

Luis C. Moll  
Cathy Amanti  
Deborah Neff  
Norma Gonzalez

---

## Funds of Knowledge for Teaching: Using a Qualitative Approach to Connect Homes and Classrooms

We form part of a collaborative project between education and anthropology that is studying household and classroom practices within working-class, Mexican communities in Tucson, Arizona. The primary purpose of this work is to develop innovations in teaching that draw upon the knowledge and skills found in local households. Our claim is that by capitalizing on household and other community resources, we can organize classroom instruction that far exceeds in quality the rote-like instruction these children commonly encounter in schools (see, e.g., Moll & Greenberg, 1990; see also Moll & Díaz, 1987).

To accomplish this goal, we have developed a research approach that is based on understanding households (and classrooms) qualitatively. We utilize a combination of ethnographic observations, open-ended interviewing strategies, life histories, and case studies that, when combined analytically, can portray accurately the complex functions of households within their socio-historical contexts. Qualitative research offers a range of methodological alternatives that can fathom the array of cultural and intellectual resources available to students and teachers

within these households. This approach is particularly important in dealing with students whose households are usually viewed as being "poor," not only economically but in terms of the quality of experiences for the child.

Our research design attempts to coordinate three interrelated activities: the ethnographic analysis of household dynamics, the examination of classroom practices, and the development of after-school study groups with teachers. These study groups, collaborative ventures between teachers and researchers, are settings within which we discuss our developing understanding of households and classrooms. These study groups also function as "mediating structures" for developing novel classroom practices that involve strategic connections between these two entities (see Moll et al., 1990).

In this article we discuss recent developments in establishing these "strategic connections" that take the form of joint household research between classroom teachers and university based researchers, and the subsequent development of ethnographically informed classroom practices. We first present a summary of our household studies and the findings that form the bases of our pedagogical work. We then present an example of recent research between a classroom teacher and an anthropologist, highlighting details of their visit to a household, and the teacher's development of an instructional activity based on their observations. We conclude with some comments on the work presented.

---

*Luis C. Moll is associate professor of education at the University of Arizona; Cathy Amanti is a sixth grade bilingual teacher (on leave) and a doctoral student in anthropology at the University of Arizona; and Deborah Neff and Norma Gonzalez are anthropologists at the Bureau of Applied Research in Anthropology, University of Arizona.*

*Theory Into Practice*, Volume XXXI, Number 2, Spring 1992

### Some Basic Findings

As noted, central to our project is the qualitative study of households. This approach involves, for one, understanding the history of the border region between Mexico and the United States and other aspects of the sociopolitical and economic context of the households (see, e.g., Vélez-Ibáñez, *In press*; see also Heyman, 1990; Martínez, 1988). It also involves analyzing the social history of the households, their origins and development, and most prominently for our purposes, the labor history of the families, which reveals the accumulated bodies of knowledge of the households (see Vélez-Ibáñez & Greenberg, 1989).

With our sample,<sup>1</sup> this knowledge is broad and diverse, as depicted in abbreviated form in Table 1. Notice that household knowledge may include information about farming and animal management, associated with households' rural origins, or knowledge about construction and building, related to urban occupations, as well as knowledge about many other matters, such as trade, business, and finance on both sides of the border (see, e.g., Moll & Greenberg, 1990). We use the term "funds of knowledge" to refer to these historically accumulated and culturally developed bodies of knowledge and skills essential for household or individual functioning and well-being (Greenberg, 1989; Tapia, 1991; Vélez-Ibáñez, 1988).

Our approach also involves studying how household members use their funds of knowledge in dealing with changing, and often difficult, social and economic circumstances. We are particularly interested in how families develop social networks that interconnect them with their social environments (most importantly with other households), and how these social relationships facilitate the development and exchange of resources, including knowledge, skills, and labor, that enhance the households' ability to survive or thrive (see, e.g., Moll & Greenberg, 1990; Vélez-Ibáñez & Greenberg, 1989; see also Keefe & Padilla, 1987).

Two aspects of these household arrangements merit emphasis here, especially because they contrast so sharply with typical classroom practices. One is that these networks are flexible, adaptive, and active, and may involve multiple persons from outside the homes; in our terms, they are "thick" and "multi-stranded," meaning that one may have multiple relation-

Table 1  
A Sample of Household Funds of Knowledge

<i>Agriculture and Mining</i>	<i>Material &amp; Scientific Knowledge</i>
Ranching and farming	Construction
Horse riding skills	Carpentry
Animal management	Roofing
Soil and irrigation systems	Masonry
Crop planting	Painting
Hunting, tracking, dressing	Design and architecture
Mining	Repair
Timbering	Airplane
Minerals	Automobile
Blasting	Tractor
Equipment operation and maintenance	House maintenance
<i>Economics</i>	<i>Medicine</i>
Business	Contemporary medicine
Market values	Drugs
Appraising	First aid procedures
Renting and selling	Anatomy
Loans	Midwifery
Labor laws	Folk medicine
Building codes	Herbal knowledge
Consumer knowledge	Folk cures
Accounting	Folk veterinary cures
Sales	
<i>Household Management</i>	<i>Religion</i>
Budgets	Catechism
Childcare	Baptisms
Cooking	Bible studies
Appliance repairs	Moral knowledge and ethics

ships with the same person or with various persons. The person from whom the child learns carpentry, for example, may also be the uncle with whom the child's family regularly celebrates birthdays or organizes barbecues, as well as the person with whom the child's father goes fishing on weekends.

Thus, the "teacher" in these home based contexts of learning will know the child as a "whole" person, not merely as a "student," taking into account or having knowledge about the multiple spheres of activity within which the child

is enmeshed. In comparison, the typical teacher-student relationship seems "thin" and "single-stranded," as the teacher "knows" the students only from their performance within rather limited classroom contexts.

Additionally, in contrast to the households and their social networks, the classrooms seem encapsulated, if not isolated, from the social worlds and resources of the community. When funds of knowledge are not readily available within households, relationships with individuals outside the households are activated to meet either household or individual needs. In classrooms, however, teachers rarely draw on the resources of the "funds of knowledge" of the child's world outside the context of the classroom.

A second, key characteristic of these exchanges is their reciprocity. As Vélez-Ibáñez (1988) has observed, reciprocity represents an "attempt to establish a social relationship on an enduring basis. Whether symmetrical or asymmetrical, the exchange expresses and symbolizes human social interdependence" (p. 142). That is, reciprocal practices establish serious obligations based on the assumption of "confianza" (mutual trust), which is reestablished or confirmed with each exchange, and leads to the development of long-term relationships. Each exchange with relatives, friends, and neighbors entails not only many practical activities (everything from home and automobile repair to animal care and music) but constantly provides contexts in which learning can occur—contexts, for example, where children have ample opportunities to participate in activities with people they trust (Moll & Greenberg, 1990).

A related observation, as well, is that children in the households are not passive bystanders, as they seem in the classrooms, but active participants in a broad range of activities mediated by these social relationships (see La Fontaine, 1986). In some cases, their participation is central to the household's functioning, as when the children contribute to the economic production of the home, or use their knowledge of English to mediate the household's communications with outside institutions, such as the school or government offices. In other cases they are active in household chores, such as repairing appliances or caring for younger siblings.

Our analysis suggests that within these contexts, much of the teaching and learning is

motivated by the children's interests and questions; in contrast to classrooms, knowledge is obtained by the children, not imposed by the adults. This totality of experiences, the cultural structuring of the households, whether related to work or play, whether they take place individually, with peers, or under the supervision of adults, helps constitute the funds of knowledge children bring to school (Moll & Greenberg, 1990).

### Funds of Knowledge for Teaching

Our analysis of funds of knowledge represents a positive (and, we argue, realistic) view of households as containing ample cultural and cognitive resources with great potential utility for classroom instruction (see Moll & Greenberg, 1990; Moll et al., 1990). This view of households, we should mention, contrasts sharply with prevailing and accepted perceptions of working-class families as somehow disorganized socially and deficient intellectually; perceptions that are well accepted and rarely challenged in the field of education and elsewhere (however, see McDermott, 1987; Moll & Díaz, 1987; Taylor & Dorsey-Gaines, 1988; see also Vélez-Ibáñez, in press).

But how can teachers make use of these funds of knowledge in their teaching? We have been experimenting with the aforementioned arrangements that involve developing after-school settings where we meet with teachers to analyze their classrooms, discuss household observations, and develop innovations in the teaching of literacy. These after-school settings represent social contexts for informing, assisting, and supporting the teachers' work; settings, in our terms, for teachers and researchers to exchange funds of knowledge (for details, see Moll et al., 1990).<sup>2</sup>

In analyzing our efforts, however, we realized that we had relied on the researchers to present their findings to the teachers and to figure out the relevance of that information for teaching. Although we were careful about our desires not to impose but to collaborate with teachers, this collaboration did not extend to the conduct of the research. In our work with teachers, at least as far as household data were concerned, we relied on a "transmission" model: We presented the information, teachers received it, without actively involving themselves in the development or production of

*problem*

this knowledge. But how could it be otherwise? Was it feasible to ask teachers to become field researchers? What would they get out of it? Could they develop similar insights to those developed by the anthropologists in our research team? What about methods? Could they, for example, with little experience, understand the subtleties of ethnographic observations?

In what follows we present a case example from our most recent work that addresses these questions. The goal of the study was to explore teacher-researcher collaborations in conducting household research and in using this information to develop classroom practices. As part of the work, 10 teachers participated in a series of training workshops on qualitative methods of study, including ethnographic observations, interviews, the writing of field notes, data management, and analysis.<sup>3</sup> Each teacher (with two exceptions) then selected for study three households of children in their classrooms. In total, the teachers visited 25 households (the sample included Mexican and Yaqui families) and conducted approximately 100 observations and interviews during a semester of study (for details, see Vélez-Ibáñez, Moll, Gonzalez, & Neff, 1991).

Rather than provide further technical details about this project, however, we present an edited transcript from a recent presentation<sup>4</sup> by a teacher (Cathy Amanti) and an anthropologist (Deborah Neff) who collaborated in the study. They describe their experiences conducting the research, and provide a revealing glimpse of the process of using qualitative methods to study households and their funds of knowledge.

### Studying Household Knowledge

In their presentation, Amanti and Neff first described some of their concerns in conducting the work, including how their assumptions and previous experiences may have influenced their observations. They also described their planning. Notice how they decided to divide the methodological responsibilities for conducting the interviews and observations.

DN: We are going to share with you some of our experience in working as a team doing household interviews. We have chosen the López family, a pseudonym, as the focus of this brief talk. The Lópezes are the parents of one of Cathy's students, whom we will call Carlos.

In going into the homes, we carry with us cultural and emotional baggage that tends to color our

understanding of interviews and observations. We have fears and assumptions, and perhaps misunderstandings. I for one did not know exactly what to expect when I first went into the López home with Cathy. I had heard talk of dysfunctional homes, lack of discipline, lack of support systems and so forth, but remained skeptical of these negative characterizations. Having done fieldwork before, I was accustomed to this kind of uncertainty.

CA: I, however, was nervous because I was going out in the field for the first time with someone who's had experience doing this type of research. Deborah had experience doing ethnography. I did not, and I was concerned about balancing doing interviews and observations with establishing and maintaining rapport. I was glad, though, that she was there, and I wanted her feedback to make sure I was getting what I should from the visit.

In 2 years of teaching, I had visited only a handful of homes. So, I had been into some of these homes before but only for school-related reasons, for example, delivering a report card, but I'd only visited for a brief period of time. These research visits were to be different—I had to observe, ask questions, take notes, and establish rapport—it was a lot to assimilate, with many activities to coordinate at the same time. One problem I had, for example, was deciding how closely to stick to the questionnaires.

DN: We discussed that and Cathy decided to stick closely to the questionnaire for the time being until she got more comfortable with the procedure. She would conduct the interviews in Spanish, the language of the parents, and we decided that both of us would take notes. I would concentrate more on observations, body language, and overall context, noting suggestions to improve our interview skills and topics to follow up on in future visits. Cathy would conduct the interview and respond to the parents' questions. We decided the first interview, in particular, would be to establish rapport.

We spent a lot of time first discussing the child, for example, Carlos's performance in Cathy's class. Cathy also informed Mrs. López of school activities she might want to be involved in, such as a culminating activity to a literature unit. It took us about 10 minutes to explain the project. The Lópezes had no difficulty understanding the potential benefits to the child, although they were not quite clear about what we wanted from them. That became clear as the interviews progressed. They were glad to participate, although Mrs. López preferred not to be tape recorded.

CA: I was glad that she was able to tell us that so readily. Each time we went, we talked about the child, and tried to make astute observations. Some of these observations included, for example, noticing and asking about family photos and trophies.

Encyclopedias on corner bookshelves provided a natural entrée into topics of family history and social networks of exchange, literacy, and the parents' pride in their child's achievements.

DN: At first, going into the López home, I felt a little nervous too, because it was my experience to spend an enormous amount of time living with and interacting with the families before gaining the kind of entrée we were hoping to gain in this first interview. I didn't realize then that Cathy, as Carlos's teacher, had a natural entrée into the home, and had an implicit connection with Carlos's parents. I can't emphasize this enough. She was their son's teacher, and so we were treated with a tremendous amount of respect and warmth. I was amazed at how easily and quickly Cathy gained rapport with Mrs. López, and how much the Lópezes opened up to us.

The anthropologist noticed that the teacher held a special status with the family that could help establish the trust necessary for the exchange of information. After making sure that the family understood the purpose of the visit, the teacher started the interview, and was surprised by how forthcoming the mother was with information. Cathy, the teacher, also realized that she was starting to blend her role as a teacher with her new role as researcher; as she gathered new information about the family, their history and activities, she started making connections to instructional activities she wanted to develop—a common experience among the teachers and a key moment in our work.

CA: Once we began the interview, it seemed that Ms. López was really enjoying talking about her family, her children, and her life. They had told us this in training, that people would open up once they get talking. For instance, when she got on the subject of the difference between Mexican and U.S. schools, she just kept talking, and we let her go with it, and got more out of it than if we had stayed strictly with the questionnaire. But we had to balance that with our agenda, and for the first interview the main thing was to get the family history so we would have a baseline for discussing literacy, parenting, attitudes towards school, and funds of knowledge.

The issue of balancing use of the questionnaire and letting it go to probe on emergent issues was never totally resolved for me. That's why it was helpful to have an anthropologist with me. For example, during one later interview, I was prepared to accept a short answer from a parent and go on to the next question, but at Deborah's urging, I probed further and ended up with good information on religious devotion as a fund of knowledge, something that I would have missed.

DN: Eventually, we returned to the questionnaire, moving on to discuss the family's labor history.

CA: As we progressed asking questions about family background and labor history, I began to relax, although I was concerned with whether I was getting enough material that would be useful later in developing a learning module. Actually I never totally disengaged from my role as a teacher and when such things as cross-border trade came up, I thought this would be a great topic to use in my classroom and I tried to figure out how I could capture this resource for teaching.

### Seeing Beyond Stereotypes

An important aspect of the teachers' participation in the household research became the more sophisticated understanding they developed about the children and their experiences. There is much teachers do not know about their students or families that could be immediately helpful in the classroom, as the following comments illustrate.

DN: One of the things that we learned about the Lópezes that we didn't know before was the depth of the multicultural experiences their son, Carlos, had in cross-border activities. It wasn't just a superficial experience for him.

CA: Half of the children in my classroom are international travelers and yet this experience is not recognized or valued because they are Mexican children going to Mexico. Anglo children may spend a summer in France and we make a big deal about it, by asking them to speak to the class about their summer activities! Carlos spends summers in Magdalena, Mexico, yet he's probably rarely been asked to share his experiences with anyone.

His visits to Mexico have been more than 1- or 2-day visits. He spends most summers there. He and his brothers are first-generation born in the U.S. but their social networks extend into Magdalena. His family's cross-border activities extend back generations. His parents were born in Magdalena. His father began coming to the U.S. during his summer vacations, when he worked as a migrant worker in California. He eventually decided to stay here permanently and moved with some friends to Tucson.

Carlos's father's parents are involved in the import/export of major appliances between Sonora and Arizona and there are regular visits of relatives back and forth. His dad says they really live in both places. I'll read some of the notes from my interview with Carlos that describe his life in Sonora:

"In Magdalena he and his family stay with different relatives. When he is there he plays with his cousins. They are allowed to wander freely around most of the town. They like to play hide-and-seek

Cross border experience

mbi France

Migrant experience  
geography  
history

Import  
Export business

and sometimes they are taken places by older relatives. They like to visit a pharmacy that one of his aunts owns and one of his older cousins is married to someone who works on three ranches.

"Sometimes he goes to visit the ranches. Once he got to ride a horse. One thing he likes to do when he visits a ranch is play with bow and arrow. He says his cousin's husband will give him and his cousins a thousand pesos if they find the arrows." Carlos also reports playing cards when he visits Magdalena and that he has gone fishing near Santa Ana with older cousins and an uncle.

DN: It is precisely through information of these kinds of social activities that we identify funds of knowledge that can be used in the classroom to help improve his academic development.

CA: Furthermore, because of these experiences, Carlos and many of my other students show a great deal of interest in economic issues, because they have seen the difference in the two countries, in immigration law, but also in laws in general; they would ask me why there are so many laws here that they don't have in Mexico. These children have had the background experiences to explore in-depth issues that tie in with a sixth grade curriculum, such as the study of other countries, different forms of government, economic systems, and so on.

Carlos himself is involved in what we could call international commerce. He's a real entrepreneur. Not only does he sell candy from Mexico but, according to his mother, he'll sell anything he can get anyone to buy, for example, bike parts. His mother says Carlos got the idea to sell candy from other children.

We didn't uncover this only through questioning but from being there when one child came over to buy some candy from Carlos. He was really proud when he gave us each a piece to take home. Here was Carlos right in front of our eyes enacting a family fund of knowledge. This experience later turned out to be the seed for the learning module I developed for the project, which I will share with you in a few minutes.

The two presenters then discuss how the specific qualitative methods of study influenced not only the nature of the information collected from the family, yielding data about their experiences and funds of knowledge, but provided them with a more sophisticated understanding of the student, his family, and their social world. This more elaborate understanding helped the teacher transform this information into a useful instructional activity.

DN: It is so important to learn how culture is expressed in students' lives, how students live their worlds. We can't make assumptions about these things. Only a part of that child is present in the

classroom. We had little idea of what Carlos's life was really like outside of the classroom, and what he knew about the world.

CA: I couldn't have done this work without the anthropological perspective and methodology I learned in the project. Ethnography is different from other forms of educational research. It's open-ended, you go in with an open mind—not prejudging—being totally receptive to everything you hear and see. I didn't want to know only if the parents read stories to their children or how many books they had. I wasn't tallying the hours of TV the children watched either. I feel that I learned much more than that with a greater breadth of knowledge because I was not narrow in my focus.

DN: Carlos is embedded in a home and world, continuous with his family's history and in a culture that is at times discontinuous from that found in school. How to take advantage of these resources in the home? This experience of going into the home, taking off your lens for a moment, trying to step outside your assumptions to see Carlos on his own terms, in his own turf, is one way to do this.

We learned a lot during these three interviews that fractured stereotypes that we had heard others say about these households. Carlos's parents not only care, but have a very strong philosophy of child-rearing that is supportive of education, including learning English. They have goals of a university education for their children, instill strong values of respect for others, and possess a tremendous amount of pride and a strong sense of identity—in addition to the more practical knowledge in which their children share on a regular basis. These values are not unique to this family. All of the households we visited possess similar values and funds of knowledge that can be tapped for use in the classrooms.

But the workshops and fieldwork experience are just the beginning. There's the extensive reflection and writing up stage, the record of the experience, from which we read segments a few minutes ago. This reflection process is not to be underemphasized, for it is not just what people say that matters, but the subtext, and our observations and interpretations; for example, the way Mrs. López's eyes lit up when she showed us the trophy her son had won in the science fair, Mr. López's pride in his philosophy of child-rearing, and so forth. And then there is the translation of this material into viable lessons for the classroom.

The presenters pointed out that it is the teacher, not the anthropologist, who is ultimately the bridge between the students' world, theirs and their family's funds of knowledge, and the classroom experience. However, teachers need not work alone. They can form part of study groups, social networks, that will provide the

needed assistance and support in analyzing information and in elaborating instructional practices.

### Experimenting with Practice

The presentation concluded with a description by Cathy, the teacher, of the development of a theme study, or learning module, as we called them, based on information gathered from the households. Notice the emphasis on the inquiry process, on the students becoming active learners, and on strategically using their social contacts outside the classroom to access new knowledge for the development of their studies. Here is her summary:

CA: After we had completed our field work and written field notes for all our interviews, it truly was left up to us, the teachers, to decide how we were going to use the knowledge we had gained about our students and their families. We spent 2 days with consultants and everyone else who had been working on the project and brainstormed and bounced ideas off each other. I worked with two other teachers from my school and together we developed a learning module with a rather unusual theme—candy. You've already heard that Deborah and I witnessed Carlos selling Mexican candy to a neighbor. The fifth grade teacher I worked with also uncovered this theme. He interviewed a parent who is an expert at making all kinds of candy. In a truly collaborative effort, we outlined a week's worth of activities we could use in our classes.

To focus students' thinking on the theme, I had students free associate with the topic. I recorded their ideas on a large piece of white paper on the board. Next, I had them come up with a definition for the word candy. This was not as easy as you might think. They'd mentioned gum and sunflower seeds while brainstorming, which I wasn't sure should be included in this category. But I didn't tell them this because I wanted them to use their analytical skills to come up with their own definition. Actually, they got stuck deciding if salty things like *picalimón* and *saladitos* (Mexican snacks that include salt and spices) were candy. Next they categorized all the candies they'd mentioned.

After that we used the KWL method to organize our unit. For those not familiar with this method, we used a three-column chart. In the first column, we recorded everything the students "know" about the topic. In the next column, we recorded what they "want" to know. The third column, the "L" column, is to be used at the end of the unit to record what the students learned during the study. After working with the project consultant, I added another W at the end

of the chart—a fourth column, something new for me—to record new questions students had, to help them see that learning is ongoing, that it does not consist of discrete chunks of knowledge. We then surveyed and graphed favorite candies of the class.

With the assistance of the teacher, the students pursued their interests by focusing their inquiry on a narrower topic and by specifying a research question. As is common in research, the class relied on all their resources, including the expertise of one of the parents, to elaborate their work. Notice, however, that this was not a typical parent visit to correct or sort papers; the purpose of the parent's visit was to contribute intellectually to the students' academic activity. This parent, in effect, became a cognitive resource for the students and teacher in this classroom (see also Moll & Greenberg, 1990).

CA: Next, we became a research team. Students chose one of the questions they'd generated to answer. They chose, "What ingredients are used in the production of candy?" I framed the pursuit of the answer using the version of the scientific method we use in schools. After writing their question on the board, the students developed a procedure to answer their question; then they hypothesized what ingredients they'd find on the candy labels they brought in the next day.

The next day, after students had made a class list of ingredients in the candy samples they'd brought in, they graphed the frequency of occurrence of the ingredients they'd found. Then I had them divide the ingredients into two lists—one of ingredients they'd found in the Mexican candy samples and one of ingredients they'd found in U.S. candy samples. We all learned something that day. We were all surprised to see that fewer ingredients are used in Mexican candies and that they don't use artificial flavors or coloring—just vegetable dyes and real fruit.

The next day one of the parents of my students, Mrs. Rodríguez, came in to teach us how to make *pipitoria*, a Mexican candy treat. This turned out to be the highlight of our unit. Before she came in that morning, the students divided up to make advertising posters and labels for the candy because we were going to sell what we made at the school talent show. When Mrs. Rodríguez arrived, she became the teacher. While the candy was cooking, she talked to the class for over an hour and taught all of us not only how to make different kinds of candy but also such things as the difference in U.S. and Mexican food consumption and production, nutritional value of candy, and more. My respect and awe of Mrs. Rodríguez grew by leaps and bounds that morning. Finally, the students packaged and priced their candy.

Mexican  
Candy  
- Ingredients  
- Spelling Lesson  
- word for  
candy

cooking

The unit concludes, somewhat prematurely, as the teacher notes, with the students summarizing and reflecting upon their work, and by identifying further topics for future research. The teacher, in turn, has become a "mediator," providing strategic assistance that would facilitate the students' inquiry and work.

CA: The last day of the unit, students wrote summaries of what they'd learned and we recorded it on our chart. Then they began to formulate new questions. Examples of their new questions are: "What is candy like in Africa?" and "What candy do they eat in China?" As you can see, if we'd had time to continue our unit, our studies would have taken us all over the world. We did, however, cover many areas of the curriculum in one short week—math, science, health, consumer education, cross-cultural practices, advertising, and food production.

From the questions the students came up with alone, we could have continued investigating using innumerable research and critical thinking skills for a considerable part of the year. If we had continued this type of activity all year, by the end we would have been an experienced research team and my role would have been to act as facilitator helping the students answer their own questions.

### Conclusion

We have presented a single aspect of a broader, multidimensional research project: teachers as co-researchers using qualitative methods to study household knowledge, and drawing upon this knowledge to develop a participatory pedagogy. The insights gleaned from approaching the homes ethnographically, and adapting the method to the educational goals of the project, were a result of a genuine teacher-researcher (in this case, anthropologist) collaboration. We have learned that it is feasible and useful to have teachers visit households for research purposes. These are neither casual visits nor school-business visits, but visits in which the teachers assume the role of the learner, and in doing so, help establish a fundamentally new, more symmetrical relationship with the parents of the students.

This relationship can become the basis for the exchange of knowledge about family or school matters, reducing the insularity of classrooms, and contributing to the academic content and lessons. It can also become, as illustrated above, the catalyst for forming research teams among the students to study topics of

interest to them, or important to the teacher, or for achieving curricular goals.

Our concept of funds of knowledge is innovative, we believe, in its special relevance to teaching, and contrasts with the more general term "culture," or with the concept of a "culture-sensitive curriculum," and with the latter's reliance on folkloric displays, such as storytelling, arts, crafts, and dance performance. Although the term "funds of knowledge" is not meant to replace the anthropological concept of culture, it is more precise for our purposes because of its emphasis on strategic knowledge and related activities essential in households' functioning, development, and well-being. It is specific funds of knowledge pertaining to the social, economic and productive activities of people in a local region, not "culture" in its broader, anthropological sense, that we seek to incorporate strategically into classrooms.

Indispensable in this scenario are the research tools—the theory, qualitative methods of study, and ways of analyzing and interpreting data. These are what allow the teachers (and others) to assume, authentically, the role of researchers in household or classroom settings. They are also what help redefine the homes of the students as rich in funds of knowledge that represent important resources for educational change.

We are currently starting the next phase of study, involving teachers in five different schools serving both Mexican and Native-American students.<sup>5</sup> The research design remains the same: developing our understanding of households and classrooms and collaborating with teachers in conducting the research and in developing academically rigorous instructional innovations. Now, however, we have teachers with research experience helping us organize the study groups, developing further the methodology for doing the home investigations, conceptualizing and implementing promising instructional activities, and evaluating the project. In this new study we plan to include principals, as co-researchers, and parents in the study groups, as an attempt to rethink our respective roles and develop our collective funds of knowledge about teaching and learning.

One of the hallmarks of qualitative research is that strategies often evolve within the process of doing. As teachers, administrators, and parents become more aware of the linkages that

can be created utilizing this methodology, and become comfortable with the redefinition of roles that it entails, new strategies of implementation will emerge that are driven by the needs of the target community. As the research unfolds, the constitutive nature of the inquiry process becomes apparent, as teacher, researcher, parent, child, and administrator jointly create and negotiate the form and function of the exploration.

### Notes

1. Our sample includes households of students in the project teachers' classrooms, as well as students from other classrooms, but in the same general community. In total, including previous projects, we have observed in approximately 100 homes.
2. For similar ideas regarding the development of teacher "labs" or activity settings, see, for example, Berliner (1985). Laboratory of Comparative Human Cognition (1982), and Tharp and Gallimore (1988). The creation of study groups is also a common practice among whole-language teachers and researchers (see Goodman, 1989).
3. Field notes are generally descriptive to provide context and background information, whereas interviews, usually based on a questionnaire, focus on topics of specific relevance to the project, such as the participation of children in a household activity. In the project described herein, all notes were prepared and coded using word processing programs, and lap-top computers were made available to the teachers. Anthropologists and graduate students assisted the teachers in interviewing, and provided feedback on the consistency, completeness, and depth of the field notes. Given the constraints on teachers' times, we recommend that they obtain release time from teaching to conduct observations and interviews, and record and edit field notes. Release time, we should point out, is routinely granted for other purposes, such as participating in inservice workshops, so it very well could be used for documenting the knowledge base of the students' homes.
4. The presentation (August 5, 1991) was before approximately 200 principals and other administrators (including the new superintendent) of the local school district.
5. One of our goals for 1992-1993 is to develop the project in other regions of the country through similar collaborative ventures. For example, we are currently piloting an initial teacher-anthropologist component to collect baseline and background data on target schools and communities, including demography, economy, migration, educational achievement levels, and community resources, before developing questionnaires and conducting home interviews in different regions of the country. We are also developing assessment procedures to document project

success, especially the academic benefits to the students, in order to improve our accountability to the schools and communities in which we work.

### References

- Berliner, D.C. (1985). Laboratory settings and the study of teacher education. *Journal of Teacher Education*, 36(6), 2-8.
- Goodman, Y. (1989). Roots of the whole-language movement. *The Elementary School Journal*, 92, 113-127.
- Greenberg, J.B. (1989, April). *Funds of knowledge: Historical constitution, social distribution, and transmission*. Paper presented at the annual meetings of the Society for Applied Anthropology, Santa Fe, NM.
- Heyman, J. (1990). The emergence of the waged life course on the United States-Mexico border. *American Ethnologist*, 17, 348-359.
- Keefe, S., & Padilla, A. (1987). *Chicano ethnicity*. Albuquerque: University of New Mexico Press.
- La Fontaine, J. (1986). An anthropological perspective on children in social worlds. In M. Richards & P. Light (Eds.), *Children of social worlds: Development in a social context* (pp. 10-30). Cambridge, U.K.: Polity Press.
- Laboratory of Comparative Human Cognition. (1982). A model system for the study of learning difficulties. *The Quarterly Newsletter of the Laboratory of Comparative Human Cognition*, 4(3), 39-66.
- Martinez, O.J. (1988). *Troublesome border*. Tucson: The University of Arizona Press.
- McDermott, R.P. (1987). The explanation of minority school failure, again. *Anthropology and Education Quarterly*, 18, 361-364.
- Moll, L.C., & Díaz, S. (1987). Change as the goal of educational research. *Anthropology and Education Quarterly*, 18, 300-311.
- Moll, L.C., & Greenberg, J. (1990). Creating zones of possibilities: Combining social contexts for instruction. In L.C. Moll (Ed.), *Vygotsky and education* (pp. 319-348). Cambridge, U.K.: Cambridge University Press.
- Moll, L.C., Vélez-Ibáñez, C., Greenberg, J., Whitmore, K., Saavedra, E., Dworin, J., & Andrade, R. (1990). *Community knowledge and classroom practice: Combining resources for literacy instruction* (OBEMLA Contract No. 300-87-0131). Tucson: University of Arizona, College of Education and Bureau of Applied Research in Anthropology.
- Tapia, J. (1991). *Cultural reproduction: Funds of knowledge as survival strategies in the Mexican American community*. Unpublished doctoral dissertation, University of Arizona, Tucson.
- Taylor, D., & Dorsey-Gaines, C. (1988). *Growing up literate: Learning from inner city families*. Portsmouth, NH: Heinemann.

- Tharp, R., & Gallimore, R. (1988). *Rousing minds to life: Teaching, learning, and schooling in social context*. Cambridge, U.K.: Cambridge University Press.
- Vélez-Ibáñez, C.G. (1988). Networks of exchange among Mexicans in the U.S. and Mexico: Local level mediating responses to national and international transformations. *Urban Anthropology*, 17(1), 27-51.
- Vélez-Ibáñez, C.G. (in press). U.S. Mexicans in the borderlands: Being poor without the underclass. In J. Moore & R. Rivera (Eds.), *Issues of Hispanic poverty and underclass*. Los Angeles: Sage.
- Vélez-Ibáñez, C.G., & Greenberg, J. (1989). *Formation and transformation of funds of knowledge among U.S. Mexican households in the context of the borderlands*. Paper presented at the annual meeting of the American Anthropological Association, Washington, DC.
- Vélez-Ibáñez, C., Moll, L.C., Gonzalez, N., & Neff, D. (1991). *Promoting learning and educational delivery and quality among "at risk" U. S. Mexican and Native American elementary school children in Tucson, Arizona: A pilot project*. Final Report to W.K. Kellogg Foundation. Tucson: University of Arizona, Bureau of Applied Research in Anthropology.

tip