There are abundant and wide-ranging funds of knowledge in the community (as represented by the households we are studying), social and intellectual resources, that make up social capital that can be applied to education. Our analysis also suggests, however, that schools, more specifically classrooms, are not organized to take full advantage of the households' (or the students') funds of knowledge, of their plentiful social capital (Moll et al, 1988; also see, Tharp & Gallimore, 1988). In fact, this social capital is most often unrecognized and untapped. How can teachers (and schools) recognize household funds of knowledge? How can they take advantage of the households' social capital?

Coleman's (Coleman & Hoffer, 1987) analysis highlights the importance of channeling social capital through an academic curriculum. Their comparative analysis of public and Catholic schools indicated that black and Hispanic students not only did not drop out but performed much better in the Catholic schools, even when the analysis controlled for background variables. In fact, as they have pointed out, "on most dimensions of academic demands, blacks and Hispanics in Catholic schools realize greater advantages than Catholic school non-Hispanic whites compared to their public school counterparts" (p. 144). These advantages, they specify, were non-trivial,

they involved placement in academic program of study, homework, English courses, and the number of advanced science and mathematic courses completed. The key difference between public and Catholic schools in facilitating the superior academic performance of Hispanics and blacks was the greater academic demands placed on the students (stronger discipline, we should note, explained little of the achievement advantages of minority students).

The ability of the school to make academic demands upon these students, it turns out, was intimately related to the community's social capital. That is, social capital in terms of the social integration of the Catholic community in support of the academic demands and activities placed on the students. Schools and families constituted a functional community around social and academic matters. In the case of the Catholic schools, this functional community, this social integration, was based on religious participation coupled with academic interests. The effects of the functional community were indirect; that is, it was not that the parents helped the children with their academic work, although that is certainly probable, but that the parents constituted a community outside the school; a community in the sense that there was frequent social contact among the parents of the students and intergenerational contact between adults and students. Our analysis of household social networks and funds of knowledge points to the potential of establishing a similar support community based on residence, social relations among parents, parents and teachers, and intergenerational contacts with students.

How can funds of knowledge be used to assist the children's academic development? To address this question we are developing our understanding of a third important concept in our work, that of the "zone of proximal development." Proposed originally by Vygotsky (1978, 1987), it was intended, in part, as a critique and as an alternative to static, individual testing, namely IQ testing. He claimed that static measures assess mental functioning which has already matured, fossilized, to use Vygotsky's term (1978); maturing or developing mental functions must be fostered



and assessed through collaborative, not independent or isolated activities. He emphasized that what children can perform collaboratively or with assistance today, they can perform independently and competently tomorrow; as Cazden (1981) put it, the zone makes possible "performance before competence."

Vygotsky (1978, Ch. 6; 1987, Ch. 6) proposed differentiating two levels of development in the child: the actual developmental level which refers to individual performance or problem solving, and the more advanced proximal level which refers to aided performance or problem solving. He defined the zone of proximal development as the contrast between aided and unaided performance. In an oft quoted statement, Vygotsky (1978) wrote as follows: the zone is "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (p. 86). The actual developmental level, he wrote, characterizes mental development retrospectively; the proximal level characterizes mental development prospectively (p. 86-87). With the help of others, the child's proximal level today becomes the actual developmental level tomorrow.

Vygotsky specified at least two important, interrelated, instructional implications from his concept of the zone. One is that effective instruction must be prospective; it must be aimed at a child's proximal level of development, or as he called it "the upper threshold of instruction" (1987, p. 211). Teachers, Vygotsky suggested, must orient their work "not on yesterday's development in the child but on tomorrow's" (p. 211). A second implication is that what a child performs collaboratively or with assistance, the child will later perform independently. Vygotsky was suggesting that in creating a zone of proximal development we're helping define the child's immediate, future learning. He indicated that the same mediational means (means of assistance) used interpersonally would be internalized and transformed by the child and used intrapersonally (Vygotsky, 1978). As such, central to the zone of proximal development are the characteristics of the collaborations that



create the proximal level and define the parameters for the child's future, independent performance.

Thus, the zone must be thought of as more than a clever instructional heuristic, it is a key theoretical construct, capturing as it does the individual within the concrete social situation of learning and development (Moll, 1990). The basic message of the zone, as Valsiner (1988) has emphasized, is the "interdependence of the process of child development and the socially provided resources for that development" (p. 145).

What we claim is that these "socially provided resources for development" can be, in great part, the households' funds of knowledge; the adults and children's funds of knowledge applied to instruction. To this end, we used the concept of the zone in at least two ways. First, in organizing lessons so that they constitute high-level literate activities within which the children can practice and appropriate various ways of using reading and writing. The second way we are using this concept is in creating learning circumstances for teachers. The teacher's study group is one important way of helping teachers assist each other's teaching and, in particular, think of how to take advantage of funds of knowledge. The study group is a context within which teachers (and researchers) study teaching and, given their interests and needs, conceptualize literacy modules, innovations, to implement in their classrooms. The study group also facilitates the teachers supporting each other's work, creating zones of proximal development for each other.

The emphasis here is on developing learning conditions for teachers that are analogous to the zones of proximal development we create for students. We seek to create a setting (or settings, if needed) within which teachers can engage in what Tharp and Gallimore (1988) call "joint productive activity with others." That is, an activity setting where the necessary support for developing and maintaining instructional innovations, including material and intellectual assistance, is available for the teachers; a setting where "assisted performance" is facilitated for the teachers to extend their teaching to new levels. This system of assisted performance, in turn,

becomes part of the teachers' social capital: resources for action; funds of knowledge for developing activities that foster the literacy learning of their students.

## **2. Some key findings<sup>1</sup>**

In the abbreviated case study presented below we highlight many of the factors we have emphasized in previous reports, such as the history of the family, the transnational experiences of family members, the instability of employment within changing economic conditions, the special, multiple roles of social networks, and the exchange of funds of knowledge. The case study illustrates what we could call the "fluid reality" of the households, the changes in household composition, residence, jobs, and social relations; it is within this fluidity that the experiences of children and parents must be understood. In all cases, as La Fontaine (1986) has asserted, children are participants in the household activities, not merely bystanders. In some cases their participation is central to the household's functioning, as when the children contribute to the economic production of the households, or mediate linguistically the household's relationships with outside institutions, such as the school or government offices. This totality of household experiences, not solely what goes on in school, constitutes sources of education, part of every child's learning environment (Leichter, 1978). These experiences also make up the households' social capital.

### **a. The Sanchez household**

Berta and Jose Sanchez's family in many ways is a typical cross-border family, not only do they have extensive kinship networks which actively engage them in one another's lives on both sides of the border, but the history of their struggle to make a living has forced them to criss-cross national boundaries in pursuit of jobs in often highly unstable labor markets. The family depends on their kin to gain access to resources on each side of the border. Because of the complex history of their family, while most of Mr. Sanchez's kin are in Nogales, Sonora, his wife's relatives live in Tucson, although she also has a scattering of kinsmen in Amado and Phoenix, Arizona.

Berta's father, for example, was born in Phoenix and worked as a migrant farm worker following the harvest in Arizona and California. Like many Mexicans during the depression, her father was "voluntarily" returned to Mexico and settled in Nogales. There he met and married Berta's mother, and together they had seven children. Berta was born in Nogales in 1954, and went through the eighth grade there. When she was 17 she married José Sanchez, and a year later they had the first of their five children. About 10 years ago Berta's family moved to Tucson to be near to her mother's sisters. However, because Berta was already married she remained in Nogales with her husband and children until deteriorating economic conditions in Mexico led them to move to Tucson in 1984.

José Sanchez is also from a border family. He was born in 1949 in a mining town near the border, Cananea, Sonora. His father had been raised in Cananea and worked in the post office, but was transferred to Nogales, Sonora when José was young. Although the postal service was a secure government job, the elder Sanchez needed more money than his salary could provide to support his wife and five children, so as a side line, he opened a car repair shop next to his house. While José was growing up he and his brothers helped their father repair cars after school and during vacations. José went through the 11th grade, before dropping out. As José had learned to play guitar in school, he also made a little money playing in a band. Around the time José got married, his father got him a job as a mail man. Nevertheless, he continued to work in his father's repair shop part-time, and to play occasional jobs in a band.

When economic conditions began to deteriorate in Mexico in the early 1980s, despite his "good" job in the post-office and part-time work in his father's shop, his salary could not keep up with inflation, and many of the benefits offered to government employees were stopped. At this point, under the urging of his wife, Mr. Sanchez decided to pull up roots and move to Arizona. Since Berta's parents are U.S. citizens, they were able to get permanent residency status for the whole family. When the

Sanchez family came to Arizona, they first lived with some of Berta's relatives in Phoenix. However, José was unable to find a steady job, and in 1984 the family decided to come to Tucson because he had friends who could help him find work there. They moved into an apartment in a public housing complex where Berta's mother lives. José soon found a job working in a Pecan factory in Sahuarita (a small town near Tucson), but worked there only a few months before finding a better job in a furniture factory. His wife also found a job in a potato chip factory. In May of 1989, José was laid off from his job at the furniture factory, and unable to find employment in Tucson, he took a job playing music with one of the most popular bands in Nogales, Sonora. Unfortunately, because some members of the group do not have passports, the band is limited to playing in Mexico. As a result, José earns only about \$150 dollars a week. However, with the money his wife earns, and because they receive a discount on rent and food stamps because José is "unemployed," they are able to get by. However, because José must commute daily to Nogales, Sonora he is looking for a "regular" job in Nogales, Arizona that would allow him to keep playing in the band. In which case, they would move to Nogales, Arizona.

Although unstable labor markets and low wages have meant that the members of the Sanchez family have had to become Jacks-of-all-trades, jumping from one sector of the labor market to another, holding several jobs, and pooling their wages, the broad "funds of knowledge" they have acquired in this process alone can not guarantee the households well-being or survival. Rather, their ability to navigate in these rough economic seas depends equally on their exchange relationships, especially with kinsmen.

1. Exchange. Although friends and kinsmen may provide a safety net offering significant aid in times of crisis, most exchanges occur in such a routine and constant fashion that people are hardly aware of them, and may even deny they "help" or receive "aid" from anyone, partly because these terms denote monetary forms of assistance or extraordinary kinds of help. Exchange, however, takes a variety of forms: labor

services, access to information or resources (including helping finding jobs or housing or dealing with government agencies or other institutions) and various forms material assistance besides money, such as putting up visitors. Again, the Sanchez family illustrates how each of these forms of exchange help the household to cope with its economic situation, as well as how the "funds of knowledge" distributed in their social networks are mobilized.

One of the most basic forms of assistance in the Sanchez's social network revolves around child care. The Sanchez family has five children ages 2 to 16. Even though the older children could take care of the younger ones after school, because both parents work, the two year old cannot be left alone. The Sanchez's, however, are surrounded by kinsmen. Not only does Berta's mother and sister live in the same apartment complex-- but if she cannot look after the children, she has three brothers and two sisters living nearby that she can turn to, not to mention some six cousins who live in Tucson. She also has a sister in Amado, Arizona whose husband, in fact, takes the boys to school each morning on his way to the clothing factory where he works in Tucson. Such assistance is by no means limited to Berta's side of the family-- because his wife works, Jose does much of the housework, and often takes his two year old daughter with him to Nogales, leaving her with his parents or sisters while he is at work. And just as Berta's mother home is the central node for exchange among her siblings in Tucson, Jose's parents house is the nexus for exchanges among his kin in Nogales. For example, one of Jose's sisters who works as a secretary/bookkeeper in one of the maquiladores in Nogales, is divorced. She has moved back in with her parents. She pays her parents to take care of her son (although not the going rate) while she is at work.

Another important set of services that the Sanchez's kinsmen and friends provide for one another is their labor. For example, Jose often helps friends and compadres repair their cars. Similarly, Jose kinsmen were helping him build a house in Nogales, but when the family moved to Arizona, work on the house was abandoned. Labor

services are also essential to family enterprises. When Jose's father retired from the postal service about three years ago, to compensate for the loss of income the elder Sanchez opened a "tanichi"-- a tiny grocery store. However, his son-in-law Ramón, who is a teacher and administrator at a technical school in Nogales, soon got the elder Sanchez a job teaching car mechanics at the school. His new duties have left him little time for the two business, so he handed over the garage to Jose's brother to run, and asked his daughter Silvia to take care of the grocery store, although he gives her some money for this work.

In addition to providing a wide variety of labor services, members of the Sanchez network provide material assistance to one another of various sorts. For instance, when Jose's relatives come to Tucson, they invariably stay with him. His sister and her husband, Ramón, have been frequent guests recently. His sister was pregnant and came to a clinic in Tucson regularly; when the baby was born they stayed with him for a week and a half. During their stay they helped out by buying milk, bread, and other food. His sister-- though pregnant-- even cleaned the kitchen every day. Similarly, when Jose visits his kin in Nogales, he never comes empty-handed. For example, because he can buy tomato soup and other things more cheaply in Tucson than they can get them in Nogales, he frequently brings them things for their grocery store. However, he also has dinner at his mother's house every time he comes to practice with the band, at least twice a week. In fact, there is a continuous stream of small gifts between these households--food, clothing, and other items. Thus, one of José's favorite past-times is going to the swap meet not only because of the bargains on things he wants, but also because he may find things that his relatives need.

Although these small prestations are constant feature of exchange relations, as they are reciprocal, they tend to balance out, and are of less importance economically than is the exchange of information and funds of knowledge. Indeed, help in finding jobs, housing, better deals on goods and services, and assistance in dealings with government agencies and other institutions is of far greater significance to survival



than are the material types of aid these households provide each other. For example, Berta has helped two of her sisters get jobs at the potato chip factory where she works, and is trying to help another sister get work there as well. Berta's has also used her "funds of knowledge" to help José's sister and her husband, Ramón, to qualify for the amnesty program. She has also assisted them in applying to the state's medical care program, ACCESS, which paid the costs of their baby's delivery. As well, She helped them get an apartment in the public housing complex where they live, and helped them get food stamps.

In each case, because they speak little English, Berta has gone with them to these public agencies and has filled out all the appropriate forms. Because families must deal with unfamiliar governmental agencies and institutions, funds of knowledge about their workings that are distributed in their social network are constantly mobilized. For instance, when we contacted the Sanchez family about this study, Berta invited her brother (an elementary school teacher in the Tucson public schools) to her home to be present when we came to explain the project; only when he was satisfied with our explanation did the family agree to participate. Similarly, when they receive mail from ACCESS or notices from school, they often turn to other relatives for help in interpreting what they are about. Sharing funds of knowledge also occurs systematically in other realms. For instance, Berta and her sister-in-law regularly go through the newspaper together looking for food specials and comparing prices.

Because households depend on their social network in order to cope with complex political and changing economic environments, they are willing to invest considerable energy and resources in maintaining good social relations with its members by participating in family rituals--birthdays, baptisms, "quinceaños," showers, weddings, Christmas dinners, outings, and so on. These events bring the members of one's network together to ritually reaffirm their solidarity, and require members to cooperate by pooling resources, or committing their labor to their staging. Moreover, such rituals broadcast an important set of signals both about the sponsor's economic



well-being and social relations with other members--both in terms of their lavishness and attendance. As well, the willingness of others to help organize such rituals is a measure of whom one may count upon for other things. For example, Jose's sister, Silvia, is soon to be married, and preparations for the wedding have been elaborate. Four bridal showers have been held for her: two in Nogales, Sonora, and two in Tucson, including one in Jose's home in which mountain of gifts, like a pottlatch, has been amassed--everything from kitchen appliances to canned food. The showers alone have involved a staggering amount of work. As José explained, just for one of them he had to make three trips back and forth between Nogales, Amado, and Tucson: one, to pick up his mother and other relatives who wanted to come to the shower; and two more because they had forgotten items in Tucson and Nogales. Similarly, Berta has made several trips to Nogales after work to help one of her sister-in-laws to make Silvia's wedding dress.

Such formal rituals are but one mechanism through which social networks are maintained; as important, or more so, are visits--informal rituals themselves. Like their more formal counterparts, the frequency of visiting and the treatment accorded to one are important signals about the state of social relations. The Sanchez's not only have frequent guests, but visit their friends and relatives almost daily. For example, José usually has breakfast in his mother-in-laws apartment, and Berta usually has lunch with her mother. Because José commutes to Nogales, he usually sees his parents and his brothers and sisters, not to mention a wide circle of friends on a daily basis. This frequent contact not only helps maintain these social ties, but these visits help the Sanchez to renew and update "funds of knowledge" in this social universe upon which they depend constantly.

In the quest for survival, families have always had to face unpredictable events such illness, injury, or death, but in highly unstable labor markets the risks they face are magnified. As a result, Mexican families have followed a two-fold strategy: one is for individuals to acquire a broad spectrum of skills that allows them to jump

from one sector of the labor market to another as need be; second, because information is key to survival in these changing seas, individuals maintain good relations with an extensive, but closely-knit network of friends and relatives who have access to a variety of "funds of knowledge." The key to maintaining good relations with friends and kinsmen is exchange--one's willingness to help them in a variety of ways. In fact, it is the variety of forms of help that one is willing to offer which creates dense and multi-stranded relationships that makes one a valued and trusted relative or friend, a person that is "de todo dar," giving of everything. This Spanish expression sums up the qualities of a good friend, and the qualities that children growing up are encouraged to emulate. But, just as a person is encourage to be generous with one's friends and relatives, there is an equal expectation that they will respond in-kind. Similarly, if exchange relations are single-stranded, unbalanced, or asymmetrical, one is justified in being distrustful, uncooperative, and selfish. The latter, unfortunately, may too often typify their experiences with schools.

b. Discussion of the case study

This case study illustrated the critical role of social relations in the household's functioning; they are means through which household members acquire or distribute information and other important resources, especially in maintaining some form of stability in work and income. Thus, given our sample characteristics and their low position in the labor market, most exchanges are related to labor services, assistance that somehow help household members work, save money and other resources, or avoid expenses with secondary institutions. A review of some of the forms of exchange documented in our fieldnotes confirms the prevalence of these exchange functions and their important role in the households. Consider the exchange typology depicted in Table 2.

Table 2: Exchange typology

1. Labor services
  - a) Babysitting and childcare
  - b) House repair, property maintenance, and other chores.
  - c) Car repair
  - d) Labor in family enterprises

- e) Transportation
- f) Running errands
- g) Elderly care
- h) Access to government services (including help with immigration and related paper work)
- i) Job training
- 2. Material exchanges
  - a) Material provisioning
  - b) Housing
  - c) Loans
  - d) Crisis assistance
- 3. Ritual exchange
  - a) Family rituals
  - b) Visiting
- 4. Access to information
  - a) Job placement
  - b) General information

Note that the most prevalent form of exchange is related to the households' economic functions, and that the exchange of information is equally important to the exchange of material goods or labor assistance. But it is the preoccupation with economic matters, especially with the unstable labor market, that becomes the focus of the household social relations of exchange. In short, household relations of exchange can either make or break a family.

Given the centrality of exchanges to the households' functioning, the level of exchange provides information on the nature of the social relationships with others. It provides one with an indication on who to count on, or not count on, when in need; the level of exchange is in some respects of measure of "confianza," the mutual trust that establishes the conditions for exchange. A change in the frequency of exchange, for example, or in the ritual visits, may indicate important changes in the interpersonal relations of the household. A similar indicator may be useful in gauging the extent of confianza with the schools or classrooms. We only have a few examples of regular exchanges with school. This lack of exchange, however, does not reflect the level of concern with education in these households, as expressed by the parents, but that household resources and efforts are utilized primarily to make it in the labor market, that is the top priority, and that no specific social structure, a path and a motive, currently exists to channel funds of knowledge to the classrooms or schools. One implication is that unless schools are willing to establish reciprocal obligations with

households, confianza may not develop. These relations need to be reciprocal and meaningful, or as happens among households, they cannot be maintained. The schools need to show parents that they indeed have something to contribute to the classrooms functioning and how to contribute in ways that are meaningful. We will return to this topic in a later section, when we suggest ways of establishing joint activities involving the exchange of funds of knowledge for academic purposes.

There is also considerable variation among the households, especially if one considers generational differences in employment as well as urban and rural differences in employment situation. The following table illustrates the differences in work by generation and by

Table 3: Jobs by generation

1. Ascending generation
  - A) Work of parents and other members of the parents' generation:
    - 1) Contextually learned jobs
      - a) Ranching or agriculture
      - b) Mining and construction
      - c) Mechanic
      - d) Small business
      - e) Railroad
    - 2) Institutionally trained
      - a) Government work and teachers
2. Head generation
  - A) Work of female head (FH) and female collaterals
    - 1) Institutionally trained
      - a) Secretarial
      - b) Service Professional
      - c) Nursing
      - d) Teacher
    - 2) Contextually learned
      - a) Housewife
      - b) Domestic and cleaning jobs
      - c) Factory work
      - d) Restaurant work
      - e) Self-employed (e.g., sales)
  - B) Work of male head (MH) and male collaterals
    - 1) Institutionally trained
      - a) Professional and trade
      - b) Electrician
      - c) Government jobs
    - 2) Contextually learned
      - a) Construction
      - b) Miner
      - c) Ranching
      - d) Mechanic and maintenance

- e) Musicians
- f) Restaurant work
- g) Small business
- C) Descending generation
  - 1) Institutionally trained
    - a) Small business
    - b) Physician
  - 2) Contextually trained
    - a) Construction
    - b) Restaurant
    - c) Self-employed
    - d) Factory

implication, differences in the households' funds of knowledge. We have included the work done by the ascending generation (the generation of the grandparents of the students in the study), head generation (the parents' generation, for which we have more detailed information) and the descending generation (the offsprings of the parents). We have also designated those jobs that are contextually learned, that is, where the skills are primarily learned on the job, and those jobs that depend on institutional training, such as schools.

Although the functioning of the household depends mostly on the men's wages, given the very unsteady labor market, women will work outside the home to provide additional income, particularly when the men are unemployed. With our specific sample, 15 women hold jobs outside the home. Most of the women market their domestic skills, finding employment in restaurants or sewing, or in similar work. But, like the men, the women are often dependant on an informal and soft economy. In such a market, having a variety of skills becomes an important way to find employment. As we commented in the case study, being a jack-of-all trades is a major strategy to search and obtain jobs. In a highly unpredictable labor market, a broad spectrum of skills allows people to shift from one sector of the labor market to another, as the need arises. We should point out that most of those skills that allow households to cope with the instability of work are not acquired in school. Most of the males in our sample acquired these skills contextually, that is, on the job, specially in the rural areas. The females, generally, market their domestic skills. Therefore, the families face the following quandary: their position in the labor market demands

highly flexible skills that will allow them to switch jobs if needed, to cope with periodic dislocations; schooling, while facilitating advancement and greater stability in certain labor sectors, radically constraints the options for employment. For example, someone trained as a dental technician will only find employment within that sector, it is unlikely that he or she will be able to market those skills elsewhere. In an important way, given the realities of being stuck at the bottom of a highly segmented and often rigid labor market, going to school is risky, it may lead to unemployment with limited prospects for work. The descending generation (the school children in our study), because they are living in an urban setting, have virtually no context within which to acquire many of the flexible skills that the parents developed previously, the children must depend on skills acquired institutionally. If they stay in school, they may acquire more stable employment, but have limited options; if they leave school, they may not have the training or the skills to penetrate those labor markets to which they may have access. Therefore, for the younger generation, school may represent the only option to getting a stable job within their labor segment or, of course, for surpassing the labor market of their parents.

Also noticeable in our analysis is that each segment of the labor market has its own peculiar pedagogy, so to speak, with differential implications for uses of literacy. Consider the Zavala family, as an example.

c. The Zavala Family

The Zavalas are an urban working class family, with no ties to the rural hinterland. They have seven children. Their eldest daughter, however, no longer lives at home, but with her boyfriend and son. Mr. Zavala is best characterized as an entrepreneur. He works as a builder, part-time, and owns some apartments in Tucson and properties in Nogales. Mrs. Zavala was born in Albuquerque, New Mexico, in 1950 but came to Tucson as a young child. She left school in the 11th grade. Mr. Zavala was born in Nogales, Sonora in 1947, where he lived until he finished the 6th grade. His father too was from Nogales. His father had little education, and began to



work at the age of 9 to help support the family. His family, then, moved to Nogales, Arizona where he went to school for another two years. When he was 17, Mr. Zavala left home and joined the army, and spent two years stationed on military bases in California and Texas. After his discharge, he returned to Nogales, Arizona and worked for a year installing TV cable, and in the installation of heating and cooling ducts. In 1967, Mr. Zavala came to Tucson, first working as a house painter for six months, then in an airplane repair shop where he worked for three years. In 1971, he opened a washing machine and refrigerator repair shop, a business he had for three years. Since 1974, Mr. Zavala works in construction part time, builds and sells houses, and he owns four apartments (two of which he built in the backyard of his house).

Everyone in the Zavala's household, including the children, is involved in informal sector economic activities to help the family. Juan, for example, who is in the sixth grade, has a bicycle shop in the back of the house. He buys used bicycle parts at the swap meet and assembles them to build bicycles, which he sells at the yard sales his family holds regularly. He is also building a go-cart, and says he is going to charge kids 15 cents per ride. His sister's, Carmen and Conchita, sell candies that their mother buys in Nogales to their schoolmates. The children have used the money they have earned to buy the family a VCR.

1. Social networks and exchange. In Tucson, Mr. Zavala also has a set of younger brothers who live in a house owned by his mother. Ana Zavala, an older sister, also rents a house (at a discount) from her grandmother on the same block. As is typical of such household clusterings of kin, Mr. Zavala's youngest brother and Ana are very close, and he does many favors for his niece, such as grocery shopping. As well, one of Mr. Zavala's sisters is married to a junior high school teacher. When his children have difficulties with their homework, they often seek assistance from their uncle. Although most of Mrs. Zavala's relatives live in California, she also has a brother in Phoenix. When he comes to visit, because he knows of Juan's interest in building bicycles, he buys parts for him.



Links between funds of knowledge and literacy: Reading and writing are an integral part of the Zavala's daily activities. Although much of what Mr. Zavala reads and writes is work related-- blue prints, lists of materials, trade books and manuals-- in his spare time, he also reads National Geographic, Newsweek, books on history, and enjoys browsing through the encyclopedia. Mrs. Zavala's use of literacy is more varied. She is in charge of reading and signing school papers. She writes greeting cards, shopping lists, recipes, notes to remind her children of household chores and family members of appointments. She reads Time, Life, Good Housekeeping. Her reading also includes a lot of self improvement books on parenting, such as How to Build Self Esteem in Your Child, Read Out Loud to Your Child, How to Put Brain Power into Your Child, Classics to Read to Children, and Loving Each Other.

Mrs. Zavala is one of the most literate persons in the sample, and her reading reflects her concerns with her children's well being. The Zavalas are committed to schooling. Both parents are deeply involved in school activities. Mrs. Zavala assists in preparing food for various school events, attends PTA meetings, Mr. Zavala is similarly involved with the school. He participates in school field trips, in the "story-telling" program at the public library, and has attended several computer workshops held for parents so they may assist their children with computer work. As well, both parents read stories to their children. Mr. Zavala often takes the three younger children to buy books at book fairs. Mrs. Zavala takes them to the public library at least one a week, she reports. School work is taken very seriously. Homework must be done, before they are allowed to play. Both parents assist the children with their assignments. For example, when Juan does not understand the Spanish instructions, he will ask his mother to translate them into English. If they are no clearer to him in English than in Spanish, she will rephrase them in various ways until she is sure he had grasped its meaning. What is interesting here is that even though Juan asks for help, Mrs. Zavala does not take over the assignment, but limits her role to assisting the child's performance.

2. Paths for literacy into the home. In a market economy, change is the one constant. Economic cycles create and wipe out jobs. Similarly, advances in technology both eliminate jobs and create new ones that, however, are evermore specialized or require new training. Faced with these challenges, families have employed both formal and informal strategies to learn new skills. Although these two strategies are not mutually exclusive, they are in competition, especially when it is easier to acquire some funds of knowledge through informal means, with little cost. Formal strategies typically depend on institutional affiliations--schools, training programs, and workshops-- and require significant time commitments, often money, and foregone income. While this path offers credentials, it cannot guarantee employment, and often does not provide the experience needed to get a job. In contrast, because informal strategies mobilize the resources within one's social network or depend on "on the job training," individuals do not have to set aside blocks of time or forego income to learn. In this context, every act of cooperation in productive activities that brings together people with different skills or different levels of skills creates zones of proximal development in which new bodies of knowledge may be mastered through "hands on experience." Because informal strategies makes use of every opportunity to hone new skills, even unstable employment may become an asset. Each act of assistance, each new job, however temporary, is an opportunity to learn new skills.

Literacy enters into these strategies in fundamentally different ways. Formal strategies commonly depend heavily on literacy because institutional settings are frequently divorced from contexts where knowledge may be applied. Informal strategies, in contrast, tend to depend more on oral communications and observations, as well as on trial and error. This is not to say that literacy is absent or unimportant, rather that literacy typically plays a supplementary role, that is, it is used to build on to and extend existing funds of knowledge. Mr. Zavala's use of books and manuals in his washing machine and refrigerator repair business are a good example of this phenomenon. The basic funds of knowledge he uses in this business, he learned at his

father's side. But as the technology changed and became more complex, he found it necessary to study books and manuals on their repair.

The current employment or the typical forms of exchange we have presented, however, do not exhaust the households' funds of knowledge; these are not the only forms of exchange that the households are capable of producing. As part of our analysis we are examining the content of knowledge found in the households. In Table 4 (see Appendix B) we have categorized the domains of knowledge of our study sample. This is knowledge found in the households and in their social networks. We have generated these categories inductively by reviewing our notes and questionnaire data. The breadth of knowledge among the households is obviously extensive and we think that our table makes the point: there is plenty of knowledge in these working-class, Hispanic households, knowledge that is usually ignored or underestimated by the schools. We can trace the origin of this knowledge to the families' social and labor histories and current experiences. For example, "airplane repair" is listed under the sub-heading "Repair" within the broader category of Material and Scientific Knowledge. This knowledge relates to the experiences of a father in one of the households who served in the army for several years and received formal training in mechanics. Once discharged, he found employment for two or three years with a firm that repaired airplanes. In contrast, under the category of Agriculture, the sub-heading of "Ranching and Farming" we have listed "knowledge about insects." This refers to knowledge obtained by one of the household members as a result of working in ranches for most of his life.

Notice that these domains include funds of knowledge that are acquired or developed through both informal and formal training (contextual and institutional learning). In all domains of knowledge literacy may play both supportive or instrumental roles; some of the training is school-based (e.g., for accounting) and some may be job-based (e.g., knowledge about folk medicine). In either case, literacy is a prevalent feature of these households; it is embedded in the acquisition and

development of funds of knowledge. Literacy is an unavoidable part of life in the social and economic context in which these households function. The families in these households, as Taylor & Dorsey-Gaines (1988) have written for the families in their study, "are active participants in a social world in which text is written and read."

d. Focusing on specific literacy events

Additional findings confirm that literacy events do occur on a regular basis in the households of this sample and, of course, that variation among households is apparent. In this section we provide a profile of the types of reading and writing activities that we documented. The information is derived from three sources: (1) Self-reported reading activities on Questionnaire One; (2) observed and reported literacy activities as recorded on Literacy Checklists, and (3) fieldnotes based on household visits. We will also consider how households of children who attend the implementing school compare with households of children who attend the comparison school. Additionally, we will consider how responses differ among male and female respondents.

Self-Report Items from Questionnaire One. During the administration of Questionnaire One, respondents were questioned as to the types of materials they read, in what language they read, and how often they read. Responses from 28 separate households are analyzed here. Because both the husbands and wives from 10 of the households in the sample provided responses on separate questionnaires, we have a total of 38 questionnaires from the sample of 28 households. Of the 38 respondents, 20 are parents of children attending the treatment school (representing 14 separate households), and the remaining 18 respondents are parents of children at the comparison school (also representing 14 separate households). Overall, 26 of the 38 respondents are females, while the remaining 12 respondents are males. Before considering comparisons between the two schools and between female and male respondents, we will describe the total sample of 38 respondents from the 28 separate households.

**Total Sample.** The average number of items read (all languages) was 5.6 per respondent, with the average being for Spanish items 2.5, for English items 2.9, and for bilingual items .2 (see Chart in Appendix B). The most common types of items read included religious materials in Spanish (including the Bible), advertising supplements in English, magazines in English, novels in Spanish, and newspapers in English. We should note that the advertising supplements in English accounted for 31% of all English materials read. When this point is taken into consideration, the sample might be considered as more Spanish dominant than the relative Spanish and English averages might suggest at first inspection. Additional less common reading items consisted of magazines, newspapers, nonfiction books, "photo-novels" (all of the preceding in Spanish), and novels, nonfiction books, and religion materials (all of these later items in English).

Regarding frequency of reading, 31% of the sample reads at least one item daily (5% reads at least two items daily), 79% of the sample reads at least one item weekly (55% reads at least two items weekly), and 89% of the sample reads at one item monthly (34% reads at least two items monthly). The most common items read on a daily basis are religious materials in Spanish and newspapers in English. The most common items read on a weekly basis are advertising supplements in English, followed by newspapers in English and religious materials in Spanish. The most common items read on a monthly basis are religious materials in Spanish, followed by magazines in Spanish and supplements in English.

**Male and Female Respondents.** Overall differences between male and female reading activities are not marked. Regarding the average number of reading materials, females read 5.4 items, while males read 5.9 items. Female respondents read an average of 2.7 Spanish items and men read an average of 2.0 Spanish items. For English items, females read an average of 2.6, while males read 3.6 items on the average. Female respondents were more likely than males to report reading the Bible and other religious materials.

Parents of children of the different schools. Regarding self-reported reading activities, the parents of children from the two schools were very similar. The average number of reading items for the subsamples was similar: 5.2 for the implementing school and 6 for the comparison school. Averages for Spanish and English items read were for the implementing school 2.2 and 2.8, respectively, and for the comparison implementing 2.2 and 3.0. Across types of reading items, the subsamples were very similar to each other. The largest difference involved the averages for reading novels in Spanish: .4 items for the treatment implementing sample and 1.2 for the comparison school subsample.

Literacy Checklist. Literacy checklists were completed immediately following most household visits. The checklists have columns for recording both literacy materials observed by the researchers and any literacy materials mentioned by household members during the course of a visit. For example, materials listed includes items such as books of various types, bills, calendars, legal documents, schedules, school homework, and writing paper. At least one checklist was completed for each of 23 households, with a maximum of 6 checklists being completed for the same household in one case. The checklist data will be discussed for the entire sample first and then we will make comparisons between the implementing and comparison school subsamples.

Total sample. For the 23 households where data is available, an average of .9 Spanish literacy items, 1.7 English literacy items, and .8 language unspecified items (e.g. a notebook containing various writings) were observed per household. Thus aside from unspecified items, approximately twice as many items were recorded for English as for Spanish. Regarding the averages for reported literacy materials, such as when a respondent reported that she had just written a letter to relatives in Sonora, the average for Spanish items was .8 per household, for English items, 1.0, and for items of unspecified language, .1.



Implementing and Comparison School Subsamples. For the households of students attending the implementing school, the average number of items observed in Spanish was .5, in English .9, and language unspecified .8. The corresponding averages for the comparison group were 1.3 (Spanish), 2.7 (English), and .9 (unspecified). While the ratio of Spanish to English items is similar for both samples, more items were recorded for the comparison group than for the implementing subsample households.

Fieldnotes on Literacy and Schooling. A variety of reading and writing activities were observed in the households and recorded in fieldnotes. For example, fieldworkers witnessed parents from different families assisting their children with homework, and in many homes noticed library books on a variety of subjects. One mother discussed ideas on parenting stemming from a book she was reading on the subject; another mother talked with the fieldworkers about a book on pregnancy that her daughter was reading. One father, an archaeologist, referred to his technical journals; a father who has worked in the mines mentioned how he likes to read book on mining. Relatives in one case were observed assisting family members complete health forms. Several parents are currently enrolled in English classes and discussed their study routines and expressed interest in improving their English. Such examples of literacy in the home could continue. We will now present two excerpts from the fieldnotes to illustrate how literacy occurs regularly in a couple of the households involved with this project:

"Mr. Ramirez lent me a piece of board with some writing on it. He said that he had written a song on the board. He got an idea about a song and since he did not have a piece of paper, he used a board.... The song is as follows:

Si tu quisieras encontrar las ilusiones y el camino  
que pediste en tu vivir  
bastarla que asomaras a mi alma  
y encontraras la razón de me existir

Yo siempre he vivido  
pensando que un día tu serias para mi  
Y que al fin realizarla mis sueños cada noche  
junto a ti

Yo no pierdo la esperanza  
de que un día te enamores tu de mi  
y que descubras el amor  
y el cariño que he guardado para ti

Porque yo siempre te he querido y he vivido  
añorando tu caricias y tu amor  
Y no pierdo la esperanza de que te fijes en mí."

Also consider the following example, pertaining to a different household, the 4th grade boy was preparing for his first communion. "The preparation includes weekly classes at the church (one or maybe a couple of hours during Saturday mornings), and readings (homework) of religious materials during the week. [His mother] related that she helps him with his readings, she sits beside him and corrects, when necessary. She read him some Bible stories (related to his preparation) once per week. This is in tune with her beliefs, since she has the custom of reading a passage of the Bible every night."

### 3. The "fracturing" of literacy: a consequence of traditional schooling

Within the household sample literacy is common, especially in Spanish, which schools would find advantageous but for important economic and legal functions do not. For example, we found that 68 percent read Spanish "well or very well;" and an equal percentage wrote Spanish "well or very well." On the other hand, 59 percent read English "not at all" or only "a little," while 62 percent wrote English "not at all" or only "a little."

Rather than assuming that literacy and comprehension is found wanting in these households, it is the shift from the Spanish use context to an English one which interrupts and "fractures" an extended development of literacy in these households. For parents, most economic functions as well as legal ones demand English dominance and use, and except for letter writing and popular literature, Spanish dominance in writing and reading is of limited utility in the English dominant world. Spanish literacy and its attending comprehension not only begins to suffer from disuse but its important legal and economic functions no longer are efficacious. Thus there is a

marked shift from a written and reading tradition in Spanish to largely an oral one in which only household situations demand the use of Spanish.

Such fracturing, however, has a number of unintended and intended consequences. First, the parent whose basic comprehension is in Spanish is unable to participate in the "incipient literacy" of their children. Since the schools generally demand that an English literacy "script" be followed, the comprehension abilities of the parents are unintentionally denied as important or are unrecognized as existing. Second, from the point of view of the parent, such abilities lay unused and unreinforced except on occasion such as in letter-writing to relatives in Mexico and in the reading of popular magazines. The lack of use and opportunity of such literacy resources then "fractures" parental ability within their own generation and prevents the transmission of the literate tradition in Spanish to the following one. Third, their own children then receive only the oral version of the literate tradition, and the transmission of knowledge and language is largely confined to household vocabulary and terms. It is in this sense that the "literate" world is denied the children of Spanish-literate parents.

The implications of such a process is of enormous significance to the acquisition of literacy abilities, cognitive understandings, and complex thought. In a very specific sense, children in such situations are reduced to learning codes of expression in Spanish that for the most part are devoid of a literary tradition. Children will be largely exposed to language directly associated with household functions and relations and not to broader economic, political, social, and cultural activities and resources that provide substantive reinforcement to academic and cognitive development.

The English version learned within the school setting will itself be largely disconnected to a reinforcing literate tradition since its constraints are directly defined by institutional requirements focussing on skills, coding, and limited problem solving applications. For other than manipulative, functional, and immediate application, English is unconnected to a previous generation and in fact children function largely as translators for parents whose own traditions, both oral and

literate, are in Spanish. This "fracturing" process between generations then may be partly responsible for the type of negative academic performances too often associated with U.S. Mexican children. In the long run, the cumulative impact of such processes is to create pockets of populations in which the problem becomes not one of illiteracy but rather limited literacy in English and Spanish. Our findings suggest that for these families succeeding generations are placed at greater and greater risk and are less able to manipulate their environment efficiently and productively than the generation that preceded it.

Household Values. Yet, regardless of this fracturing process our field research clearly shows that most of the households valued highly the schooling process. Schooling in some cases served as the rationale for moving from Mexico to the U.S. because parents thought that their children would have better and more educational opportunities here. This is illustrated as well in the enrollment of children in pre-school programs beginning at the age of three; supporting their children with homework assistance; ferrying children to special school activities and programs; participating in bake and yard sales to generate income for school programs, and even building computer tables for schools when no funds were available for their purchase. Parents as well gave children small rewards for reading and writing beyond school assignments and some parents emulated the school system by giving their children stars for exceeding the homework assignments. In later years, parents specifically give up recreational and work opportunities in order to care for grandchildren so that daughters' especially can attend community college, general education, or university classes.

Many of the parents themselves enrolled in training programs, English classes, and community information programs in order to increase their knowledge base. The overwhelming rationale for most parents was to improve the opportunities for their children by improving their own life chances. As well, however, such opportunities can make profound impacts on the pedagogy of the household in that such training

programs as Headstart for Parents generated specific approaches to learning such as using rewards systems to encourage learning.

Yet there are schooling "contradictions" exhibited in a few homes that should be noted in order to gain a complete understanding of the diversity of parental values. Two households mentioned that previous generations thought that survival was not educationally dependent and that schooling was a waste of time to some degree. On the other hand, those citing such attitudes, themselves, did not share the negative association of schooling and if anything were in complete opposition to this point of view.

#### 4. Household pedagogies: the emergence of *confianza* in children

Our analysis also suggests that each exchange of information, or of other resources, includes a didactic component that is part of the activity of sharing. Sometimes this teaching is quite explicit, as when teaching someone how to build a structure or a machine (such as a bicycle) or how to use a new gadget; at other times it is implicit and depends on the participation or observation of the learner, as when the children assist the father in the building of an addition to the house. What we are calling a didactic component to the exchange is part of any households pedagogy. People must teach and learn new knowledge and skills. The exchange activities that we have been describing are employed by people to deal with reality. In many instances the children are involved in these activities, they may be the recipients of the exchange, as observer or participant. However, just as literacy is embedded and found directly or indirectly in most funds of knowledge activities, this didactic component is not neatly separable from the exchange of knowledge, it is contextualized, it is found within the activity, and it occurs often. These households are not socially or intellectually barren; they contain knowledge, people use reading and writing, they mobilize social relationships, and they teach and they learn. These are the systematic strategies that enhance survival within harsh social conditions.

Within "thick, multiple relations, children have the opportunity to visit and become acquainted with other household domains as well as the relationships within those domains. Such clustered households provide the opportunity for children to become exposed to an array of different versions of funds of knowledge. However, what is of particular importance is that the child is not only exposed to multiple domains but is also afforded the opportunity to experiment in each domain. From our observations of children in these households, the transmission process is largely an experimental one in which specific portions of the funds may be manifested by an adult but in which the manner of learning specific knowledge is in the hands of the children themselves. Largely by observation, children learn to ask the necessary questions during the performance of a household task. Thus the question-answer process is in the hands of the child rather than in the hands of the adult. Once the answer is received, the child may very well emulate the adult by creating play situations of the learned behavior. Another interesting aspect of this behavior is the wide latitude allowed for error as well as encouragement to take responsibility for the further experimentation. From observation, for example, a child observing and "assisting" an adult to repair an automobile leads to frequent attempts by the child to further experiment on other mechanical devices as well as "junk" engines that may be available since little is discarded. The admonition by the adult is usually along the lines: "do it but finish it yourself and try your best no matter how long it takes." Even when the child is stuck at one point, the questioning process is still in his or her hands because the adult usually does not volunteer either the question nor the answer. What is crucial to understand in this sequence is that children are taught to persevere, experiment, manipulate, and to delay gratification. As well, because of multiple occasions in which to experiment there are also the multiple opportunities to fail and to overcome that failure in different domains. It is highly probable that there will be a variety of different kinds of tasks that the child may observe and the opportunity to become adequate in one or more tasks in which the child has been successful. To repeat, however, the central feature or



characteristic of transmission of funds of knowledge is the following: the opportunity for children to enter multiple domains, to manipulate a variety of tasks, to experiment without punitive responses. However the most salient characteristic to be kept in mind is that all learning is contextualized and largely in the hands of the children and without explicit direction by the adult.

Children either directly or indirectly participate in these relationships as a medium through which exchange is facilitated. Thus, children not only learn the underlying rules and ideology of exchange but are participants in the activities that constitute the objectives of exchange. Funds of knowledge are then composed of both the rules and the content of these exchanges.

The domains of knowledge and their content are reflective of these factors. So that what children learn and manipulate in every day activities is only a partial set from a large array of culturally constituted behaviors which are distributed within the household and its social networks.

At the level of the household, children assist adults in maintenance activities which such specific chores as helping in home and car repair, sewing, knitting, and engaging in crafts requiring the learning of skills, assisting in the reading of English documents and instructions, or helping in care of younger siblings. Within these households at one point time, only a small segment of their possible universe of knowledge may be apparent. In other words, no single household ever expresses the full range of knowledge nor of the knowledge of the children in the household.

Nevertheless, children are routinely included in a wide range of such activities which entail specialized and particular funds of knowledge. Such occasions provide them an opportunity to learn a meta-set of principles about organization, sequences of behavior, and the sharing of knowledge involved in such processes which may be applied to a wide range of domains. It is through this learning of meta-principles through specific activities that children learn to learn.

We have found that learning seems less lineal than expositional. Learning becomes understood as largely as an unfolding process in which other actions and activities are constantly interspersed with the action representing the thing to be learned. Thus other conversations, seeming interruptions, physical interventions and interrogatives from sources not part of the learning action are an accepted part of every social activity. Simultaneity seems to be the norm rather than the exception, widely focussed concentration rather than singularity, and multilevels of stimulation operate: vocal, kinetic, proxemic, visual, tactile, and conversational. There is probably a hierarchy of determination that guides what is to finished first versus last and it probably has to do with immediacy and importance but we are also convinced that "finishing" has a wider temporal limit as well as end point as to when the task is defined as finished. To return to the action after completion is not just a matter of checking quality or admiration but rather an almost never ending investment to an experimental and expositional process that for the sake of a better category we could call generative and transformative.

Relatively little attention is paid to boundaries of activities and there is a sense of effortlessness involved. Action seems to spill into what some would expect to have clear divisions. Thus a child being shown how to play a game in the front yard is expected to pay attention to the immediate task but is not held strictly accountable to an "on-task" completion since the adult herself-himself is constantly carrying out tasks in different action domains. In a sense the interaction is not unlike a dance of two partners that engage and disengage at times of interruptions only to return to finish the music.

Evaluation does not necessarily require immediate "feed-back" since to so do in part would signal some sort of end, but rather since most tasks are labor intensive and interactive, children soon learn that "a good job" will be recognized without explanation. A child may be asked to work out a problem concerning a particular task

and specifically told to do "it as many times as it takes" but to do a good job. Good here is gauged according to a working model of the activity to be learned.

Even directed learning is largely advisory and cautionary with a great deal of room for experimentation. Seldom are "directions" provided but a sequence of observation-manipulation- experimentation-learning tasks based "hands-on" behaviors. There is little advanced instruction as to what is to be done except for broad hints in general so that direct instruction is not usual but rather supplementary to observation, manipulation, experimentation, and completion within the broader contexts described above. Thus the learning processes described seem to enjoy learning principles that any literacy program of instruction should consider carefully.

## 5. Summary

We started the project by building on the explicit assumption that the Hispanic community represents a resource of enormous importance for educational change and improvement. Our research during the last year has confirmed the validity of this assumption and has extended our understanding of the community as a resource and of how to apply that resource to educational practice. Our analysis of households' funds of knowledge can help re-define Hispanic families for educators and others (such as psychologists) involved in education and transform their reactions to these families. The idea that these families are somehow devoid of abilities and skills is simply erroneous, as we have documented in this report. The common view that their children suffer from a deficit of "funds of background experience" is seriously challenged by our work. From our perspective, these families represent a major social and intellectual resource for the schools. The extent of their funds of knowledge justifies our position that the community needs to be perceived by others, especially educators, and probably by the community itself, as having strength or power, as having resources that schools cannot ignore.

In an important sense, the schools are in an analogous situation to the households we are studying. All schools consider that they need more resources in addressing the

needs of students, especially if these students are LEP and from poor neighborhoods. It is common for teachers to bemoan the scarcity of resources. These resources are usually thought of as material resources, for example, the need for better books or more computers. On occasion the need for additional resources is expressed as needing more parental support for the teachers and their work, such as having the parents help with homework. Dealing with scarcity of resources, however, is an everyday issue in the households. The exchange of funds of knowledge, as we have explained, is a major strategy to deal with the lack of resources, a strategy developed to harness, control and manipulate resources. The idea is to do the most with what you have.

In short, teachers need not be isolated or alone in addressing the needs of the children; they can develop social networks of assistance. Our work indicates the importance of creating reciprocal, exchange relations with households; that is, the importance of utilizing the households' funds of knowledge in teaching, while becoming part of the households social networks. Typically, the lesser the access to formal sectors, the greater the reliance of households on reciprocal networks for survival. Similarly, the lesser the access to (or knowledge of) formal schooling, the greater the need for situating schooling within the adaptive strategies that the households employ.

Let us conclude this section by summarizing some of the findings. They are as follows:

1. The organization of funds of knowledge among the households is part of the implicit operational and cultural system of daily life. They are part of the history, but especially the labor history of each household so that of paramount importance in understanding such funds are the technological and environmental changes each household has undergone.

2. Literacy becomes among the most important abilities that allow such funds to function efficiently. Literacy activities in which children participated usually occurred during household construction, automotive repair, assembly and development of appliances, toys, electronic devices, and entertainment centers. Homework took a

central place as the most frequent and emphasized literacy activity in which parents and children participated.

3. The funds of knowledge to which children have access are socially distributed throughout the household clusters described in this report so that children acquire information and relationships from a variety of sources. Because learning is not of a single source, the context for the acquisition of funds of knowledge by children is itself "thick," that is, of multiple dimensions, with many opportunities for error and success, for experimentation versus rote instruction and for the acquisition of learning principles based on example, analogy, and manipulation.

4. A disturbing process that we have termed as "literacy fracturing," the interruption of inter-generational literacy development, is among the most serious consequences uncovered by our work. The implications of such interruptions is the denial of literacy resources within the household to the children, and the possible evolutionary damage to U.S. Mexican households in general

5. Because pedagogy is in the hands of multiple sources, it is highly likely that children will have the expectations for learning based on this experience. Single sources of information, in a single context, providing segmented experiences, that is, the typical schooling experience, may be culturally contradictory to these children.

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<sup>1</sup> The following colleagues contributed to the household study, most are faculty and graduate students at the Bureau of Applied Research in Anthropology of the University of Arizona: Carlos Vélez-Ibáñez, James B. Greenberg, Douglas Fry, Javier Tapia, Gerardo Bernache, Elizabeth Howard, Claudina Cabrera, Marcella Vasquez, Ana O'Leary, Francisca James Hernandez, and Nieves Zedeño

## **B. The instructional phase of the project: After-school Lab and literacy modules<sup>1</sup>**

The main characteristics of the after-school settings were derived from our theoretical position which emphasizes the prime importance of social context in literacy teaching and learning and the interactive role of adults and children in creating such contexts (Goodman, 1986; Langer & Applebee, 1986, 1987; Moll & Díaz, S., 1987; Scribner & Cole, 1981; Vygotsky, 1978). Studies of effective literacy and language learning consistently point out the importance of students interacting frequently, purposefully, and meaningfully with language and text (see, e.g., Edelsky, 1986; Farr, 1986; Johnson & Roen, 1989; Langer & Applebee, 1986, 1987; Moll, 1988). These studies stress the importance of children learning language and literacy as a medium of communication instead of as a static subject with sets of isolated topics, facts, or skills that must be learned, as it's common in most classrooms (see, e. g., Goodlad, 1984; Oakes, 1986). A key to our approach, then, is to facilitate the children's use of literacy and language to convey and obtain meaning, in short, thinking of literacy and language learning as communicative activities (Moll & Díaz, R., 1987)

### **1. The Lab**

Therefore, one of our main tasks at the after-school setting we called "the Lab" was to help teachers create activities that would allow students to use reading and writing in many forms and ways; to organize communicative relationships, social transactions, where adults help children understand and master different types of literacy (see, Goodman, 1986; Heath, 1986; Wells, 1986). An important goal of the lab was to develop a collegial, working relationship between the teachers and researchers. We wanted to turn the lab into a place where we could provide the teachers with strategic assistance in developing and implementing innovations (see, Berliner, 1985). In our work with teachers we also emphasized the need for students to assume more control over their own learning. We introduced the idea of students deciding their own units of study, seeking answers to their own questions, and using themselves and their peers as resources for thinking. The role of the teachers, we



proposed, was to facilitate or mediate the students' activities, but not to control them by imposing a required sequence or task or by providing answers. From our perspective, teachers must trust (and assist) students to make appropriate decisions and grow into self-responsibility.

Finally, in developing the lab we became acutely aware of the limitations imposed on teachers in getting to know their students. There are two primary ways teachers can find out about their students: observations and through the use of instruments. Teachers usually observe students within only very limited environments, such as prescribed lessons requiring abbreviated discourse or actions. Accordingly, teachers' views of students, what they can accomplish, tend to be equally limited. Rarely do teachers get a chance to observe their students within a variety of circumstances or participating in activities that require considerable research and diverse applications of reading and writing, thus providing teachers with a more dynamic or expanded view of their students. These constraints are a function of the way schooling is generally defined and conducted (for an extended discussion of these points, see, Tharp & Gallimore, 1988). As we discussed earlier, reading and writing in classrooms is usually limited to the narrow routines of basal readers and rarely extend much beyond those imposed limits.

As important are the tools teachers have available to understand their students. In general, teachers have to rely on tests that provide a fixed or static view of their students (or on standardized tests which provide no useful feedback for teaching). Probably the most important tool to assess or understand students is their writing, but extended writing rarely takes place within most classrooms (see, Langer, 1984, 1987; Moll et al, 1989b). We, therefore, wanted to provide teachers with suggestions or additional tools and instruments to help them obtain a more varied and positive perspective on the students' development. We will elaborate this point further later in this report (see Biliteracy Development). We now, however, provide

additional information about the after-school lab, and summarize key case studies resulting from this work.

## 2. An example of the lab's work

We meet twice a week with students. Usually there were about 10-15 students that attended the lab with regularity. Nine fourth graders, three fifth graders and three sixth graders generally comprised the group. Our lab meetings last from one and a half to two hours. The teacher/researcher, Wendy Hood, directs the activities and is assisted by one of the RA's (a former teacher and teacher trainer) Elizabeth Saavedra. At least one RA is present during each session to take notes on the activities. Other adults who attend regularly the lab are the PI and Lab Coordinator, Luis Moll, and the Curriculum Specialist, Carmen Zúñiga-Hill.

A goal during the initial weeks of the lab was to develop a collegial, working relationship between the adult facilitators and the student participants. The students have had at least four years of public school training and, it seems, are not used to taking responsibility or participating in decision making for their own learning. An important purpose of the lab, therefore, was to help the students assume more control over their own learning. We encouraged them to decide their own units of study, to seek their own answers to their own questions, and to use themselves and their peers as resources. Adult participants were expected to facilitate or mediate the students' activities, but not to control them by imposing a required sequence or task or by providing answers. The adults in the setting needed to trust (and assist) the students to make appropriate decisions and grow into self-responsibility.

Language and literacy development was expected of all children participating in the lab. We gave priority to developing advanced academic activities and "hooking" or engaging the students in these activities. Rather than teach reading and writing skills in isolation, we wanted that substantive academic activities to provide the appropriate context for language and literacy learning. It is the students' interest in things academic that motivates them to develop their language and literacy (Genesee, 1986;

Moll, 1988). From our perspective, language and literacy are tools to be learned to attain a goal, be it effective communication or academic success.

The classroom teachers attended the lab on either of the two meeting days (Monday and Wednesday). We held an extended after-lab meeting with the participating teachers every Monday to discuss the lab activities, plan new activities and changes, and discuss their involvement in the project. These meetings became useful in clarifying how to involve classroom teachers in research and how to introduce the literacy modules into their classrooms. An example of a literacy module follows.

### 3. Developing a literacy module: Construction

Central to the lab activities was the utilization of community based information in teaching. During our last meeting in December the students developed a list of topics of interest to them. The only criterion for inclusion on the list was that it had to be a topic that could be studied using reading and writing. The list ranged from construction and related activities to making a pizza. After generating the list, which was written on a large piece of paper pasted to the wall, the children voted on the topics or themes that interested them most and ranked them to determine which ones they wanted to study most. The theme of construction/building received the most votes. We were delighted with this selection because our household study had revealed that construction was one of the most prominent funds of knowledge found in the homes. We, therefore, view this module as an important opportunity to extend our ideas about integrating home and school knowledge.

a. Introducing the module. We began the module with a slide presentation on home building. The idea was to start with an activity that would capture the interest of the students and generate discussion. In particular, we wanted the children to think about their knowledge or familiarity with construction and to realize that they had experiences relevant to the task at hand. The slides had been taken by Doug Fry, the project's Field Coordinator, as part of previous research he conducted in rural Mexico.

The entire process of building an adobe home, from start to finish, was illustrated. Several important subthemes related to construction also became visible: planning, the knowledge required, the division of labor, the use of tools, cost, and deadlines. Below we borrow from the field notes of Wendy Hood, the teacher/researcher, in describing what happened. We were particularly interested in the children's questions and reactions to the activity and people captured in the slides.

The children actively viewed the slides, they were far from being passive, quiet viewers. They were at times boisterous yet attentive and asked some rather sophisticated questions. Hood reported as follows:

"Some were very interested in the familial relationships since some of the builders were related (kin) and some were friends....(one of the initial slides) showed 17 men (the children counted them), all of the men who worked on the house.....They posed in front of the finished structure. The date was painted on a beam above the doorway. Doug pointed out a couple of brothers of the man whose house it was. Then the kids wanted to know if they were all relatives and why non-relatives would be helping."

The children were also curious about the differences they noticed, especially in dress, in the people in the slides. We quote again from the notes:

"The second slide also showed the men wearing sandals. One woman in the slide had bare feet. This prompted a discussion of why they would wear sandals or nothing. Frank (one of the students) mentioned that it was foolish to build a house without shoes on. The kids went into a self-guided discussion concluding in a consensus that they (the people in the slides) must not have any other shoes and that some may not have shoes at all. Throughout the entire presentation the kids were very interested in the attire of the people. There were endless comments about the way people looked. At first the comments were negative. 'Why do they dress so funny?' Later the comments about dress evolved into more serious questions regarding the purpose or function of certain articles of clothing. The women often had head bands and bands of wound cloth worn like necklaces. There was a constant pursuit as to whether these were ornamental or functional. Doug had come prepared, he showed a slide of his wife dressed as a local. He helped the children see why the locals thought her (and the kids in the lab) usual clothing was funny (from the perspective of the people in the slides)."

The children were also able to relate personal experiences similar to the ones depicted in the slides. As Hood noted:

"When Doug showed the workers filling in the mortar between bricks with a mud mixture, Angel noted that his father repairs the chinks in the mortar of their house using mud. Frank made a somewhat teasing remark about fixing a house with mud to which Angel replied, 'Well, at least we don't waste anything.'... the kids were able to relate a personal anecdote of experience with outhouses (common in rural homes like the one in the slides). This discussion followed the question generated by one of the students regarding placement of a bathroom in the house...Crystal vividly relayed her

experience and the very real fear of falling into the outhouse at her grandma's (the worn seat had grown larger over time)."

Throughout the slide presentation the kids reflected on the process of building. For example, Frank criticized a line the workers established to pass the buckets of mortar and described a pulley system that was possible to construct with the tools that they (the workers) had available. The students also displayed cultural insights. They understood that the "maestro" (as the workers called the most experienced and skilled man in their group) had a role defined by age and expertise. When one student noticed a white cross painted on the newly build front wall of the house, students commented about the function of the cross and some related similar personal experiences.

When the presentation was over (D. Fry, not used to presenting to children, called it his toughest audience), W. Hood explained to the students that they had wanted to investigate building things (one of the students commented "We voted on that."), so she placed a stack of construction paper with some scissors on the table and challenged the students to build a house with just paper and scissors. There were moans and groans and demands for glue, tape and staples, but W. Hood insisted on using only what was available. The following examples will clarify three different approaches to the task. We offered no help, it was a chance for the children to solve problems any way they chose (a rare event in classrooms, with their teacher-directed drills and lessons). We quote again from the notes by W. Hood.

"Diego immediately settled down to the task at hand. He used the scissors as a measure and tried a few experimental folds. He manipulated the paper a bit, opened it up and refolded it to form a box with no top. His problem was how to get the folded ends of his box to stay together. He solve d this quickly by using an additional strip of paper at either end tucked around and into the folds. He then announced that he did not know how he would be able to make the roof. He went about solving that problem in much the same way as the original building. As he worked, Diego maintained a social banter with the others. He invited comment and suggestions such as when he asked for opinions about where he should cut the door. When he was basically finished, I asked if he thought he could do that again. He reflected and guessed that he could. A little while later, Angle (who had left the room) returned and watched the kids for a while. Then he went over to Diego and asked him to make one for him. Diego consented to show him how he'd done it. Angel was inattentive while Diego was demonstrating as he was busy arguing with Crystal if he was cheating or not. In the end, Diego had a second basic structure and Angel was left manipulating a partially folded box."

"Crystal began by insisting that she absolutely must have some tape or glue or staple. It can't be done, she kept reasserting. She had some support in this from



Roxanne who was also complaining. Crystal complained that Diego must have done this before. he patently said that he had not. she complained and complained but kept watching Diego, Joel and Diana who were working. She made a few futile attempts to fold some papers, tore a few and threw the other down in disgust. Finally, twenty minutes into the project she said, "Oh, I know!" She proceeded to create a three sided structure. By three sided I mean that it had a bottom and two slanted walls. The ends were open triangles. She left enough hanging off the top to fold over for a secure closure. She cut two triangular pieces for the ends and was working on tabbing them to place when it was time to go. She was very upset to have to stop at 4:30."

"Joel started out by taking a single sheet of paper and looking at it. He simply appeared to be pondering the flat sheet of paper he was sitting next to Diego. for a while, he watched Diego work. He sat without doing anything to the paper until Diego had his basic structure folded. Then, Joel looked at his paper for a while longer. He first cut his paper rather small. Then silently he worked until he had a very small house. While Diego's house was perhaps 6 inches long x 4 inches high and 4 inches deep, Joel's was at most 2 inches in its largest dimension. By the time he had finished, Joel had built a minute house with cut out door and windows, a slanted roof and a chimney! He interacted minimally until he was completely finished. Then he simply held up his finished house saying nothing."

The examples illustrate the different ways children engaged in the same task, from the resistant student to the quiet, independent worker. This simple task allowed us to observe and evaluate the children's strengths and weaknesses and helped us determine what to do as a follow-up activity. Such observations, combined with more formal devices, are important in determining the progress pupils will make and the needs they may have.

b. Follow up activities. As follow up we started to implement additional activities. We had the students engage in more miniature building but with additional tools and resources. The students built structures with wood craft sticks, some short lengths of balsa wood, modelling clay, construction paper, glue and other supplies including tape, markers, and pencils. This activity provided us with additional information on the children and the teachers. For example, the children started work immediately (and separately, reflecting the classroom ethos) building a structure. There were three classroom teachers observing their work. Some of the children, aware that the lab staff was very reluctant to supply answers and instead wanted them to explore and seek answers, turned to the teachers for help. The teachers provided them with some quiet, individual help. It was very hard for an adult, especially a teacher, watching a child struggling with a problem to resist coming to the child's



rescue and direct his or her work. The teachers pulled back after they heard us respond to similar questions by saying "You do it your way." or "How do you think you could solve that problem?" We also reminded the teachers that this was an exploratory activity, and that we wanted the children to shape it in their own ways.

The children also wrote to peers in San Diego and Puerto Rico, who have been informed about our construction work, to give them details of what they did and how the task is progressing. In one of the case studies below, we provide an example of how we took deliberate advantage of these communications to develop classroom based writing activities.

#### 4. A move to from Lab to classroom: Mobilizing funds of knowledge

In what follows we present two case studies that resulted directly from our involvement with teachers and students in the after-school lab. Both case studies, each in its own way, paved the way for the work that characterized the final phase of the study.

The first case study involves the work of Ina A., a 6th grade bilingual teacher. In many respects, Ina's classroom contained all of the elements necessary to experiment with literacy instruction. Although she followed the assigned curriculum, she deviated often to implement supplementary activities. For example, she used the assigned basal reader but supplemented the basal with novels, newspaper and magazine stories, and poems. She also had the class write often, including poems, short stories, narratives and descriptions, but reported that the children were reluctant writers, not an unusual situation. The teacher joined our after-school lab already sharing our belief that the use of outside, community resources could give more meaning to the learning experiences of the students. She mentioned that the "parents and children will see the role of the community (in education) as something that is worthwhile." Ina was, as she put it, "dispuesta al cambio," was concerned with how parents perceived the school, and believed that parents often felt that they didn't belong in the school. However, she was convinced that parents were interested and willing to help.

Ina A: some background. Ina teaches sixth grade in a bilingual school.

She has approximately 30 students in her class and they are predominantly Spanish-dominant, Mexican children. Along with another teacher, she is responsible for Spanish reading for the intermediate students in her school. This is Ina's fourth year of teaching. She is a native of Mexico and has been living in Tucson for approximately 5 years. She studied university in Monterrey, Mexico, but obtained her teaching certificate in Tucson. She has been at her present school for two years.

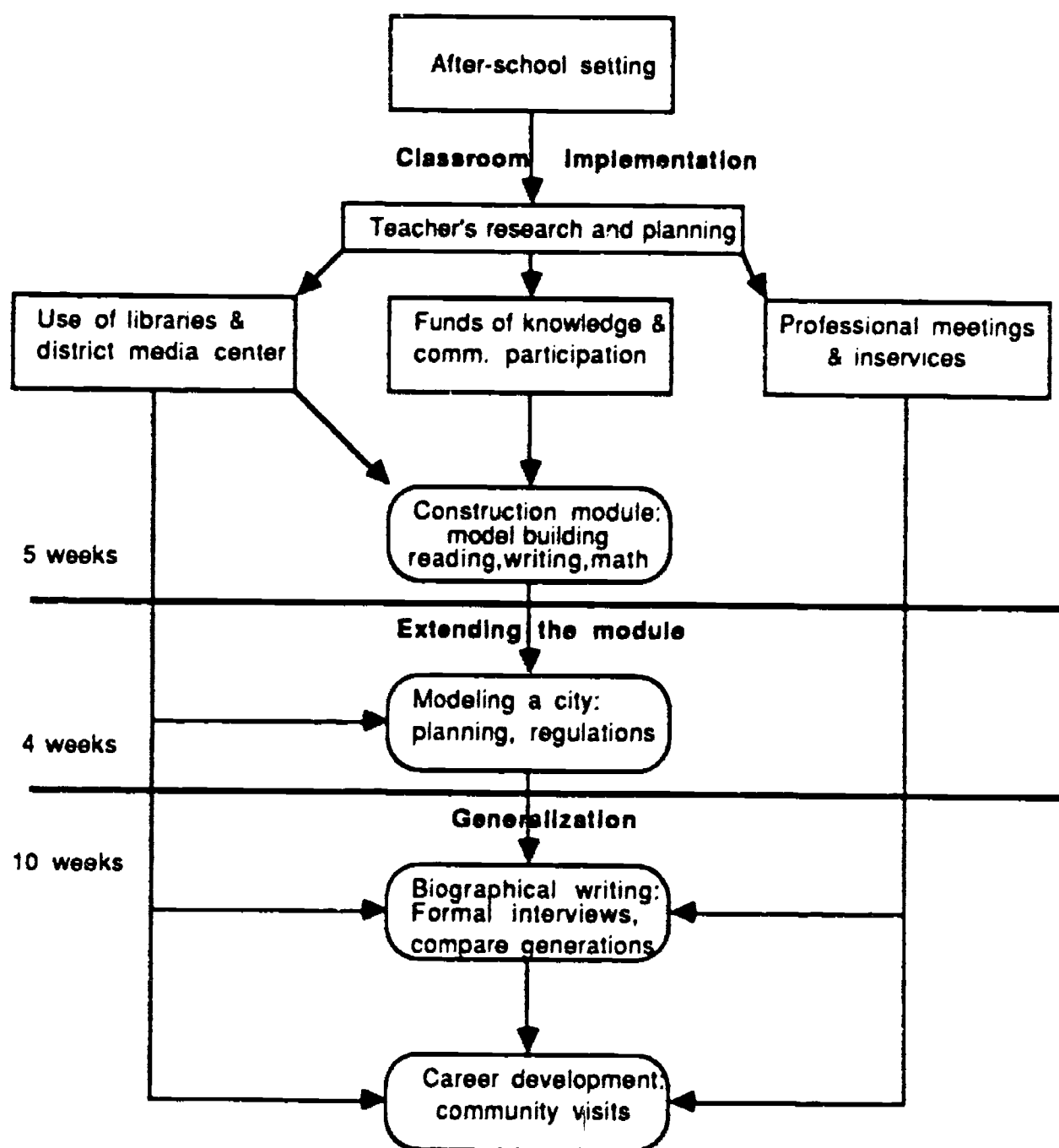
In what follows we will describe her work in what we called the "construction" module or theme unit. She got the idea for the module from the work in the lab described above, where we experimented with an activity centered around construction and building, a theme of interest to the students. Construction, it also turns out, is one of the most prominent funds of knowledge found in the homes. Ina decided to replicate the activity in her classroom in an attempt to integrate home and school knowledge. Her work was one of the most successful and ambitious literacy innovations developed in the project, and we believe that it serves as a prototype for other teachers interested in combining classroom literacy activities with household and community funds of knowledge. The module and its extensions are depicted graphically in Figure 1. Below we will discuss its development, highlighting the use of social resources for teaching and learning.

The beginning. The teacher introduced the idea of the construction module to the class and discussed with the students possibilities for research on this topic, which the students readily accepted. The teacher believed, however, that the work required to conduct the module would be more in depth and extensive than anything they had done before. For the teacher, the module clearly represented a new challenge for her and for the students.

After introducing and clarifying the idea of the module, the teacher asked the students to visit the library to start locating information on building or construction. In particular, the students obtained materials, in either English or Spanish, on the

history of dwellings and on different ways of constructing structures. Through her own research in a community library and in the school district's media center (see Figure 1), the teacher identified a series of books on construction and on different professions, including volumes on architects and carpenters, and decided to use them as part of the module.

Figure 1: The construction module



This initial intervention was successful. The students also build a model house or other structure as homework, and wrote brief essays describing their research or explaining their construction. In the following example, two students collaborated on a story based on the details of their model, inventing a character named María, whose father constructs houses:

La casa de María está en un pueblo lejano y está hecha por su padre. La casa de María tiene dos cuartos un cuarto para su mamá y papá. El otro de azul es de ella. Su cuarto no tiene nada ni de sus padres. La sala tiene dos sillones y una mesita en el medio. El baño es chico y es ancho no es lujoso lo unico lujoso es un espejo chico. La cocina tiene una estufa poco lujosa y tiene una mesa. La casa fue hecha de troncos de árboles muy buenos y bonitos. María y su familia estan contentos en su casa tienen dos cuartos, un baño, la sala y la cocina. También tienen electricidad gas y agua. Por fuera de la casa esta lujoso y bonito. Tiene un río tres árboles con piedritas alrededor. Ellos tienen poco dinero pero su papá trabaja haciendo casas. Así que viven bien. A nosotros nos gusto la cocina, la sala, las camitas, los árbolitos y nos gusto como la hicimos estuvimos una hora haciendo la casita. Nos gusto y aprovechamos el tiempo que estuvimos haciendola. Nosotros creemos que ustedes también aprovecharon su tiempo en la de ustedes.  
Fin.

(Maria's house is in a far away town and was made by her father. Maria's house has two rooms a room for her mom and dad. The other blue one is hers. Her room has nothing nor her parents'. The living room has two couches and a small table in the middle. The bathroom is small and is wide it is not luxurious the only luxurious thing is a small mirror. The kitchen has a stove lacking in luxury and has a table. The house was made from very good and pretty tree trunks. Maria and her family are happy in their house they have two rooms, a bathroom, the living room and the kitchen. They also have electricity gas and water. On the outside the house is luxurious and pretty. It has a river three trees with little rocks around them. They have little money but her dad works making houses. So they live well. We liked the kitchen, the living room, the little beds, the little trees and we liked how we made it we spent an hour making the little house. We like it and we made good use of the time that we spent building it. We believe that you all also made good use of your time in making yours. End.)

Another student compared his model to the human body, note the use of metaphors and precise construction terms, such as "hormigón armado" (reinforced concrete):

sin barillas, no podrias mantener en pie una casa. Caerías al suelo como una mareoneta sin hilos que la sostenga. Una casa sin esqueleto se caería del mismo modo. Sin embargo, el esqueleto de una casa no esta constituido por huesos como los nuestros. Sino por hormigón armado.

Para Construir una casa necesitas, antes que nada, hacer los cimientos, es decir, una sólida base de hormigón. Sobre ésta se levanta el esqueleto de la casa y lla está construida.

Nosotros utilizamos carton goma y picadientes para hacer una casita primero estabamos pegando los puros picadientes y se caian entonces decidimos ponerle carton y luego le pegamos los picadientes y no se cayo.

(without steel rods, you couldn't maintain a house upright. It would fall to the ground like a puppet without strings to sustain it. A house without a frame would fall the same way. Nevertheless, the frame [esqueleto, skeleton] of a house is not constituted by bones like ours, but by reinforced steel. To construct a house one needs, first of all, to make the foundations, that is to say, a solid base of reinforced steel. On top of this the frame is build and now it is constructed. We utilized cardboard glue and toothpicks to make the little house we were first glueing only the toothpicks and they would fall then we decided to add carton and then we glued the toothpicks and it did not fall.)

In short, the teacher was able to get the students to write about their experiences and in the process improve the activities she learned at the lab.

Mobilizing funds of knowledge. The teacher, however, did not stop there. She extended the module much beyond what we had initially planned. She proposed that the class invite parents as experts to provide information on specific aspects of construction and mentioned that she had already invited one father, a mason, to describe his work. She was particularly interested in the father describing his use of construction instruments and tools, and how he estimated or measured the area or perimeter of the location in which he works. The teacher reported that the children were surprised by the thought of inviting their parents as experts, especially given some of the parents' lack of formal schooling, and were intrigued by the idea.

The visit by the first parent was a key to the module. Neither the teacher nor the students were sure what to expect. The teacher described it as follows:

The first experience was a total success... We received two parents. The first one, Mr. S., father of one of my students, works at (the school district) building portable classrooms. He built his own house, and he helped my student do his project. He explained to the students the basic details of construction. For example, he explained about the foundation of a house, the way they need to measure the columns, how to find the perimeter or area...After his visit, the children wrote what they learned about this topic. It was interesting to see how each one of them learned something different: e.g., the vocabulary of construction, names of tools, economic concerns, and the importance of knowing mathematics in construction.

Building on her initial success, the teacher invited other parents or relatives to make their expertise available to the class. We quote again from the teachers notes:

The next parent was Mr. T. He was not related to any of the students. He is part of the community and a construction worker. His visit was also very interesting. He was nervous and a little embarrassed, but after a while he seemed more relaxed. The children asked him a great number of questions. They wanted to know how to make the mix to put together bricks...He explained the process and the children were able to see the need for understanding fractions in mathematics because he gave the quantities in fractions. They also wanted to know how to build arches. He explained the process of



building arches through a diagram on the board, and told the students that this was the work of engineers.

The teacher also invited people knew to contribute to the class. What is important is that the teacher invited parents and others in the community to contribute substantively to the development of lessons, to access their funds of knowledge for academic purposes. Theirs was an intellectual contribution to the content and process of classroom learning. The parents came to share their knowledge, expertise or experiences with the students. This knowledge, in turn, became part of the students' work or a focus of analysis, as illustrated eloquently in the following English writing sample from one of the girls in the class:

Mr. S. came today and in a way he taught us how to build a house. He taught us how to measure for the materials and which materials we needed and how to get the best only. He also taught us that if you guy an expensive house form a company it may be made from real cheap stuff and just maybe it might fall apart. And that if you build a house without a ridge or varillas it may tip over and just fall apart. When you are putting the ridge you must put an joist hanger or the ridge will fall. Also you must put cement first then you put in the varillas. For the wall the plywood fir is better than the waffle board. But the waffle board is cheaper than plywood fir. And that for the door and the window you put a metal board for it could hold the material or blocks. he also said that if you paid another worker that isn't from the company he might cheat you, like tell you to pay by the hour. And then they'll take a long time. So then you have to pay them more because they worked more hours. If you do it yourself you might save, I said you might because if you don't know you will be wasting a lot of money because will not be knowing what you are doing... and if you are paying the wr ker how much both of you decided they might do it real fast. He also said that you'll need to put at least 3 or 4 feet of cement above the ground so that termites do not go in. And that the bottom of the plywood or what ever you are using people put some termite poison. But well it is better to have a brick house and to build it yourself because you might save a lot of money.

If you do not know how to make your own home or just a storage room like Mr. S. you might want a friend to help. Yo' should also know the size or amount of the wood, bricks, nails, or any other supply that you might need so that you don't spend a fortune or a lot of money on some dum storage room that you didn't even do right and that in a week it'll fall down.

So if you are wanting a house or just a room make sure you know what you're doing. Take my advise I listened to someone who does know. Don't try to do it yourself because you'll probably end up with noting because it'll probably fall. He also showed the size of some nails and other supplies.

Another girl wrote, although in less detail, about the same visit, and the visitor happened to be her uncle:

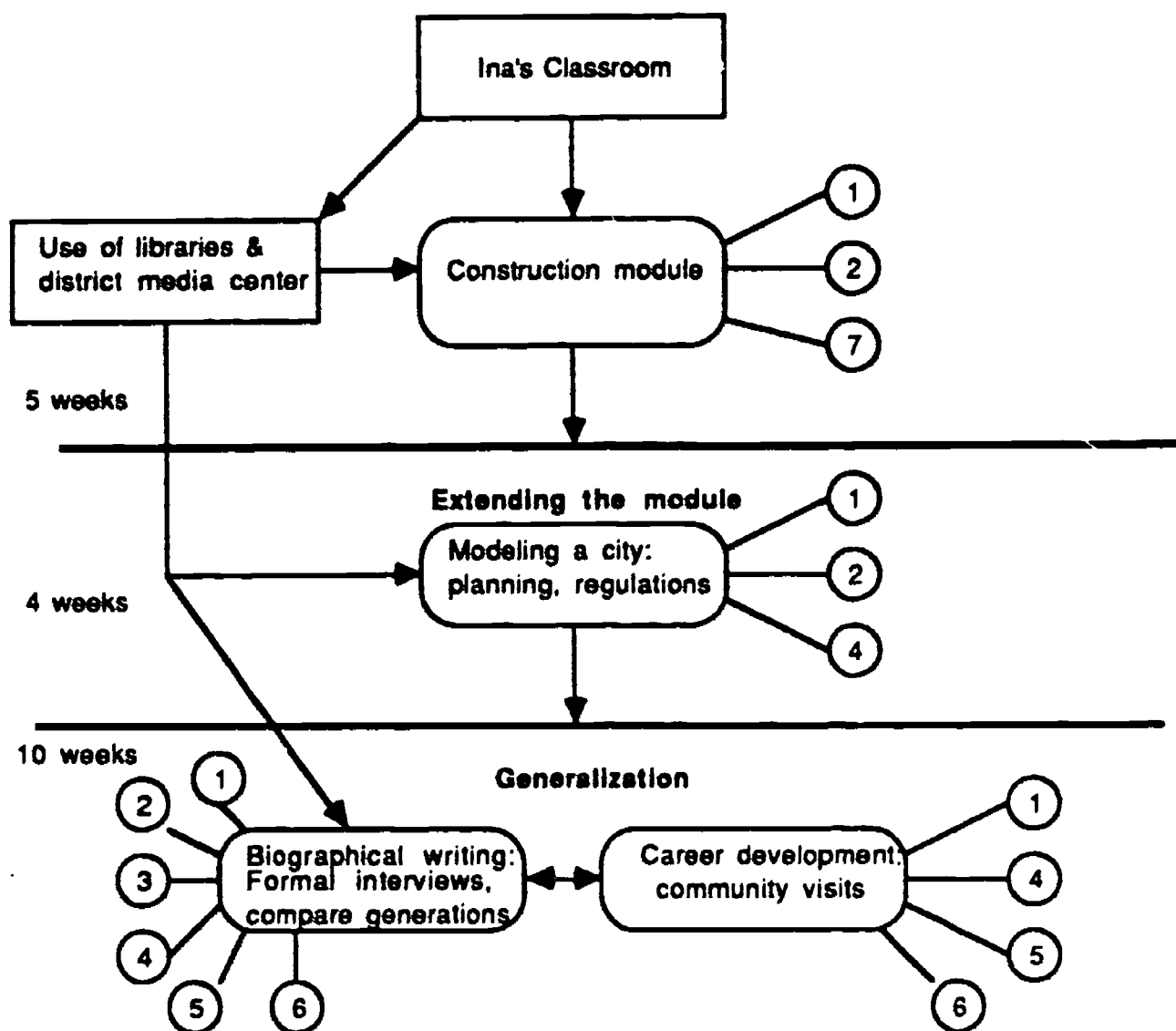
My tio Mr. S. came to our class to talk about the facts of house making. My tio is a carpenter. He told us about how some people are Honest and some people are not Honest. Most honest people are like your family and friends. After you put some bricks you put fiber glass and then put tirmite liquet and then some serock. My tio said its better to build a house out of brick instead of wood. There are some word he



told us I only remember is Ridge, Fiber glass, Stager, Bolts, Joist Hanger, Serock, plywood, waffle board, and panel. The elicticion and pluming gos threw the bottom of the ground. these days houses are made easy and cheap. I think it is better to make a house out of brick.

Obviously these visits were not trivial, they mattered for the development of the lessons. As such, these invitations and classroom visits helped create a new instructional routine in this classroom which helped the teacher and students exceed the curriculum, stretch the limits of their writing, and expand the knowledge that formed lessons. Figure 2 illustrates this mobilization of funds of knowledge through the creation of social networks for teaching. In total, about 20 people visited the classroom during the module implementation.

Figure 2: Social networks for teaching

**Code:**

- 1-Students' own knowledge
- 2-Students' parents & relatives
- 3-Other students' parents or relatives
- 4-Teacher's own network

- 5-School & district staff
- 6-Community members
- 7-University faculty & students

The teacher utilized at least 7 different sources of funds of knowledge, listed below.

1. The students' own knowledge: The first step in the module activities was for the students to discuss and present what they knew about the topic and to visit the library to search for written sources that would help them elaborate their knowledge.

2. The students' parents and relatives: The first visit to the classroom was one of the students' parents, as we describe below, and in subsequent activities the parents became a regular source of information and assistance with the academic tasks.

3. Other students' parents or relatives: The teacher also invited parents of students not in her class, thus extending beyond her classroom the immediate network of knowledge available to her and to the students.

4. Teacher's own network: In extending the module the teacher used her own social network as a resource of knowledge inviting relatives and friends to participate in the lessons.

5. School staff and teachers: The teacher also used the expertise of others in the school, including teachers and other staff.

6. Community members without school age children: The teacher also invited other members of the surrounding community who were not necessarily part of the children's or her immediate social network.

7. University faculty and students: This group includes the lab staff and other university personnel.

As we will show next, these social networks became a regular feature of classroom instruction.

Extending the module. Establishing social networks to access funds of knowledge for academic learning, generated important secondary activities in this classroom that went far beyond the initial module. For example, the class invited one of the students' brother, studying to be a draftsman, to present construction plans to the class and explain how he developed them. Stimulated by the presentation, the students decided to extend the module by going beyond the building of individual structures and combine them to form a community. But developing a community with its streets, services, parks and private and public buildings required considerable research. The students and the teacher followed two strategies. One is that they returned to the library to do research. They acquired additional information on what a town or city requires for its

development, for example, obtaining water and providing electricity. To supplement the library research, the students conducted observations in their own communities to determine what other aspects urban life they may need to incorporate into their model. The teacher provided the class with a large poster of a town, which she found during her own research, and the students placed it on the side wall of the class, near their models. As was now the routine, part of the classroom task became for the students to present their research in writing and to share it orally with the class or with others in the school. Consider the following example:

There are many people that work in construction. First there is a designer. She designs the way the inside of the building will look like. She finds the best quality furniture to match the color of the room, she also gets the rugs, curtains etc. to match the color. The architecture designs the building. He must figure out the length, width and how many rooms there will be.

The estimators figures out how much everything will cost. he tries to find the best, least expensive tools for the job. he also has to estimate how long will it take to finish, because every day they must pay money.

The carpenter does all the wood work. He designs all the wood work. He designs the frame to start the building. He also does sticks so when they pour the concret it is straight. The electrician puts the wires inside the walls for electricity. he also does the outlets for connecting things, to have lights and other needs.

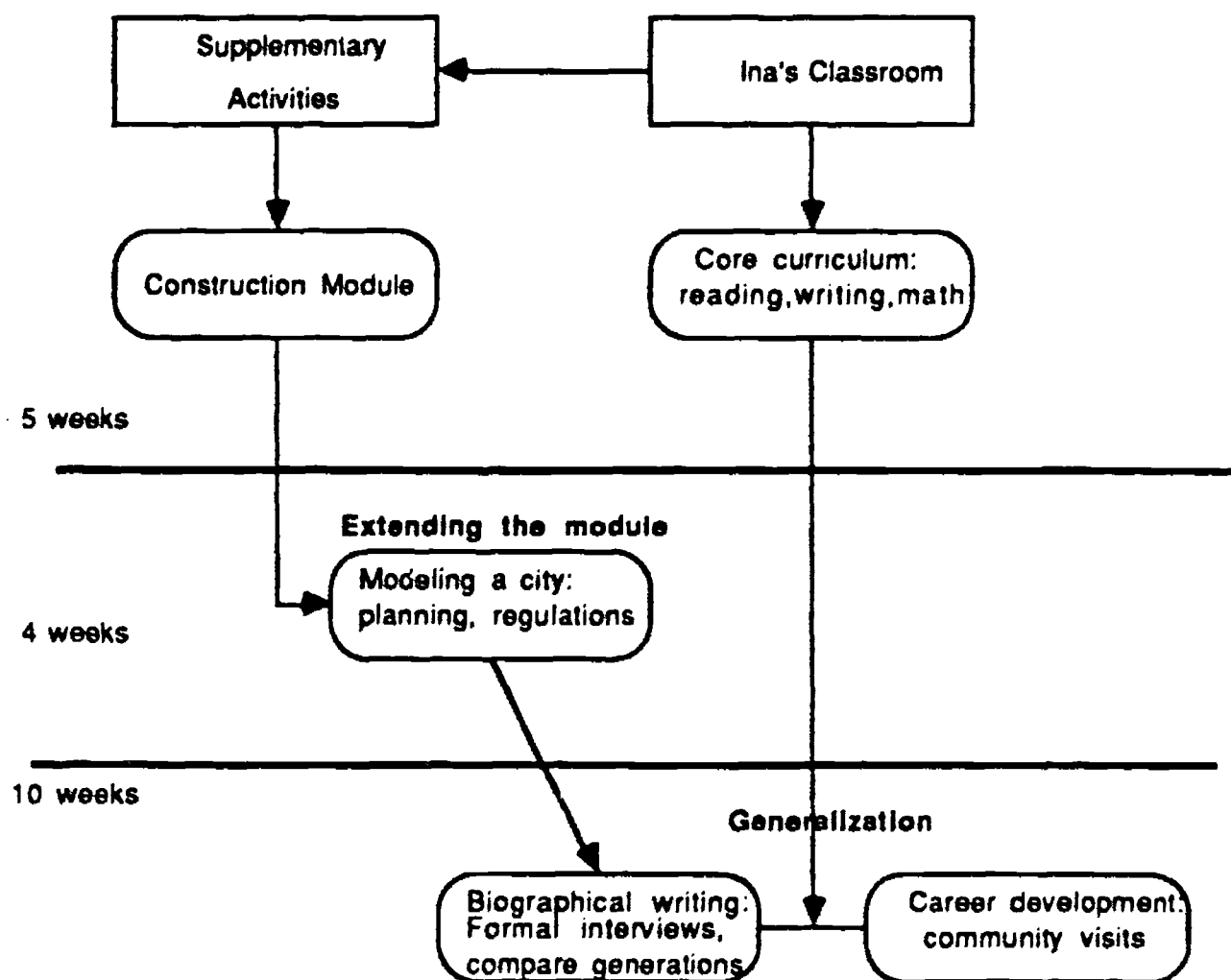
The plumber is someone who does drains. He does bathroom wires and he puts a hose like, so that water can come out of a fountain.

An important consequence of the module was how it shaped the students' and the teacher's perception of the parents and the community in general. In a sense, the teacher convinced herself that valuable knowledge exists beyond the classroom and that it could be mobilized for academic learning. She also understood that teaching through the community, as represented by the people in the various social networks and their collective funds of knowledge, could become part of the classroom routine, that is, part of the "core" curriculum. We describe next this generalization of the activities into the curriculum.

Generalization. The two activities we describe below were developed by the teacher and students, independent of our assistance. As such, they represent a generalization of the construction module activities into the curriculum (see Figure 3). This is a key point. The module started as a temporary and supplementary activity, but as the teacher extended the module, it started becoming more central to

the classroom's activities, a vehicle to accomplish the teacher's curricular goals. The teacher generalized the module by incorporating the "core" curriculum within the module's activities. This generalization illustrates the extent to which the teacher and her class had taken over, appropriated, the initial module's activities and created something new to address the needs of this specific classroom. An example will illustrate this process of appropriation.

**Figure 3: Shift to the core curriculum**



The teacher had attended an in-service on writing and was provided with a package of materials on possible writing activities. She noticed that one of the activities concerned writing biographies and deliberately chose this topic as a theme to reinforce the instructional process involving funds of knowledge which the class had started with the construction module. The logic of developing this new module is what's

of interest here. It depicts how the teacher re-created her own version of the module, and suggests how she was acquiring ownership of the procedures and goals of the activity. What follows is the sequence of the module's activities:

1. The goal of the activity was for the students to write a biography. The procedures included the students writing about the lives of people from different generations. The study materials included questions about people's activities as children, a topic that particularly interested the students. The teacher used the available language arts materials to train the children in how to interview others. The students also started to identify who they wanted to invite to the classroom for the class to interview and persons they could interview outside the classroom.

2. As an extension of the materials, the students developed questions in Spanish and English that they could ask the interview subjects. These questions included asking about different jobs that people had done. This topic had become quite salient in the previous module, when they analyzed the division of labor that goes into constructing a building. The topic is also related to the identification of people's or households' funds of knowledge.

3. The teacher and the students invited people from three different generations representing the decade of the forties, sixties, and seventies. The teacher discussed with the person's invited the types of questions they could expect the students to ask.

4. During a 4 week period, a total of 12 people visited the class. These people were identified and contacted through the social networks previously discussed. In this instance, they drew people from all of the sources available to them. The children interviewed the people in both Spanish and English.

5. The students wrote summaries of the interviews highlighting specific questions or areas of interest to them.

6. The students were then asked to interview two other people in the community that represented two different generations and to write a comparison based on their interviews.



7. Finally, the students brought pictures from their families depicting different generations. These pictures were discussed in class and posted on the front board as a symbol of the students' research and the theme of study.

This process represents how the teacher re-applied in her instructional practice the principles that she learned implementing the initial module, and was able to do so independently, without our assistance. She picked a theme that was significant to the children and helpful to her in achieving the curricular goals. She also adjusted the packaged curriculum to include funds of knowledge not available within the classroom. This incorporation of funds of knowledge was accomplished by bringing into the classroom community people that could be reached and invited through the available social networks, but the teacher also used homework assignments to tap the funds of knowledge of the students' homes and other locations.

All of the activities, from the planning and interviewing to the preparation of a final product, involved considerable reading and writing in both languages on the part of the students. As the students' writing samples suggest, literacy in English and Spanish occurred as a means of analysis and expression, not as isolated, reading and writing exercises. To support the development of writing, and to enable individual assessments, the teacher organized peer-editing groups that focused on how to improve the writing to facilitate the clear expression of ideas, whether in English or Spanish. The teacher evaluated the students' progress by their ability to deal with new and more complex activities, and by their ability to read and produce more sophisticated writing to accomplish those activities. As Langer (1987) has suggested, it is necessary "to look for successful literacy learning not in isolated bits of knowledge, but in students' growing ability to use language and literacy in more and broader activities. It will also be necessary to judge progress in learning by students' ability to successfully complete those activities. When we do this, the nature of instructional activities will change dramatically -- from pretend to real tasks, from parts to wholes, from practice to doing, and from recitation to thinking." (p. 17).

Following this module, the teacher organized yet another module, this time, coinciding with the end of the school year, on career development. The topic evolved from the children's questions and work during the previous modules, as they came into contact with diverse jobs and family labor histories. Their guiding question was: What do you see in your future? Next to the board displaying the family pictures, the students and teachers developed posters depicting various jobs and professions. Through the social networks, they invited high school and university teachers and students to discuss various careers and how to enter them. They also visited local schools and interacted with professors and students. As with the other modules, the children used their reading and writing to mediate and analyze their interactions with the "living knowledge" brought into the classroom by their social networks or encountered in the community during their visits.

#### 5. Another move from Lab to classroom: The writing module

This other case study started from two teachers' concerns about their students' lack of writing. The module started with a classroom demonstration and eventually extended the classroom activities into the lab. We formed study groups with teachers as a way of identifying classroom practices that teachers want to change or develop, and as a way of creating a context to assist and improve teaching. We will describe the instructional processes involved in the module and related changes in a specific student's writing, highlighting how we facilitated new social relations that extended instruction beyond what is presently offered in the classroom.

Two teachers, teaching 4th and 5th grades within the same school, participated in this module. Both are Hispanic, bilingual, females, and in their second year of teaching. The students in both classrooms are predominantly Mexican, all of them being bilingual or monolingual Spanish speakers. There is a wide range of literacy abilities within these classrooms, including students in the beginning stages and proficient students performing above grade level. The child we feature in the case study, Elena (a pseudonym), is in the fifth grade and classified as Spanish

monolingual. A quiet and soft spoken child, Elena formed part of a small group of students who preferred to write in Spanish. We concentrate on Elena's activities and writing because the details of her work help illustrate essential elements of our study. However, Elena is not unique, in fact, she is representative of several other students in these classrooms.

The module was organized around three activities (see Figure 4). The first was the formation of a study group between the teachers and the researchers. In these study groups the participants read research articles on literacy instruction and discussed how to apply some of these ideas in practice. These meetings, held weekly with the teachers as part of the after-school lab, also served to plan the modules and evaluate their progress.

We will return to this topic in the discussion, as these study groups have become central to the project and in plans to extend the project to other classrooms. The second activity was demonstration lessons. The teachers invited the researchers to implement lessons in their classrooms that would interest the students in writing. In particular, they were interested in eliciting topics from students and organizing lessons to help the students address those topics in writing. After the demonstration lessons, one of the teachers (IN) identified 11 students who were interested in developing a video that would explore in more depth specific topics of interest to the students. This combination writing/video development activity became too elaborate to be confined to the classroom. The students, therefore, agreed to work with the researchers on the lessons at the after-school lab and it became one of the regular lab activities.

We will summarize the module by describing three phases in its development: the initial writing, the extension to the household, and writing to develop the video. For each phase, we provide examples of Elena's writing. It is important to understand the changes in her writing in the context of the specific module activities. We will show how Elena drew on the available resources to develop her writing and her ideas,

and how her writing was shaped by the goals and structure of the activity. Particularly important for our purposes is how Elena used writing as a tool to extend and organize her thinking and plan her activities; how Elena assumed ownership of the activity and the writing process. The key role of the adults in this process was in mediating the activities, especially in helping the students to be active in creating and shaping their tasks. The adults did not control the writing, as is common in classrooms, instead they oriented the students to the use of other persons and materials in developing their writing. That is, following our household analysis, they obtained funds of knowledge by connecting the literacy activity to parents, community organizations, and libraries, among other resources.

The module also shows that by studying children in diverse circumstances we gain a more sophisticated perspective on what they are capable of doing. The students themselves initiated most of the writing and the accompanying activities. In the case of Elena, none of the writing, except the initial writing, was required by the instructor. As such, both the students and the instructor's activities departed considerably from the usual classroom practices.

Initial writing. As part of the demonstration lessons, the children in IN's classroom brainstormed a list of topics for writing, discussed three topics of special interest to them, and began writing on one of the topics. Some of the students, including Elena, were particularly interested in developing further their computer communications with a school in Ponce, Puerto Rico, one of the Lab's on-going activities<sup>1</sup>. Elena formed part of a group of students who preferred the lesson in Spanish. Although most of these children understood much of the demonstration lessons, conducted in English, they felt more confident discussing their topics and writing in Spanish. During the first lesson, Elena, like many of her classmates, appeared unsure. She did not seem confident in sharing her responses and writing, and did not actively participate in the lesson; she appeared unresponsive. When it was time to write, Elena said, "Pero Miss, no se que escribir." The instructor encouraged

Elena to select one of her topics and write about it. After some hesitation, she began to write about her ideas of what a school in Ponce (Puerto Rico) might be like. This draft serves as Elena's first writing sample. She wrote as follows:

Las escuelas an decer como un cuarto chico son como echas comodamente para los alumnos y los maestros tambien ande tener acientos echos de madera y pintados tambien an de estar limpias y acomodada ande ser como un techo de lamina luego como sacate encima para que de sombra tambien los usan para que es te fresca en el calor y caliente en el frio ellosan de estar my agusto en las escuelas porque a ellos les gusta el modo decer las escuelas tambien las escuelas estan echas de lodo y queda un poco asperas Las...  
(E.O., 3/20/89).

(The schools must be like a small room they are like made comfortably for the pupils and the teachers also they must have seats made of wood and painted also they must be clean and orderly they must be like a tin roof later like grass on top to give shade also they use them so that it will stay cool be very comfortable in the schools because they like they ways the schools are also the schools are made of mud and remain a bit rough The...)

Note that Elena selected the topic because it was of interest to her and she revealed some prior knowledge on the topic. For example, she discussed how a building may be adapted to changes in climate, and possibly assumed that the materials used in construction may be indigenous to Puerto Rico's tropical region. Elena may also be using her own knowledge of adobe construction in Tucson and Mexico to guess about how schools are constructed in Ponce. An initial analysis of Elena's writing, using categories suggested by Harste, Woodward, and Burke (1984), also shows that her intent was to write an informational piece of writing. She begins her writing with the statement "Las escuelas an decer..." (The schools must be...), indicating with this opening that the text will inform about the topic of schools. The text is also not in the form of an outline, list, or story, but in a narrative paragraph similar to those found in content area textbooks. It appears that Elena is aware of or borrowing from a textbook organizational structure. Textbooks organize content into groups of sentences which inform about a particular concept. Once that concept has been explained, a new concept is described with a new group of sentences delineated by a paragraph. Elena attempted to do the same, although she did not utilize new paragraphs to begin new concept descriptions.

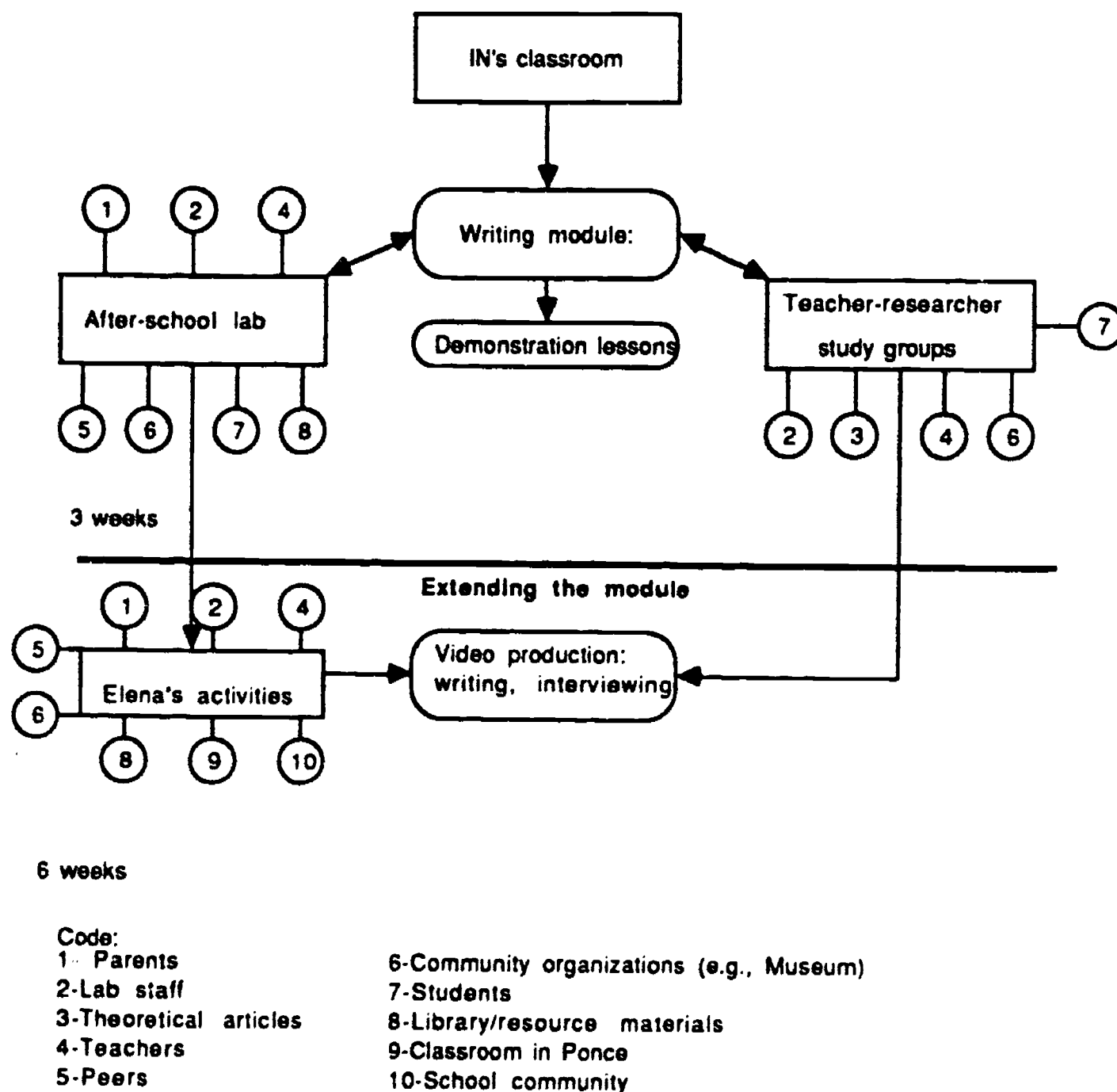
Perhaps what is most noticeable in the text is Elena's spelling and lack of punctuation. Elena spells phonemically, i.e., the way words sound. For example, in "echas" (hechas, made ), "an" (han, must) and "ellosan" (ellos han, they must), she did not write the "h" which is aspirated in Spanish pronunciation but included in the written form. Elena also combines "de ser" (must be) into "decer," although later in the text she writes "de ser" correctly. Also, in several instances within the text, Elena appears to be experimenting with the spelling of "han de" (must be). For example, she writes "Las escuelas an decer como..." (The schools must be...), "tambien an de estar" (also must be), "...tambien an de estar limpias" (also they are probably clean), and "el frio de ellosan de estar..." (their cold must be). This may indicate that as she progresses through the text, she may be moving between invented and conventional spelling.

Elena used no conventional punctuation, yet in parts of the text her ideas flowed and connected. She used words that indicated the connection between her thoughts. For example, she used "tambien" (también, also) instead of punctuation to inform the reader that one sentence had ended and another had begun. When her description changed from the interior to the exterior of the classroom, she did not use any punctuation, but again used the word "tambien" to connect her sentences conceptually and provide the text with some semantic coherence.

Extension to the household. In order to get ready for the preparation of the video that Elena wanted to send to the students in Puerto Rico, she interviewed her father about Tucson and together they looked in encyclopedias for answers to some of their questions. They also contacted an aunt who had been a long-time resident of Tucson to obtain additional information about the city. This research, we should mention again, was self-initiated, not assigned by the instructor. This extension of the literacy activity beyond the classroom was also not unique to Elena, it formed part of the general structure of the module. Figure 4 depicts the various social networks that formed part of this classroom.



Figure 4: The social networks in IN's classroom



Also included in the figure are the specific social relations Elena used in developing her activities. Here we highlight what Elena wrote at home with her father's assistance:

ir al museo con una guia para que me enseñe explique lo que significa cada cosa y que me diga más o menos cuando hicieron cada cosa y ir apuntando lo que me va diciendo la guia de cada cosa así les doy informacion a los niños de Puerto Rico para que vean como era antes Tucson Arizona y enseñar como se vestían los indios que vivían en Tucson. Como eran las camas, y las casas donde vivían. Enseñar que hacían las casas de soquete y que aun existe una casa hecha por los indios y de soquete eso creo que les va a interesar a los niños de Puerto Rico como de mi edad porque a mí me interesa mucho saber del tiempo pasado como vivían y lo que usaban para vivir que comían y como hacían las casas de soquete para que no se cayera enseñar la cosas que hay en la cocina

como las piedras donde molian la comida y la estufa de dos placas. Y el baño la vañera era una bandejas y habia la ropa como votas y camisas pantalones de cuero que se ponian los indios nativos y sus maletas. La sala era como tenia unos muebles de madera y unos libreros y en medio abia una alfombra muy antigua tejida  
(E.O. 5/4/89)

(go to the museum with a guide so that he can show explain to me what each thing signifies and tell me more or less when each thing was made and write down each thing the guide tells me that way I can give information to the children from Puerto Rico so that they can see how Tucson Arizona used to be and show how the Indians that lived in Tucson used to dress. How the beds were, and the houses where they lived. Show that they made their houses from mud and that even now there exists a house made by the Indians and from mud that I think will interest the children from Puerto Rico about my age because I am very interested in knowing about times past how did they live and what they used to live what did they eat and how did they make the mud houses so that they wouldn't fall show the things that there are in the kitchen like the stoves where they ground food and the two burner stove. And the bathroom the bathtub was some pans and there was the clothes like boots ans shirts suede pants which the native Indians wore and their suitcases. The living room had some wooden furniture and some bookshelves in the middle there was a rug very old knitted)

The text seems to take the form of a list of ideas that Elena's father may have shared with her. Elena recognizes that there is no need to write a complete narrative because the purpose of the text is to provide suggestions to herself and a plan of action during her upcoming video sessions. What is most interesting is that Elena used the text to communicate with herself, to regulate her own behavior, to plan her activities. For example, she starts the list by directing herself, as the reader, through each step of the tour, beginning with a general statement about the museum, then progressing through each room. She's also very conscious of her audience, specifying what type of information she thinks the children in Puerto Rico, her eventual audience, will find interesting and why. Along with the detailed description, Elena prepared a storyboard for the videotaping. The storyboard consists of step-by-step video instructions and corresponding audio segments accompanying the video. Elena even drew sketches of what the camera should be focusing on and underneath each sketch wrote a brief description of what she would say .

It is also evident that Elena's spelling improved, which may be because of her father's help. For example, she begins to use the "h" consistently, perhaps at the urging of her father, even overgeneralizing with words that do not employ the aspirated "h" such as "hedad" (edad, age) and "hera" (era, was). In contrast to her

previous writing, she also begins to use some punctuations, for example, periods at the end of some sentences and capital letters at the beginning of sentences. The text, for its purposes, has unity and hangs together coherently, it is grammatical despite the lack of conventional punctuation.

Video writing. Preparation of the video was a major undertaking. Elena had carefully planned the visit and written questions to ask the tour guide, the expert on the site. Elena chose the Fremont House as her site, one of the first and few remaining homes still standing in one of Tucson's original barrios. The house is now a museum that contains many artifacts of its time. She chose the date to go to the museum and film her video, and asked others to do the videotaping while she conducted the interview of the guide and toured the historical site. Elena produced this final writing sample as an outline to guide the sequences of her video:

Boy a presentar al guia para ve si me ayuda

Boy a decir de que vamos hablar durante la pelicula

Despues boy a entrar ala casa y empesar a esplicar cada cosa

Enseñar las recamaras con todo adentro

Enseñar las armas que usaban para matar animales

Enseñar la cosina con la mesa, las sillas y las estufas  
(E.O. 5/10/89)

(I will introduce the guide  
to see if he will help me.

I will tell what we are going  
to talk about during the film

Afterwards I will enter the house  
and begin explaining each thing.

Show the bedrooms with  
everything inside.

Show the arms which they used  
to kill the animals.

Show the kitchen  
with the table, the  
chairs and the stoves)

Armed with her plans and outlines, Elena was very confident throughout the videotaping and interview. Her questions were well thought out and clear. For example, she asked the guide what was done to protect the structure from erosion. Although Elena encountered some obstacles in her interview, for example, the guide was not completely fluent in Spanish, she was undaunted by the experience and completed, through her own volition, the task she set for herself at the beginning of the module.

Despite the brief writing sample, we can detect improvements in spelling and vocabulary. For example, Elena is using the aspirated "h" (as in hablar, speak) and does not overgeneralize by using it with words such as "empezar" (to begin) and "enseñar" (to teach) and she did in her previous writing. For an outline, her sentences are well-designed and grammatically acceptable and her description of events is coherent and clear. But what is impressive is Elena's use of writing over the course of the module to help her think, plan, conduct and successfully complete her activity. She went from a tentative, reluctant writer, to a student who used writing to accomplish her intellectual goals. And in so doing, she provided the teacher with a more realistic perspective on her abilities and her potential to benefit from instruction.

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<sup>1</sup> The following colleagues contributed to the development of the after-school site and the classroom analysis, most are graduate students and faculty at the College of Education, University of Arizona: Isabel Conchos, Wendy Hood, Barbara Thompson, Kathy Whitmore, Joel Dworin, Elizabeth Saavedra, Ana O'Leary, Carmen Zúñiga-Hill, Yetta Goodman, and Arminda Fuentesvilla. Our sincere appreciation to the students, teachers, and principals for allowing us to work in their schools.

<sup>2</sup> As part of the lab's activities, we communicate regularly over computers with students in Ponce, Puerto Rico, San Diego, California, and New York City. Our thanks to Dennis Sayers of Project Orillas for facilitating many of these contacts. These written communications are conducted in both English and Spanish. These electronic networks for long-distance communication are analogous to the local social networks for teaching we are trying to develop.

C. Final phase of the project: Study groups, exemplary teaching, and change.

As we learned in implementing the initial phase, for any innovation to have a chance, teachers must be involved and informed throughout the project. We are, of course, not the first to make this point (see, e.g., Erickson, 1989), but it remains one of the most ignored aspects of developing and implementing innovations in classrooms (Sarason, 1982).

Our primary strategy for involving teachers substantively in the project was to develop an after-school "lab" that included teachers and students. During the first phase of the project we met with some success in developing and implementing such a lab and, in fact, it led to the implementation of important literacy instructional innovations, as we have described. The main drawback of the lab, however, was in involving the teachers. We could interest the teachers in what we were doing with the children, and they would visit the lab setting occasionally, but we were unable to secure their active and regular participation in the activities. They perceived the lab as removed from their classroom work, isolated from their classroom experiences. This lack of participation suggested to us the need to create an additional setting where the teachers could address issues of concern with our assistance; where they could have direct input into developing activities and the reasons for the activity. We tried out the study group format with success as part of one of the modules and decided to concentrate on its development during this final phase of the project. We still think that it is important to develop settings in which to try out innovations with children before they are implemented in classrooms, but recognize that the development of these settings must result from the joint productive activities with teachers, not something researchers develop independent of teachers and then try to lure them into participating.

The study group represents a social setting for informing, assisting, and supporting teachers' performances, as well as a setting where teachers help themselves. Tharp and Gallimore (1988), for example, have identified the creation of

settings for joint productive activity of the sort we advocate, settings that facilitate long-term collaborative work between researchers and teachers, as the single most important factor in successful innovations or in producing change in education.

We started the study group with the idea of developing a place to discuss with the teachers the data about the households' funds of knowledge. However, rather than prescribe how to organize lessons that could tap into the funds of knowledge, we used the group to address the teachers' interests and concerns within their specific classrooms. We met with ten teachers (often less) once a week for approximately two hours and arranged additional meetings during the week, as needed. We soon realized that, analogous to the household networks, we needed to foster the formation of social relationships that could lead to the exchange of ideas and resources within the group. The common concern of the teachers was with the reading and writing development of the students and how to organize more productive lessons or classroom activities that would take advantage of the students' abilities. It became clear to us that one thing was to document the households' funds of knowledge, and quite another to use this information fruitfully in classroom contexts (also see, Gallimore, 1985).

As the work progressed, we made our particular theoretical and ideological predilections quite clear: current instructional practices, with an emphasis on rote-like instruction, passive students, curtailed interactions, and low-level academic work, seriously constraint what children are able to learn and display intellectually; we favored meaning-based, interactive approaches to literacy instruction, where the children have considerable control over their learning, and where they are active users of literacy to accomplish high level academic tasks. It is only within these latter classroom conditions that it makes sense to use funds of knowledge as a resource in teaching.

For the first three months the teachers assessed what they wanted to change in their classrooms, read articles about literacy instruction, and discussed how they could go about planning and implementing change in their classrooms. Those teachers



who were already conducting more "participatory" lessons, in which the students were reading for meaning with trade books, or using reading and writing in support of a broader classroom activities or theme studies, or taking advantage of the households' funds of knowledge as part of the students' academic tasks (see previous section), discussed their work with unusual candidness, offered suggestions and advice as well as learned from the other teachers. In short, the teachers became resources for each other.

The goal of studying practice remained central, and all of the teachers attempted to implement some change in practice, but the group also started analyzing their role as teachers and the ideological question of why they teach the way they do, especially in relation to literacy instruction. But above all, we did not want to impose but collaborate with the teachers. In most cases, we felt that the teachers already possessed much of the knowledge to change or improve their literacy instructional practices, we hoped the study group would serve as a catalyst by providing the motivation and support in developing innovations.

Below we present two case studies that illustrate key factors in our work. We present the case studies in some depth so that teachers and other educators can use the information to think about these ideas in relation to their own local settings and the ways they teach. In a sense, these case studies, as a whole, represent a composite of the instructional aspects of our model. The first study describes the functioning of a classroom in which the students are immersed in literacy, where the children's construction and control of knowledge through literacy is the central focus of the classroom's routine. This bilingual teacher's (Karen C., all teachers' and school names are pseudonyms) work served as one model of how to organize instruction in ways that helped the children actively use and manipulate literacy to accomplish academic goals. Her case study shows how a teacher can arrange literacy activities to take full advantage of the social and linguistic resources (the children's funds of knowledge) that children bring with them into the classroom. Throughout, the teachers main

concern was not necessarily with the acquisition of specific literacy skills or subskills, but with whether the children were making meaning through literacy as they engaged in increasingly sophisticated activities. This teacher's practices provide a striking contrast to the rote-like instruction typical with working class students.

We then follow with an example of how the study group can function. We highlight one teacher's efforts, Maria M., a 5th grade bilingual teacher, at changing her instructional practices and at using her colleagues in the study group as primary resources in that change. Through her participation in the study group, this teacher was able to develop her theoretical sophistication and implement changes in instruction within her classroom. The study group served as a source of ideas and as a place where she could discuss with her colleagues the application of these ideas. The study group always had a practical connection to the classroom practice of the teachers; while their classroom work had a theoretical connection through the readings and discussions with peers in the study group.

In sum, the case studies presented below capture central elements of our pedagogical approach. Here are some questions that readers could ask themselves as they read these case studies:

- What is the role of the teacher in the classroom?
- Do I know teachers who teach this way?
- In what ways do teachers and students negotiate the curriculum?
- With whom could I form a study group?
- How do children learn literacy?
- How do children take charge of their learning?
- How is literacy used by the students?
- How is the children's bilingualism used as a resource?
- How is curriculum developed to develop or maintain bilingualism and to expand the children's biliteracy?
- What do the students produce with literacy to present their learning?

We believe that our approach affords a major re-definition of working-class households as cognitive resources for instruction, of bilingual teachers as active, thinking professionals in control of their practices, and of bilingual and limited English proficient children as resourceful, able, and competent students.

Case study # 1: Towards a literate classroom community<sup>1</sup>

In this chapter you are invited to experience an outstanding, if not exemplary bilingual third grade classroom, called "The Sunshine Room" by the students and teacher. We will show that unlike other classrooms, where the curricula and the teachers typically lower their expectations for minority and bilingual students, the intellectual level of instruction in this classroom is always high and the children actively use literacy, in either English or Spanish, as the means with which to accomplish curricular goals. Other key issues of instruction emerged from our analysis, including the importance of trusting the students as learners, of the teacher negotiating with the students control of the classroom's goals and activities, and of the teacher as yet another learner in the classroom. We will elaborate upon these issues within a general description of a typical day in this classroom. This day represents a compilation of numerous classroom observations conducted almost weekly over the course of a year. A general theme in this classroom is that the academic activity always has priority. A student's lack of English fluency never becomes an impediment to full participation in academic tasks at the highest level possible.

We will also present a thematic unit of a classroom study of Native Americans that illustrates how the teacher creates diverse circumstances for the children to use and apply their considerable intellectual and linguistic resources. We see these theme units as dynamic contexts within which the children learn by manipulating knowledge. These same activities provide the teacher with many opportunities to evaluate how well the children are using reading and writing as tools for analysis and for thinking. In our terms, these are contexts within which the children constantly re-define themselves as learners for the teacher and for each other.

### Karen C: some background information

The teacher is a knowledgeable and experienced professional. She has been a bilingual teacher at this school since 1979, when it became a primary magnet desegregation school, and has previously taught at another bilingual school. Her teaching experience extends from early childhood through college level courses and, as an articulate speaker, she is frequently called upon by her district, the university, and professional education organizations to discuss her work with colleagues and pre-service teachers. Ms. C. considers herself a "whole language" teacher and sees as her primary role to assist and guide the students by creating an advanced and highly literate environment for their academic work. Currently working towards an Education Specialists Certificate, she is taking graduate courses that keep her in touch with the latest information on theory, research, and teaching. Her role as an active learner is crucial to the success of her classroom, as we shall show.

Besides the teacher, two other adults work in the classroom, Ms. P., a teacher aide, and Ms. M., a student teacher. These two women, although they have different experiences as teachers, have a collaborative role in this class, becoming team teachers with Ms. C., participating and interacting with the children in the planning, development and implementation of activities.

The children at this school come from the immediate neighborhood (52%) or from other surrounding neighborhoods (48%) as part of a magnet desegregation program. Approximately half of the students are Anglo and half represent minority populations, with about 37% Hispanic, 9% African-American, and 5% Native Americans. The classroom consists of 27 children, 12 boys and 15 girls.

### The Sunshine Room

Each day in this classroom begins outside, in the patio area of the school, where all of the children, staff and faculty of this primary school meet to share announcements, sing, and recite the Pledge of Allegiance. The boisterous voice of the principal can be heard over the group and the day begins with enthusiasm. As the

children and teachers move into their classroom, the children noisily put away their things, greet each other and move to the group meeting area in the center of the room.

As is common in bilingual classrooms, there is considerable diversity in the children's language and literate abilities. According to the teacher, fifteen of the children are monolingual English speakers and readers. Of these, two children, Sarah and Brooke, are learning to speak, read and write Spanish, and Ilinca is learning Romanian. Elizabeth is the only English-dominant bilingual speaker and she also reads in both languages. Nine children are bilingual orally, of these, Veronica, Susana and Lupita are reading and writing in both languages; Francisco, Raymundo and Roberto read both languages but are clearly Spanish dominant, and Rosario, David and Ana are Spanish-only readers. Jaime is a Spanish-dominant speaker who came into the classroom in the fall speaking only Spanish and by the end of the year spoke and read some English as well. Acuzena is a monolingual Spanish speaker, she arrived in the United States from Mexico in the spring and reads only Spanish.

A typical day. As the participants in this classroom come together each morning there is chatter in both English and Spanish. The teacher finds a chair in the meeting area and the group quiets for announcements, calendar and weather information, and a discussion of the schedule for the day, presented below:

#### Daily schedule

8:30 Story/Circle  
 9:00 Math Centers  
 10:00 Recess  
 10:30 SSR/Literature study  
 11:00 Writing workshop  
 12:00 Lunch  
 12:45 Centers: Native American Theme  
 2:00 Clean up  
 2:15 Circle/Story  
 2:30 Adios/Hasta Mañana

At least one story is read aloud daily by the teacher. The story might be a big book in either Spanish or English, followed by paired reading or a writing extension in which the pattern of a story is followed or new endings are created, or it might be the ongoing reading of a chapter book, perhaps by a favorite author of the class. Reading

for meaning is re-established as a goal every day during this class activity. For example, one day the class read The Gift of the Sacred Dog by Paul Goble, a selection that effectively combined quality literature with the thematic unit about Native Americans. As the teacher reads aloud it is obvious that her primary concern is that the children understand the story, gain meaning from the book, and enjoy their experience.

Following the opening story, the class moves into math centers. Very little direction is necessary to get the children and adults moving around the classroom, gathering materials, and settling into four math groups located at various places in the classroom. This classroom is a functionally organized setting. There are several large tables in the room that, along with the ample amount of carpeted floor area, provide work space for the children and adults. Cubbies and cupboards are used by the children a storage space for their personal belongings, but the school supplies (pencils, paper, crayons and the like) are for the classroom community. They are all within easy access of the children and are clearly labeled in both languages. A piano, loft and the teacher's hidden desk allow children places to hide away to work, read, and visit.

Following math, the children usually go outside for recess for about a half hour, although many students request permission to stay inside. Opportunities to continue writing projects, illustrate books, catch up on assignments, and work on second languages are relished by the students. Roberto and Rafael ask to work on a collaborative book, Brooke asks to practice reading in Spanish, and Shelley finishes a filmstrip project. These children work independently and the teacher uses this time to prepare for upcoming activities, plan with the student teacher, and interact with the children either inside or outside on the playground.

#### Language Arts: creating a literate community

At approximately 10:30, the children reconvene at the meeting area before they move into a language arts block that consists of Sustained Silent Reading (SSR), literature circles, and writing workshop (WW). Today the children are continuing



their literature studies of several authors. While the teacher and the student teacher meet with two of the literature circles, the other children either meet in their own author-centered literature circles independently or do SSR.

SSR in this classroom means an extended period of time, at least fifteen to twenty minutes, often more, reading any material of choice. The children and adults all read and the reading materials are extensive and varied in type, topic, and language. The teacher frequently selects a piece of adolescent literature to read from her children's literature courses at the University. Newspapers are available and are usually the choice of the student teacher and the teacher assistant. They share articles with each other, chatting as they would over the breakfast table at home. Children read magazines, chapter books, books made by students and the whole class, picture books, comic books, non-fiction books. Miss Rumphius, Dear Mr. Henshaw, Little House on the Prairie, Historia Verdadera de una Princesa, Clara Barton, and many, many more titles have been read during the year. Children settle in with friends or alone during SSR, finding niches under the loft or piano or lying on the floor. The SSR period is not silent, although it is subdued. Sometimes music plays in the background and children share information and illustrations as they read. Some children read out loud to themselves or to a friend. The pleasure of the reading experience is punctuated by occasional laughter.

What is most noticeable in this classroom is how the teacher, through the arrangement of the class and through the activities, immerses children in print. As one walks through the room at any given time, the children and adults are using print to complete activities and "live" successfully in this highly literate community. Books are everywhere. They are shelved near the group meeting area marked with a sign that reminds the children about a classroom etiquette: "Ms. C.'s library and personal books. You may read them, but please return them to this spot!! PLEASE!!!" A box stuffed to overflowing with books published by individual children and the class is labeled bilingually: "Sunshine Room Authors/Autores del Sunshine Room." These two

groups of books are popular sources for reading material during SSR. Other books come from the window sill across the room. It is covered with the books used for the ongoing theme studies. Books about the general topic of study are categorized in bins, for easy access. During the Native American theme, the categories present are: Navajo, general books about Native Americans, Pueblo, Ancient Tribes, Yaqui, other Southwest tribes, Hopi, Tohono O'odam (Papago), Eskimos, legends/poetry, Native American art and music. These books range in type, from Byrd Baylor's and Paul Goble's picture books, to Alik's cartooned information books, to adult non-fiction and 'coffee table' books. The books not only provide information sources in English and Spanish for the thematic work, but are frequently chosen by the children for free reading during SSR.

Still more books can be found elsewhere in the room. When the teacher was preparing a new literature set for author studies, a shelf of these books was marked: "Favor de NO llevar libros de aquí. Estoy preparando los próximos estudios literarios. Please do NOT take books from here. I'm preparing for our next literature study groups. Ms. C (signature)." The children's selections from the library are in yet another box, waiting to be exchanged at their next visit. A peek into the children's cupboard areas reveals books they are taking home to continue reading, and books they are bringing from home to read and share with others.

In addition to the wealth of books and reading materials, other functional print litters the environment. Two alphabets hang in the room, one in English and one in Spanish. Classroom rules, agreed upon and signed dramatically by the children and teachers are posted near the door. Schedules that remind participants of activities such as guitar lessons and time in the loft are nearby their associated work area. Written communication is evident between the members of this classroom community. A note hangs on the file cabinet by Ms. Crowell's desk: "Mrs. C., I found out Tuesday 13th of March was when Uranus was discovered in 1781. From, Rita" Notes and letters in Spanish and English from the teacher, the teacher assistant, and the school to the

parents are waiting to be delivered at dismissal time. The daily schedule is changed each morning and referred to by all participants throughout the day. Reading and writing are not only subjects in this classroom, but essential, functional aspects of the classroom's intellectual life.

In preparation for the literature study groups, the teacher brought in approximately 50 books (mentioned above) in text sets according to author. The children choose which author they wished to study, and in which language they wished to read, and signed up for literature circle groups. Each group meets about two times a week with the adult member, and at other times independent of adult participation. In addition to reading a variety of books by the selected author, the children learn biographical information about the author, compare his or her varied pieces of writing, extend their reading into writing through literature logs and other writing projects, analyze plots and illustrations, create story maps and a variety of other related experiences.

One revealing occasion, the William Steig author study group meets with the teacher who has been absent for three days attending a national bilingual convention. In her absence, the children were to meet as a group and be responsible for developing a visual representation of the connections they saw among the literature set of William Steig books read by the group. The teacher had suggested the preparation of a chart, a web, or a graph, but the specifics of the product were left up to the students. The group also was to incorporate a list, developed before the teacher's absence, in response to her question, "What connections do you see?"

The children share their work with the teacher. They have developed several representations and they explain their graphs and charts. The teacher asks questions to clarify the children's intentions, such as "What do these abbreviations mean, Jonny?" Some of the products were accomplished by groups so that negotiation among the students was necessary, others were developed individually. The group works together to incorporate the children's ideas and to accomplish the teacher's objective

for a second chart: to develop one clear, visual representation. The teacher asks, "What would you like to try?" and the group decides to develop a web, although none of their individual products were webs. "Let's try it," says the teacher, "if it doesn't work out we can always start over with a different idea." They proceed to place the name 'William Steig' in a circle at the center of a large butcher paper and to put the names of specific titles in smaller circles all around the paper. The teacher serves as a recorder while the students make suggestions and remember titles. However, when the attributes from the list of connections are added to the web, it quickly becomes clear that the information is too complex for this format.

The teacher recommends a chart format instead and turns over the butcher paper. She lists the names of the books being described across the top of the paper and the connections between books down the left hand side, then the group as a whole decides which of the connections fit each book. Jonny contributes the idea of distinguishing between those connections important to the story, with a check, or those which are "details," with a circle.

The teacher leaves the group, moving to another literature circle. She leaves Rita in charge of recording information for the next title and suggests that the children take turns completing the chart. The children complete the chart systematically without the teacher. Evan goes to the shelf where the author centered books are housed to verify whether or not an attribute is present in a book under discussion. "Did this work?" the teacher asks when she returns to the group. As they look at the chart, they decide that it does summarize what they feel connects the William Steig books and decide to add the copyright dates under the titles. This decision leads to the idea to restructure the chart in chronological order. The teacher volunteers to put the titles in the right order when she copies the chart. "Would you recommend these books to other people?" she asks the students as they break up their group.

In another literature circle, the student teacher meets with a group of children who have already read Pepón (in Spanish) silently to themselves during SSR. Now the

group reads the story aloud, not to evaluate oral reading, as might be the purpose in a traditional classroom, but to ensure that all of the children, even those who might be called 'not so strong' readers, have a complete understanding of the text so that they may participate in the later parts of the literature study. Veronica is hesitant when it is her time to read out loud. The student teacher reads the page with her, giving Veronica confidence, and then the group moves to the next reader. All of the talk in this group is in Spanish.

On another occasion, the teacher meets with four Spanish readers. These children are selected by the teacher for special attention because she felt they are not reading strongly enough for meaning. The student teacher works with similar group in English. The teacher gives each of the children the following text:

Me gusta (blank) el jardín zoológico. Para mí es un (blank) interesante. Siempre (blank) los leones y los monos. Los leones parecen (blank) y al mismo tiempo hermoso y valientes. Los monos son (blank). Van y vienen (blank) y hacen gestos chistosos. Aunque los leones y los monos son mis favoritos, me (blank) también los elefantes y las jirafas. En (blank) todos los animales del jardín zoológico me fascinan. [I like (blank) the zoo. For me it is an (blank) place. I always (blank) the lions and the monkeys. The lions look (blank) and at the same time beautiful and brave. The monkeys are (blank). They come and go (blank) and make funny gestures. Although the lions and monkeys are my favorites, I (blank) also the elephants and the giraffes. In (blank) all of the animals in the zoo fascinate me.]

The group reads one sentence at a time in unison, saying, "blanco" in the spaces. Then the children offer words to fill in the blanks.

Ana: "Miro." [Look.]

Teacher: "Siempre miro los leones y los monos. ¿Eso tiene sentido?" [I always look at the lions and monkeys. Those that make sense?]

The group: "Si." ["Yes."] (The teacher writes "miro" on the board for sentence number three.)

Raymundo: "Pelean." [Fight.]

The teacher: "Siempre pelean los leones y los monos. ¿Eso tiene sentido?" [The lions and monkeys always fight. Those that make sense?](She adds it unto the list when the group approves.)

The dialogue continues as Rosario and David suggest "juegan" and "viven" ["play" and "live"]. The children decide as a group if each word is appropriate to make the sentence makes sense. If so, the teacher writes the word(s) on the chalkboard. When all of the sentences are completed, the group reads the entire paragraph again, using the first word in each written list to fill in the blanks. Often, during the course of the activity, the group uses language to talk about language. Following the sentence above, The teacher points out that the words the children selected are all verbs, words of action, and that most any verb would make sense here. She stresses meaning, telling the students that it's important "que las historias siempre, siempre, siempre tengan sentido y hagan sentido" ["that the stories always, always, always have meaning and make sense"] Therefore, she says, when you (the students) are reading and don't know a word, substitute a word that makes sense.

Reading and writing merge during a special author study of Byrd Baylor in conjunction with the Native American theme study. After spending several days reading from a set of Baylor's books, Ilinca, Rita and Mariah come together to discuss their impressions of the books, the commonalities across texts, and how they might share their reading with the rest of the class:

- Ilinca: All the books are deserty. They all have to do with the desert -- mostly the plants and animals.
- Mariah: All the desert scenes look like they were painted with watercolors.
- Rita: What I liked best was the lettering, the print. It was like in poetry. It doesn't have anything to do with poetry. Well, maybe a little. It sounded like poetry.
- Teacher: Poetry doesn't have to rhyme. It's more a way of expressing feelings and describing things. Do you think Byrd Baylor was expressing her feelings about the desert?
- Rita: I can tell she's a gentle person. It sounds like she cares about the desert and doesn't want it destroyed.
- Mariah: I read about Byrd Baylor in that newspaper article. She lives in the desert. Her house is kind of Indian style.
- Ilinca: Maybe we could write about the desert, a plant, or animal, and make it look like poetry like Byrd Baylor does. I like being in the desert. Could I write about being in the desert?
- Teacher: Yes, of course. That sounds like a wonderful way to share what you have learned with the rest of the class.
- Mariah: And we could make pictures like the books too.



The group then spends time studying Peter Parnall's illustrations more carefully, noticing how he uses simple lines and little color, and how only some parts of the plants and animals are detailed.

The children are not sure how to go about writing in a style similar to Byrd Baylor. The teacher suggests that first they simply write something about the desert that expresses their own feelings. She does the same, and then models breaking her prose into shortened segments to establish the rhythm that makes it more poetic. The children are very pleased with the results. Here are some examples of the children's writing:

I love  
to watch the hawk soar  
through the sky  
and the coyotes howl  
at night.  
The rabbits hop  
from cactus to cactus.  
by Sarah

The desert  
is a great place.  
So wonderful. A nice place.  
I wish I lived there  
with my family.  
It would be so fun  
to see the sunset and  
to see the stars  
in the sky.  
by Rita

The desert  
is a great  
place. It  
is very  
beautiful.  
I like to  
lie down  
and listen to  
the coyote  
howl at night,  
and watch the  
rabbits hop  
around, and  
see the prairie  
dogs peek in  
and out of  
their tunnels. I  
just love  
the desert.  
by Ilanca

The coyote  
eats by day  
the coyote howls  
by night.  
The coyote  
goes out in the  
middle of the  
night to find  
his prey. At  
the time of  
dawn, he comes  
home, with good  
things to eat.  
The mother  
says (in coyote  
words) I was  
worried. - Don't worry,  
be happy.  
I thought  
you got  
caught. Who  
me? Never.  
by John

As a participant in such literature groups, rather than solely the leader, the teacher strives to respond as a reader, to move beyond traditional comprehension questions, and expand upon teachable moments.

SSR and literature studies transform into writing workshop with a quiet direction or by turning on and off the lights. Children murmur, "Aww," with sadness and displeasure as they are instructed to put their reading material away, but they are soon equally absorbed in their writing. Materials and work partners change and quiet talking about reading becomes active discussion about writing projects, illustration, and publication.

Susana, a bilingual student, and the teacher are positioned at the computer, preparing to print Susana's text for illustration and publication. Susana reads her book, written in Spanish, to the teacher who follows on the monitor. The conversation is in English. "You don't have a title, Susana. What's the title of the book?" asks the teacher. She types in "La muchacha rebelde" ["The rebellious girl"] and prints out the text.

A group of girls sit at a rectangular table with their ongoing projects spread out in front of them. "Let's have author circle now," says Brooke and she and Elizabeth take turns reading their evolving text to Angel. "What's the title?" asks Angel as she works on her own writing. Susana listens while she colors elaborate illustrations on a card to a previous teacher in the school.

At the piano bench, Racheal and Lupita finish a conference with the student teacher about spelling and return to the publication process. Their story represents an interesting collaboration. Racheal, a monolingual English speaker, approached Lupita and invited her to join her in a project so that they could produce a bilingual book, Lupita being bilingual and biliterate. Their joint story concerns a young English speaking girl who encounters a monolingual Spanish speaking girl and the problems they face as they develop a relationship. In the course of their dialogue, Racheal says, "Lupita, you know what we should do?" and suggests a minor revision.

"No, that won't sound good," counters Lupita. "Okay, you're right," Racheal adds, "I'm not good at the Spanish, Lupita." "You're not? Then just do the letters," comforts Lupita.

Jason and Evan are stretched out on the floor. There are papers spread out all around them and they explain that they are working on two separate stories of science fiction. Jason's science fiction piece is an elaborate comic book about 'Griffins' which has been evolving for several weeks. He has written the text and separately drawn illustrations in comic book form. Now that he is coming into the final stages of his book, the teacher has become a collaborator and is copying the text into the illustrations at his direction. She was drawn into the project because Jason couldn't write small enough to fit his words into the comic book format.

Shelley and Sarah are deeply absorbed in their writing at a circular table. Like Jason, they have been involved in one project for an extended period of time, but theirs is a Choose Your Own Adventure story about a time travel adventure (which the girls titled: An African Adventure). It began as a complex skeletal outline, created on two long sets of taped together papers, one for each girl. At each step of the outline, the reader (an active character in the story) makes a decision and the decision alters the plot of the story. Shelley and Sarah have finished their outline and are now working on transforming it into readable text on note cards. The teacher was a consultant for their project as she helped them create a workable process for formatting their complicated text (for a copy of the final product, see Appendix C).

Jaime and Roberto are nestled under the loft. They are busy writing letters during WW time. The letters, written in Spanish, are headed across the room to David and Raymundo who are scrunched under the study carrels. Jaime and Roberto are writing to them "because they don't want to be our friends and we want them to," explains Roberto.

Ms. P., the teacher aide, is sitting at another table. She has an individual conference with Ana about her writing, helping her with punctuation and spelling for a

final draft. Lupita has finished working with Racheal and shares a new ending for another project with the aide. "Oh, Lupita, that's wonderful. I was wondering how your story was going to end," she says. Meanwhile, Racheal shares a poem with a friend. Racheal is a very social writer, often collaborating with others and experimenting with a wide variety of genres. Poetry, plays and interviews are represented in her work folder, as well as many stories and her continuing Native American report.

Brooke has also changed writing projects. She is now finishing a "pourquois tale," explaining how the Sphinx came to be. Brooke's story illustrates a common phenomenon in the writing from this classroom, in that it combines content area (a theme of "Ancient Egypt") with process writing.

The teacher describes the process of attending to traditional skills within a classroom emphasizing writing as a process:

I keep almost everything that the kids write so that I'm real aware of what things they are trying out when they are writing. If I see a lot of children exploring something then I will do a short class lesson (about a skill). We did that with quotation marks. There were a lot of kids trying to put conversations into their stories but they don't use punctuation and they don't use speech carriers and you couldn't tell who was talking. So we spent a couple of days doing written conversations, the kids did them with each other in class and they were also asked to do it with their parents at home. And then in the classroom we talked about how you put (the punctuation) in so you can tell who is talking. Then the kids went back and did that with their written conversations. I have seen that in their writing since then some of the kids are really starting to use the ideas we practiced. The speech carriers appeared right away, they were less sure what to do with the little marks, but some of the kids are using them now. And if I see them I say, "Oh, I see you are using quotation marks in your story." So most of the teaching about writing takes place along that line.

She continues by explaining how they use the children's reading to develop their writing:

Also, we look as readers. We might look at how an author uses a particular stylistic kind of thing or how poets use things like alliteration and try out some more guided kinds of writing. We do some pattern kinds of writing sometimes when we're exploring things like that. And kids may or may not pick up things on their own when it comes to their writing but I certainly see a lot of growth. And the spelling development is there, too, because I don't teach the spelling program either and the kids are beginning to trust that they will learn to spell.

SSR and writing workshop in this classroom are favorite times of the day for both the students and the teachers. The descriptions above only briefly touch upon the

variety of literacy events taking place simultaneously with enthusiasm and energy each day. Many students have more than one writing project going on at one time; their writing includes a variety of genres, languages, styles, and collaborative relationships between children and with adults.

A few minutes before noon, the children are reminded to get ready for lunch. More groans and sighs can be heard as they put away writing materials and gather at the meeting area once again. The teacher takes a moment to comment on the morning's activities and set the stage for the afternoon. At the end of the month children with excellent behavior records are invited to a special lunch in the room with the teacher. Frequently, the teacher's philosophy is shared during moments like these, allowing the children open insight into her beliefs about learning. "Talking is probably the most important thing we do in here because you learn the most when you can talk while you work," the teacher tells the students, although she cautions that they shouldn't get so loud as to disturb each other.

#### Thematic Units: Native Americans

When the children return from their lunch period, they become involved in work organized around thematic content. Half of the class moves into centers, or committee work stations while the other half of the class works at two large tables on their individual projects. The theme under way is about Native Americans. The teacher explains how much control the children have over the topics that form part of these theme studies:

The theme cycles are pretty much controlled, the topics anyway, by the kids. Right away at the beginning of the year we go through a group brainstorm process where the kids will put out anything they are interested in studying and we group things together. We put sharks and whales in the list together with someone that said ocean so that related topics are chunked together. And then the kids are asked to vote for their 10 most favorite, and those are the ones that we do as group theme cycles for the year. I put my things on the list, too.

Other topics chosen for intensive study this year have been fairy tales, astronomy, ancient Egypt, and the ocean. As the teacher explains it, the theme studies involve both individual and collaborative projects among the students:

(It) usually starts with some kind of a web, sometimes the kids would share what they already know, I usually ask them to generate lists of questions of what they want to know about, and that helps arrange centers or activities, knowing what they're interested in, what their areas are. With the Native American unit we are doing right now, the kids wanted to do some independent research projects but they also wanted to do centers. The reports they'll produce will probably be a page or a couple of pages and we talked about binding them into a book for the library, because we found very little information in our school library to help us.

Based on the type of planning just described, the teacher collects wide and varied literacy materials to fill the classroom with information in both Spanish and English. In addition to books, approximately 100 trade books, pieces of art, posters and artifacts find their way into the classroom from the teachers, support staff, parents, and the children themselves.

The teacher makes use of the children's interests and ideas and she plans the learning experiences that will form part of the theme units. The themes involve large groups, small groups and individual activities, and all subject areas. The general organization of the Native American theme unit is summarized in Figure 5 (see Appendix C).

Each theme culminates in some form of a product or of a demonstration of the groups learning. For example, the Native American theme produced a published class book that included all of the children as co-authors and detailed bibliography. A theme about Egypt ended with an impressive transformation of the classroom into a museum, which the other classes visited with the students serving as guides. These ideas evolve during the themes and are usually initiated by the children themselves.

The centers that involve the children during the Native American theme vary in content and process. At one side of the room, Angel, Roberto, Jaime, and Francisco are learning about corn. On the table where they sit is a basket containing of blue and yellow corn chips to taste, a collection of trade books in English and Spanish about corn, a two page information sheet, and a colorful basket of squash and Indian corn. The teacher briefly joins the children to explain the procedure. When she leaves the children taste the corn chips, read a book about corn, and write about each experience. The books are varied in style and language and the children cheer when the teacher



explains that she found for them a Spanish translation of one of the books (Corn is maize, by Alike). The children also read a corn legend on the paper included at their center, titled, "Niman dancers Hopi" and color the accompanying illustration.

Across the room, Rafael and Susana work with the teacher assistant on weaving. Each child has a forked branch which serves as the frame for their work. Ms. P. helps the children select colors, measure the appropriate amount of yarn and begin the weaving. Spanish predominates their casual and comfortable conversation as the children methodically weave colors of yarn around the natural looms. In the basket on their table are books about weaving and a diagram that labels the components of weaving in both languages, as well as the weaving materials.

In another center the children can view film strips. The children are using this center as a resource for their ongoing research projects. The teacher has made several films available. The children select which films they wish to view and if they prove to be helpful, the information is included in reports and documented on bibliographies.

Another center involves the children who are continuing work on their individual research projects. These children and the teacher are seated around two tables which are covered with bins of books (categorized as explained above), 3x5 note cards, and children's work folders in manila envelopes.

Lupita, who is researching the Sioux, is reading a trade book in English called Plains Indians, concentrating on a section called "Games and Pastimes." As she reads, she records in Spanish on an index card information she finds relevant. She explains the process she and the other children are following. Lupita's work provides a good example the research and learning process involved in this theme activity. The class as a large group began the theme by webbing the content they wanted to learn through their study. The result of the discussion is represented in Figure 6 (see Appendix C).

Secondly, each child composed his or her own web. The students then write self-generated questions on index cards about their previously chosen specific topics about Native Americans,. The children may read and write in either language, or a combination of the two, as Lupita's cards illustrate . As the children look in the books for the answers to their questions, they record pertinent information on their cards. They also record the books they use on a reference sheet which asks for information about the title, author, call number, and whether they will use the book for information or will not use the book (see Appendix C for examples). This will become a bibliography when their upcoming reports are finished.

Upon completion of their research, each child completes a second web summarizing the information they have learned, as a way to monitor their own learning (see Appendix C for Lupita's final web and report). This entire process is graded by the teacher (very similar to how graduate students are evaluated) according to the quality of the questions, the first web, the resource list, the note keeping, the final report, the final web, and a composite, overall grade .

Veronica is studying the Yaqui Indians. The teacher is sitting with her, reading to her from an adult level book written in English (Southwestern Indian Tribes by Tom Bahti). After she reads a passage, the teacher translates the ideas into Spanish and discusses it with Veronica in terms of her research questions. The teacher is very absorbed in the process herself; she appears to be a co-researcher with Veronica, eager to learn and share new knowledge with her student.

Richard and Evan are at the opposite end of the table studying the Anasazi. They are searching for information about weapons and how the Anasazi defended themselves. Richard finds a picture of an "atlatl," a missile launcher used for hunting, and they decide to use it for their answer. Each boy traces the illustration, cuts it out and tapes it to his index card. Evan finishes taping his and says, "This is cool," as he hurries over to Jason at another table to share what he has learned. Jason is discussing the Sioux and responds to Evan saying, "The Anasazi didn't trade with the white men. The

Sioux just needed to buy iron for weapons and they did the rest." Talk centered around the content of study is frequent and natural.

From the initial web, through the intermediate stages of planning, center activity, and research work, the theme studies are a captivating curricular activity, where the children use literacy to search for knowledge and to present their ideas to others in the classroom community and in the school.

### Discussion

The nature of instruction in this classroom is exemplified by the Native American theme unit. There is no ceiling on the expanse of possibilities for intellectual work in this classroom. In particular, there is no limit to what the children may learn about Native Americans during this unit or about any other topic in other theme units. The high expectations built into the curriculum, the nature of the materials employed, the guiding and supportive role of the teacher, the mutual trust between teacher and students, and the use of the children's bilingualism and literacy, all contribute to creating an advanced intellectual and literate community in this classroom. We comment on each of these factors below.

Curriculum. The curriculum, organized into center activities and independent research projects for the theme studies, is structured so that children may work at their own levels and have their individual academic needs met. The teacher allows and encourages children to stretch their abilities and to take risks with new experiences, materials, and challenges. Simultaneously, the design of the curriculum and the participation of the teacher support the children and ensure success, acting as a safety net for those who are taking risks, especially in their second language. At all times, the children are encouraged to be responsible for their own learning and to be active participants in the learning. The classroom is socially organized to support that goal.

The curriculum also indicates the value of emphasizing process as well as product. In the Native American theme (and in other classroom activities), the children not only learn a wealth of information about their topic of study, but they

learn how to go about studying the topic. The children are responsible for conceiving their own questions, guiding their own learning with materials and experiences in English and Spanish, and following a sophisticated research procedure. They are expected to display skills at using reference materials, and to articulate their awareness of the reasons for keeping records of reference materials. The research process culminates in a report, wherein children learn to produce a piece of writing in a specific genre at the same time that they are providing the school library with real, researched, and referenced information.

**Materials.** The materials in the classroom also help to extend the amount or type of learning possible for any child. Included in the materials for the Native American unit, for example, are a great number of books, including information books, legends, cookbooks, music and art books, and many pieces of children's literature of various genres that deal with Native American topics. The teacher, the other adults in the classroom, and the students search for these books and they bring their own, borrow others, or check them out of the library. Many of the books are at an adult level. The children read these books selectively, and glean information pertaining to their self-selected topics and specific questions. The books are sometimes very difficult, but the teacher assumes that with her assistance, the students can read and use these books. This is illustrated by the interaction between Veronica and the teacher, described above. The teacher helped Veronica, a dominant Spanish speaker and reader, translate a difficult text from English into Spanish, rather than assuming that Veronica could not handle the information, or that she needed an easier task.

**Teacher as learner.** The teacher typically assumes this guiding and supporting role in the classroom as well as being an active participant in the learning, as she is most likely as absorbed as her students in the content and the process of learning. Although the students are exceptionally independent and are able to find resources, complete activities, and make decisions with very little adult assistance, the teacher is keenly aware of the interests of each child and is actively involved in their learning.

She researches along with the children, combining her own content questions with demonstrations of the research process, and the types of questions she asks are usually probing questions requiring elaboration and explanation. The teacher spoke to her role as a learner in the classroom:

I am the kind of person who is never quite satisfied and that keeps pushing me. I have always felt that if I got to a point when I stopped being a learner then I needed to be out of the classroom...I model learning for the kids when I sit during SSR reading my textbooks and my university texts, reading my professional books and text sets for the classes I take and sharing my trials and tribulations of writing papers....[The children] are aware of adults [in the classroom] learning for themselves as well as [our] telling them that we learn a lot about how kids learn from watching and sharing with them.

Within the theme unit, the teacher has ample opportunities to effectively combine her goals as a teacher with her interests as a learner, as she explains it:

By going through it myself, the questions are really my questions, things I really want to know about how Native Americans observe the sky and what kinds of legends they told about the stars because I love astronomy, so you know there is genuine interest, they are genuine questions on my part.

Mutual trust. As noted, the children have considerable control over virtually all aspects of this classroom. They select groups, reading materials, writing topics, and theme topics. They generate their research questions and negotiate their learning tasks with their teacher. The teacher allows and promotes this sharing of power, based on her trust of them as learners. She explains it as follows:

It's taken a lot of trust to give control to the children but I think that I've really been rewarded in the long run. The day may not run smoothly and it may not look organized to people who are not knowledgeable about what is going on in the classroom, but I think the learning that is going on on the children's behalf and on my own is much more genuine and meaningful when it is like that.

The teacher's trust in the children's abilities enables her to set high expectations for them; their trust in her allows them to take risks, to experiment, and collaborate with her in learning. Learning in this classroom is not only an individual achievement but a joint accomplishment between adults and children.

Bilingualism and literacy. Bilingualism in this classroom is not only a goal but a powerful resource for learning. It forms an integral part of the classroom community and a means for children to expand their literate and social experiences. In the study

centers and groups, Spanish is used interchangeably with English so that the children learning English could both understand the content in their dominant language and expand their vocabulary and comprehension in their second language. Whenever appropriate, recording information occurs in either language, with decisions for language choice made by the children and by the teacher, depending on the activity and the materials. The teacher strives to provide the children with materials in English and Spanish because it expands the children's literate worlds, and to use their bilingualism to create interesting, advanced conditions for literacy use and language learning. But in general, the students' and teacher's bilingualism is used as a resource to expand opportunities to obtain, create, and communicate knowledge, and to develop the social relationships so essential to this classroom's work.

Case study #2: A teacher's emerging practices

This case study spotlights the work of María M., a fifth grade bilingual teacher, the process through which she transformed herself as a teacher, and the role of the study group in facilitating that process. The study group developed as a means to provide a context for teachers to think and to analyze their practice. Two research assistants (E. Saavedra and J. Dworin), both experienced teachers, facilitated the study group sessions. Although the group was initiated by researchers, it quickly became teacher-led and directed. Four major activities formed the bases of the group's work:

- 1) Creating a support group where teachers could inform, assist, and challenge their current thinking and instructional practices.
- 2) Exploring the relationship between theory and practice in teaching.
- 3) Selecting topics to address in practice in relation to their own personal and professional needs.
- 4) Developing literacy instructional innovations that could challenge their roles as teachers.



We will discuss several resources that assisted and facilitated the teacher's development, most prominently her fellow teachers, as well as the potential of the study group for facilitating similar transformations in other teachers. Above all, however, the key factor in María's transformation was María herself. Without seeing the teacher as an active participant, one cannot appreciate the process of her development, or of teacher change more generally. From our perspective, administrators, district personnel, and especially researchers, cannot change teachers and their practices; the process of change is simultaneously social and personal, it takes a sustained, although not necessarily a solitary effort by the teachers.

María: some background. María is 26 years old and was born and raised in Tucson. Her father was born in Arizona and her mother in Mexico. Her first language was Spanish, but both Spanish and English were spoken in her home as she was growing up. She attended a local community college and graduated from the University of Arizona in 1987, with a degree in bilingual education. Hence, she has been a teacher for three years. She is currently taking graduate courses towards a master's degree in Reading.

We started observing in her classroom during the previous academic year (1988). Although María's classroom was, in general, quite traditional in its organization of instruction, for example, teacher-dominated lessons and with a dependence on basal readers, she was already attempting to introduce some change into her classroom practices. We recorded during our classroom observations that the teacher organized the room into rows formed by pairs of desks that faced the front of the room. The classroom operated as a large group for the majority of instruction, all of the students worked on the same assignments at the same time, but they were seated in small groups and interacted in them. Reading, as it is the case in most classrooms, bilingual or otherwise, was basal based. The teacher lead lessons in which students took turns reading aloud in Spanish or in English and the teacher asked questions about the text; the students also did some independent reading and workbook assignments.

The teacher supplemented the basal readings by reading to the students and by having students read to the class. In the following example (KW, 3/17/89), however, reading to the class seemed to be a routine rather than a conscious effort to extend students' understanding of text:

(The student) took a seat at the front of the room on a stool. She began to read a trade book, in Spanish, titled Danny. She read in a quiet, monotone voice and continued reading although other students moved about the room and talked above her voice. D. and V. worked at the computer. A few students stood by the teacher's table waiting to sign the sympathy card. Eventually (the student reading) left the stool and approached the teacher apparently to ask a question about a problem with a word. The teacher had not been paying attention to the reading either, so she was unaware that the student had stopped reading.

After the reading, there was no discussion, reaction, or extension of the brief literature period. As the observer (KW, 3/17/89) noted:

By the 5th grade, I would expect students to be capable of discussing the elements of literature, the style and purpose of the author, predicting the events to come in the next chapter or at the conclusion of the story, expressing opinions and reactions to the reading and extending the literature into their own writing or other activities, all within the context of an enjoyable reading event. Rather, it appears in this classroom, that the pleasure gained by reading is the full purpose of the activity. This observations is reinforced with the students' behavior during reading - they engaged in a variety of activities while listening.

Writing took place primarily in response to worksheets and assignments.

However, the teacher was introducing a number of writing innovations into her lessons. For example, the students were writing in journals which are read by the teacher. She allowed the students about 5 minutes each day to write on their journals. In addition, the teacher tried out more process related writing activities. As the observer noted (IC, 1/30/89):

The teacher....did some brainstorming...about publishing a classroom newspaper about their experiences at Camp Cooper (an archeology camp and dig) ...drugs, solar system, school events...She stirred their imagination and wrote their ideas on the board: Native Americans, las luchas/wrestling, animals....armas, cuerpos (and others). The student's name was written next to the topic of their choice (e.g., animals: Selene). They were given five minutes to write on their topic. The T. encouraged them to write without worrying about grammatical errors... After five minutes T. read them her experiences in San Francisco. Afterwards each child was asked to read their story to their partner and finally share their stories in groups of four.

Other classroom writing is more teacher directed and based on the basal readings. For example, the students read as homework stories about a girl that wanted to be a

military cadet and about a trip to outer space. After the reading, the teacher assigned both these topics for writing (in Spanish). Previous to the writing, however, she had a brief discussion with the class about what she expected and helped the children generate ideas. As the observer (IC, 3/2/89) pointed out, the teacher asked the class:

- T: ¿De qué se trataba la historia esta semana?  
 S: (A student answered) Para lograr una meta...  
 T: ¿Qué era la meta de la muchacha?  
 S: Quería ser una soldada, para poder ir a West Point  
 T: José, ¿qué quiere decir un reto?  
 S: Quieres hacer algo que es difícil.  
 S: (A different student) La muchacha se fue a la escuela de paracaidistas, pero le daba aterrizar. Cada día era un reto, pero de todos modos lo hizo. Quería comprobar que podía hacerlo...(she continues) Este fin de semana fui con unas amigas hiking, como le tengo miedo a la altura, decidí quedarme en un lugar seguro, aunque se rieron de mí, ahí las espere.  
 T: ...Imagínense que ya son cadetes, no digan me gustaría ser cadete. Escriban como si fueran cadetes. ¿Cuales son las experiencias que están teniendo?

The teacher discussed with the students the writing assignment, including listening to a student's attempt to relate a personal experience to the story's content. This type of interaction, which writing researchers have long advocated to assist students' writing development, occurs infrequently in the classrooms we have observed, and in some classrooms, none at all. In this particular instance, however, the students worked on their essays for approximately 1 hour. In sum, Maria's class seemed a combination of traditional methods and some attempts by her at implementing more interactive, or process-oriented literacy lessons. In this respect, she did not differ from most of the teachers working in the project.

The study group. María agreed to attend the study group at the beginning of the current school year (1989-1990). Our analysis reveals several resources for change that came together as part of the study group's work, they include the following:

- 1) Peers: the role of other teachers in expanding her theoretical and practical development, and in providing a forum for interactions and reflections about practice and theory.
- 2) Research literature: the important role of studying the literature about the study and teaching of literacy.
- 3) Classroom analysis: the examination of practices developed in conjunction with the study group work, especially how the practices influenced specific students' literacy use.

4) **Mentor:** the key role of a mentor in modeling and explaining alternative practices.

5) **Courses:** the importance of university coursework in developing new knowledge and in engaging her in inquiry.

6) **Community:** the use of the broader community as a source of ideas.

The study group served a variety of purposes, from supporting on-going practices to being a catalyst for change in some classrooms. A major function, however, was in mixing these resources strategically depending on the needs of a particular teacher. Some of the teachers attended the group regularly, discussed issues, did the readings, but did not attempt much change in their classrooms. In one case, the teacher remained dependent on the basal reader, but examined her practices critically, while her teaching partner re-arranged his reading lessons into literature-based groups. In another case, the teacher experimented with reading retellings as a way to collect new information on her most problematic students. A goal of the study group was to accommodate diversity, and help the teacher's forge their own paths to change. In some respects, the work of Maria represents an ideal situation. She used the study group as a context in which to reflect upon her practices, and with some trepidation, embark upon a process of changing her teaching, with a new understanding of both theory and practice. As the following excerpts show, in the study group, ideas about change in the role of teachers' were in the air.

Invitations for change. After discussing several ways of organizing writing activities that would build on the students' interests, the group turned to the question of teacher control of lessons, who has control of classrooms?

ES: I keep hearing over and over the role that we play as teachers; we say things like that as a teacher you want, you make, you give, you provide, we make objectives, who has control of the classroom?

T: The children.

ES: When you say we want, we give, we provide...?

T: I think the kids in my class have control of it....they've chosen what they want to study, they chose their own writing, they choose the books to read, it may be orchestrated....it's learning what they want to learn and what they need to learn at any particular point.

**T2:** But how do you get them started?

**T:** It's invitation, lots of invitations....

The teachers then discussed ways of helping the children find a purpose for writing, and how to give them the time to do it. A common theme in the discussion was on trusting the students and in providing them with an environment for risk taking, as we show below:

**ES:** What underlies that trust?

**T:** I guess the knowledge, the belief that every child is a learner; that every child can learn.

**ES:** And how do you develop that belief?

**T:** By watching kids, watching my own children...

**T3:** Giving them the freedom to learn...

**T:** I would like to spend my whole time just sitting in the middle of the room, or just wandering around with my little clipboard and just watch and eavesdrop all day long, you hear and see the most amazing things....

**T4:** You see a lot of learning going on...

**T:** Sometimes we are so involved we miss it, we miss what the kids are doing...

The teachers discussed the need for objectives and for good daily preparation for teaching, as well as how one develops the role of facilitator of activities.

**ES:** How do you get to the point of being an orchestrator and facilitator... what is the process you went to?

**T4:** Did you model for them?

**T:** I modeled a learner for kids. I sat at desk today reading and highlighting ...my own learning at a professional level is very aware to the kids and I share that....and letting them know that I am learning from them. You have to give up all the control, you can't have all the control if you want those kinds things to happen, you have to give it back to the kids, you give the responsibility and the right and the freedom to do it, and it means you organize your classroom in a different way, it means you interact with them in a different ways...in this article (the author)calls it "gentle impositions," I like that, I really do...rather than being the questioner you are the participant, and its for some kids to accept you that way...

The teachers then discuss the work of one of the teachers and his use of folk tales in the reading lessons, how teachers must take risks and allow failure to happen and



learn from the students and their own failure. It is within this context, where teachers are analyzing their own and each other's practices, that María finds the support to attempt changes she wanted to make in her teaching of literacy.

Ideas from the readings. She described some of her early efforts to try out literature studies with her students, instead of relying on the basal readers. We had distributed, at the teachers' request, several articles on reading and writing workshops. A few of the teachers were already trying out some ideas in their classrooms and reporting some success. María mentioned that she was adapting some of the ideas from the articles and trying them out in her classroom and described how she had her students summarize, answer questions, learn vocabulary from each story and record it in a response log. She then continued as follows:

I read this article you gave us, and rather than doing response logs, what (the author) had them do was read for about thirty minutes, and then the next fifteen minutes as well, she would give them questions, mystery questions, and then they would come up and pull the questions out, and then in a group they would answer them (verbally)...and I thought, well, that is yet another way to do it, you don't have to use response logs. Then I red on and it said that she later added that to her class, and I thought, "that's neat," you can combine all those things...just to give (the students) some structure, to help them grow in their thoughts, give them some guidelines to follow. I just couldn't say, "Get together and talk"; I think they need to have some guidance as to what to talk about...(Transcripts, 11/4/89).

María was using the articles as a resource to elaborate her thinking about her own classroom practices and using the study group to discuss her views. Some of the reading activities discussed in the article gave her an opportunity to examine whether or not she wanted to put these views of literacy into practice. The study group was becoming a place where she and the other teachers could reflect on their theory and teaching of literacy.

Peer interactions. The major vehicle for examining different views about the teaching of literacy, however, was through interactions with the other teachers, including teachers from other schools and grades. In the following excerpts, María is questioning Karen (see Case study #1), a more experienced colleague, about her teaching strategies in relation to the implementation of reading and writing workshops



in her classroom. During this exchange the other teachers were listening or participating in the discussion, although Maria takes the lead in interrogating Karen.

**Maria:** How do you organize your reading period?

**Karen:** Right now the kids, we're doing a unit on Native Americans, the reading is integrated with the whole study, the kids are all studying about their projects. I've put together some sets of books, some I have the same title, multiple copies, others are books that are thematically related. And I did book talks, I spent about fifteen minutes just introducing the different sets to the kids, and I left them put for the rest of the day. At the end of the day there were just sheets up on the chalkboard that identified the sets and they signed up for the book they were going to read.

**Maria:** And then what happens the following day?

**Karen:** They went into their groups and they had with them their books and their lit logs. And they read, wrote in their logs and shared. While they were doing that I went around to the groups. And what we did today was just brainstorm things that you could just talk about related to what we read today. We came up, in all the groups with a list of four or five things, and then they were asked to identify one, which they would discuss tomorrow. And so tomorrow, the expectation is you come into the group prepared to discuss whatever it was your group decided on.

**Ana:** Can they take the books home?

**Karen:** Yes, I have one group that is reading Stone Fox, which is longer, which is about 80 pages. And today they decided, they negotiated how much they would read by the next day, and there's two kids in there who are just pretty much new to English reading, but they really loved to try that book. And so we said, "Yes, go ahead and take it home, you know, and if you find that two chapters is not enough or it's too much, come back and re-negotiate, but it is expected tomorrow that they will come in and talk about Chapters 1 and 2 in the book."

Maria then asked about guidelines and scheduling relating her questioning to the article she had read as part of the study group; Karen responds with two factors that are central to her work, having the students give direction to the activity, and having them establish the relevance of their readings to their personal lives.

**Maria:** When (the students) respond in their logs do they write whatever they want or do you give them guidelines about what to write?

**Karen:** We've done some things where I asked them to explore plot, and character, and setting, when we did our fairy tales. Because we wanted to look at a generic fairy tale. But this time, I asked them to really key on their personal responses, "What were they thinking about when they read?", or "How did the book make them feel?", or "Did they make the connection?", I think you mentioned that too. It's kids connecting, right away to their personal lives, I think that's the first response. What really is interesting is that I ask kids when they share it to read directly from their logs, because what I find would happen is what when I ask kids to share they would change what they are thinking, when they would listen to

a few people, because they would start to feel that, "Oh what I felt isn't the right response, especially if they haven't been in that kind of a program before, so I said no, you read right from your log, and they writing their log before they have a chance to talk to anybody.

María: Is this done daily, then? They read, respond, and share, what they read, and then they decide how much they are going to read?

Karen: Well, some kids read a chapter book, somebody asked, "Well, what do you do if you can read more?. And I asked the kids what they felt about that. And they decided that it wouldn't be fair if somebody had read ahead because they'd know things that would color their perceptions of what they were going to say about the book? So they decided that they could not.

María follows up with additional questions about final projects, literature sets, and the size of groups, and about how much modeling Karen does for the students to learn her system; Karen also reveals that she does not group students by ability or level of reading, but by interest or activity, and that she gets the students used to the idea that she, the teacher, is a co-participant in the class.

María: Do you ever like model those (activities)...

Karen: Lot's of times.

María: So your going over how to do things (with) them.

Karen: Especially this early in the year. But I come in at a participant level, and that's hard for children because I found that kids sort of sit and wait for you to ask them questions. And I sit there and wait, and I wait, and they look at me, and I wait some more. And sometimes I'll say something, but I usually don't ask a question. It's a comment like, "This is what I thought" or "It struck me that".

María: What about those final projects, do you do things as a class? Did you come up with a chart together? What did you say that you had done, story maps?

Karen: We had done story maps, but they had done those in groups.

María: How did they learn to do that?

Karen: We did one all together as a class. I modeled for the whole class. We had read a series of books aloud, three different versions of the Pied Piper and then we all worked together on the story map. I cut out the pieces but the kids told me what they wanted on the map and where it had to go. And then they broke up into groups and did their own map. That was a hard process, that was the first really cooperative thing we had, there were some real struggles.

María: The children decided what group they were going to be in by signing up?

Karen: We don't do any groups by levels or anything.

Ana: So you have all kinds of readers in the groups?

Karen: Yes, and I've worked with my kids on a couple of ways to support each other...(Study Group Transcript, 11/14/89).

Throughout the session, and in later sessions, Karen became the informant/mentor, describing how she arranged her classroom and some of the principles of instruction that she followed.

Insights into change. The study group progressed along the lines described above. About a month later, as a result of trying out innovations in her classroom and discussing her work with peers in the study group, María is able to report quite perceptively on her process of change. Change, she says, is a gradual process, but it must begin somewhere, no matter how modest the change may be. We quote at length from María's description, it is a very revealing insight:

I think that you can start without the thought that you are going to let go completely; instead of waiting for the perfect time, because I thought for such a long time, that I wanted to do literature in my classroom, probably most of last year, and I was just waiting and waiting for the perfect time and I did not really know enough ...but instead of waiting for ever I just started with the basal, I did not have literature sets yet, but I just started with the reader, changing the program, and just having them get together and talk about the story instead of doing round-robin reading or doing skills, and they started just sharing their insights, their thoughts, their connections to the story, so I don't think you have to start thinking that you are going to know how to do it and bingo, it's going to work wonderfully.

I just started very slowly, each week I was adding a little bit more, the following week I gave them an interview, a reading interview, and then I gathered literature sets, I took them to the library, they chose books themselves, but I gathered materials, and it was slow and I was starting to do it as I was learning. I don't feel that I know everything you need to know even now, but I don't think that you should wait, I think you should just start.

She then describes how conscious she's become of the difference between how she is teaching and how she would like to teach, finding that the key is to share control of the classroom with the students, while trying to take advantage of their interests in developing the academic activities. We quote again from the transcript:

Last Thursday when I came to (study group) meeting, right away the next day, I said, I am going to do that, because we were talking how we need to start with the children's interests and I was telling Elizabeth here I had imposed a research project on constellations, I gave them worksheets and everything, here I am changing in some ways with some of the writing and reading, but yet I had not even thought of it, I just felt this would be a neat way to show them the format....I realize that here they could learn so much more about astronomy and here they have so many interests, and I had started them thinking about everything they knew, and they had written it into their logs, but I did not take it a step further. So that same evening we met and the next day we made a semantic web of everything they knew and then on another chart they wrote down everything they'd like to know, and they were so many things they wanted to

know, we went to the library and they just attacked those books, and they were just sitting around during the throughout the whole library just looking at things that interested them, and I thought how much nicer, we did follow the format of the constellations, (she told the students) you remember how there where questions about the constellations, now you think of the questions you have on this topic, and it was just wonderful to see how interested they were. So I don't feel I know this whole thing about theme cycles, there is that much more to learn, there is so much more to study, how to take it to its full potential, but this is the starting point, starting from where (the students') interests lie. (Transcript, 12/12/89)

As María describes it, instructional change comes from attempting new teaching practices as they are being learned; as they make sense theoretically, they become practical in the classroom. María was becoming consciously aware of her changes and was able to articulate these changes for her peers in the study group, becoming a source of important information and a facilitator for the other teachers.

Classroom extension. As she gained confidence in her ability to instantiate positive change in her classroom, María decided to extend her experimentation. She found additional support and inspiration from one of her graduate courses and from the assistance of one of the researchers (E. Saavedra). She had asked for some help with an assignment for the class, and Elizabeth volunteered to assist her. While working on the course assignment with Elizabeth, María mentioned that she was planning to change the classroom environment and initiate literature studies with her class. Elizabeth discussed with her different possibilities and plans that María could make to implement in her classroom. Within a week María had selected a literature set and each of the students had chosen a book<sup>2</sup>. The students were then grouped for reading and discussing the books. In follow-up observations, we recorded some of the classroom changes:

María was asking the students to get into their groups to read for a while, then she brainstormed (in Spanish) with the children the types of writing or response activities they could include in their response journals. When they concluded the list, she asked the students to begin their reading. The students arranged themselves into small groups in which each of the students were reading the same book. The groups consisted of three or four students. Some of the children read silently, while others read aloud together or designated an oral reader for the group. The atmosphere was very relaxed, and the children were self-directed and involved in their books. As they read, the teacher walked around the classroom, the students asked her questions, she provided some guidance to assist the students with their joint reading, and she posed questions to the students. Some of the students shared portions of the stories with her (ES, 3/7/90).



As a direct result of the instructional changes, María discovered that some of her reluctant readers became very involved with the books and the group activities. She mentioned how one boy who had been reading short stories and pictures, and one who she suspected did not really read the books, had chosen a chapter book, and taken the book home and read it. The following excerpt from the notes tells a similar story:

A boy came up to María and told her that he had finished reading his book. María asked him what he thought about the book. He responded that he found the ending very sad, because the dog had died. He described how the dog had died, and said that he felt very bad. María asked him what he was going to do now that he had finished the book, and he told her that his group was going to talk about it. After the boy returned to his seat, María turned to me, and told me that this particular boy had always been a reluctant reader, and would avoid reading. He would choose simple books with pictures. He had just started this particular chapter book two days before and had already completed it. Since he had discussed the ending she was sure he had read it. She discussed how before when she assigned basal stories, she would not see him reading, and when she asked him what he thought about the story or what it was about, he didn't know. Now, she commented that he came to her to talk about the story and how fast he had read it. She also commented that this was the first chapter book he had ever read. María shared that she had always seen the students rush through their stories in basal. She would assign stories and have the students read them silently to themselves. She stated that the students would barely sit down with the book and then get up and say they were finished. She never trusted that they read the story and that they understood it or got anything out of it. Now, she is feeling very positive and developing trust in their reading. She is also participating in literature studies with her students. (ES, 3/7/90).

In her description we see a connection among the discussions and readings in the study group, the teacher's attempts at developing a new approach to literacy in her classroom, and the students' uses of literacy. In particular, as she described it, she has gained a new perspective on her students, especially those not motivated by her previous arrangements. Obtaining positive change in the classroom is an indispensable element of the study group, convincing the teachers that they have the ability and the wherewithal to develop and implement innovations. María's comments are again very revealing and insightful, notice that she relates how she is learning to how her students are learning:

Where I need to go with who I am as a teacher, to learn, to just keep reading more, and be willing to talk about (my work) with other teachers, in classes, and with the study group as to how things can be done differently. You know, just like I said, reading that book alone, it was great, easy reading, and it had such neat ideas, there are things we've done (in the classroom) but it just brings it (the meaning-based instruction) into focus, and it gives you more ideas within that same framework....And by reading that book, I have learned more as to how I can use those tools, you know, the interview

and the report writing, and what comes before that. That's the key. I think we have to keep doing our professional reading, make time for it, and make time to plan with other teachers and talk with other people, and that's how we learn, and I'm realizing that's how the kids learn.

### Discussion

We have developed a case study of Maria to illustrate the potential of a teachers' study group in serving as resource, support, and catalyst for change. Just like the starting point in the household analysis is on people's activities and how they are connected to broader concerns, we have learned that the starting point in our classroom work must be with the teachers' interests. Rather than imposing a curriculum, or developing prescriptive ways of getting teachers to use household knowledge in their lessons, ways that would disappear when the project concludes, we opted to explore how to develop innovations that would come from the teachers and could feasibly be sustained after the formal research project is over. Simultaneously, we wanted to create multiple contexts for the use of funds of knowledge in classrooms. We do not underestimate the difficulty of the process we have undertaken and the time needed to establish new literacy routines in classrooms. A major problem with projects such as ours, as Sarason (1982) has emphasized, is assuming that one can program change by the calendar: "Any attempt to change regularities in the classroom places the teacher in an unlearning and learning process, a fact that has obvious implications for the time perspective of those seeking change" (p. 286).

Our case study also shows that the progression towards new expertise and change is not uniform, easy, or inevitable. There are multiple paths to change and these are shaped by the specific circumstances of teachers, their beliefs or conceptions about teaching and learning, and the nature of the support they receive to confront problems they may encounter.

In an important way, there is no difference between the way we are suggesting teachers work with students and the way we work with teachers (for a similar point, see Tharp & Gallimore, 1988). We build on the teachers' interests and knowledge, use the literature and our social relationships as resources, and literacy to support and



extend our research activities. In doing so we respect the teachers as learners, and trust that they can be important agents of change in their classrooms and assist peers to do the same. Teachers can create the necessary classroom conditions to take full advantage of the ample intellectual resources of their students. In our school systems, especially those serving working-class students, teachers as well as students are tracked, and neither have much control or say about their work and their goals. The formation of study groups is a strategy to provide teachers with the autonomy to be active thinkers about their work and, with support, make change a possibility.

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<sup>1</sup> The case study of this classroom was developed and written by Kathy Whitmore.

<sup>2</sup> Here the broader community became an important resource. Elizabeth took Josie to a local library/bookstore run by a group of teachers who had organized under the name of Teacher Applying Whole Language (TAWL). TAWL will lend literature sets to teachers on a variety of topics. A common complaint of bilingual teachers about literature sets is that there is a lack of books in Spanish; we find there is an abundance of good children's literature in Spanish, although not necessarily readily available. The TAWL model seems an excellent way of pooling resources to make Spanish language literature available to large number of teachers.

#### D. Assessing literacy use in children

In this section we present results from our use of instruments to understand and evaluate the reading and writing development of the students. Recall that we designated one school (its bilingual 4th , 5th and 6th grades) as implementing school and another as comparison school. These two schools are within five blocks of each other and serve a very similar student population in terms of ethnicity, language composition, and income. In addition to these 6 classrooms, we collected data in English and Spanish from 5 additional classrooms located in 3 other schools.

We start by reporting the results of the standardized tests of reading comprehension (we used the reading comprehension portions of the CTBS in English and SAGE in Spanish). We will then turn to the reading retellings and the writing samples. In contrast to the standardized tests, the collection of reading and writing samples facilitate a qualitative analysis of the reading and writing process and products. These results are revealing, not so much in showing gains by the children, but in showing serious limitations in how we use standardized tests and other such "static" measures, as well as important limitations in the very reading and writing samples that we prefer.

#### Reading comprehension

Fourth grade. The results of the pre-post comparison are shown in Table 5. These results show a significant difference between the classrooms in Spanish reading comprehension scores favoring the comparison school, and very similar results in English in both classrooms.

Table 5: Reading comprehension scores: 4th grade  
(Average Percentile Ranks)

School A: Implementing school			School B: Comparison school			
	Pre-test	Post-test		Pre-test	Post-test	
4th grade	Span.	32	33		53	55
	Engl.	24	22		14	22

What is most striking about these results, however, is the big differences between the Spanish and the English reading comprehension scores, especially at the comparison school. The results suggest that the students are apt readers in Spanish, but have considerable difficulty reading for comprehension in English. Furthermore, the results show that no gains were reflected in the Spanish scores in the comparison school; although there were gains in English in both classrooms, the reading levels are quite low.

Fifth Grade. These results (see Table 6) are among the most interesting. There were modest gains in the Spanish and English scores in the implementing classroom, although the English reading levels remain low.

Table 6: Reading comprehension: 5th grade  
(Average percentile ranks)

School A: Implementing school			School B: Comparison school			
	Pre-test	Post-test		Pre-test	Post-test	
5th grade	Span.	29	36		79	50
	Engl.	14	16		14	16

The striking finding is in the comparison classroom. Note the high scores in the Spanish pre-test, clearly suggesting that the children were very able readers in Spanish. The post-test results, however, show a regression in the Spanish scores, and

modest gains made in English. We have no reasonable interpretation for these findings. However, our observations suggest that the comparison fifth grade classroom is among the most traditional in the sample in following the basal series.

Sixth grade. Again, these results (see Table 7) hold the pattern of high scores in Spanish and very low scores in English.

Table 7: Reading comprehension scores: 6th grade  
(Average percentile ranks)

School A: Implementing school			School B: Comparison school			
	Pre-test	Post-test		Pre-test	Post-test	
6th grade	Span.	90	94		71	96
	Engl.	8	26		16	15

Our observations showed that the comparison grade teacher attempted innovations in Spanish reading as a result of course work he was taking at the university. For example, he asked the parents to sign a contract that they would read with the students every night, and he took the time to monitor the parental participation, writing letters encouraging them. According to our scores, the students in this class read in Spanish with great comprehension. The students in the implementing classroom maintained their high scores in Spanish and made solid and significant gains in English.

#### Discussion of results

These results show that, in general, the students scored very well in Spanish and very poorly in English. The test results gathered from these classrooms are difficult to interpret. Although all (but one) of the teachers in the participating classrooms (except the comparison classrooms) tried out an innovation in their classes, none of them incorporated systematically a new approach to reading or writing. As became clear in the study group, the extent to which teachers implement innovations varied widely depending on their concerns, theories about teaching, and their perceptions of

the students, willingness to take risks, and of opportunities for change within their school. For example, of the teachers who worked at the implementing school, only the 5th grade teacher was a regular participant in the study group and attempted to change reading and writing along the lines discussed in the study group (see the case study on this teacher's emerging practices). The fourth grade teacher attended the study group sporadically and did not attempt serious or major modifications in her classroom; while the 6th grade teacher only met with the group a couple of times and, to our knowledge, did not attempt any innovations. In short, these scores are not very useful for purposes of evaluation or for determining the effectiveness of any of the interventions.

Nevertheless, the results of the tests suggest that, in general, the students can read well for comprehension in Spanish but cannot do so in English. At face value, even that conclusion seems optimistic because of the low Spanish scores in two classrooms in the implementing school. Further, the students show minor gains (except in Spanish for the sixth grade in the comparison school), especially in English, and seemed to have regressed in Spanish in one classroom (5th grade in the comparison school). However, these results are rather fragile. For example, in administering the tests, especially at post-test time, we noticed that some of the students simply filled in the scores at random, although when asked, they claimed otherwise. It could have been because they had undergone a long series of tests by the district and were tired of tests, or it could be that it was close to the summer break and they did not care about what the results of such tests would show. If one assumes that these tests are not valid and removes the three lowest scores from the data of the 5th grade classroom in the implementing school, the results increase from the 36th to the 51st percentile rank, showing a gain from the pre-test of 22 points. Given the level of participation in the project of the teacher in this classroom, we could then claim that the significant gains were the result of our intervention.

Even if such a claim is warranted, we think that the (construct) validity of these tests is questionable, particularly if one takes into account the awkwardness of the items or the content of the abbreviated stories that the students have to read. In short, the test items seem meaningless, it is understandable that some students do not bother to read the stories (in fact, it makes us wonder about the students who do read them, it is an indication of how much they have been socialized into reading meaningless texts that many get proficient at taking these tests). In our opinion, the validity of these tests pales in comparison to the information gathered from reading retellings, where the students are asked to read real texts and discuss the story with an interested adult (or peer). But these reading samples are not unproblematic, as we shall discuss in the next section.

The results of these tests also suggest that there were important differences in the school populations at the outset that gross indicators like income and ethnicity can mask. Two important ones seem to be the students' length of residence in this country and the mothers' years of schooling. It is generally believed that students who are recent arrivals in this country and who have been schooled in Mexico have developed advanced literacy skills in Spanish, especially in comparison to their U.S. peers. The high Spanish reading comprehension scores of the comparison classrooms may reflect that situation. Our data suggests that these families may be more recent arrivals than the families that make up the implementing school neighborhood. Furthermore, our household data also suggests that the mothers of the students in the comparison group have more years of schooling than the mothers in the implementing school. Mothers' years of schooling has long been associated with higher school achievement. If their schooling is in Spanish, and the students are fluent in Spanish, then it follows that their achievement may be reflected in the Spanish language tests. In sum, schools and neighborhoods that seem very similar if not identical, upon closer inspection, differ considerably in ways that may influence the students performance in the classroom. The results from the other classrooms, obtained from schools just a few miles away



(less than a 10 minute drive from the classroom mentioned above), present another profile that we think is also related to the specific characteristics of the neighborhood.

### The other classrooms

Test results from the other schools are presented below. We start with School C (see Study Design), in which we worked with three classrooms, all fourth grades. The scores for these classrooms (see Table 8) are different from the ones discussed above in that both the Spanish and English scores are low, although there were modest gains in two of the classrooms.

Table 8: Reading comprehension scores: School C  
(Average Percentile Ranks)

		Teacher A		Teacher B	
		Pre-test	Post-test	Pre-test	Post-test
4th grade	Span.	14	19	29	35
	Engl.	20	21	32	32

		Teacher C	
		Pre-test	Post-test
4th grade	Span.	32	21
	Engl.	13	18

All three of these teachers participated in the study group with teacher A experimenting with literature based reading groups for a few weeks. Again, none of the classroom changes were systematic enough or long enough to be reflected in these tests scores (assuming the appropriateness of the test as an indicator of change in reading comprehension, from our perspective, a questionable assumption).

The neighborhood surrounding the school is among the poorest in Tucson, and is made up primarily of second and third generation families. We did not collect household data in this neighborhood, concentrating on the households of students in the implementing and comparison schools. We speculate, however, given our knowledge of the neighborhood and our discussions with teachers from the school, that less Spanish is spoken, more English is used in everyday conversations, and that the families have less schooling than those in the neighborhood we studied. Some of the teachers have complained to us that some of the children cannot read well in either language, which the test results also seem to suggest. This complaint is feasible, given the results reported here.

The test results of the next two classrooms may be deceptively low, except, of course, for the English scores of School F (see Table 9).

Table 9: Reading comprehension scores: Schools E & F  
(Average Percentile Ranks)

School E			School F		
	Pre-test	Post-test		Pre-test	Post-test
4th grade	Span.	25	25	21	10
	Engl.	NA	23	80	85

Both teachers participated actively in the study group and both developed what we consider highly literate classrooms. These classrooms are in schools that have been designated as magnet schools, attracting students from other neighborhoods in the city in an effort at voluntary desegregation. The students in the classroom are approximately half from the local neighborhoods (primarily Mexican students) and half from surrounding locations (primarily Anglo students, with some Black and Native American students). We may have a situation in which the English dominant or monolingual students may depress the Spanish scores and the Spanish dominant

students may depress the English scores. To test this hypothesis, we disaggregated the scores for one of the classrooms, the third grade, where we had pre- and post-test data in both languages, to see how the Spanish dominant students (as designated by the teacher and our participant observer) did in either language. In contrast to the 21st percentile rank in Spanish obtained from the entire class, these students (N=11) scored at the beginning of the year at the 50th percentile. However, they scored only at the 23 percentile in the post-test, for which we have no adequate interpretation, except that they did not take the test very seriously.

### Reading samples

In an effort to obtain a more sensitive index of comprehension and to provide information to the teachers that may be more useful (and valid) than standardized scores, we collected reading retellings from a sample of students in each class (see the Study Design, for a discussion of data collections procedures). In analyzing the data we first tried out scoring protocols that assigned points on the basis of the characteristics of the students retelling of the story. We found two problems with these protocols. One is that often they do not take into account what the student can retell with some assistance from the adult. In many ways, this information is more important than an unassisted retelling because the student is given a chance to elaborate and the adult can notice gaps or strengths in comprehension that would otherwise go undetected. Additionally, none of the scoring protocols took into account the information obtained from switching languages. As our example below will illustrate, this is key information when dealing with bilingual students.

A second problem is that the characteristics of the text are not taken into account, although it is well established that the structure of the text (as well as its cultural salience) influences comprehension. In most protocols the text is treated as either neutral or irrelevant. We will discuss problems with text selection below, along with other methodological difficulties that detract from the attractiveness of this method.

To address both concerns we developed a scoring protocol (see Appendix A for a copy) that is based on a transactional view of reading: the idea that readers actively construct meaning in interactions with text. This protocol provides a score for the students retelling and anchors that score on the knowledge of characters and events of the specific story being read. We assigned points to the characters and events, weighing their significance in the story. For example, a major character would be assigned more points than a marginal character and similarly for the recollection of key events in the story. The total score adds up to a maximum of 100 points. Furthermore, the protocol takes into account any contributions to the total score from the assisted and cross-language retellings. Therefore, the total score may be a result solely of the unassisted retelling or an aggregate score of the three parts: unassisted, assisted, and cross-language check. By taking into account the three parts of the retelling, the teacher can identify where the students' strength and weaknesses are in performing well on such an activity. We assume that what the students can provide with assistance in the present, they will provide unassisted in the near future, with some practice. In our terms, the reading retellings help create a "zone of proximal development" for students (Vygotsky, 1978; also see Moll, 1990).

We treat this score as a surface retelling score and supplement it with notes on inferential information that the students provide, or misconceptions about the story, key information for a teacher to assess the students' making of meaning. We have also added section for the teacher to keep track of the type of retelling. This instrument is also intended to form part of a student portfolio, where the teacher accumulates evidence (e.g., observations, writing samples, student reports, reading logs and test scores) of the students development of reading and writing over the school year. The instrument can also be used as a preliminary assessment preceding a more in-depth analysis provided by, for example, miscue analysis.

In what follows, we present an example of an application of this protocol.

Veronica's retelling. We picked this student randomly from the fifth grade in the implementing classroom to illustrate the possibilities of this instrument. Veronica is a Spanish-dominant student and the teacher regards her as an average reader in Spanish and less than average in English. During the initial (pre-test: November, 1989) collection of data we asked Veronica to read two stories with us, one in English and one in Spanish. All of the stories that we used in collecting the retelling samples were suggested by a group of teachers of the different grade levels. Each story was supposed to be appropriate for the students' grade level and brief, yet interesting, complete, and coherent. We wanted to avoid the sort of "choppy" stories typical of basal readers. Nevertheless, the selection of stories turned out to be problematic, a key issue with this methodology that we will discuss later in this section. We asked Veronica to read in English a story named Myron; in Spanish a story named Mariposa. Mariposa (by Joe Hayes).

Before the collecting the retelling, we transcribed the story so that the adult could follow along as the student read aloud and make notations on miscues and other details of the reading. We also included with the transcript an outline of the story that included a list of characters and the sequence of events that make up the story, and upon which we based the scoring of every story (see examples for both stories in Appendix A). We asked the student to read and retell the stories about a week apart. The Surface Retelling Score for Veronica is displayed in Table 10.

Table 10: Veronica's Surface Retelling Scores

	Pre-sample			Post-sample		
	Un/As	CL	Total	Un/As	CL	Total
Span.	89	0	89	93	0	93
Engl.	55/10	17	82	93	0	93

Un = Unassisted retelling

As = Assisted retelling

CL = Cross-language check

1. The Spanish retelling (pre-test: 11/8/89): Notice that Veronica scored an 89 in the unassisted/assisted portion of the retelling, indicating that she was able to recall most of the elements of the story, including main characters and key events. Furthermore, she was able to do so without much assistance. Although there is room for improvement, she showed that she understood the story.

2. The English retelling (pre-test: 11/1/89): First notice the score of the unassisted retelling, a 55. Based solely on this score, it would be easy to conclude that Veronica did not understand the story in English. In fact, this is more than likely the type of retelling that teachers obtain in classrooms, for example, when a student is asked during a lesson to describe what a story was about. This is especially true in English monolingual situations. The ability of a teacher to determine if a student like Veronica understood what she read is seriously curtailed in those situations. Also keep in mind that most questions in a standardized reading comprehension exam request a retelling of sorts by the child within a multiple choice format. This type of retelling must adhere to the publishers questions of what is important in a story and the student does not get a chance to elaborate. We should point out that Veronica's scored at the 20th percentile in the standardized reading comprehension pre-test in English



(unfortunately, she was absent during the post-test). At first glance, it seems that her retelling scores correspond to the information provided by the standardized test.

However, notice the additional score obtained through the assisted retelling, a 10, for a total score of 65. Although this score is, we would argue, a better indicator of what she has understood, there is still considerable difference between the Spanish and English retelling scores (assuming that the stories are roughly comparable, which is difficult to ascertain).

The cross-language check. Finally, notice the additional score obtained through the cross-language check into Spanish. By switching languages, the adult allowed the child to display in one language what she understood from reading the text in a second language. We gave her credit in the cross-language portion for information provided in Spanish beyond what she had already provided in English. The additional 17 points brought up her total score to an 82.

The key point is that we have a very different view of this student's reading comprehension competence when she scores an 82 than when she scores a 55. We created a situation for the retelling in which the student and the adult were able to use their bilingual skills to communicate about text meaning. In so doing, we propose, we get a more realistic and positive view of this student's reading comprehension. We also assume that with further practice in reading and some practice in retellings, what Veronica did with considerable assistance today, she will be able to do unassisted or with less assistance later in the school year. Is this assumption warranted?

The post-test sample. With this particular student, yes. Seven months later we re-administered the reading retellings in both languages and using the same texts (see Table 10). Veronica's Spanish retelling improved from 87 to 93, using only the unassisted portion of the retelling to derive this score. Of great interest is that her unassisted/assisted English retelling (date: 6/1/90) score was also a 93. During the course of the year she continued to develop her reading comprehension abilities and her English oral fluency to the extent that she was now able to display similar abilities

in either language and under similar conditions. Notice that, in contrast to her English retelling during the pre-test, after her post-test retelling in English she did not find it necessary to continue the retelling in Spanish.

### Discussion

We used the reading retellings as an alternate, qualitative assessment to standardized reading scores. In contrast to the reading comprehension test, retellings allow us to take into consideration the sociolinguistic dynamics of bilingualism in assessing students' understanding of texts. The retelling situation permits the students to use either language in communicating their knowledge, and permits the adults to use their bilingualism to aide the assessment. As our example suggests, with some (we believe many) bilingual students this flexibility is the difference between being labelled an apt or an inapt reader.

Reading is an unitary activity and the students can use their resources in one language to assist comprehension in the other language. This bilingual process can be assisted and enhanced. The retellings provide the teachers with information to guide instruction. These data can be used by teachers in creating diverse situations in which students get to analyze and discuss texts with others. In this sense, and in contrast to standardized tests, retellings are a dynamic, interactive, way of assessing students reading comprehension.

One of the teachers in the project routinely uses similar retellings throughout the year in assessing the students' reading development. She uses retellings as part of individual conferences with students about what they are reading and as part of group discussions. Another of the teachers has started to use the cross-language check as part of her discussions of stories read in English. A third teacher will accept written reports in one language about a book read in a second language. The process is the same, concentrating on the students making of meaning and creating assessment situations that help teachers evaluate strengths as well as weaknesses.

Reading retellings do have some constraints, however. We found that text selection is one of those difficulties. Even after consulting with classroom teachers, we were not satisfied with the selections that we used in the assessment. In one instance, after collecting the retellings, we felt that the text (a chapter from a book about Helen Keller) was too long and perhaps too tedious to use in a retelling. The students were reluctant to read the whole chapter and complained about its length, especially because we required that they read the selection aloud so that we could tape it. After the lengthy reading, the discussions of the text were brief, we felt that the students just wanted to get it over with. In another case, the story in Spanish contained several errors and awkward phrasing. The story turned out to be a Spanish written translation of an English oral story common in the Southwest. We are not sure how the sloppy text influenced comprehension. Interestingly, the stronger readers corrected the text as they proceeded and made several semantically appropriate miscues during this correction and adjustment process.

It is also difficult to ascertain the comparability of the texts. This issue may not be very important in classroom use of retellings to assess comprehension. After all, the teacher has multiple opportunities during the course of the year to ask for retellings of different texts and of varied difficulty. However, in a research project, it seems important to establish how the texts used for the retellings, the texts that in great part establish the context for the retelling, are comparable in terms of difficulty or complexity, or at least whether they are the types of stories that are appropriate for the grade level being studied. Although we sought suggestions from experienced researchers with this methodology and consulted with a group of teachers before selecting the texts, we are unsatisfied with our text selection. We feel that they are of uneven and sometimes undetermined quality. This uncertainty raises questions about the validity of the retellings, especially across grade level. The same point, by the way, can be made about standardized tests. One of their main problems is also with the selection of reading samples to include in the text. We found the selections in the tests

that we used quite poor. We cannot consider reading bit and pieces of uneven texts and then selecting an answer from sometimes ambiguous choices as real reading. It is more a caricature of reading.

However, standardized tests are used in part because they are easy to administer and to score. In fact, they are what we call "easy data": easy to collect, easy to score, and easy to reach erroneous conclusions about students. These tests are static, rigid, while reading, especially in two languages, is a dynamic, fluid, and uneven process. Nevertheless, the retellings, without question, are cumbersome when compared to the ease of collecting and scoring group administered tests. It is relatively simple, at least on the surface, to standardize the administration of tests, although procedures always vary from class to class, even when the publishers recommendations are taken seriously (which we did), and assume that the conditions for all students were the same. After administering several hundred tests in these classrooms, ranging from third to sixth grade, and with the mix of languages and backgrounds typical of many bilingual schools, we question this supposition. The conditions for testing vary in ways that remain unaccountable in scoring and interpreting the tests. Test makers simply make believe that these variations are not severe and that they do not influence the validity of the test. We believe otherwise.

This problem of variation in the assessment conditions are not solved simply by using retellings. Even after careful training of doctoral students to assist in data collection (including workshops, pilot testing, and monitoring of the tapes during data collection) we found important and frustrating problems with how these data were collected: for example, leading questions, close-ended questions, ignoring the student's desire to explain the story in the other language, not taping the reading or the retelling, or telling the students the gist of the story. These problems can be diminished with more time for practice, which we lacked, and they clearly influence the utility of the data. However, the procedures make it obvious, visible, when there exist methodological problems, and these can be corrected. These or similar problems

are hidden in standard testing procedures and it is assumed that the quantity of data corrects for methodological problems.

Are the constraints and difficulties of collecting retelling data worth it? We believe so, especially when the purpose is to study or analyze jointly reading processes and outcomes, to study bilingual readers, or to help the teachers assess the reading development of students in their class. For these purposes, standardized tests are of limited utility. They do not help pedagogically and do not illuminate the intricacies of reading for meaning.

### Writing samples

We also collected writing samples in English and Spanish in all of the classrooms (see Study design for information about procedures). As with the reading sample assessments, we were after the qualitative aspects of producing text, and found it necessary to develop our own scoring protocol that would highlight the students' attempts at communicating meaning (see Appendix A for a copy). In what follows we first present some examples from the writing samples that illustrate key issues in the children's development of writing, especially in two languages. We then describe the writing assessment instrument and how we are using and conclude this section by contrasting the writing production of the students in the samples with what we were able to obtain through interactive journals with some of the same students.

Some examples. Let us start with a fifth grade girl (Delia) in the implementing school. She wrote in Spanish as follows (see Appendix C, for copies of original writings):

A mí me han dicho que  
los gatos son los animales  
más limpios que hay. Yo  
tengo un gatito y le  
hé enseñado muchas cosas  
diferentes. Yo le he enseñado  
a cazar, subirse a los árboles,  
comer lo que le doy y le enseñé  
a jugar.

En este mundo hay gatos  
de toda la clase.

En selvas, bosques, zoo y

en tu propia casa o barrios hay  
gatos. En las selvas y en los bosques hay toda clase  
de animales salvajes que  
comen o atacan a la gente  
y a los animales.

En la casa o barrios  
algunos gatos son domesticos  
porque la gente los cría y  
los cuidan. Los gatos  
que no son domesticos o  
no estan domesticados por  
la gente son salvajes y  
sí los tratas de agarrar  
te rasguñan la cara o manos.

(They have told me that cats are the cleanest animals there are. I have a little cat and I have taught him many different things. I taught him how to hunt, climb trees, eat what I give him, and I taught him how to play. In this world there are cats of all kinds. In jungles, forests, zoo, and in your own house or neighborhoods [barrios] there are cats. In the jungles and the forests there are all kinds of wild animals that eat or attack people or other animals. In the house or neighborhoods some cats are domestic because people raise them and take care of them. The cats that are not domesticated by people are wild and if you try to grab them they will scratch your face or hands.)

As can be seen, this girl is a good writer in Spanish, she communicates quite clearly. She developed her topic well, elaborating on the differences between wild and domesticated animals, and even included personal information to embellish the story. She displayed a good sense of audience and her writing is highly readable, with clear punctuations (some misplaced accents, notoriously difficult for children) and conventional spelling.

Compare her writing in Spanish with her English writing sample, collected about a week after the Spanish sample:

They have told me that  
cats are the cleanest animals there is.

There are many kinds of cats,  
the're tigers, lions, mountain lions,  
cheetas, panthers and cats that you  
take care at home.

The cats that you  
take care at home are  
domestics, and tigers, lions,  
mountain lions, cheetas and panthers  
are wild. Their wild because  
they kill people, eat other animals,  
and they are not domesticated  
by people.

If you play around  
with a kitten the kitten mite  
bite you, run away or



keep on playing.  
 Wild cats like to hunt  
 other wild animals.  
 Domestic cats are  
 little and wild cats are  
 big and strong.

As with the Spanish sample, the student picked a topic and developed it, elaborating also on the difference between domesticated and wild animals, but providing different supporting details. The article is probably not as good as her Spanish sample, but it is coherent and communicates well her thinking. It would be safe to conclude that, with practice, this student is well on her way to being a fluent (and probably eloquent) writer in both languages. In fact, this student is well on her way to being biliterate, she reads very well in both languages as well.

From our observations and literacy samples, we believe that every student in bilingual education could become as fluent and literate as Delia. All limitations on students developing literacy in two languages are artificial and could be overcome. In a sense, she illustrates the possibilities, what could be, given appropriate instruction. But other writing samples, not as clean or as clear as Delia's, also demonstrate the great possibilities if we examine them correctly.

Consider this next sample. It was collected in a fourth grade class where the teacher told us, in no uncertain terms, that we were wasting our time asking the students to write for us in English.

Games  
 Games yes turday my  
 mam day go to te keimart En  
 my mam che toulme ef ay  
 quant a games.  
 En ay set yes mama please ay  
 guan a games En my mam  
 seat okey.  
 En may mam se guich guente  
 tu lla quant.  
 En is set te lean of zelda En  
 may mam set okey En ay brater  
 sete de super mario broders.  
 En may mam seate okey ay take  
 da tu games.  
 En guiar sau japie.

At first glance this piece of writing is incoherent, confirming the teacher's expectations. There are only a few words spelled correctly in English (games, my, please) and the text is hard to decipher. But upon closer scrutiny, this is the piece that comes through:

Games  
 Games. Yesterday my  
 mom and I go the the K-mart (a store). An  
 my mom she told me if I  
 want a game.  
 And I said, yes momma, please, I  
 want a game. And my mom  
 said okay.  
 And my mom said, which one  
 do you want.  
 And I say the legend of zelda (a computer game). And  
 my mom said okay. And my brother  
 said the super mario brothers (another computer game).  
 And my mom said okay I take the two games.  
 And we are so happy.

When one reads past the invented spellings, and the lack of punctuation, and concentrates on the meaning of the story, it is obvious that the student is describing a trip to the store, where the boy's mother decides to buy both his brother and him computer games. This boy is trying his best to communicate in English. He is using all his resources to get meaning across in English, including his knowledge of Spanish (in a sense he is writing English in Spanish) and his recollection of a personal event of interest. But perhaps more important are the unconventional spellings (e.g., set for said; quant for want ). Most teachers, especially those limited to English proficiency, or those not knowledgeable about writing, would simply regard these spellings as mistakes or as a sign of a poor writer. From our perspective, however, these spellings are most revealing. This student is a risk-taker. He is risking the spelling for the sake of communicating meaning in English. This student certainly did not have to write anything for us, we informed the students that this activity was voluntary. But he wanted to write and to tell a story. These unconventional or invented spellings are the principal mechanism that children use to get meaning across in a second language that they still do not know well. This strategy is not unique to second language

writers but it is particularly important in these contexts; it shows not a poor writer, but a writer in development; a writer begging for support and assistance. With sufficient practice and help from the teacher, this student also in on his way to writing fluently in his second language.

Consider a third example taken from the same class:

Once apon a time there was a  
girl name Elvia and she love  
to dance. She live in a house  
with her family. Wans she went with  
her sister and her name was Erika  
she was toing to pactis to dance.  
Wen they got to the room to  
pratis the teacher told Elvia  
if she want's to dance with your  
sister and she sad yes! a  
will dance. But mother and Father  
will not let you to dance  
with me sed her old sister you  
beter asckt. Wen they got home Elvia toll  
he Mother and Father  
and they said Yes! you will.

Wen she heard Yes  
she was sow happy she was  
craying wen she told he  
older sister Erika she was  
real happy.

And the day's past she  
learnd a lot and she was sow  
happy she learnd to dance.

The End

Notice that the story is coherent and attempts to communicate meaning to the reader. Also notice her punctuation is quite good, and her use of exclamation points and underlining to provide the emphasis needed. But also notice the amount of conventional spellings in contrast to the previous example. Solely on the basis of these samples, we could speculate that the latter student has been in this country longer, or reads more often in English. As students get familiar with words (e.g., games) they will start spelling them conventionally. In general, we have found that high frequency words are spelled conventionally, low frequency words unconventionally, and that

invented spellings are the students' principal strategy to communicate meaning; to go beyond themselves and their limitations in English to communicate with others.

The instructional implications of this analysis are as follows: First is that there are great possibilities for helping the students develop into writers not only in one but in two languages. Second is that the students' errors, as writing researchers often point out, are very revealing of the strategies that children use to communicate meaning. As we have suggested in the case studies presented in this report, let the students write (and read). Provide the students with ample opportunities to use writing for a variety of purposes, but especially to communicate something to others of importance to them.

Towards a meaning-based assessment of writing. As part of our work, we've developed a scoring system that privileges the students' attempts at making meaning over adhering to writing conventions, and that provides teachers with information about the students' strengths in writing for communication. Our procedures are as follows:

1. We first decide whether a text can be scored as written (e.g., the first two examples presented above) or whether it needs to be re-written for clarity (e.g., the third example presented above). The purpose of re-writing is to make the surface features of the text, a major distraction when the orthography is poor or the student uses many invented spellings, as transparent as possible so that the reader can concentrate on the writer's attempts at communicating meaning.
2. We then check the genre, because it will help us evaluate the appropriateness of the writing and the development of what is written. That is, one would not evaluate a poem the same way that one would evaluate a report.
3. We then start scoring, ranging from 1 to 10, deciding first on the communicative success of the text, or whether it flows logically from beginning to end.
4. We then assess substance and semantics and how well the writing is developed.

5. And we follow with an assessment of syntax, spelling, and punctuation. All three of these are assessed in relation to the extent that they influenced, detracted, or enhanced the readers ability to gain meaning from the text.

6. Additionally, we check for, but do not score, other language influences, an important topic in second language writing, as we have discussed. And we also check for any illustrations on the part of the student and whether they enhance meaning.

7. The writer is given both scores within categories and an average score. The score is intended as another index of assessment rather than a way to compare the writer to other students. Two scores of eight may be non-comparable, depending on the categories in which the student exhibited strengths or limitations.

Following these procedures is what helped us develop the insights reported earlier about students' writing in two languages. We have achieved inter-rater agreements of .85 and higher when we scored writing samples.

Beyond writing samples. Writing samples, however, have their limitations. For example, they usually do not involve revising or editing, critical aspects of writing. But perhaps more worrisome, is that it is very easy to underestimate what a student can produce by relying on a contrived task like collecting writing samples. Furthermore, it is a relatively asocial task, it elicits little or no interactions and is the product of the adult, requesting the children to comply. Writing samples can be seen as an attempt on the part of the children to fulfill our needs, but not their own. There usually is not desire or obligation on their part to put any real thought into the writing, or to elaborate a topic.

During the course of the project we experimented with other forms of eliciting student writing<sup>1</sup>. Particularly successful were the dialogue journals. Unlike the writing samples, journals are thoroughly social in nature, they involve an obligation to reciprocate; an obligation reminiscent of the households' exchanges of funds of knowledge. The journal requires the sharing of personal experiences, knowledge, and views between student and adult (see Staton, 1988). Interacting with a student

through these journals, provided the student with opportunities to pull in their funds of knowledge into the writing, and the topic and method of exchange is predominantly controlled by the children. These journals are also an important way for teachers' to discover children's funds of knowledge.

First consider the following example taken from our writing samples. It is written by a fifth grade girl.

**Animals**  
 Animals are like people and they help each other. I love animals because they are pretty and lovely. Some animals take care of people when they are in dangerous. Animals are smart they are smater than people. It's very fun to play with animals. I like to play with animals because they are lovely.

Susana has completed the task well by writing about something she likes or is interested in, yet she has not elaborated or explained why she like animals. Her writing sample is better than some, but it feels limited, constrained.

Compare the above to what Susana has written in the journal. In initiating the dialogue journals, the research assistant (R. Andrade) presented it to the children as follows: "I am very interested in what children like yourselves think and know, what interests and preoccupies you. In the dialogue journal, I would like for us to begin individual dialogues. I would like you to initiate the dialogue with whatever interests you. Always keep in mind that this is your dialogue, you decide what to discuss, what to write, and how to write it." She gave no writing restrictions, journals could be written in Spanish, English, both or whatever pleased each child

Let us quote from the researcher's notes: "This said and notebooks distributed, the children began to write. Thereafter, upon completing their writing, they would return the journals to the me. I then read them, responded, and returned them upon a subsequent visit to the school. I initially began with one visit weekly, this quickly became a twice weekly event lasting between 30 minutes to 1 hour during class time.



As I arrived at the school shortly before the lunch hour to observe interactions among and between the children, several children (5-8) would join me for lunch and would then directly return to the classroom with me, thus skipping their lunch play hour to begin reading and writing in their journals."

Here is Susana's journal entry:

My name is Susana, my last name is \_\_\_\_\_, the same as the school. Those that don't know me misspell my name. Some write it with a Z others with 2 Ns. It upsets me when they misspell or mispronounce my name. I am ten years of age, I will be eleven years of age on July 16.

They almost always make me a party at home. Not too long ago there was a spelling contest here at the school. I participated in that contest. I won in that contest. On April 21 I have to go to the Community Center to participate with the other schools in Arizona. Two girls or boys are going from each school in Arizona. I must study the words a lot to participate in that spelling contest. When I won the spelling contest they gave me to certificates. Last year I also participated but I did not win because I made a mistake in 'excitados' I forgot the c. But that time I was a little nervous. My favorite food is Campbells chicken soup. Also, I really like ice cream and frozen popsicles. When I get home I watch cartoons or do my homework. Also I play. First I say hello to the people and then I give my mother and my nana a kiss. My father arrives from work at four. My mother takes care of a little boy, the little boy's name is Arturo but we have nicknamed him Magu. I love Magu very much. Magu is playful, good, cute and pretty and ... he eats everything and he is not a crybaby. Now Rosi I would like to ask you some questions. What is your name? How old are you? You are pretty, nice you can really tell. You are like a star which is in the blue sky. You are like a flower that is planted in the fertile ground. That is all thank you.

This is her second entry:

Dear Rosi the spelling contest is only in Spanish. I participated only with fourth, fifth and sixth grades. Yes Rosi I have one sister who is named Gris... she is 9 years old and is in 4th grade with Mrs. D. My other little brother is in Head Start and he is named Carlos and he is 5 years old. He is named like my father. I have only two siblings. Magu is a year and a half old. Yes I like to create poems because it entertains me to think. Some of the poems are

#### The Black Panther

I would like to be a black panther to roar and growl  
in the large and brilliant jungle

#### Time and Life

Give yourself time to work; the price is success.  
Give yourself time to think; it is the origin of power.  
Give yourself time to love and to be loved; it is the  
privilege of the gods.^  
Give yourself time to play; it is the secret of eternal  
youth.  
Give yourself time to read; it is the basis of knowledge.  
Give yourself time to dream; it is like hooking your car to  
a star.  
Give yourself time to make friends; it is the road to  
happiness.

Give yourself time to look around; the day is too short to  
be selfish.  
Give yourself time to laugh; it is the music of the soul.

Susana freely expressed her attitudes and opinions in the dialogue journal, yet she would not share or hint at the same with her teacher. The teacher was surprised when he glanced at some of the journals at the quantity and quality of the writing, and realized how little he knew the children, although they had been in his classroom for six months.

What a completely different assessment of writing one can obtain through this method. Let us conclude this section by quoting the researcher again: "Any earnest attempt at gauging children's capabilities cannot be made in one swift collection of data, but must be done over time, taking into consideration the children at their best, as well as at their worst. Children's brilliance or lack thereof cannot be ascertained in a fleeting moment, especially when children are not given opportunities to demonstrate their talents and intellect on their own terms. Yet it is seemingly interesting to find how quickly student assessments are made on such limited information, when we knowingly would certainly not want to be judged on one particular performance, but on a more general basis. The hastiest judgments are generally the poorest, yet they reign superior in educational settings" (Andrade, 1990).

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<sup>1</sup>Rosi Andrade conducted the research reported herein.

## Discussion

### A. Summary of outcomes

We have reported on an approach to the study of literacy in school and community settings that has as its central premise the inseparability of the individual from the social. We have argued that there are great advantages to this approach, especially that in studying human beings dynamically, within their social and cultural circumstances, in their full complexity, we gain a much more complete and, we believe, a much more valid understanding of them. We also gain, particularly in the case of language minority children, a more positive view of their capabilities and how our pedagogy often constraints, and just as often distorts, what they do and what they are capable of doing.

Our approach calls for a re-thinking of the role of teachers and of the role of students as learners. We have emphasized the importance of the teachers working collaboratively with colleagues in analyzing their practices and in developing change within their classrooms. We have also emphasized the importance of viewing students as learners who actively use literacy to pursue social and intellectual interests and goals. And we have underscored the importance of local resources, what we refer to as funds of knowledge, in facilitating the teaching and learning of literacy.

We have learned from our analysis that the organization of funds of knowledge among the households is part of the social and cultural system of daily life and that literacy becomes is among the most important abilities that allow such funds to function efficiently. The funds of knowledge to which children have access are socially distributed throughout the household clusters described in this report, so that children acquire information and relationships from a variety of sources. Because learning does not result from a single source, the context for the acquisition of funds of knowledge by children is itself "thick." Diverse social relations relations create multiple domains for learning, with many opportunities for taking risks and for experimentation.

How can teachers take advantage of these funds of knowledge? It is by creating classroom circumstances that are both pedagogically sound and academically rigorous. Our case studies represent specific examples of teachers and students at work. We relied on these case studies to help the readers experience these classrooms and study group so that they can visualize what to expect and how the ideas captured in the studies may relate to their own local settings or their own ways of teaching. Three factors became particularly clear in the case studies. One is the difficulties of change. There are no easy, quick, and neat prescriptions for change in education, and no guarantees for success. In attempting change teachers are challenging tradition. They can expect uncertainty, as they move into new terrain, and even fear of losing of control over the students. Is the role of the teacher to provide information and implement a set curriculum, or is it to guide and support students in their own learning? Must teachers assign topics of study, or can the students pursue their goals and interests? As Maria pointed out in her case study, she had many more questions than solutions. She felt uncertain, did not know how to start, and there was no one there willing to tell exactly her what to do.

However, Maria was not alone, others in the study group were equally hesitant, while others seemed very confident about their work and what the students in their class could accomplish. Maria used the experiences and support of others and the information gained from articles to guide her initial attempts at change. But as she stated, even if one still has questions, one has to start somewhere, maybe by rearranging the classroom, maybe by taking into account the children's interests in developing a lesson plan, or by getting new materials for the students to read.

A second factor is that teachers never change independently of their students. As teachers attempt change, the students will react. We found that students need to go through the change process themselves, for they will also be challenging traditions on what it means to be a student or a learner in the classroom. And the students also need support and encouragement, and need to use each other as resources to understand what

is expected of them. So the classroom will get noisier, but it will also get busier, as students start adjusting to new roles and more flexibility in their learning. The change will not be neat, and teachers will wonder if they are doing the right thing, or whether they should pull out the worksheets. Among the most difficult things for teachers to do, we should add, is to learn how to share the control of the classroom and how to trust that the students will learn. For the teachers in our case studies, sharing control and developing trust were keys to their success. They all mentioned these factors as essential to establishing a classroom community where the students gain control over literacy as part of their work. These same factors are involved in developing a social network for teaching, as Ina did in her classroom. There must be a willingness to share lessons with the parents and have them provide the content, and a willingness to trust that what they have to offer is worthwhile.

A third factor is the importance of teachers learning how to articulate how they are teaching and why they are teaching that way. Teachers need to develop a language and vocabulary that helps them explain their decisions to others, including students, parents, and other teachers. Karen was always thinking out loud in her classroom, letting the students know what she was thinking, what she was writing, or what she was trying to accomplish. Similarly in the study group, she was able to share her thinking with her colleagues and explain her actions and decisions in the classroom. This language is developed through the reading of theory and the analysis of practice, and through the discussion of issues with peers and other colleagues.

These three factors, dealing with the uncertainty of taking risks, the interdependence of teacher and student change, and being able to explain the work to others, all help re-define the role of teachers, and as a consequence what we can expect from students. If our case studies are any indication, teachers can expect the following from their students:

a) Greater involvement from the students, as their interests become legitimate topics of study.

- b) More reading, including different types of texts, as reading becomes the essential activity to accomplish their projects and tasks in the classroom.
- c) More writing and a greater variety of writing as writing becomes the essential way to communicate with others, make a point, or influence another's point of view, or a way to reflect and think about one's own work.
- d) They will gain in confidence as they realize that they are capable of advanced academic work and that they can take charge of their own learning and explore new areas of study either independently or with the teacher's or their peers' help.
- e) They will use their bilingualism as a resource for thinking as they understand how knowing two languages expands one's ability to enter new social and literate worlds.
- f) They will want to display their knowledge to others through activities or exhibits that they have conceived and developed.
- g) They will learn how to articulate their experiences and learning as talk becomes a cornerstone to the classroom's functioning.
- h) They will attempt to relate their classroom learning to what occurs in their communities as they start making connections through their schoolwork and through the participation of parents and community members in their activities.

What can teachers expect? The most difficult challenge for the teachers is to seriously question their ways of teaching and to develop new practices that make sense to them and help their students. In doing so they can expect the following:

- a) To understand how their practices limit or facilitate their students' academic development.
- b) To give academic goals top priority, especially if the classroom contains limited English speaking students.
- c) To share control of the classroom with the students, where the students' interests and goals count as much as the teacher's.
- b) To think of others, especially parents, as resources for their teaching, and to share the responsibility for teaching with others.
- c) To emphasize student questions over teacher questions, and active learners over passive students.
- d) To evaluate students on the basis of real uses of reading and writing, how they develop their activities, and the academic quality of their products.

## **B. Implementation issues**

We perceive that the major barriers to implementing the work described in this chapter are tied to institutional beliefs and expectations. After all, as our case studies illustrate, we are suggesting fundamental changes in the roles of teachers and the roles of students as learners. These changes emphasize the students' own engagement in the



learning process, using literacy for the development of meaning, with the strategic assistance of teachers. These suggestions go against the grain in many schools and districts where, for example, there is an unquestioned assumption that Hispanic and other working class students are simply not capable of doing the type of work described herein, that they need and deserve low-level, rigid, skills training. The complaint may be that what we suggest may be fine with the students we worked with but that their specific situation is unique; that in their particular districts teachers and parents really do not care about the students' education and that, in any case, it will take the students a long time to be able to use literacy as part of their own research and learning activities, as we advocate. What we propose is simply not practical; that it does not fit easily within most classrooms as currently structured.

Another objection may be that a sufficient amount of trade books and other materials are not available. And, especially, that until the appropriate materials are available, why start changing instruction, the teachers will not know what to do if they do not have some sort of guide or manual. In any case, the teachers are too busy with other matters or unmotivated to be attending study groups. Or as we have heard often, everyone knows that teachers won't read anything that is too complicated, such as research articles or books; they must be told what to do, not asked to think.

How do we challenge these views? We suggest starting with the teachers' study group, as a setting for thinking and analysis, and by relating the study group to changes in literacy practices. The goal is for teachers to develop new frameworks for understanding their teaching and for developing changes in their practices that make sense to them and their students. Teachers need not work alone. As our experiences suggest, there are many within the schools (teachers, principals, administrators) and within the community (parents) willing and eager (and with the funds of knowledge) to work for change, to contribute to positive change. Our recommendation, following our analysis, is to create social networks for change. The strategic involvement of others in the change process "is a matter that derives from the principle that those

who are or may be affected by the change should have some part in the change process because only through such involvement can they become committed to the change" (Sarason, 1982, p. 294). Through the involvement, they come to see the change as their own. This principle is very much like the type of pedagogy we have advocated in this chapter, where the children and teachers, as well as parents, those who are most affected by change, are actively involved in the process. The objective, then, is to seek and obtain the support of those who are essential for the proposed change.

### C. Replication Issues

The case study examples presented above illustrate essential aspects of our approach, such as developing participatory, meaning-based literacy instruction where the intellectual level of the activity is always high, and where the teacher shares much of the control of the class with the students while guiding and assisting their developing uses of literacy as part of their own inquiry. We also highlighted the importance of creating a special setting to support teachers' thinking and intellectual work and provided a vivid example of how one teacher altered her practices to create a social network for teaching, characterized by community members contributions to her students school work. How to start if one wants to apply our ideas elsewhere?

We are convinced that the term "replication" is a very misleading metaphor. It implies, erroneously from our point of view, that all one has to do is copy (after all, that is the definition of replication) someone else's work or follow a set of prescriptions that will lead to success. This approach ignores the importance of the dynamics of local issues and contexts in influencing how one works, what Goldenberg and Gallimore (1990) call the importance of local knowledge. A better choice of terms than replication would be "re-invention." It implies that one can borrow ideas from elsewhere but that one must apply those ideas anew by taking into account the specifics of local settings. Participants in each setting must re-invent the innovations to fit specific local concerns and contexts.

Central to this re-invention (and re-contextualization) is the thorough involvement of teachers. No innovation has a realistic chance of succeeding unless teachers are able to express, define, and address problems as they see them; unless teachers come to see the innovation or the change as their own. Admittedly, this process takes a good deal of effort and is time consuming. We offer no easy recipes for teaching, but how could it be otherwise, we are dealing with the complexities of schooling. From our perspective, the ultimate outcome of an innovation (or of a re-invention) depends on how teachers become part of the decision and process to initiate change. One important way to facilitate such serious teacher involvement, as we propose, is through the development of study groups. Such a setting can be fairly easy to implement by any school or district, as our experiences suggest.

Our study group began with the idea of developing a place to discuss with the teachers the information we were obtaining about the households' funds of knowledge. On the average, ten teachers (we recommend four to six) met once a week for approximately two hours with two members of the research team (also teachers getting advanced degrees). Additional meetings during the week were arranged as needed. We usually met in the library of one of the schools participating in the project. However, we also met in other locations, for example, in a classroom where the teacher wanted to show how she was arranging the room, in a local restaurant where we held the meetings over dinner, at the university, and sometimes part of the group would meet at someone's house. Meeting weekly fostered the formation of new social relationships among the teachers (six of them worked at different schools) that would lead to the exchange of ideas and resources within the group, much like the household networks we were studying in the community.

The focus of the teachers' study group evolved as the year progressed and as the teachers became comfortable discussing their experiences and seeking assistance from each other. The original intention of sharing the household information with the teachers was adapted to the particular interests of the group. That is, rather than

prescribe, for example, how to organize lessons that could tap into the households' funds of knowledge, we used the group to address the teachers' interests and concerns within their specific classrooms. The general concern of the teachers was the reading and writing development of the students and how to organize more productive lessons or classroom experiences that would take advantage of the students' abilities. Although our main concern was to have the teachers focus on the resources outside the classroom, they preferred to start by discussing the particulars of instruction within their classrooms. We followed their lead.

As the work progressed, we made our theoretical and ideological predilections quite clear: current instructional practices, with an emphasis on rote-like instruction, passive students, curtailed interactions, and low-level academic work, seriously constrain what children are able to learn and display intellectually; we favored meaning-based, interactive approaches to literacy instruction, where the children have considerable control over their learning, and where they are active users of literacy to accomplish high level academic tasks. Beyond its pedagogical merits, this approach provides ample opportunities to apply funds of knowledge in classroom practice, facilitating strategic connection between parents, their knowledge, and the students' academic work.

For the first three months of the study group, the teachers assessed what they wanted to change in their classrooms, read articles about literacy instruction, and discussed how they could go about planning and implementing change in their classrooms. Those teachers who were already planning or conducting more "participatory" lessons, in which the students were reading for meaning with trade books, or using reading and writing in support of a broader classroom activities or theme studies, or taking advantage of the households' funds of knowledge as part of the students' academic tasks, discussed their work with unusual candidness, offered suggestions and advice as well as learned from the other teachers. In short, the

teachers became resources for each other; they developed their own supportive network.

Our analysis reveals several resources for change that came together as part of the study group's work, they include the following:

1) Peers: the role of other teachers in expanding each other's theoretical and practical development, and in providing a forum for interactions and reflections about practice and theory.

2) Research literature: the important role of studying the literature about the study and teaching of literacy.

3) Classroom analysis: the examination of practices developed in conjunction with the study group work, especially how the practices influenced specific students' literacy use.

4) Mentor: the key role of a mentor in modeling and explaining alternative practices.

5) Courses: the importance of university coursework in developing new knowledge and in engaging her in inquiry.

6) Community: the use of the broader community as a source of ideas.

The study group served a variety of purposes, from supporting on-going practices to being a catalyst for change in some classrooms. A major function, however, was in mixing these resources strategically depending on the needs of a particular teacher. We wanted to accommodate diversity, and help the teacher's forge their own paths to change. Throughout the experience, we did not want to impose but collaborate with the teachers. In most cases, we felt that the teachers already possessed much of the knowledge to change or improve their literacy instructional practices, the role of the study group is to assist the teachers' thinking in developing innovations.

Needless to say, the support and encouragement of principals greatly facilitates the process of inquiry and change. Principals are in an especially good position to develop such study groups and assist teachers. In our experience, the principals were willing to support the study group and the experimenting with instruction, as long as the teachers (and the principals) felt that the work would benefit the students. All of the principals were invited to attend the study groups, although only one came

occasionally. Most of the teachers, in turn, were ambivalent about principals participating in the group, feeling that their presence would inhibit the discussions and the planning. As expected, some of the teachers believed that their principal supported if not encouraged attempts at innovation, while others felt that the principal was more concerned with routines and issues that were irrelevant to their teaching. All of the principals expressed that at a minimum they wanted to be informed about the work taking place in the classrooms. To our knowledge, none discouraged the teachers from meeting as a group or from trying to implement changes in practice that they felt would help the students.

As of this writing, three of the schools are planning to initiate teacher study groups as part of their weekly routines. For example, two of the schools have agreed to modify their schedules so that teachers can meet every Wednesday afternoon in study group formats. The purposes of these study groups will vary, depending on the interests of the faculty and issues of concern within the specific school (e.g., the development of literacy in the students' first language). At a third school, we have been invited to help organize a study group to address the principals and teachers' concerns about fostering literacy in both English and Spanish. We take this development as a sign that our suggestions are feasible and reasonable.

However, we do not underestimate the difficulty of the process we have undertaken and the time needed to establish new literacy routines in classrooms. A major problem with projects such as ours, as Sarason (1982) has emphasized, is assuming that one can program change by the calendar. There is often an unrealistic time perspective of the difficulties of obtaining positive change in places as complex as schools and classrooms. Researchers are notorious for underestimating the difficulties of going from a good idea or promising results to sound classroom practice. So, without doubt, time is a crucial element. Teachers need the time to meet and think, as well as the time to conceptualize and implement change in their classrooms. The students need time to understand what is expected of them, and in our approach, to assume much



more responsibility for their schoolwork. Both teachers and students also need time to understand how to evaluate success, when the major criteria is what one does with literacy, rather than a score on a static test with little or no relation to sophisticated uses of reading and writing.

In addition, money is another important factor. We paid the teachers in the project for their work after school hours. They were remunerated for their participation in the study groups and in any other activity related to the project. Did paying the teachers make a difference in their rate of participation and in their willingness to try out a new approach? Possibly. We are sure that there were a couple of teachers who attended the study group because they were getting paid. However, there were also a couple of teachers who did not participate actively despite the lure of money. The majority of teachers were pleased that they were getting paid, after all they were professionals participating in a research project, but were motivated to participate in an effort to help the children develop their literacy abilities. If our experience is any indication, most teachers are concerned about the students in their classrooms, want them to do better, and are willing to put in the time and effort to assist them. If they receive money or academic credit, it is a welcomed change, but not a necessary one to get teachers to meet, analyze their practices, share ideas and opinions, and try to improve the ways they are teaching. Most teachers still work in relative isolation from their peers. They want and appreciate the opportunity to meet with their peers to discuss and deal with substantive issues of instruction.

#### D. Implications for educational practice

Perhaps the most important resources for change cannot be purchased with money. We are referring to the ample funds of knowledge found in the households, and we are convinced, in every classroom. Through our household analysis we documented the existence social relations or networks that connect households to each other and facilitate the transmission of knowledge among participants, as well as skills and labor. We termed these diverse, socially-mediated transactions the exchange of funds

of knowledge. It is how these social systems of knowledge operate that has important implications for schooling. Our analysis shows that these social relations of exchange are multi-stranded and flexible in that they involve many people and can be arranged or re-arranged depending on the specific needs of the participants. Further, these exchanges are reciprocal. It is this reciprocity that establishes and maintains the necessary trust among participants to keep the system active and useful. The idea, put simply, is do the most with what you have, or what you can obtain with the assistance of others.

This concept of funds of knowledge has important implications for re-defining the resources available for use in classrooms:

(1) Households as cognitive resources: We used a sample of 30 households and documented the breadth of knowledge found among these homes (see Appendix A for a listing). We can safely say that we can easily increase that list if we take into account every household's social network. Consider that every classroom has about 30 households or more represented by the children in the class, which makes accessible to every classroom a comparable list of funds of knowledge to use as resources for teaching. By adopting our funds of knowledge perspective, teachers can think of their students' households, not as impediments to learning, but as potentially important resources for instruction. Perhaps as important, this perspective may facilitate a re-definition on the part of the parents themselves, as having knowledge that is relevant to their children's school work.

(2) Teachers as resources for each other: The main function of the study group is to facilitate the teachers' use of other teachers as resources. As we have shown, the study group facilitates the exchange of ideas, readings, theory, and knowledge about practices. In an important way, then, there is no difference between the way we are suggesting teachers work with students and the way we worked with teachers (for a similar point, see Tharp & Gallimore, 1988). We build on the teachers' interests and knowledge, use the literature and our social relationships as resources, and our

literacy to support and extend our research activities. In doing so we respect the teachers as learners, and trust that they can be important agents of change in their classrooms and assist peers to do the same.

(3) Students as resources for teaching: Every classroom is, in a sense, a community that contains its own funds of knowledge that are shared and exchanged by the students, and, if arranged, with the teacher as well. A key to our model is to implement an instructional approach that takes maximum advantage of the students' interests and knowledge to address academic goals. We have identified several principles of instruction as part of the case studies (also see bibliography at the conclusion of this chapter). Let us reiterate some of the main ones here, for they are an important resource for guiding practice.

a. Always maintain the intellectual integrity of schoolwork by engaging students in academically challenging and interesting activities. Literacy develops most powerfully in response to the students' social and intellectual needs. The role of the teacher is to mediate and guide activities that fulfill those needs.

b. Trust that all students can be learners and respect their intellectual abilities. Teacher and students must co-create diverse and appropriate (authentic) circumstances for children (and teachers) to apply their considerable linguistic and intellectual resources. A students' lack of English fluency is never an impediment to full participation in academic tasks at the highest level possible.

c. The goal of reading and writing is the making of meaning. Obtaining and communicating meaning (to others and to one's self) are the only legitimate reasons for using literacy.

d. Treat bilingualism as a resource to expand the students' literate and social worlds, which in turn creates new contexts for their thinking.

e. The materials in a classroom, including texts, must be meaningful and relevant. These materials are tools and resources for learning, their purpose is to extend the amount and type of learning possible for any child.

f. Always consider the students' and their families' funds of knowledge as the bases for instruction, it re-defines the children and the adults in their lives as authentic resources for classroom learning, and facilitates an exchange of knowledge between homes and classrooms.

It is by combining resources of both classrooms and community, by providing teachers with the autonomy to be active thinkers about their work, and the support to make change feasible, that we can release the potential in teachers and students to make change a realistic possibility.

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## APPENDIX A

### CONTENTS:

- Background Characteristics  
of Sample Households
- Household Fieldnote Sample
- Home Literacy Materials Checklist
- Classroom Fieldnote Sample
- Classroom Reading Miscue Assessment
- Retelling Analysis Protocol, Spanish
- Retelling Analysis Protocol, English
- Reading Sample, Spanish
- Reading Sample, English
- Meaning Based Scoring, Writing Samples

Background Characteristics  
of Sample Households



**BACKGROUND CHARACTERISTICS  
OF THE SAMPLE HOUSEHOLDS**

	<u>MALES</u>	<u>FEMALES</u>	<u>TOTAL</u>
<b>Total Sample Size:</b>	<b>(n=24)</b>	<b>(n=29)</b>	<b>(N=53)</b>
<hr/>			
<b>YEARS OF EDUCATION</b>	<b>5.6</b>	<b>5.3</b>	<b>5.4</b>
<b>IN MEXICO</b>	<b>(23)</b>	<b>(29)</b>	<b>(52)</b>
<b>YEARS OF EDUCATION</b>	<b>2.2</b>	<b>2.2</b>	<b>2.3</b>
<b>IN USA</b>	<b>(23)</b>	<b>(29)</b>	<b>(52)</b>
<b>YEARS OF EDUCATION</b>	<b>7.9</b>	<b>7.5</b>	<b>7.6</b>
<b>TOTAL</b>	<b>(23)</b>	<b>(29)</b>	<b>(52)</b>
<hr/>			
<b>NATION OF BIRTH</b>			
<b>USA:</b>	<b>13%</b>	<b>10%</b>	<b>11%</b>
<b>MEXICO:</b>	<b>79%</b>	<b>83%</b>	<b>81%</b>
<b>OTHER:</b>	<b>8%</b>	<b>7%</b>	<b>8%</b>
	<b>(24)</b>	<b>(29)</b>	<b>(53)</b>

**BACKGROUND CHARACTERISTICS  
OF THE SAMPLE HOUSEHOLDS  
(continued)**

**REGION OF BIRTH**

<b>SW USA</b>	<b>13%</b>	<b>10%</b>	<b>11%</b>
<b>NO. MEXICO</b>	<b>71%</b>	<b>69%</b>	<b>70%</b>
<b>OTHER</b>	<b>17%</b>	<b>21%</b>	<b>20%</b>
	<b>(24)</b>	<b>(29)</b>	<b>(53)</b>

	<u><b>MALES</b></u>	<u><b>FEMALES</b></u>	<u><b>TOTAL</b></u>
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<b>BORN IN TUCSON, AZ:</b>	<b>8%</b>	<b>0%</b>	<b>4%</b>
	<b>(23)</b>	<b>(29)</b>	<b>(52)</b>

<b>YEARS IN TUCSON, AZ:</b>	<b>11%</b>	<b>12%</b>	<b>12%</b>
	<b>(15)</b>	<b>(25)</b>	<b>(40)</b>

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<b>HAVE RELATIVES</b>	<b>93%</b>	<b>100%</b>	<b>97%</b>
<b>IN TUCSON, AZ</b>	<b>(14)</b>	<b>(23)</b>	<b>(37)</b>

<b>MEAN NUMBER OF RELATED</b>	<b>7.9</b>	<b>5.8</b>	<b>6.5</b>
<b>HOUSEHOLDS IN TUCSON</b>	<b>(12)</b>	<b>(23)</b>	<b>(35)</b>

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	<u>MALES</u>	<u>FEMALES</u>	<u>TOTAL</u>
<b>CURRENTLY EMPLOYED</b>	<b>79%</b>	<b>48%</b>	<b>62%</b>
	<b>(24)</b>	<b>(29)</b>	<b>(53)</b>

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**LEVEL OF WORK ACTIVITY**

<b>FULL TIME</b>	<b>71%</b>	<b>50%</b>	<b>69%</b>
<b>PART-TIME</b>	<b>4%</b>	<b>50%</b>	<b>23%</b>
<b>UPON DEMAND</b>	<b>4%</b>	<b>0%</b>	<b>3%</b>
<b>RETIRED</b>	<b>8%</b>	<b>0%</b>	<b>6%</b>
	<b>(21)</b>	<b>(14)</b>	<b>(35)</b>

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<b>MONTHLY HOUSEHOLD</b>	<b>\$1212</b>
<b>INCOME</b>	

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**OCCUPATIONAL CATEGORIES**

<b>RETIRED</b>	<b>3.8%</b>	<b>8.3%</b>	<b>0.0%</b>
<b>EXECUTIVES, ETC.</b>	<b>1.9%</b>	<b>4.2%</b>	<b>0.0%</b>
<b>SMALL BUSINESS</b>	<b>1.9%</b>	<b>4.2%</b>	<b>0.0%</b>
<b>ADMINISTRATOR</b>	<b>1.9%</b>	<b>4.2%</b>	<b>0.0%</b>
<b>CLERICAL/SALES</b>	<b>5.7%</b>	<b>8.3%</b>	<b>3.4%</b>
<b>SKILLED</b>	<b>15.1%</b>	<b>25.0%</b>	<b>6.9%</b>
<b>SEMISKILLED</b>	<b>3.8%</b>	<b>0.0%</b>	<b>6.9%</b>
<b>UNSKILLED</b>	<b>38.1%</b>	<b>33.3%</b>	<b>31.0%</b>
<b>UNEMPLOYED</b>	<b>5.7%</b>	<b>8.3%</b>	<b>3.4%</b>
<b>HOMEMAKERS</b>	<b>4.2%</b>	<b>28.3%</b>	<b>48.3%</b>
	<b>(24)</b>	<b>(29)</b>	<b>(53)</b>

Household Fieldnote Sample

- A. HH ID 023
- B. J. Tapia
- C. 02/01/90
- D. 6:10-8:45pm.
- E. Language of the interview.
  - 1. Spanish and English
- F. Persona
  - 1. Salvador [redacted] (father), Mary Ann [redacted] (mother), Chavita Angulo (son), Rosi [redacted] (daughter, target student), Mary Ann [redacted] (daughter), Suzi ? (daughter), Crystal (Suzi's daughter).
  - 2. Alberto [redacted] ( Mr. [redacted] brother), and his friend Ana came to visit the family around 6:30pm. Ana left around 7:15pm. They did not participate in the interview.
- G. Summary
  - 1. Collection of data on household income. Repairs on Alberto's car.
- H. Informal visit.
  - 1. Arrival at the residence.
    - a) I arrived at the [redacted] residence around 6:10pm. Mrs. Angulo welcomed into the house. Mr. [redacted] asked me to sit down in my favorite chair. Chavita, Mary Ann (daughter), and Rosi were also present in the room.
  - 2. Education, parental assistance on homework assignments.
    - a) I began to talk to Mr. [redacted] about my visit to the dentist earlier on the day. I noticed that Rosi was working on her homework (I think it was a history or a social science assignment. Rosi had to read a chapter and then answer the questions at the end of the chapter. The lesson was in English). Rosi had problems with some of the questions, and she asked her mother for assistance. Mrs. [redacted] sat down next to Rosi, and she began to read the passages in the book. She then began to ask questions to Rosi. It seems to me that she was trying to clarify the material for her daughter. However, I was not able to write down the specific oral interchanges between the two because I was talking to Mr. [redacted] at the same time.
  - 3. Household income: member's salary and expenditures.
    - a) Earnings--
 

Mr. [redacted] said that he earns about \$100.00/week on his odd jobs (construction, plumbing and electrical repairs). This is \$4,800/year (Mrs. [redacted] said that the figure is more like \$5,000/year). Mr. [redacted] said that this is highly variable because sometimes he may earn up to \$1,000.00 in one week, but that other times he may only earn \$100.00 in three weeks. He added that he does not have an exact figure because he is paid mostly in cash. He said that he likes to be paid in cash because he does not have to included it in his income tax returns. He added that he does not get any money back, but that he does not pay either.

Mr. [redacted] receives \$2,719.00/month from the rental of his apartments and one lot in Nogales, Arizona and Tucson ( 1 house and 3 apartments in Nogales; 4 apartments in Tucson). The total income from these properties is

\$32,628/year.

Mr. [REDACTED] receives from Suzi and her husband \$50.00/month for living expenses (Suzi, her husband, and Crystal moved into the [REDACTED] residence 4 months ago). Mrs. [REDACTED] said that they only charged this amount because they want to help them out.

Mrs. [REDACTED] sells tamales once a year, and she earns about \$100.00. The children earned \$150.00 last year from the sale of candy and fruits. Rosi, on her own, sells "esquite" once every three months. She earns \$3.00 in each sale. Mrs. [REDACTED] makes the "esquite" for Rosi. Rosi sells the "esquite" in the neighborhood.

b) Expenditures--

1- Food--Mr. [REDACTED] said that they spent about \$250.00/week on food (Mrs. [REDACTED] said that before Suzi and her family moved in, they spent about \$170.00/week). They include soap, detergent, toilet paper, and other items in this category.

2- Utilities--Electricity: \$100.00/month; Water: \$120.00/month; Gas: \$100.00/month (electricity, gas, and water includes the utility costs of the two apartments at the rear of the house); Telephone: \$45.00/month.

3- Repair and maintenance of properties--Last year, \$2695.00. On his own house, Mr. [REDACTED] has spent about \$14,000.00 over the last three years on additions and remodeling. He has also spent about \$5,000.00 on furniture over the last three years.

4- Clothes--They spent about \$300.00/year per person. Mrs. Angulo usually buys clothes in September and for Christmas.

5- Books, magazines--\$100.00/year for children's books and magazines. Mrs. [REDACTED] spends about \$100.00/year on books for herself, and about \$4.00/week on magazines. Mr. [REDACTED] spent \$30.00 last year on auto repair books.

6- Recreational--\$20.00/week for taking the children to the movies and for dining out. Mr. and Mrs. [REDACTED] also spent about \$20.00/week for movies and for dining out.

7- Family assistance--\$65.00/month for their daughter's, Araceli, dental bill. \$30.00/month given to Mrs. [REDACTED]'s mother. \$100.00/month for purchasing clothes for their grandson and granddaughter, and the rest is given to their daughter Veronica.

8- Other--\$2.00/daily for Mr. [REDACTED]'s medicine for his diabetes. Mr. [REDACTED] gives his wife \$100.00/month for her own miscellaneous purposes.

4. Purchasing decision making/payment of bills.

Mrs. [REDACTED] said that they go to Fry's to purchase most of the groceries. Before they used to go to Abco, but she feels that it is cheaper at Fry's. Mr. [REDACTED] added that it is not only cheaper but that the fruits and vegetables are much better. Mrs. [REDACTED] said that they do the grocery shopping together, and that she writes a grocery list to remind herself of the things that are needed. Sometimes during the week they run out of some items, and Mrs. [REDACTED]



is responsible for their acquisition. Mr. [redacted] said that her wife is the one that knows what grocery items are needed. Mrs. [redacted] said that they usually run out of eggs and/or milk and that they end up expending an extra \$10.00. Mr. [redacted] disagreed. He said that it is more like \$50.00. He said that they are going to keep track to see who is right.

Mrs. [redacted] said that she is mostly responsible for purchasing clothes for herself and for her sons and daughters. She said that she buys most of the clothes in Mervins and at J.C. Penny. She uses the lay-away services at these stores. She also buys most of her blouses at Factory to U. She usually gets the blouses at this place for \$7.99. I asked them about how they go about purchasing these items and how they find out about the price of the items. Mr. [redacted] told me jokingly that his wife spends all her time at the department stores, "Es que no sale de las tiendas." I began to write down this information, and Mr. [redacted] laughingly told her wife that I was writing it down. Mrs. [redacted] said that she goes to the department stores two or three times per week, and that is how she becomes aware of the different prices. She added that she also looks at the advertisements in the newspaper.

Mrs. [redacted] is responsible for paying most of the bills. She usually pays (cash) the bills at the First Interstate Bank located in the South Gate shopping center. At the bank she buys money order to pay utility bills of their apartments in Nogales, Arizona. She also buys money orders to pay for books that the family order through the mail. They do not have a checking account. I did not feel comfortable asking them more on this matter.

Mrs. [redacted] told me that her husband likes to write everything down, but that she likes to keep everything on her head (this is with respect to household expenditures). She said that her husband learned to do this from his father. However, she said that when she was growing up with her family, neither her mother or stepfather made lists of their budget. Mr. [redacted] said that he likes to maintain a list of the money coming in into the house and of the expenditures as well, but that sometimes they are not able to record everything. Sometimes they wonder about where all the money was spent, and that is when they want to write down everything. "Por ejemplo, cuando no sabemos en que se va el dinero es cuando queremos hacer una lista de todo."

5. Family assistance.

a) Mr. [redacted] owns the house where her daughters Araceli and Veronica live. Veronica's boyfriend, Jose, and her son, Joseph, also live in the same house. Mr. [redacted] said that he charges Araceli only \$280.00 for the rent of the house. The rent should be \$340.00, but Mr. [redacted] wants to assist her daughters by charging a reduced amount.

6. Car repairs.

a) I was talking to Mr. [redacted] about his income earned from his "small" jobs when we were interrupted by Ana. Around 6:15pm

Ana decided to use Alberto's car to go back to her house. However, the car broke down in the middle of the street, right across from the Angulo's house. Ana came into the house to tell Mr. [REDACTED] about the incident. I told Mr. Angulo that we could continue the interview afterwards. Mr. Angulo put on a jacket and went out to look at the car. Alberto, Ana, Chavita, Mrs. [REDACTED], Mary Ann, and myself went out to look at the car. Suzi came out to look at the car, but she went back into the house right away. Crystal and Rosa Linda stayed inside the house.

Ana said that there was something wrong with one of the front wheels. Mr. [REDACTED] began to look at the left front wheel and asked Chavita to get a lamp and the extension cord. Mary Ann was wearing a blouse and Mrs. [REDACTED] told her to get a jacket. Mr. [REDACTED] also told Mary Ann to get some old clothes for him. Chavita came back with the lamp, and Mr. [REDACTED] began to inspect the wheel and the car's suspension. He said that a bolt was missing, and he told Chavita that they had forgotten to put that bolt when they had been working on the car. "Te acuerdas que no sabiamos donde iba la tuerca." Mr. [REDACTED] told Chavita to go and get the bolt. He put down the lamp, and I picked it up so that Mr. [REDACTED] could see better. Chavita came back, and without exchanging words, he got the lamp. I moved back to observe.

Alberto did not "try" to help. He talked to Ana, Mary Ann, and Mrs. [REDACTED] most of the time. Mary Ann noticed a spot light in the sky. She pointed out us. "Look there is a light in the sky." Alberto, jokingly, said that it was Walmart's blue light special.

Mr. [REDACTED] finished placing the bolt, but the car's gears did not work. Mr. [REDACTED] said that there might be something wrong with the transmission. Alberto got into the driver's seat and the rest of us pushed the car up into the porch.

#### 7. Leaving the house.

- a) We all went back to the house. I told Mr. [REDACTED] that if they had other things to do, we could continue the interview some other time. He said that it was up to me because they had no other plans. Mrs. [REDACTED] asked me if I wanted to drink hot chocolate or ice cream. I choosed chocolate. Rosa Linda came to the kitchen and was about to step outside when Mrs. [REDACTED] told her not to go outside barefooted. I finished the interview around 8:45pm.

Home Literacy Materials Check-List

## HOME LITERACY MATERIALS CHECKLIST

Family Name \_\_\_\_\_ DATE OF HOME VISIT 7/22/84CHILD'S NAME YODA ID # \_\_\_\_\_CHILD'S AGE 7/10/13 BIRTHDATE 9/16/77NAME OF FIELDWORKER STANLEY

## INSTRUCTIONS:

The major responsibility of the fieldworker (FW) is to accurately record:

1. literacy materials observed in the home;
2. materials or their use reported by family members, but not directly observed (for example, someone mentions child has books in another room, but FW does not observe directly; someone mentions writing to relatives, but no writing materials are observed).

Use of the materials is not required for them to be checked off. Use and interactions with materials will be recorded as part of the Observation Protocol, not the Literacy Materials Checklist.

Observations and reports should be checked as soon as possible after they are collected. Observed or reported materials should be recorded as

part of the ongoing record of the home visit. The ongoing record can be used to complete the Checklist after the home visit is concluded.

Please add in FW Comments any indication particular materials are not accessible to the target child, or the target child is not allowed to use materials.

If it cannot be determined whether materials are in Spanish, English, or Both, place "?" in appropriate column.

At the end of each family visit, a summary fieldnote should be written which provides a holistic account of the presence and reported use of literacy materials in the home. Any observed use of such materials should be described in full detail. Any reported or implied use of such materials should also be described in detail. Purpose of the fieldnote is to provide a context for those materials observed and/or reported, and thereby a more complete "sense" of the place of such materials in the daily routine of the family and the target child.

	A	B	C	D	E
1	MATERIALS	OBSD.	REPORTED	Span Eng. or Both	Fv COMMENTS
2	adult books—fiction				
3	adult books—n/f		X	SPAN	
4	adult books—texts				(ex. texts for English classes)
5	adult magazines				
6	advertisements				(ex. car brochures, sale catalogues,
7	announcements				
8	applications				
9	bills				
10	calendars				(ex. with holidays noted, aphorisms, etc)
11	checks & checksdk				
12	children's books		X	ENDING (PUSI)	
13	children's mags.				
14	clocks				
15	comic books				
16	game rules				ex. how to play games, instructions,
17	informal notes				(ex. instruction, phone messages, etc.)
18	instruc. manuals		X	INSTRUC.	(ex. how to assemble bike, use TV or appliances, etc.
19	job materials				ex. instructions, workrules, union info, actual work
20	legal documents				(ex. birth cert., marriage license, immigration)
21	mail-genaro				(ex. if undetermined, otherwise check specific type)
22	mail-greeting cards				(ex. birthday, wedding, sympathy.)
23	mail-letters rec.				
24	mail-letters sent				
25	medical info.				ex. brochures, prescriptions with instructions, etc.
26	phone directory				
27	political flyers				
28	posters				(ex. poster of sports figure with message, titles
29	relig-Bible		X	276	
30	relig-child Bible				
31	relig-sunday sch				(ex. exercises from religious instruction)
32	schedules				(ex. family chore assignments, holidays, workdays, etc.)
33	school-books				
34	school-homework				reading or writing assignments, including math, etc.
35	school-notes				(ex. messages from school RE: conference, back to school)
36	school-workbooks				
37	shopping lists				ex. grocery lists, clothes, holiday gifts
38	TV guides				
39	writing-implements				ex. pencils, pens, typewriter, etc.
40	writing-paper				



Classroom Reading Miscue Assessment

## CLASSROOM READING MISCUAE ASSESSMENT

This assessment is designed to help teachers identify what reading strategies a student uses and with what degree of frequency they are used in order to create meaning. The instrument will guide teachers to plan instruction that will improve students' proficiency with effective reading strategies. In this assessment procedure, a student reads a whole story to a teacher while the teacher records how effectively the student strives to make sense of the story.

Listening to students read uninterrupted texts provides a "window on the reading process"<sup>1</sup>. Those who look through the "window" at the reading process have a way to describe, explain, and evaluate a reader's control or ownership of the process.

### PROCEDURES AND DIRECTIONS FOR THE ASSESSMENT

This assessment consists of having a student read an entire selection without assistance; this is done in order to assimilate how a child transacts with a text when he is alone. The selection must be difficult enough for the student so that reading miscues will be made, but not so difficult that he will be unable to continue independently. It is helpful to have two or three selections of different difficulty levels available for use. A good rule of thumb is to choose the initial selection from material one grade level above that which the child seems to be capable.

A tape recorder in good working condition, reading selections, typescripts of the selections, retelling guides, pencils for marking miscues, and a comfortable setting for the student and the teacher are needed. For the first few steps, the whole of the reading experience must be preserved and kept on tape long enough for the miscues to be marked on the typescript, and for final analysis. Before taping, the physical requirements are checked, and all materials are collected. Everything possible should be done to assure a good recording of the reading and retelling; for example, the microphone is placed on a folded cloth with the microphone head toward the reader and away from sources of background noise, and the student's voice is checked on the recorder before the taping proceeds.

- Step 1:** Have all materials ready. To begin the miscue inventory you will need the book the student will read, a typescript for the marking, a retelling guide, a tape recorder, and a cassette tape.
- Step 2:** Keep the atmosphere informal and friendly. Engage in conversation to make the child feel at ease. Then discuss the following procedures with the student.
- The student will read the entire story aloud and will retell the story when the reading is finished.
  - During the reading, no aid will be offered even though there are words which will give problems. The reader is expected to do his best in trying to attack these words. He can use any strategies which he knows, and he can guess. If all else fails, he can skip the word and go on.
  - The whole session--the reading and the retelling--will be tape recorded so it can be re-examined and listened to later. Some notes will be made during the session for the same purpose.

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1. Kenneth S. Goodman, (1973b). Miscues: windows on the reading process. In K.S. Goodman (Ed.), *Miscue analysis: applications to reading instruction* (p. 5). "A miscue, which we define as an actual observed response in oral reading which does not match the expected response, is like a window on the reading process."

- Step 3:** Record the reading and mark the teacher typescript of the story. Do not react verbally or with body language to difficulties the student may be having except to remind the child that he may guess or skip a word if necessary. The child should not be stopped unless he is making too few miscues or he is unable to continue independently because the selection is way too difficult. If the selection is too easy, a more difficult selection should be provided. If the student doesn't generate enough miscues for analysis, the data will be insufficient to compile a representative profile of the student's reading. Also, if the reader seems to be extremely uncomfortable and is having a difficult time, he should be asked to stop. Surface features such as slow, choppy, and hesitant reading do not provide enough evidence to conclude the reader cannot read independently. In fact, miscue analysis often provides the opportunity for such readers to surprise teachers with their reading ability.)
- Step 4:** Ask the child to close the book and tell, in his own words, what he has read. Try not to interrupt the child or to ask any questions until he has had the opportunity to retell the story in his own words. Mark the retelling guide. You may then need to question the child to help him expand the retelling if he has not covered the information on the retelling guide. Here are three major guidelines for questioning:
- a. The questions should make use of no specific information not already introduced by the reader.
  - b. The questions should tend to be general in nature so that their formulation does not lead the reader to insights or views which do not grow from his own reading.
  - c. Any mispronunciations or name changes which the reader has instituted should be retained by the teacher.
- Step 5:** After the child has left, replay the tape to make sure nothing was missed in marking the script or the retelling guide.

## MARKING THE WORKSHEET

### THE MARKING SYSTEM

The marking system is organized around the five overt variations which can occur in oral reading--substitution, omission, insertion, reversal, and repetition of items. In the following examples each of these occurrences is illustrated separately, although in many reading situations multiple misuses frequently occur within the same sentence. All of the following examples have actually been produced by readers.

#### SUBSTITUTIONS

Indicated by writing the substitution above the appropriate part of the text.

He was always like one of the <sup>them</sup>uncles.

The <sup>cat</sup>cat ran down the alley.

#### OMISSIONS

Indicated by circling the word, words, or parts of words.

But he still thought swimming was more fun.

They each selected a library book.

#### INSERTIONS

Indicated by an insertion sign at the point where the insertion occurs; the insertion is then written above the line.

The boy <sup>as</sup>hit the ball

When the chair rocked the boy <sup>off</sup>fell

He can come <sub>^</sub>and see you tomorrow.

#### REVERSALS

Indicated by the commonly used editor's transpositional symbol that shows which parts of letters, words, phrases, or clauses have been interchanged.

"I see what the trouble is!" Mr. Porter said,

She ran around the playground merrily.

On the way, he fell.

## REPITITION

A line is drawn from right to left to the point at which the reader began to repeat. At this point a letter is placed within a circle indicating the reason for the reader's repetition. Readers regress for a variety of reasons, which are outlined below.

### A. Correcting a miscue--(C)

He worked <sup>(C)</sup>at home every night.

The reader first said, "he worked every night." Then he went back to the point at which the omission was made and corrected his omission. Saying "...at home every night."

<sup>(C)</sup>helped  
David helps his father.

The reader first said, "David helped. ..." then stopped, corrected his miscue, and continued the sentence: "...helps his father."

### B. Abandoning a correct form--(RC)

She ran <sup>(RC)</sup>in the store.

The reader first said, "She ran into..." He then regressed, abandoned the correct response and said, "... in the store."

She was always <sup>(RC)</sup>comparing.

The reader first said, "She was always comparing.." He then regressed and said, "...complaining."

### C. Unsuccessfully attempting to correct--(UC)

He had <sup>(UC)</sup>heard a lot.

The reader first said, "He had head..." He then regressed and made an unsuccessful attempt at correction: "...hid a lot."

<sup>(UC)</sup>2. Clarida  
1. Clarence  
Her name was Claribel.

The reader first said, "Her name was Clarence>" He then regressed and made an unsuccessful attempt at correcting "Her name was Clarida."

### D. Anticipating difficulty with a subsequent word--(A)

Tony <sup>(A)</sup>enjoyed doing chemistry experiments.

The reader first said, "Tony enjoyed..." He then stopped and regressed in anticipation of the upcoming word "chemistry, and went onto say, "...enjoyed doing chemistry experiments."

## ADDITIONAL MARKINGS

**A. PARTIAL WORDS:** When a reader attempts at but does not produce a complete word, a partial word has been produced. When partial word substitutions are made, the miscue should be followed by a dash.

Life is filled with <sup>*disappoint*</sup>disappointments.

**B. NON-WORD SUBSTITUTION:** When a reader produces a miscue which is not recognizable as a known word in English, the miscue is called a non-word substitution. When non-word substitutions occur, retain as much of the original spelling pattern as is possible. Identify the miscue as a non-word by preceding it with a dollar sign.

It all depended on the weather.  
<sup>*\$disappointed*</sup>

**C. DIALECT DIFFERENCE:** When a miscue involves a sound, vocabulary or grammatical variation which is the result of a dialect difference between the author and the reader, it can be identified by preceding it with a circled *d*. A dialect miscue involving only sound variations should be spelled the way it sounds, staying as close to the original spelling pattern as possible.

He went on home.  
<sup>*@good*</sup>

Someone must win the game.  
<sup>*@must*</sup>

**D. PAUSES:** When the reader makes a number of very long pauses, this information can be noted by placing a *P* at the point of the pause.

He went to buy <sup>*P*</sup>some candy for the little boy.

**E. REPEATED MISCUE:** When the same miscue is repeated each time a particular word is encountered, mark *RM* above the word in the text (except for the first time the miscue is made).



## GUIDING THE RETELLING

### UNAIDED RETELLING

Encourage readers by showing interest, but avoid asking information-questions or asking your reader yes or no. Information giving questions may suggest elements to the reader that they really did not know by themselves. Questions that do not give information, such as, "Can you tell me more?" "Is there anything you want to add?" or "What else do you remember?" are suitable if the reader appears to be finished and the teacher wants to be sure there is nothing more to be added. This is also a good time to develop the ability to use silence as a way to get students talking again. A pause of 40 or 50 seconds sometimes seems too long, but often students begin relating additional information without additional probing questions. Occasionally, students have a difficult time getting the retelling started. If this happens, be patient and make sure your directions are clear. When you think that you have waited long enough for a response, you may ask the readers to close their eyes and think about the story. Urge them to tell about anything or anyone that was of special interest. Keep probing without providing specific information from the story or article.

WHEN THE READERS HAVE RELATED AS MUCH AS THEY WANT TO SHARE, MOVE TO THE AIDED RETELLING.

### AIDED RETELLING

Drawing on the information given by the reader during the unaided retelling, ask open-ended question discussion, always use the reader's pronunciation of names, places, or events.

### QUESTIONING STRATEGIES

Following are examples of open-ended questions:

Tell more about (*character mentioned by reader*)

After (*character mentioned by reader*) or (*event mentioned by reader*), what happened?

Why do you think (*character mentioned by reader*) did that?

When appropriate, follow the reader's responses with: Why do you think so? or so?

Questions that help readers relate plot and theme are sometimes difficult to formulate. If students are familiar with the terms for the concepts of plot, theme, moral, characterizations, and so on, don't hesitate to use those labels in your questioning. If that is not the case, the following questions may be helpful:

Now that you have told me so much about the story, will you tell what the story was about in just a few sentences?

What question(s) were you wondering about as you were reading the story?

Why do you think the author wrote this story?

Do you think the author was trying to teach something in this story?

Does this story remind you of any other story? In what way?

What problem was the story concerned with?

To get information about characters, character development, and setting, ask direct questions using these terms if you believe the reader understands them, and if you can do so without providing information. If you think the reader will not understand questions such as, "What is the setting of the story" or "Tell me more about the other characters in the

story," the following may be suitable:

Where did the story take place?

Tell me about anyone else in the story that you haven't already mentioned.

Describe (*character named by reader*) at the beginning of the story and describe him/her at the end of the story.

To get at subtleties, follow up on any aspect of the reading or retelling in which the student appears to be especially interested. For example:

Was there something in the story that made you feel good? happy? sad?

Was there anything funny?

Did anything seem strange, unusual, or scary?

Did anything make you feel uncertain or uneasy?

Tell about the part of the story that made you want to laugh or cry.

To encourage readers to evaluate and judge, consider the following:

Did you like the story? Why?

Is there anything you would have changed in the story, such as the ending?

Did you think(*character mentioned by reader*) was right or wrong when he/she(*event mentioned by subject*)?

In the event that important details, characters, or entire segments of the text have been omitted in the retelling, ask open-ended questions that might help students remember. These questions should be asked when you are reasonably certain students have the information, but for some reason have not included it in the retelling. The following are examples of such cued questions:

You told me about the time Freddie got in trouble because he tinkered with the alarm clock, and the time he turned his sister's doll green. Were there any other times that his parents really got angry at him?

You mentioned Andre, his father, and his grandfather. Were there any other important people in that story?

## REMINDERS FOR GOOD RETELLING PROCEDURES

1. Get to know the reader.
2. Become familiar with the story.
3. Avoid giving the reader information from the text.
4. Include in questions and comments only information introduced by the reader.
5. Don't rush yourself or the reader. Think through your questions and patiently wait for the reader's reply.
6. Make your directions and questions very clear and avoid giving more than one question at a time.
7. Don't take "I don't know" for an answer. Rephrase questions to get the information another way. At the same time, don't exhaust the reader with too great a focus on any one topic.
8. Let students develop a topic and reach their own conclusions before changing the subject.
9. Ask open-ended questions. Questions that can be answered with yes or no or with single words often limit the reader's presentation potential.
10. Retain any nonwords or name changes given by the reader.

Retelling Analysis Protocol, Spanish

# COMMUNITY LITERACY PROJECT

## RETELLING ANALYSIS :

NAME \_\_\_\_\_ ID# \_\_\_\_\_ GRADE \_\_\_\_\_

SCHOOL \_\_\_\_\_ TEACHER \_\_\_\_\_

SAMPLE: PRE POST DATE \_\_\_\_\_

LANGUAGE: ENGLISH SPANISH

STORY: MARIPOSA, MARIPOSA

RESEARCHER \_\_\_\_\_ ANALYST \_\_\_\_\_

### RETELLING OUTLINE

CHARACTERS	PTS.	DEVELOPMENT	PTS.
Mariposa	8	trabajadora vuela y tiene un 'vestido nuevo'	3
Narrano	6	gruno, ronco y hecho a correr	1
Gato	7	maullo, rodeo la cas, se enrosco bajo la ventan y se durmio	3
Ratoncito	8	chirrio, se caso con la mariposa	2
amigos	1	dan su pesame y traen flores	1

### EVENTS

PTS.		AIDED/UNAIDED	CROSS
8	Mariposa barriendo se encuentra una moedita	_____	_____
8	no sabe si comprar rojete o dulces - teme que la llamen coqueta o golosa	_____	_____
7	compra tela (de un amarillo fuerte cubierto de manchas negras) para hacerse un vestido nuevo	_____	_____

7	encuentro con el Marrano y el la pretende	_____	_____
8	encuentro con el Gato y el la pretende	_____	_____
8	encuentro con el Ratoncito, el la pretende y se casan	_____	_____
8	Ratoncito va a tomar agua cuando el Gato se lo come,	_____	_____
6	Mariposa queda triste y pas sus dias volando de flor en flor	_____	_____

#### SURFACE RETELLING SCORE

	UNAIDED/AIDED	CROSS LANGUAGE	TOTALS
	RETELLING	RETELLING	
I. CHARACTER DEVELOPMENT (40)	_____	_____	
A. RECALL OF CHARACTERS	_____	_____	_____
B. INFORMATION ON EACH CHARACTER	_____	_____	
II. EVENTS (60)	_____	_____	
A. LIST OF MAJOR EVENTS	_____	_____	_____
B. DESCRIPTIONS OF EVENTS	_____	_____	
III. EXTRA INFORMATION	_____	_____	_____

#### INFERENTIAL INFORMATION

1. **THEME STATEMENT(S)** : Theme statements are generalizable statements made by the subject about the purpose of the story or the intent of the author.

UNAIDED/AIDED:    YES    NO

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---

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---

---

CROSS:            YES    NO

---

---

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---

---

**II. PLOT STATEMENT(S) :** Plot statements include a succinct restatement of the main events of the story and how they relate to each other, or a statement about the major problem of the story.

UNAIDED/AIDED:    YES    NO

---

---

---

---

CROSS:            YES    NO

---

---

---

---

**III. INFERENCES :** Statements readers make which are not in the surface of the reading material but which readers infer from the information in the surface, based on concepts they already have.

UNAIDED/AIDED:    YES    NO

---

---

---

---

CROSS:            YES    NO

---

---

---

---

**IV. MISCONCEPTIONS :** Any inferences or concept statements which readers make in their retelling which indicate readers used the story material inappropriately. This provides additional evidence that readers comprehension is related to the knowledge system they bring to their reading.

UNAIDED/AIDED:    YES    NO

---

---

---

---

CROSS:            YES    NO

---

---

---

---



**TYPE OF RETELLING:**(for in-depth analysis)

	<b>UNAIDED/AIDED RETELLING</b>	<b>CROSS RETELLING</b>
(check one for each retelling)		
KALEIDOSCPIC RETELLING	_____	_____
TOTAL STORY RETELLING IN SEQUENTIAL ORDER	_____	_____
MAIN EVENTS RETELLING IN SEQUENTIAL ORDER	_____	_____
PLOT STATEMENT FOLLOWED BY TOTAL STORY RETELLING IN SEQUENTIAL ORDER	_____	_____
PLOT STATEMENT FOLLOWED BY MAIN EVENTS RETELLING IN SEQUENTIAL ORDER	_____	_____

Retelling Analysis Protocol, English

# COMMUNITY LITERACY PROJECT

## RETELLING ANALYSIS #

NAME \_\_\_\_\_ ID# \_\_\_\_\_ GRADE \_\_\_\_\_

SCHOOL \_\_\_\_\_ TEACHER \_\_\_\_\_

SAMPLE: PRE POST DATE \_\_\_\_\_

LANGUAGE: ENGLISH SPANISH

STORY: MYRON

RESEARCHER \_\_\_\_\_ ANALYST \_\_\_\_\_

### RETELLING OUTLINE

CHARACTERS	PTS.	DEVELOPMENT	PTS.
Myron	8	President, good listener	2
Mrs. Jewis	8	Teacher	2
Dana	8	Classmate	2
Vet	1	Cares for Pugsy	1
Pugsy	3	Dana's Dog	1
Dana's Mother	1	Bandaged Myron	1
Stephen	1	Next President	1

## EVENTS

PTS.		AIDED/UNAIDED	CROSS
6	Myron becomes president, learns duties of job.	_____	_____
9	Because he was president, he stayed late to turn off lights, and heard crying went to investigate.	_____	_____
9	Found classmate Dana, and her injured dog Pugsy and carried dog to vet.	_____	_____
9	Went to Dana's house to check on dog, was bitten by dog and bandaged by Dana's mother.	_____	_____
9	Myron was late to school, didn't turn lights, class and teacher was sitting in darkness.	_____	_____
9	Looses job as president, trains his replacement Stephen.	_____	_____
9	No one realizes what a good president Myron was.	_____	_____

## SURFACE RETELLING SCORE

	UNAIDED/AIDED	CROSS LANGUAGE	TOTALS
	RETELLING	RETELLING	
I. CHARACTER DEVELOPMENT (40)	_____	_____	
A. RECALL OF CHARACTERS	_____	_____	_____
B. INFORMATION ON EACH CHARACTER	_____	_____	
II. EVENTS (60)	_____	_____	
A. LIST OF MAJOR EVENTS	_____	_____	_____
B. DESCRIPTIONS OF EVENTS	_____	_____	
III. EXTRA INFORMATION	_____	_____	_____

**INFERENTIAL INFORMATION**

**I. THEME STATEMENT(S) :** Theme statements are generalizable statements made by the subject about the purpose of the story or the intent of the author.

UNAIDED/AIDED:    YES       NO

---

---

---

---

CROSS:            YES       NO

---

---

---

---

**II. PLOT STATEMENT(S) :** Plot statements include a succinct restatement of the main events of the story and how they relate to each other, or a statement about the major problem of the story.

UNAIDED/AIDED:    YES       NO

---

---

---

---

CROSS:            YES       NO

---

---

---

---

**III. INFERENCES :** Statements readers make which are not in the surface of the reading material but which readers infer from the information in the surface, based on concepts they already have.

UNAIDED/AIDED:    YES       NO

---

---

---

---

CROSS: YES NO

---

---

---

---

---

IV. MISCONCEPTIONS : Any inferences or concept statements which readers make in their retelling which indicate readers used the story material inappropriately. This provides additional evidence that readers comprehension is related to the knowledge system they bring to their reading.

UNAIDED/AIDED: YES NO

---

---

---

---

---

CROSS: YES NO

---

---

---

---

---

TYPE OF RETELLING:(for in-depth analysis)

	UNAIDED/AIDED RETELLING	CROSS RETELLING
(check one for each retelling)		
KALEIDOSCOPIC RETELLING	_____	_____
TOTAL STORY RETELLING IN SEQUENTIAL ORDER	_____	_____
MAIN EVENTS RETELLING IN SEQUENTIAL ORDER	_____	_____
PLOT STATEMENT FOLLOWED BY TOTAL STORY RETELLING IN SEQUENTIAL ORDER	_____	_____
PLOT STATEMENT FOLLOWED BY MAIN EVENTS RETELLING IN SEQUENTIAL ORDER	_____	_____



Reading Sample. Spanish

COMMUNITY LITERACY PROJECT

READING SAMPLE

NAME \_\_\_\_\_

ID \_\_\_\_\_

SCHOOL \_\_\_\_\_

GRADE \_\_\_\_\_

TEACHER \_\_\_\_\_

DATE \_\_\_\_\_

STORY \_\_\_\_\_

# MARIPOSA MARIPOSA

By Joe Hayes

0101           Una vez vivía una Mariposa en una casita en la  
0102           esquina de la calle.

---

0201           Un día estaba la Mariposa barriendo delante de  
0202           su casa. Vio algo brillar en el suelo. Se arrodilló y  
0203           descubrió una monedita de plata.

---

0301           --¿Qué debo comprar con este dinero?-- se  
0302           preguntó la Mariposa.  
0303           --¿Debo comprar pañete para pintarme muy  
0304           bonita la cara?  
0305           --No. Que me van a decir "icoquetal"

---

0401           --¿Debo comprar dulces para comer?  
0402           --No. Que me van a decir "igolosa!"  
0403           Luego se decidió. Iba a comprar tela para hacer  
0404           un vestido nuevo.

---

0501           Fue la Mariposa a la tienda y compró un trozo  
0502           de tela. Era de un amarillo fuerte y cubierta de

0503 manchas negras. Regresó a casa e hizo un ves-  
0504 tido nuevo. Luego lo puso.

---

0601 Pues todo el mundo sabe el gusto que le da  
0602 llevar ropa nueva. Así le pasó a la Mariposa. Y  
0603 salió a sentarse delante de su casa--esperando  
0604 que alguien viniera para ver lo bonita que se veía  
0605 en su vestido nuevo.

---

0701 Después de poco tiempo vino alguien por la  
0702 calle. Era el Marrano. Al ver a la Mariposa se paró.  
0703 Dijo el Marrano.--Mariposa, Mariposa, ¿que  
0704 guapita que estás!  
0705 Ella le respondió--Ya lo sé, ya lo sé. ¿No  
0706 quieres decirme más?

---

0801 Si que el Marrano quería decirle más! Le  
0802 dijo --Mariposa, Mariposa, ¿que te casas  
0803 conmigo?  
0804 La mariposa replicó. --¿Cómo me cantarás,  
0805 si me caso contigo?  
0806 El Marano gruñó. --ironca-ronca-ronca!

---

0901 --¡Ah!--dijo la Mariposa. --¡Que me asustarás!  
0902 El Marrano corrió calle adelante llorando.  
0903 --oi-oi-oi-oi

---

1001 Luego vino el Gato.  
1002 --Mariposa, Mariposa, ¡qué guapita que estas!  
1003 --Ya lo sé, ya lo sé. ¿No quieres decirme más?  
1004 Mariposa, Mariposa ¿que te casas conmigo?  
1005 --¿Cómo me cantarás, si me caso contigo?

---

1101 Maulló el Gato.--imiauuuuuu!  
1102 --¡Que me asustarás!

---

1201 Pero el Gato no corrió calle adelante, sino que  
1202 rodeando la casa hasta que vio una ventana  
1203 abierta. Se metió por la ventana y se enroscó  
1204 debajo de la cama donde estaba calentito a su  
1205 gusto. Y se durmió.

---

1301 Vino otro por la calle---el Ratoncito.  
1302 --Mariposa, Mariposa, ¡qué guapita que estas!  
1303 --Ya lo sé, ya lo sé. ¿No quieres decirme más?  
1304 --Mariposa, Mariposa, ¿que te casas conmigo?

1305            --¿Cómo me cantarás, si me caso contigo?

---

1401            El Ratoncito chirrió.--pip-pip-pip.

1402            --¡Aí!--dijo la Mariposa.--¡Qué canción tan

1403            bonita! Si, íme caso contigo!

---

1501            Y fueron a la iglesia y se casaron.

---

1601            Cuando llegaron a casa después de la boda

1602            eran y las altas horas de la noche. Tenían sueño

1603            y se acostaron.

---

1701            Pero el Ratoncito tenía sed y fue a tomar agua.

1702            ¡Nunca volvió!

---

1801            La Mariposa llamó.--Ratoncito, Ratoncito, ¿que

1802            no vuelvas ya?

---

1901            Desde debajo de la cama una voz respondió

1902            --Miauuu...¡en mi estómago está!

---

2001            El Gato había tragado al Ratoncito. Y la pobre

2002            Mariposa quedó con el corazón destrozado. Lloró



2003 y lloró.

2004 Todos sus amigos le compadecieron. Le trajeron

2005 ramos de flores bonitas para animarla.

---

2101 A la Mariposa le gustaron tanto las flores que ya

2102 no le importaba vivir en una casa, ni ser casada.

2103 Ya pasaba todos los días volando de flor en flor.

---

2201 Y todavía lo hace. Puedes verla cualquier día

2202 de verano. La vas a conocer por su vestido nuevo.

2203 Es de un amarillo fuerte, y cubierto de manchas

2204 negras.

## MARIPOSA, MARIPOSA

### Retelling Outline

#### PERSONAJES

#### DESARROLLO

Mariposa

pequeña, bonita,

Gato

grande, su canto asusta a la Mariposa

Marrano

gordo, canta feo

Ratoncito

chico, canta bonito

#### EVENTOS.

Mariposa estaba barriendo en frente de su casa cuando encontró dinero.

Penso comprar rojete pero luego le dijieran coqueta.

Penso comprar dulces pero luego le dijieran golosa.

Cumpló tela y se hizo un vestido amarillo con manchitas negras.

Se sento enfrente de su casa para que le dijieran que bonita se veía.

El Marrano se quería casar con ella pero cuando le canto asusto a Mariposa.

Corrió el Marrano.

El Gato se quiso casar con ella pero cuando le cantó, asusto a Mariposa.

Se metió en la casa de Mariposa y se curmío debajo de su cama.

El Ratoncito se quería casar con ella, cuando le canto a Mariposa le gusto.

Se casaron en la iglesia.

Cuando el Ratoncito fué a tomar agua se lo comió el Gato.

Mariposa dejó su casa y anda de flor en flor.

#### TRAMA

Por fin Mariposa encontró un compañero, pero se quedó sola, al fin encontró su felicidad admirando las flores.

#### TERIA

Siempre encontraremos felicidad aunque todo no nos vaya como esperamos.

Reading Sample. English.

COMMUNITY LITERACY PROJECT

READING SAMPLE

NAME \_\_\_\_\_

ID \_\_\_\_\_

SCHOOL \_\_\_\_\_

GRADE \_\_\_\_\_

TEACHER \_\_\_\_\_

DATE \_\_\_\_\_

STORY \_\_\_\_\_

Myron

0101 Myron had big ears. He was elected class president.

0102 The children in Mrs. Jewl's class expected him to  
0103 be a good president. Other presidents were good speak-  
0104 ers. Myron was even better. He was a good listen-  
0105 er.

0106 But he had a problem. He didn't know what a class  
0107 president was supposed to do . So he asked.

0108 "What am I supposed to do?"

0109 "It's a difficult job," said Mrs. Jewls. "But you can  
0110 do it. You must turn the lights on every morning and turn  
0111 them off at the end of the day."

0112 "What?" asked Myron.

0113 "As a class president you must learn to listen," said

---

0201 Mrs. Jewls. " I'll repeat myself only one more time . You  
0202 must turn the lights on every morning-"

0203 "I heard you the first time ," said Myron. "It just  
0204 "It just doesn't sound like much of a job."

0205 "It certainly is!" said Mrs. Jewls. "Without light I  
0206 can't teach, and the children can't learn. Only you can  
0207 give us light. I think it is a very important job."

0208 "I guess so," said Myron. He wasn't convinced .

0209 "Here let me show you how to work a light switch,"  
0210 said Mrs. Jewls.

0211 "I already know how," said Myron. "I've been turn-  
0212 ing lights on and off all my life."

0213 "Very good !" said Mrs. Jewls. " You'll make a fine  
0214 president."

0215 Myron wanted to be the best president ever. But it was  
0216 such an easy job, he thought, that anybody could do it.  
0217 When school let out that day, Myron stayed behind . He  
0218 turned out the lights by flicking the switch down .  
0219 "Excellent!" said Mrs. Jewls.  
0220 On his way home, Myron heard a horrible noise. First  
0221 there was a loud screeching, then a sharp squeal, a roaring  
0222 engine, and then the very faint sound of a girl crying.  
0223 Myron ran to see what had happened.  
0224 Dana was bent over in the middle of the road.  
0225 "What's the matter ?" asked Myron.  
0226 "My dog, Pugsy, was hit by a car," Dana cried  
0227 "Who did it?" asked Myron.  
0228 "I don't know!" Dana sobbed. "They sped away."  
0229 "Well, that's not important," said Myron . "We've  
0230 got to try to save Pugsy."  
0231 Pugsy lay unconscious in the street. Myron carefully  
0232 picked her up. He carried her two miles to the vet. Dana  
0233 cried at his side.

---

0301 " Don't worry, Dana," said Myron. "She'll be all  
0302 right." But he wasn't really so sure.  
0303 He gave Pugsy to the vet, walked Dana home, then  
0304 walked home himself .  
0305 Dana was so upset that she forgot to thank him. Myron  
0306 didn't mind. He thought that was what being class presi-  
0307 dent was all about.  
0308 The next morning, before he went to school, Myron



0309 went to Dana's house. Pugsy was there. She seemed all  
0310 right.  
0311 Dana petted her. Pugsy licked her face.  
0312 "See , Myron, she's all right," said Dana. "The vet  
0313 said that you brought her in just in time."  
0314 "HI, Pugsy," said Myron . He petted her.  
0315 Pugsy bit his hand.  
0316 "I guess she doesn't know you," said Dana. "She was  
0317 unconscious yesterday when you saved her life."  
0318 Dana's mother put some medicine and a Band-Aid on  
0319 Myron's hand . Then she drove the children to school.  
0320 They were late . They ran up the stairs to Mrs. Jewl's  
0321 class. The room was completely dark.  
0322 "It's about time you got here, Myron," said Mrs.  
0323 Jewls. "We have no lights."  
0324 "Why didnt's somebody else just turn them on?" asked  
0325 Myron.  
0326 "Because you're class president," said Mrs. Jewls.  
0327 "Show Stephen how to work the lights. From now on he  
0328 will be class president. "  
0329 Myron showed Stephen how to turn on the lights. He  
0330 flicked the switch up.  
0331 At the end of the day, Myron showed Stephen how to  
0332 turn the lights off. He flicked the switch down.

---

0401 After a week, Stephen finally caught on. He made a  
0402 good president. The lights were on every morning.  
0403 Myron, who was president for only a day, was the best  
0404 president in the history of Kayside School. It was just  
0405 that nobody knew it.

## Myron

### Retelling Outline

#### Characters

Myron

Mrs. Jewls

Dana

Veterinary

Pugsy

Dana's Mother

Stephen

#### Development

Big ears, good listener  
good president

Teacher, likes lights  
on her classroom

Classmate, sensitive,  
loves dogs.

Saves Pugsy's life.

Dana's dog.

She put a Band-Aid on  
Myron's hand.

Next president.

#### EVENTS:

Myron was elected class president.

The class expected him to be a good president.

Because of his big ears, he was a good listener.

Myron didn't know what a class president supposed to do.

Mrs. Jewls explained to him that it was a difficult job.

The job was to turn the lights on every morning and turn them  
off at the end of the day.

Myron doesn't think that it is a difficult job.

Mrs. Jewls explains that without lights she can't teach and children  
can't learn.

Mrs. Jewls show him how to work a light switch.

Myron already knew how to do it.

Myron wanted to be the best president ever.

When the school went out that day he stayed behind and turned  
out the lights by flicking the switch down.

On the way home Myron hear a horrible noise.

He hear the sound of a girl crying.

Myron ran to see what had happened.

The dog Pugsy was hit by a car.

They do not know who did it . They speed away.

Pugsy lay unconscious in the street.

Myron carried Pugsy two miles to the vet.

Dana cried at his side.

They left Pugsy with the vet.

Myron walked DANA to her house.

He walked home himself.

Dana forgot to thank him.

Myron didn't mind.

He thought that was what being class president was all about.

The next morning, before he went to school , Myron went to Dana's house.

Pugsy was there, she seemed all right.

Dana petted her. Pugsy licked her face.

The vet had said that Myron brought Pugsy just in time.

Myron petted Pugsy and she bit his hand.

Dana's mother put a Band-Aid on Myrons's hand.

Then she drove the children to school.

They were late.

Mrs. Jewls was waiting for Myron, because the room was without lights.

Myron asked "why didn't somebody else just turn them on?"

Mrs. Jewls answered "because you're class president"

Mrs. Jewls selected Stephen to be next class president.

She asked Myron to show Stephen what will be his job.

Myron showed Stephen how to turn on the lights. He flicked the switch up.

At the end of the day he showed Stephen how to turn the lights off.

After a week , Stephen finally caught on.

He made a good president.

Myron was only president for one day.

He was the best president in the history of Wayside School.

It was just that nobody knew it.

**Plot:**

How David is selected to be a class president and the reason why Mrs. Jewels decided that he was not a good president

**Theme:**

The life of an animal is before the lights of the classroom.

Meaning Based Scoring, Writing Samples

**COMMUNITY LITERACY PROJECT. 1990  
MEANING BASED SCORING- WRITING SAMPLES**

STUDENT NAME \_\_\_\_\_ SCORING TEAM: \_\_\_\_\_  
 TEACHER \_\_\_\_\_ GRADE \_\_\_\_\_ 1. \_\_\_\_\_  
 LANGUAGE \_\_\_\_\_ SAMPLE DATE \_\_\_\_\_ 2. \_\_\_\_\_

**GENRE:**

- |  |  |
|--|--|
| I. <input type="checkbox"/> Opinion Piece        | V. <input type="checkbox"/> Poetry           |
| II. <input type="checkbox"/> Narrative           | VI. <input type="checkbox"/> Mixed Genre     |
| III. <input type="checkbox"/> Personal Narrative | VII. <input type="checkbox"/> Jokes          |
| IV. <input type="checkbox"/> Report              | VIII. <input type="checkbox"/> Indeterminant |

Other Language Influence  
☐ High ☐ Some ☐ None

Adornments or Illustrations  
☐ A ☐ I ☐ None

**A. Communicative Writing:**

Degree of readability  
 (includes legibility)  
 Writer's sense of  
 audience. Does it flow  
 logically from beginning  
 to end.

1	2	3	4	5	6	7	8	9	10
No sense of audience. Not Readable				Adequate sense of audience. Generally readable			High sense of audience. Very readable		

**B. Story Content and Substance:**

Semantics: meaning  
 construction: How well is  
 the story developed?

1	2	3	4	5	6	7	8	9	10
No development of ideas				Some development of ideas			Well developed text		

**C. Syntax:**

Appropriate to genre?  
 Does it sound like  
 language? Can the reader  
 tell where one thought  
 ends? (May include other  
 language influence)

1	2	3	4	5	6	7	8	9	10
Awkward syntax interferes with meaning				Language may have some awkward syntax. Doesn't interfere with meaning			Language very well suited to genre		

**D. Spelling:**

Does the spelling  
 effect readability?

1	2	3	4	5	6	7	8	9	10
Reader unable to gain meaning because of spelling				High use of invented spelling; doesn't effect meaning of text			No issues of spelling; or invented spelling of high frequency words; enhances meaning		

**E. Punctuation:**

Does punctuation effect  
 readability?  
 (punctuation= spacing,  
 accents, paragraphing,  
 etc.)

1	2	3	4	5	6	7	8	9	10
Punctuation or lack of interferes with ability to gain meaning				Punctuation used doesn't affect comprehensibility			Punctuation adds to the meaning of the text		

AVERAGE SCORE \_\_\_\_\_



APPENDIX B

TABLE 4

CONTENTS:

- Domains of Knowledge
- Summary of Number of Items Read by Respondents

DOMAINS OF KNOWLEDGE

**TABLE 4**  
**Domains of Knowledge**

- A. Agricultural**
  - 1. Ranching**
    - a) Horsemanship (cowboys)
    - b) Animal husbandry
      - 1) domesticated animals
      - 2) Veterinary
  - 2. Farming**
    - a) Crop and vegetable planting
      - 1) knowledge of soils
      - 2) knowledge of irrigation
      - 3) knowledge of pests
        - a) mice, crickets, cockroaches
      - 4) Weather and climate
  - 3. Knowledge of wild animals**
    - a) hunting
      - 1) tracking
      - 2) dressing, curing, tanning
    - b) fishing
- B. Mining**
  - 1. timbering
  - 2. mineral
  - 3. assaying
  - 4. blasting
  - 5. equipment operation and maintenance
- C. Institutional knowledge**
  - 1. Schools
  - 2. Church
  - 3. Banks
  - 4. Hospital
  - 5. Welfare and Government Agencies
    - a) State and Federal regulations
      - 1) Labor laws
    - b) Building codes
    - c) IRS
      - 1) Tax codes
    - d) INS
      - 1) Immigration law
      - 2) Amnesty
- D. Economic and marketing**
  - 1. Banking and credit**
    - a) credit
      - 1) credit checks
    - b) loans
      - 1) collateral
  - 2. Real estate**
    - a) property management
      - 1) rentals
    - b) market values
      - 1) mortgages
      - 2) appraising
    - c) leases
  - 3. General Business**
    - a) contracts
    - b) organization of production

- c) management skills
- d) accounting
- e) sales
- 4. Employment Strategies
  - a) job seeking strategies
    - 1) network use
    - 2) formal means
  - b) job cycle process
    - 1) skill acquiring strategies
    - 2) (jsex or all trade and/or specialization)
- E. Material and Scientific knowledge
  - 1. Construction skills
    - a) Carpentry
    - b) Roofing
    - c) Masonry
    - d) Plumbing
    - e) Electrical
    - f) Painting (interior and exterior)
    - g) TV installations
    - h) Fences
    - i) Plastering
  - 2. Mechanical skills
  - 3. Design and architecture
    - a) Reading or making blue prints
    - b) Contracting
      - 1) organization of production
      - 2) planning work site
    - c) Estimating
      - 1) calculating costs of materials and labor
      - 2) measurement and leveling
    - d) building codes
  - 4. Management
    - a) organizational abilities
    - b) planning
    - c) goal setting
  - 5. Repair, maintenance, and assembly
    - a) electronics
    - b) airplane
    - c) heating and cooling
    - d) bicycle
    - e) automobile
    - f) appliances
    - g) farm implements
    - h) welding
  - 6. Invention and development
  - 7. Bodies of experiential knowledge
    - a) local geography
- F. Arts, Folklore, and Music
  - 1. Arts
  - 2. Music
    - a) Composition
      - 1) writing music
      - 2) music theory
      - 3) orchestration

- b) sight reading
- c) Vocal
  - 1) memory of lyrics.
- d) Instruments
  - 1) guitar
  - 2) piano
  - 3) accordion
  - 4) harp
  - 5) violin
  - 6) guitarron
  - 7) organ
  - 8) drums
- e) Types of Songs
  - 1) Ranchero
  - 2) Corridos
  - 3) Waltz
- f) band organization
  - 1) conjuntos
  - 2) trios
  - 3) mariachi
- 3. Folklore
  - a) Charros
  - b) Folk tales
  - c) Chistes
  - d) Border lore
- 4. Oral history
  - a) Genealogy
  - b) migration history
- 6. Medicine
  - 1. Accidents and Disability
  - 2. Knowledge of standard medical practice
    - a) drugs
    - b) first aid procedures
    - c) anatomy
    - d) medical systems and practitioners
  - 3. folk medicine
    - a) knowledge of anatomy and biology of animals
    - b) diagnostics
      - 1) classification of disease
    - c) folk cures
      - 1) herbal medicines
        - a) classes of plants
        - 1) preparation
      - 2) animal medicines
        - a) (crickets used to cure cows with eastitis)
      - 3) Specific cures
        - a) folk cures for asthma
    - d) Mid-wife skills
- H. Dimensions of Self
  - 1. Affection
  - 2. Romance
  - 3. Hate
  - 4. Ethnic self identity
- I. Social Exchange and Culture

1. Maintaining social networks
  - a) characteristics of networks
    - 1) dense networks
    - 2) strong and weak ties
  - b) social skills
    - 1) moral support (advice)
    - 2) interpersonal skills
    - 3) conflict mediation
    - 4) trust
  - c) reciprocity
    - 1) exchange
      - a) brokerage
        - 1) children as interpreters in institutional settings
      - b) visits
      - c) child care
      - d) caring for the sick, elderly
2. Networks as communications systems
3. Language
  - a) values of language (English and Spanish)
- J. Social Conflict
  1. Discrimination
  2. Familial discord
  3. Schools
  4. Work
  5. government
- K. Ritual and Religion
  1. Church membership
  2. ritual
    - a) baptisms
    - b) catechism (first communion)
    - c) quinceaneras
    - d) weddings
    - e) funerals
    - f) mass
    - g) birthdays
  3. bible reading
  4. moral knowledge and ethnics
  5. Cosmic information
- L. Household Management
  1. Budgets
    - a) paying bills
    - b) smart consumer
  2. Division of labor
    - a) child care
      - 1) adults caring for children
      - 2) children caring for children
    - b) allocation of labor to household tasks
  3. household chores
    - a) cooking
    - b) cleaning
    - c) sewing
    - d) yardwork
    - e) household maintenance and repair
  4. Household ideology

- a) Ideology of child raising
  - 1) socialization (educaries)
  - 2) respect
- b) gender roles
- c) membership
  - 1) rights, duties, and obligations
  - 2) claims on persons
  - 3) love and blood

#### M. Education

- 1. formal education
  - a) parents assistance with homework
  - b) training programs for adults
- 2. informal education
  - a) on job training
  - b) household pedagogy
    - 1) discursive and non discursive methods
      - a) covert theory
    - 2) on household tasks
    - 3) learning by observation
      - a) listening and observational skills
    - 4) self-discipline and practice
  - c) ranch and farm as school
- 3. Other specific types of training
  - a) musical
  - b) religious
- 4. Reading
  - a) literacy skills and activities
    - 1) poetics
  - b) reading materials
    - 1) reading of manuals, National Geographic, Time, Newsweek, encyclopedias, Good Housekeeping, bills, catalogs, self-improvement books, business literature, contracts, school assignments, etc.
- 5. Math
  - a) computational skills
  - b) measurement skills



SUMMARY OF NUMBER OF ITEMS READ BY RESPONDENTS

JUNE 1990

SUMMARY OF NUMBER OF ITEMS READ BY RESPONDENTS

		All Languages	Spanish	English	Bilingual
Total Sample	Mean	4.0	1.8	2.2	.1
	S. D.	3.3	1.6	1.9	.3
	Range	0 to 16	0 to 6	0 to 12	0 to 1
Treatment School	Mean	4.2	1.5	2.5	.1
	S. D.	4.0	1.4	3.4	.2
	Range	0 to 16	0 to 6	0 to 12	0 to 1
Comparison School	Mean	3.6	2.1	1.5	.1
	S. D.	2.2	1.3	1.3	.3
	Range	0 to 8	0 to 5	0 to 2	0 to 1

## APPENDIX C

### CONTENTS:

- Shelley and Sarah's Adventure Book
- Figure 5
- Figure 6
- Samples 1 and 2
- Sample 3
- Sample 4
- Sample 5
- Sample 6
- Delia's Spanish Writing Sample
- Delia's English Writing Sample
- Sergio's English Writing Sample
- Erika's English Writing Sample

Shelley and Sarah's Adventure Book

THE AFRICAN ADVENTURE  
A CHOOSE-YOUR-OWN ADVENTURE BOOK

BY  
SHELLEY AND SARAH

**READ THIS FIRST!**

Do not read this book from front to back. These pages contain many different adventures. From time to time as you read along, you will be asked to make a choice. Your choice may lead to success or disaster. The adventures you take are a result of your choice. You are responsible because of your choice. After you make your choice, follow the instructions to see what happens to you next. Think carefully before you make your move.

**GOOD LUCK!**

Dedicated to  
Mrs. C  
our favorite teacher

Primary Magnet School  
The Sunshine Room  
May, 1990

255

257

You and your friends are going to go to Africa tomorrow. Right now, you and your friends, Kim and Stef, are in your room planning your vacation. You all think you will have so much fun. You all want to go to the zoo and see all the African animals. You also want to go on an African tour. But you can't decide how to get there.

If you go on a boat, turn to page 3.

If you go on an airplane, turn to page 2.



2

You are going straight down. You feel like your head is spinning. All of a sudden, you hit the ground. You open your eyes. You see your friends on the ground. You wake them up. You see a rhino charging. You turn to run, but you can't move. Right when the rhino is about to touch you, someone pulls you and your friends into the bushes.

If you tell your rescuers what happened, turn to page 4.

If you make up something, turn to page 5.

261

3

You feel like you're being hypnotized. When you wake up, you see all these African people staring at you. Your friends ask you what they are doing in that town.

If you decided to tell what happened, turn to page 6.

If you just turn and run, turn to page 7.

262

4

You decide to tell the savers what happened. You ask them what year it is. They say, "2151." You look at your friends. They have wide eyes. You say you came from the year 1990.

Turn to page 8.

5

You make something up. They bring you in a room filled with food. You are hungry and wondering why they put you in there.

They shut the door and lock it, so you can't get out. But there is a window that you can talk through to them.

If you tell them you are going to eat the food, turn to page 9.

If you say you won't eat the food, turn to page 10.

The villagers crowd around you and start asking what you are doing in their village. You start to tell them how you got there. but all of a sudden, the chief of the village comes out of his house. He sees you and your friends and yells to all the villagers, "Charge at them!" All the villagers start to run at you. You run away from them. You run out of the village with all the villagers running after you. You see there are two ways to go.

If you decide to go right, turn to page 11.

If you decided to go left, turn to page 12.

You decide to take a chance so you start to run. You haven't been running very long when Kim says, "I think I see something over there in the bushes." Then Stef says, "Let's go find out what it is."

You go over to the bushes to see what was making them move. You look behind them and see an elephant. He looks friendly, so you all get on his back. He takes you to a place where there is food and water.

While you're getting food and water, a guide comes up and starts to talk to you. He tells you where you should go.

If you talk with the guide, turn to page 13.

If you ignore him, turn to page 14.

8

They get scared and start to throw spears. You are dodging them. You trip over a bush. A lion is coming towards you, but does not see you and starts charging a deer.

If you and your friends get up and run, turn to page 15.

If you lie on the ground and pretend to be dead, turn to page 16.

9

You tell them you will eat the food. You, Kim, and Stef eat all the food. It tasted really good. You feel a little weird. All of a sudden, you fall to the ground. Then Kim. Then Stef. You all die.

THE END

You say you are not hungry. but you ask if you can rest. They say. "Yes." But you have a choice of rooms - the seashell room. or the coconut room.

If you pick the coconut room, turn to page 18.

If you pick the seashell room, turn to page 17.

To the right, you see a clearing. You start running toward the clearing. You run near the bushes so the villagers won't see you. All of a sudden, a cheetah pops out of the bushes and jumps on top of you. You have a big fight against the cheetah, but finally the cheetah kills all of you.

THE END

You decide to go left because there are lots of trees and that way you have less chance of the villagers seeing you. You look back to see if the villagers are coming, but instead, you slip and fall into quicksand, right under a tree. There is a python in the tree. The python comes down from the tree and saves you. He wraps around your neck and pulls you up into the tree with him. When he has pulled all three of you up into the tree with him, he strangles all of you.

THE END

You start to talk to the guide. He tells you where to go. When he tells you where to go, it sounds weird, like he isn't telling the truth.

If you think he's telling the truth, turn to page 19.

If you think he's lying, turn to page 20.

He looks like a mean man to you. Your friends think so too. You start to ignore him and he starts to ignore you. You walk off into the woods. You walk down by the river. All of a sudden, you get pulled underwater by a big crocodile. Then he lets go of you. You climb back on shore. You have a big cut on your leg. You don't know if you should wrap up your cut with a leaf or go back to the village and see if they have anything.

If you want to wrap up your cut with a leaf. turn to page 21.

If you want to go back to the village, turn to page 22.

You decide to run. A spear hits you in your back and you die.

THE END



16

You lie on the ground and pretend to be dead. They leave. You check to see if Kim and Stef are okay. Stef was stabbed in the arm, but Kim was fine, except for a few cuts. But you have a twisted ankle. But Kim and you can go on.

If you stay and fix Stef's arm, turn to page 23.

If you leave Stef, turn to page 24.

275

17

If you pick the seashell room, they lock the door so you can't get out. It is filled with tigers. You see a sun roof on the top of the hut.

If you try to jump to the sun roof, turn to page 25.

If you try to fight the tigers, turn to page 20.

276

You said, "I want to go in the coconut room." They take you across the village into a tiny room. They push you in and lock the door behind you. It is filled up to the top with coconuts except for one little space in the front. The only way out is to eat your way through.

If you try to eat your way through, turn to page 27.

If you stay there, turn to page 28.

You think he is a nice man, so you go where he tells you to go. All of a sudden a rhino comes out of the trees and comes charging at you. The rhino stomps on top of you and your friends. You all die.

THE END

20

He looks like he's lying to you. You walk away from him. Then a tiger that was hiding in the bushes near you jumps out on top of you and kills you. Then he pulls you to his cave where all the other tigers eat you for dinner.

THE END

273

21

You think it will take you too long to get back to the village, so you just wrap it up with a leaf. But after you had put the leaf on your cut, you feel an insect inside your cut. The spider infects you and you die.

THE END

280

You start running back to the African village. You ask the chief if they have any bandages you can use to wrap up your cut. They do, but the bandages look like they have blood on them. They start to wrap up your leg when you yell, "STOP!" They all stop and look at you. You tell them you're not sure you want them to put the wraps on your leg.

If you use the bandages, turn to page 29.

If you think they have blood on them and don't want to use the bandages, turn to page 30.

You stay and fix Stef's arm. It took three weeks, but now it's fine. You all take a vote and decide to go home.

THE END

24

You leave Stef lying there. You and Kim start walking and walking. It's getting dark. You and Kim go in a cave to sleep. In the morning, it is dark. You can't see anything. It is pitch dark. Then you find out that the door caved in. There's no way out. You die in the cave.

THE END

283

25

You went first. You ran, jumped on a tiger, and jumped to the sun roof and got out. Then you called to the others to come up with you. You see a vine that you could swing on and get out of the village and you also see a ladder that you can get down. But you would have to walk through the village.

If you go down the ladder, turn to page 50.

If you swing on the vine, turn to page 49.

284

26

You fight the tigers with a stick. but  
the tigers are too strong for you and they  
kill you.

THE END

27

You eat your way through. Kim, Stef, and  
you eat as much as you can. Then you stop  
and rest. You finally eat your way through.

Go to page 33.

286

285

You stay in the coconut room, you, Kim, and Stef. First Kim dies. Then you and Stef live in there for four months. Then Stef dies. You live alone for two months and then you die.

THE END

You decide to use the bandages. They work. Your cut heals very fast with the bandages on it. After your wound healed, you went back to where you met the guide. He's still there. He wants you to go with him into the woods. You're not sure that you really should. Maybe he's a different guide. You're still not sure.

If you don't think you should go with him, turn to page 35 or 40.

If he looks like a different guide, turn to page 34.



You don't use the bandages because they look poisonous to you. You can't decide where to go to get more bandages.

If you try to go on and hope that you find a place that has bandages, turn to page 48.

If you try to get back home, turn to page 39.

The koala looks so cute that you can't let it die. You drop off the vine and climb down toward the fire. The koala's almost there but so are you. When you get to the koala, you pick him up and take him away from the fire. You don't know if you should keep him or not.

If you keep the koala, turn to page 38.

If you don't keep the koala, turn to page 47.

You live with the villagers for the rest of your life. They crown you the leader of the tribe.

THE END

You think it will be hard to save the koala. When you get as far as the vine will go, the vine breaks right over the fire. You all fall into the fire and get burned up.

THE END

You go where the guide's sitting and tell him that you will go with him into the woods. When you get farther into the woods, you see some smoke coming up from the trees. You all start to run toward the fire to see what caused it. All of a sudden, the guide starts running out of the woods. Before you go after him, you see a koala going straight toward the fire. You're on a ridge and the fire is at the bottom of the ridge. The koala is going down toward the fire.

If you take a chance and jump off the ridge, turn to page 43.

If you leave the koala there to die, turn to page 44.

None of you want to go with the guide. So you start walking away from him. Pretty soon you all see an elephant in the bushes about 50 feet away. You all start running toward the elephant. When you get to the elephant, he just stands there and lets you get on him. When you're on him, he starts walking toward a big clearing. It's like it would be fun to get off here. But you can't decide if you want to.

If you get off here, turn to page 41.

If you stay on for a little longer, turn to page 42.

36

You want to let the koala go back into the wild. Right after you let the koala go, you find yourself in your room feeling good about what you just did.

THE END

37

You put the koala in a zoo in the closest village and get on a boat that will take you home. At home, you are so proud of yourself.

THE END

38

You decide it would be fun to have a pet koala. You wish you were home again and all of a sudden, you're at home playing with your pet koala.

THE END

39

You think you want to try and get home, so you start walking toward the African village. When you're almost to the African village, you see a triangle that has African writing inside it. You all step in it, and all of a sudden, you're flying home.

THE END

297

293

42

You stay on the back of the elephant.  
The elephant goes on through the clearing.  
After the clearing, you go into the trees.  
All of a sudden, you fall off the elephant.  
Then an elephant gets attacked by a  
leopard. The elephant falls on you. He  
squishes you and you die.

THE END

43

You decide to take a chance and jump off  
the ridge. You make it. You start walking  
toward the fire. Up on the ridge, it didn't  
look very far away, but it's taking a long  
time to get to the fire. You haven't even  
felt or smelled smoke yet.

If you keep going on, turn to page 45.

If you turn back, turn to page 46.

It looks too far down to jump and too hard to climb down. So you just walk away and leave the koala there to die. When you get out of the forest, you wish that you were home again and all of a sudden, you're home again.

THE END

You keep on going toward the fire. Suddenly, you smell smoke. Then you can feel it on your face. You see the koala almost at the fire. You start running toward the fire to save the koala. You catch him right before he gets to the fire. A few hours later, you're back at the African village with the koala. You don't know what you should do with him though.

If you decide to put him in a zoo, turn to page 37.

If you and your friends decide to let him go back into the wild, turn to page 36.



46

You go back toward the cliff and climb up it. When you're up, you start walking the other way. After walking a couple of hours, you find yourself in the middle of a village. A boat is just leaving to America. You go up to the dock and get on the boat. It takes you home.

THE END

47

You don't want the koala to feel sad because he's not living with other animals. But you still don't know what to do with him.

If you let him go back into the wild, turn to page 36.

If you put him in a zoo, turn to page 37.

You think there might be another village somewhere around here. You walk for a couple of days and still don't find another village. Too much blood has come out of your leg since you started. You have so much blood out of your body that you die.

THE END

You grab the vine and swing down through the trees. You see a fire and a koala going toward the fire.

If you drop and try to save the koala, turn to page 31.

If you think it would be too hard to save the koala, turn to page 32.

50

You start walking over to the ladder,  
but the roof caves in underneath your feet.  
You fall down to where the tigers are and  
you get eaten.

THE END

307

808

Figure 5

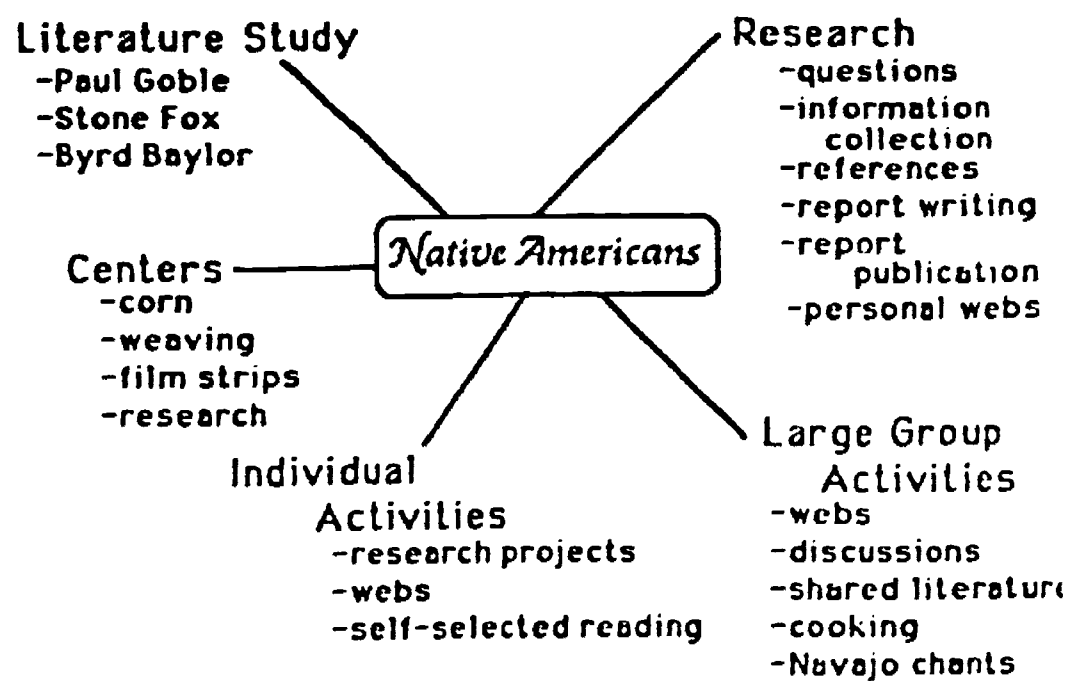


Figure 5. Organizational Web: Native American Theme

Figure 6

311

BEST COPY AVAILABLE

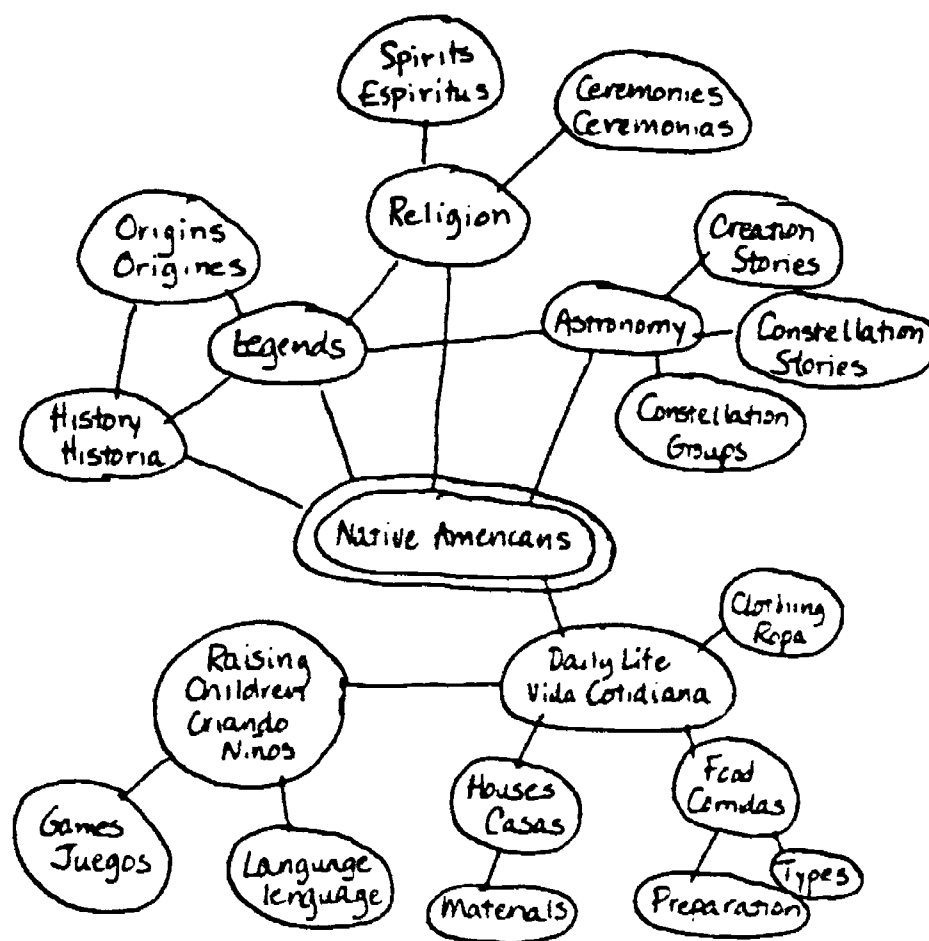
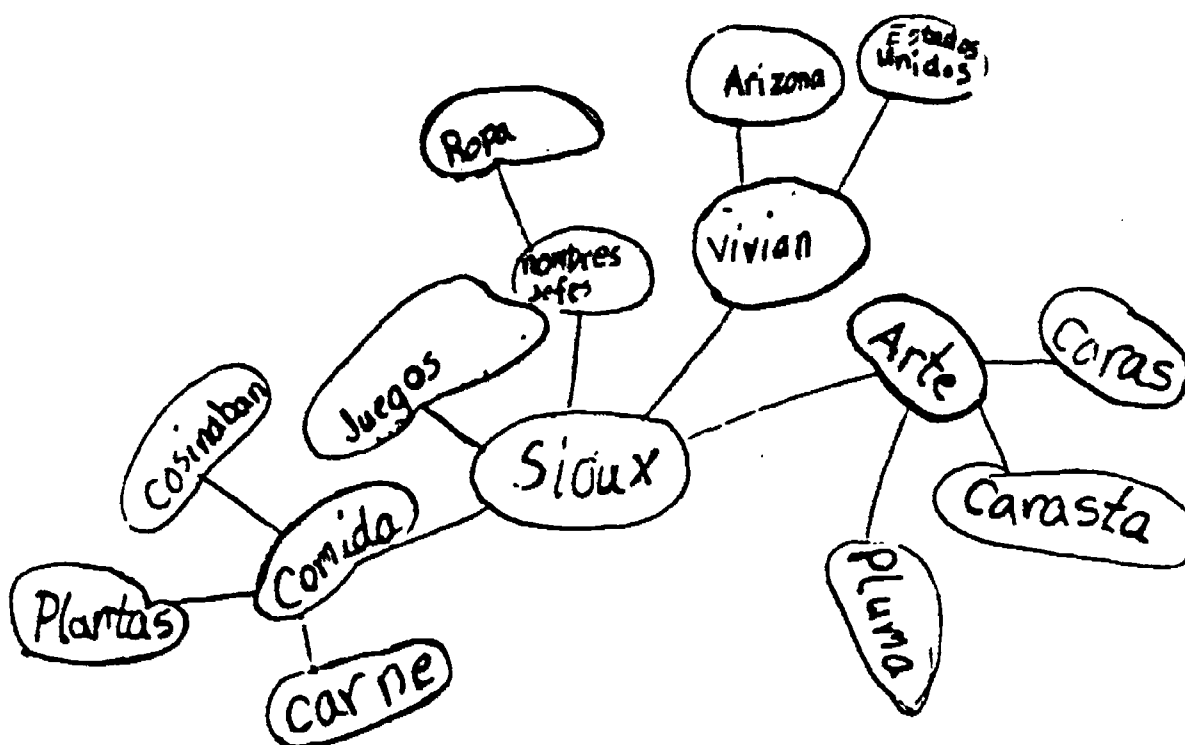


Figure 6. Class web of Native American Theme



Samples 1 and 1



Sample 1. Lupita's web of "what I want to know" about Native Americans

Lupita	
Personal questions	
¿Me gustaría saber sobre el tribu Sioux.	¿Porque sus jefes tenían nombres de animal?
¿En que territorio vivian?	¿Tenian una manera especial de aser la ropa?
¿Porque no quirian q' la gente blanca?	¿Que colores eran de los apachis?
¿Porque se pintaban los coras y sus caballos?	¿Tenian una corrida especial?
¿Que se significaban las plumas en sus cabeza?	¿Como asien las corastas?

Sample 2. Lupita's questions about Native Americans

Sample 1

— (1) ¿Tenían una comida especial?

#1 Abes es cuando mataban los animales los secaban y los dejaban para el invierno. Y luego los asaban en sopa. También había muchos vegetales diferentes y fruto. Uvos y algo era nomas. Habían unas cosas más que...

P.12

— (2) ¿En qué territorio vivían los Sioux?

#3 Los Sioux vivían en  
Trin River

— (3) ¿En dónde cosinaban?

Los Sioux cosinaban afuera en la  
lumbre con leña.

— (4) ¿Cuáles eran los nombres de sus jefes?

#4 Sitting bull - Jefe del tribu Sioux.

Chief Gall - Hunkpapa Tetón  
Sioux.

Chief Red Horn ball Oglala  
Sioux.

Rain-in the face

P.122

Sample 3. Examples of Lupita's research cards

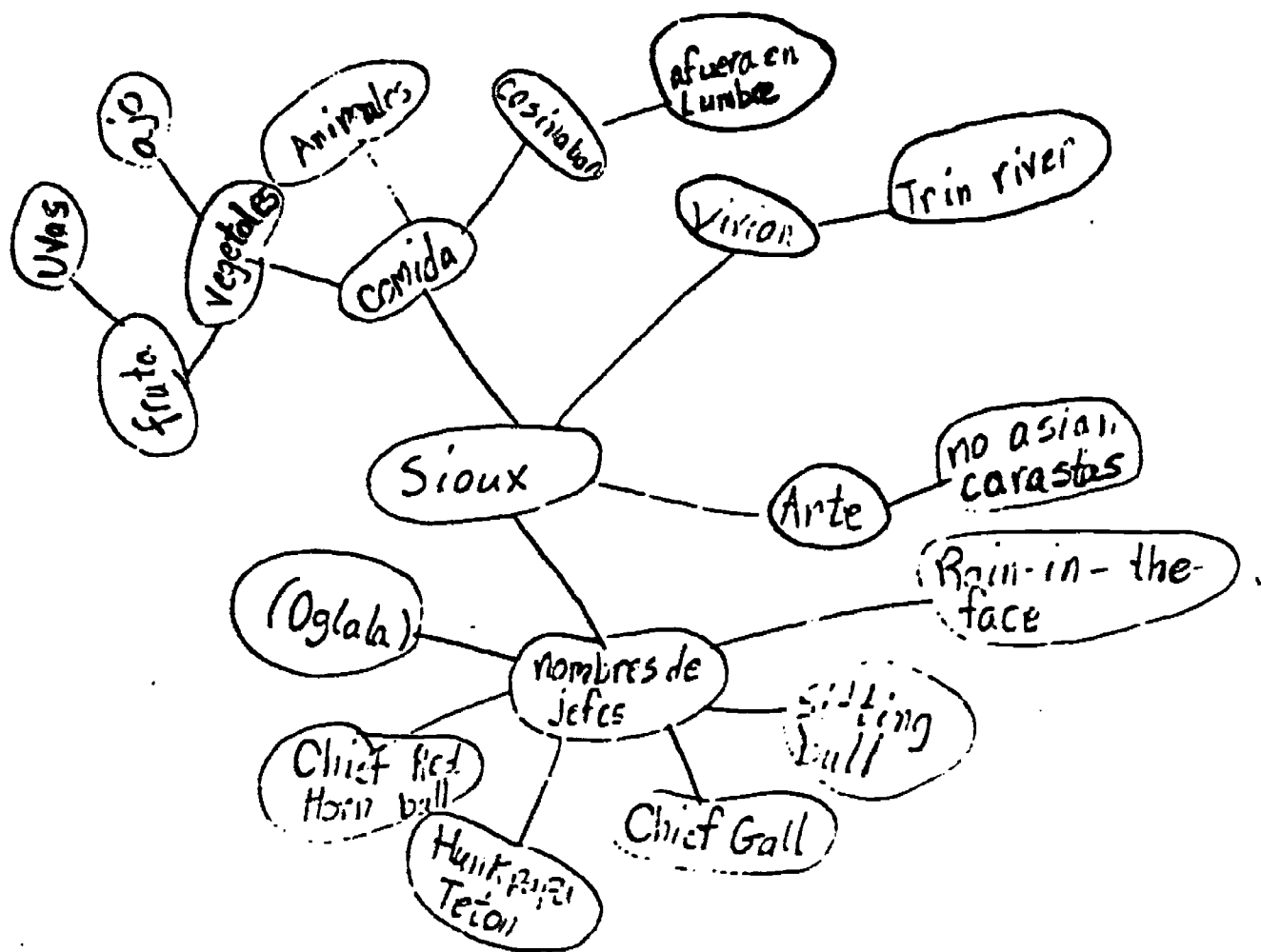
Sample 4

Source #	Número de identificación Source Call #	Books	Libros	✓ will use x will not use
1	970.001 HU	Hughes, Jill		✓
		(Author) Last Name, First Name Apellido Nombre		
		Plains Indians		
		Title Título		
2	745.5 P.U	Purdy, Susan		✗
		(Author) Last Name, First Name		
		North American Indians		
		Title		
3	470.001 W.A.	Waldman, Carl		✗
		(Author) Last Name, First Name		
		Atlas of The North America		
		Title		
4	970.4 AM	American Heritage		✓
		(Author) Last Name, First Name		
		Indians of the plains		
		Title		

Sample 4. Lupita's bibliographic record

Sample 5





Sample 5. Lupita's final web of "what I learned" about Native Americans

Sample 5

## LOS INDIOS SIOUX

por

María Guadalupe ~~Tépis~~

Yo me llamo María Guadalupe Tépis y quise aprender del tribu Siou porque casi no se mucho de ese tribu. Aprendí de los juegos que jugaban. También aprendí de los vegetales que comían y los nombres de los jefes.

Los Sioux vivían cerca del Trin River. Los Sioux no hacían muchas canastas.

A veces, cuando mataban los animales, los secaban y los dejaban para el invierno. Luego lo hacían sopa. También había muchos vegetales diferentes y fruta. Uvas y ajo eran unas de las comidas que les gustaban. Los Sioux cocinaban afuera en la lumbre.

Estos son unos de los nombres de los jefes del tribu Siouxi:  
Sitting Bull - jefe del tribu Siouxi, Chief Gall - Munkapa Teton,  
Chief Red Horn Bull - Ogalaia, and Rain-in-the-face.

También aprendí los juegos de los Sioux. Uno se llama "tiran lo del caballo" que jugaban antes de cazar o de bailar. Jugaban tirando a otros al suelo. También había otro juego que dos hombres tenían que poner un palo por un hoyo. El que ponía el palo por el hoyo primero ganaba.

Sample 6. Lupita's final report, a page in a published class book

Delia's Spanish Writing Sample

Julia ~~10/30/1989~~  
Oct. 30, 1989  
~~10/30/1989~~  
SPN

A mí me han dicho que los gatos son los animales más limpios que hay. Yo tengo un gatito y le he enseñado muchas cosas diferentes. Yo le he enseñado a cazar, subirse a los árboles, comer lo que le doy y le enseñe a jugar.

En este mundo hay gatos de toda la clase.

En selvas, bosques, zoo, y en tu propia casa o barrios hay gatos. En las selvas y en los bosques hay toda clase de animales salvajes que comen o atacan a la gente y a los animales.

En la casa o barrios algunos gatos son domesticos porque la gente los cria y los cuidan. Los gatos que no son domesticos o no estan domesticados por la gente son salvajes y si los tratas de agarrar

te rasguñan la cara o  
manos.

Delia's English Writing Camp.



They have told me that cats are the cleanest animals there is.

There are many kinds of cats, there are tigers, lions, mountain lions, cheetahs, panthers and cats that you take care of at home.

The cats that you take care of at home are domestic, and tigers, lions, mountain lions, cheetahs and panthers are wild. They are wild because they kill people, eat other animals and they are not domesticated by people.

If you play around with a kitten the kitten might bite you, run away or keep on playing.

Wild cats like to hunt other wild animals.

Domestic cats are little and wild cats are big and strong.

Sergio's English Writing Sample

2/25/90

ms. ~~1/25/90~~

## Games

Games wed Tuesday my  
mama day go to the Keimart En  
my mama are Taulme EF ay  
guant a Games.

En ay set yes mama please ay  
guan a Games En my mama  
seat okay.

En my mama set guide guante  
tu la guant.

En is set to learn at school En  
my mama set okay En my brother  
ste ide Super mario brothers.

En my mama seat okay ay take  
in the Games.

En guant some game.

Erika's English Writing Camp

Jan. 25, 1990  
Sra ~~Elm.~~  
~~Elm.~~ Elm.

dance\*

game's

music.

Once upon a time there was a girl name Elvia and she love to dance. She live in a house with her family. Wans she went with her sister and her name was Erika. She was going to pactis to dance. Wen they got to the room to fratis, the thecher told to Elvia if she want's to dance with your sister and she said yes! a will dance. But mother and Father will not let you to dance with me sed her old sister you beter ascht. Wen they got home Elvia toll he Mother and Father and they said Yes! you will.

Wen she heard Yes she was sow happy she was craying wen she told he older sister Erika she was real happy.

And the day's past she  
learnd alot and she was sow  
happy she learnd to dance.

The End