Chapter 4

Teachers as Social Scientists: Learning about Culture from Household Research[1]

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The most basic of pedagogical principles is for teachers to build on the experiences and abilities that students bring to class. An extension of this principle, especially in contemporary multicultural contexts, is that teachers must come to "know" the "cultures" from which their students emerge. The point, of course, is that students' cultural characteristics, including their language and literacy experiences, must be treated as resources, not as impediments to their schooling (e.g., Moll, 1992a; Moll & González, 1994). Indeed, as Ferreiro (1994) has recently suggested, transforming students' diversities into pedagogical assets may be the foremost educational challenge for the future (p. 25).

Although this "multicultural" approach is laudatory in its conceptualization, the application has run aground on at least two key issues. The first issue concerns the manner in which teachers' awareness of diversity is pre-packaged and pre-digested for inservice consumption. Typically, inservices or after-school meetings are held in which experts transmit to practitioners certain traits or attributes of "Culture X" or "Culture Y." Rather than grappling with the complexities of the movements of peoples, a historical consciousness of how these groups came to exist in their present circumstances, and what they do and know to survive or get ahead, inservices often offer an homogenized and standardized prescriptivism for dealing with children of the "other." Indeed, these approaches may simply succeed in forming new sets of stereotypes, albeit more positive or benign ones, to replace previous sets of stereotypes. Practitioners thus are forced to rely on a "transmission" model for learning

about their students: disengaged from first-hand experience and with information often boxed into pre-existing molds and generalizations.

A second issue that proves problematic is dealing with the notion of "culture." Prevailing trends in anthropological or ethnographic literature have moved away from univocal and harmonious visions of an integrated version of culture. Yet, the prevailing notions of "culture" in the schools center around observable and tangible surface markers: dances, food, language, folklore, ethnic heritage festivals, and international potlucks. Although these affirmations are undoubtedly positive in fostering tolerance, there is an unspoken assumption of a normative and clearly defined culture "out there" that may not take into account the everyday lived experiences of students and their families (González, 1995).

In the work described in this chapter, we present a qualitative approach to addressing these two issues. We are participants in a collaborative research project involving teacher-researchers from elementary schools and university-researchers from the disciplines of anthropology and education (see González et al., 1995; Moll et al., 1992). The basic premise of this project is that classroom learning can be greatly enhanced when teachers learn more about their students and about their students' households. In our particular version of how this learning can come to be accomplished, teachers venture into their students' households and communities, not as "teachers" attempting to convey educational information, as valuable as that role may be, but as "learners" seeking to understand the ways in which people make sense of their everyday lives. Ethnographic research methods involving participant-observation, interviewing, elicitation of narratives, and reflection on field notes, flesh out the multidimensionality of student and family experiences. Although the concept of making home visits is not new, entering the households of Mexican origin, African American or Native American students with a "theoretical" eye towards learning from households is a radical departure from traditional school home-visits (González et al., 1995).

Drawing from ethnographic and qualitative methods, the goal is for teachers to tap into the reservoirs of accumulated knowledge and strategies for survival that households possess, which we refer to, following Greenberg (1989) and Vélez-Ibáñez (1988), as "funds of knowledge." Teachers are not given second-hand generalities about Mexican, or African American, or Native American culture

by academic researchers; they are learning, as ethnographers would, directly from interviews and other first-hand experiences. Our claim is that these qualitative methods of study can become the "tools" necessary for the teachers' development of "theoretical" knowledge that, in turn, helps them formulate a pedagogy specific to their situations and that builds strategically on the social relations and cultural resources of their school's community.

ANALYZING FUNDS OF KNOWLEDGE

The project consists of three main interrelated activities: 1) a qualitative analysis of the strategies, uses, and development of knowledge among households in Latino and other communities in Tucson, Arizona; 2) creation of after-school sites where researchers and teachers meet to think about their joint research and to determine how to use pedagogically what we are learning; and, 3) classroom observations to examine methods of instruction and explore how to produce positive change by integrating what is learned from the households and at the after-school site. This three-part design—household analysis, the creation of study groups or lab settings with teachers, and the development of pedagogy—is, with considerable variability, our basic framework for conducting research. This design allows for the flexible but continuous analysis of three important domains of practice (households, labs, and classrooms), and for the exploration of interconnections (theoretical and practical) that may benefit classroom instruction (Moll, 1992b).

In previous studies we have documented how every household contains accumulated "funds of knowledge" (skills, abilities, ideas, practices), in short, those bodies of knowledge that are essential to the households' functioning and well-being (Greenberg, 1989; Moll & Greenberg, 1990). We have also emphasized how each household is interconnected with other households (and other institutions and individuals) for the purpose of garnering or exchanging these funds of knowledge. In fact, these social networks represent a flexible mechanism that allows households to adjust to changing (and often difficult) social and economic circumstances (see Vélez-Ibáñez, 1988). These funds of knowledge and the social networks have been the main focus of our household studies.

The centerpiece of our work, however, has become the collaboration with teachers in conducting household research (González et al., 1995; Moll et al., 1992). We emphasize this point

because it has been such a significant change in our work. It is no longer the case of the researchers providing the teachers with "data," or the analysis of such data, and asking them to do something interesting with the information. It is now the case that the teachers themselves are creating new knowledge based on their own household observations. This change has had major consequences on our working relationships with teachers and on the relationship of teachers with families, as well as on how we think about the pedagogical consequences of our work, a point we will discuss later in this chapter.

We base the work on the assumption that there are important (cultural) resources for teaching in the school's immediate community but that one needs both theory and method to locate, identify, and document these resources. Furthermore, we also assume that these cultural resources (funds of knowledge) can be fruitfully imported into classrooms but only under the teachers' direction and control. In contrast to other efforts at teacher research (e.g., Lytle & Cochran-Smith, 1990), our starting point is not the study of classrooms but the analysis of household history and practices. One of the teachers in the project put it as follows:

> Like many other teacher-research projects, this project is a collaborative endeavor, carried out jointly by university- and school-based researchers. However, unlike most teacher-research, which has come to be synonymous with classroom research, the teachers working on this project have not been confined to research in their classrooms alone. Where teacher-research in general subscribes to the notion that teachers are more effective when they "closely observe individual students in their classrooms" (Bissex, 1987, p. 16), the benefits of closely observing their students in other contexts, such as their home, have been left unidentified (Amanti, 1994:2).

There are some compelling reasons for taking this "community-mediated" approach. For one, as Goodson (1991) has pointed out, having strangers scrutinize one's teaching is not a very good way of creating a working relationship between teachers and researchers. In contrast, the initiation of teachers into household, rather than classroom, analysis provides the context for collaboration in a number of overlapping arenas (see Moll & González, 1994). For example, as we discuss below, teachers are presented with a body of

social theory that helps them reconsider the households of "minority" children from a different theoretical perspective. In addition, by approaching these households as qualitative researchers, teachers are offered a non-evaluative framework that helps them to go beyond surface images of families. The household analysis also serves as a way to learn to study, in general, unfamiliar settings that they cannot assume they know or understand. Not coincidentally, the contrast between the known or familiar (the classroom) and the unknown or unfamiliar (the households), especially when teachers do not live in the community in which they teach, is analogous to an anthropologist entering an unknown setting or community. This contrast becomes an issue even when the teachers are themselves members of the community. In such cases, the task becomes that of "making the familiar strange" in order to observe and document processes that are less salient or "visible" to the "insider." All teachers, minority or otherwise, have found that entering the households as researchers, rather than as "teachers," produces a discernible reorientation to household dynamics and processes and to the formation of qualitatively new social relations with families (González & Amanti, 1997; González et al., 1995).

The theoretical orientation of our fieldwork, then, is towards documenting the productive (and other) activities of households and what they reveal about families' knowledge. Particularly important in our work has been the analysis of households as "strategizing units": how they function as part of a wider economy and how family members obtain and distribute their material and intellectual resources through strategic social ties or networks or through other adaptive arrangements. We have learned that in contrast to classrooms, households never function alone or in isolation, they are always connected to other households and institutions through diverse social networks. These social networks not only 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, but serve important emotional and service functions, providing assistance of different types, for example, in finding jobs, with child-care and rearing, or other problem-solving functions.

It is primarily through these social networks that family members obtain or share what we have termed "funds of knowledge." We have defined funds of knowledge as those historically accumulated and culturally developed bodies of knowledge and skills essential for

household or individual functioning and well-being (Greenberg, 1989; Moll & Greenberg, 1990). As households interact within circles of kinship and friendship, children are "participant-observers" of the exchange of goods, services, and symbolic capital that is part of each household's functioning.

What is the source of these funds of knowledge? We have concentrated primarily on documenting the social and labor history of the families. Much of a household's knowledge is related to its origins and, of course, to family members' employment, occupations, or work, including labor specific to household activities. To make this discussion more concrete, consider the following case example drawn from one of our studies (adapted from Moll & Greenberg, 1990; names are pseudonyms)[2]:

> 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 boy friend and son. Mr. Zavala is best characterized as an entrepreneur. He works as a builder, part time, and owns some apartments in working-class neighborhoods 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 installing 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 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 sisters, 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.

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.

Reading and writing are an integral part of the Zavalas' 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 once 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 has grasped the 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.

Notice that even this cursory and superficial example reveals substantial funds of knowledge that a teacher could document, as well as knowledge about the family's strategies to cope with economic circumstances. We can specify that this family has knowledge about the purchase, construction, rental, and maintenance of apartments (business knowledge), installation of cable TV and heating and cooling ducts, the repair of washing machines, refrigerators, and even airplanes, and professional knowledge about the painting of houses; the father and son (and uncle) also have knowledge about the building and repair of bicycles, and the mother and daughters about sales (of candy purchased in Mexico) and savings. The family history also reveals the cross-border character (and knowledge) of the family, typical of many Mexican families in Tucson. Their social network places them in contact with considerable knowledge about other matters—in the example above, knowledge about formal schooling from the brother-in-law, who is a teacher, as well as knowledge gained from their own intimate involvement with schools and library, including the management of their children's homework tasks and knowledge about computers. We also learn about some of the family's uses of literacy, in both English and Spanish, ranging from job-related reading to reading for recreation, self-improvement, and child rearing and education.

The case example above, obviously, does not exhaust this household's funds of knowledge or the forms of exchange that the household is capable of producing. The knowledge and skills that such households and their networks possess are extensive. For example, many of the families know about repairs, carpentry, masonry, electrical wiring, fencing, and building codes—in general, knowledge related to jobs in the working-class segment of the labor market. Some families have knowledge about the cultivation of plants, folk remedies, herbal cures, midwifery, and first-aid procedures, usually learned from older relatives in rural settings. Family members with several years of formal schooling have knowledge about (and have worked in) archaeology, biology, education, engineering, and mathematics.

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 room 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 of the exchange is part of any household's pedagogy. People must teach and learn new knowledge and skills to deal with a changing reality. In many instances the children are involved in these activities, they may be the recipients of the exchange, as observers or participants. 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, then, as should be obvious, are not socially or intellectually barren: they contain knowledge; people use reading and writing; they mobilize social relationships, and they teach and they learn. From the documentation and (theoretical) analysis of

funds of knowledge, one learns not only about the extent of the knowledge found among these working-class households but about the special importance of the social and cultural world, and of social relations, in the development of knowledge (Moll et al., 1993).

PEDAGOGICAL CONSEQUENCES

Teachers have reported to us the transformative potential of viewing households from a funds of knowledge perspective (see González et al., 1995). One implication, and a most important one, is debunking ideas of working-class, language-minority households as lacking worthwhile knowledge and experiences. These households, and by implication, these communities, are often viewed solely as places from which children must be saved or rescued rather than places that, in addition to problems (as in all communities), contain valuable knowledge and experiences that can foster the children's educational development.

Each teacher, as she or he came to know the households personally and emotionally, came away changed in some way. Some were struck by the sheer survival of the households against seemingly overwhelming odds. Others were astonished at the sacrifices the households made in order to gain a better education for their children. They all found parents who were engineers, teachers, and small business owners in Mexico, who pulled up stakes and now work in jobs far below their capabilities in order to obtain a "better life and education" for their children. They found immigrant families living with fifteen people in a household, with all adult males and females working, in order to pay rent and everyday necessities. The teachers not only documented family histories and activities and related these to the concept of funds of knowledge but established enduring social relationships with the families. It was common for teachers to be invited not only for dinner but to important family functions such as weddings, or *quinceañera* (debutante) celebrations, a prominent cultural activity for many families in this region. Parent visits to the schools or phone calls to the teachers also became common, as the parents sought to stay in touch with the teachers. In short, teachers became part of the families' social networks, signaling that relationships of mutual trust *(confianza)* had developed.

Our work also involved the incorporation of household knowledge into tangible curricular activities within the classroom. For example, one teacher learned that many of her students' households had extensive knowledge of the medicinal value of plants and herbs. She was able to draw on this ethnobotanical knowledge in formulating a theme unit that reflected local knowledge of the curative properties of plants. Another teacher, after visiting a household that regularly participated in trans-border activities in northern Mexico, discovered that her student commonly returned from these trips with candy to sell. Elaborating on this student's marketing skills, an integrated unit was spun around various aspects of candy and the selling of candy. Students adopted an inquiry-based approach to investigate the nutritional content of candy to make a comparison of U.S. and Mexican candy and sugar processing, and to develop a survey and graphing unit on favorite candies. In both instances, individuals met during the household visits became participants, visiting the classrooms to contribute (in either English or Spanish) their knowledge or experiences (González et al., 1994; Moll et al., 1992; see also Moll & Greenberg, 1990).

In other cases, the involvement of the parents has followed an unexpected trajectory. In one special case involving an African American household, the research visits revealed that the father, in addition to his regular job as a gardener, had a wealth of musical and theatrical knowledge that was tapped for the production of a full-scale musical in the school. This father wrote lyrics and composed music and a script that featured eight original songs, described by the teacher as "songs that these children will carry with them for the rest of their lives" (Hensley, 1995). Other than the skills learned in staging the musical, a unit on sound and music was developed that focused on the acoustical properties of sound, the construction of various musical instruments, and ethnomusicology. Interestingly, a written survey sent by the school inquiring about household skills had not been returned by this family, but the personal and interested contact of the teacher was key in revealing and using this storehouse of talents.

One further development marks this case study as illustrative of the "catalytic" potential of this method. During an initial interview, the Johnsons (a pseudonym for this family) had indicated disinterest in the school's PTA. However, as Mr. Johnson became a frequent school visitor (on his weekly day off, we should add), carrying his musical instruments, other teachers noticed him and asked about his presence. Soon they were requesting that he visit their classrooms, and his visibility extended into other areas of school life. By the end of the school year, Mr. Johnson had been elected PTA president,

proposing an ambitious agenda of community involvement in school matters. This case example effectively points out yet another area of potential that can be harnessed by transcending the boundaries of the school and making inroads into the funds of knowledge of the community (Moll & González, 1994).

Another implication, and one we want to highlight in this article because of its relevance for multicultural education, is in understanding the concept of culture from a more dynamic, "processual" view, not as a group of personality traits, folk celebrations, foods, or artifacts but as the lived practices and knowledge of the students and their families. The fact that many minority students live in ambiguous and contradictory circumstances favors a perspective in which attention is directed towards the interaction between individual agency and received structures. In this way, the actual and everyday experiences of students' lives are privileged over uniform, integrated and standardized cultural norms. Cathy Amanti (1994), a teacher-researcher, explains it as follows:

> The impact of participating in this project went far beyond my expectations. My approach to curriculum and my relationship with my students are two areas where the impact was most profound. In the area of curriculum, as a teacher of predominantly Mexican and U.S. Mexican students, I believed in the importance of acknowledging and including aspects of my students' culture in my classroom practice. However, though teachers are trained to build on students' prior knowledge, they are given no guidelines for how to go about eliciting this knowledge. Also, the multicultural curriculum available in schools perpetuates an outdated notion of culture as special and isolated ritual events and artifacts, the kind featured in *National Geographic*. Its focus on holidays, "typical" foods and "traditional" artifacts covers a very narrow range of my students' experiences and ignores the reality of life in the borderlands, which often falls outside the norms of traditional Anglo or Mexican culture.
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> Participating in this project helped me to reformulate my concept of culture from being very static to more practice-oriented. This broadened conceptualization turned out to be the key which helped me develop strategies to include the knowledge my students were bringing to school in my classroom practice. It was the kind of information elicited through the questionnaires that was the catalyst for this transformation. I sought information on literacy, parenting attitudes, family and residential history, and daily activities. But I was not looking for static categories, or judging the households' activities in these areas according to any standards —my own or otherwise. I simply elicited and described the context within which my students were being socialized. What this meant was that if the father of one of my students' did not have a "job," I did not stop the inquiry there. The format of the questionnaires encouraged me to continue probing to discover any type of activity that the father and mother were doing to ensure the survival of the household.
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> If we were simply eliciting labor history associated with categories of work in the formal economic sector, we would risk both devaluing and missing many of the experiences of our students and their families. This has clear implications for how we approach culture. If our idea of culture is bound up with notions of authenticity and tradition, how much practice will we ignore as valueless and what will this say to our students? But if our idea of culture is expanded to include the ways we organize and make sense of all our experiences, we have many more resources to draw upon in the classroom (see also Amanti, 1995).

Viewing households within a processual view of culture, rooted in the lived contexts and practices of their students and families, engendered a realization that "culture" is a dynamic concept and not a static grab bag of *tamales*, *quinceañeras* and *cinco de mayo* celebrations. Instead, teachers learned how households network in informal market exchanges. They learned how cross-border activities made "mini-ethnographers" of their students. And most importantly, that students acquired a multi-dimensional depth and breadth from their participation in household life (Moll et al., 1992).

Once teachers entered households as "learners," as researchers seeking to construct a template for understanding and tapping into the concrete life experiences of their students, the conventional model of home visits was turned on its head. No attempt would be made to "teach" the parents or to visit for other school-related reasons. This shift constituted a radical departure from the

household visits in other programs that incorporate the "home visit" concept. The after-school labs were restructured to accommodate these shifts, and the ethnographic method emerged as the vehicle for participant-observations, rather than "household visits." Within the lab setting, ethnography surfaced as more than techniques. It became the filter through which the households were conceptualized as multi-dimensional and vibrant entities. This new perspective reflected a corresponding shift in teacher's theoretical paradigms. As has been noted, in teaching anthropology "a state of mind is more important than specific techniques" (Spindler & Spindler, 1990:20).

Throughout the study groups, anthropological inquiry was presented as more of a state of mind than a technique. However, the theoretical implications of technique became conspicuous in several ways, and an effort to systematize reflexivity emerged. As part of the ethnographic experience, teachers were asked to select two to three students from their classrooms. Students were selected at the teacher's discretion, and no formal attempt at representativeness was made. Households were visited three times and the interviews lasted an average of two hours each. An interview of the target child was also conducted. Ages of the students ranged from kindergarten through fifth grade. Teachers were asked to taperecord the interviews (if the family was comfortable with it) and to conduct the interview as conversationally as possible. Teachers were paid (when possible) as project participants for their "extra duty" time.

Following their forays into the field, teachers were asked to write up fieldnotes based on each interview, and these fieldnotes became the basis for the study group discussions. Teachers overwhelmingly remarked on the time-consuming nature of this process. After a hectic school day, conducting interviews that often stretched into two or three hours and later investing several hours in writing field notes was an exacting price to pay for a connection to the households. They cited this one factor as precluding wholesale teacher participation in this project. Yet, in spite of the strain of the task, the teachers felt that the effort was "worth it." In the reflexive process involved in transcription, teachers were able to obtain elusive insights that could easily be overlooked. As they replayed the audio tapes and referred to notes, connections and hunches began to emerge. The household began to take on a multi-dimensional reality that had taken root in the interview and reached its fruition

in reflexive writing. Writing gave form and substance to the connection forged between the household and the teacher.

A second ethnographic technique involved the writing of a personal field journal. Not all teachers opted to do this. One teacher who kept an extensive journal noted: "Transformation occurs over a long period of time and is quite subtle in its nature. Elements of my transformation would have been elusive had I not documented them along the way. I recognize this as I look back and cannot remember having those feelings/beliefs." Another teacher lamented the fact that she had not kept the journal. She did not follow the suggestion and bemoans the fact in retrospect. She relates, "I don't remember when I stopped feeling and thinking this way or that way. I don't think it was an overnight thing. I think all of that is just changing little by little. If I had kept a journal, I could go back and read and say, 'OK, this is where I first started thinking about it.'" These comments highlight that an awareness of the documentation of the reflexive process began to take shape.

A third field technique involved the questionnaires. Teachers felt that the use of questionnaires signaled a shift in approaching the households as "learners." Entering the household with questions rather than answers provided the context for an inquiry-based visit, and the teachers considered the questionnaires a meaningful resource. They addressed such diverse areas as familial histories, family networks, labor history, educational history, language use, and child-rearing ideologies. Within each topic, questions were left open-ended, and teachers probed and elicited information as the interviews proceeded. Interviews were, as teachers commented, more of a conversation than an interview, and one teacher noted that with the audiotaping of the interview, she was free to be a conversational partner without the task of furious notetaking. Teachers used the questionnaire as a guide rather than a protocol, suggesting possible areas to explore and incorporating previous knowledge into formulating new questions. Interviews were not conducted as a unilateral extraction of information, as teachers were encouraged to make connections with their own lives and histories as they elicited narratives from the families.

These issues illustrate the critical effect that methodology had in learning a different way of visiting homes. Teachers often voiced the notions that "methodology helps to implant theory and represents its embodiment, particularly in this project which is very

experiential." The theoretical orientation to the households as containing funds of knowledge was critical in teacher transformation. But equally as important in the transformative process was the reflection generated by the collaborative effort of a collective ethnographic experience.

Through the mediating structure of the after-school study groups, teachers were provided with the forum to engage in reflexive thought. Although specific techniques in participant-observation, fieldnote writing, interviewing, and elicitation of life histories were presented and discussed, the focus was continuously on the discourse, on the joint construction of knowledge. Ethnographic fieldwork became not one lone researcher grappling with overwhelming data but a collaborative and reflexive process in which teachers and researchers shared insights and information.

Household research, however, is not unproblematic. Indeed, one of the missions of the study groups became to provide a setting to discuss problems or ethical considerations. The teachers sometimes felt overwhelmed with the sheer complexity of the task. Anna Rivera, one of the teacher-researchers, reported feeling "like a private investigator—like you're watching everything. What are they cooking? How do you make this, how do you do that? The home visit was totally different from what I had done before" (González et al., 1995). The requirements of participating and observing, of interviewing and audio-recording and note-taking, of being both the teacher and ethnographer, was at the outset for teachers a numbing experience. This hesitance soon wore off as teachers became more comfortable with the process. Martha Floyd-Tenery, for example, reported after her series of interviews, "I remember at first I was scared to death. Would the family be skeptical? What would they think of me? Would they feel uncomfortable? I remember thinking all kinds of things. And now, it seems, like, what is the big deal? I can do this, and I can do it well" (González et al., 1995).

Participants in the study groups were able to voice their changing ideas about households and the subsequent transformation that the observations and reflection provoked. In the face of the sometimes overwhelming social and structural factors that face the students and their families, it would be easy to simply "give up." One teacher, Floyd-Tenery, voiced this sentiment as she reflected on her initial pessimism: "I did not realize it at the time, but I used to believe that my students had limited opportunities in life. I thought that

poverty was the root of many of their problems, and that this was something too big for me to change as a teacher." Through the reflexive discourse of the study groups, this hopelessness was short-circuited. The teachers no longer felt isolated from each other or the community, as this same teacher explains: "This fatalistic obsession of mine has slowly melted away as I have gotten to know my students and their families. I believe this transformation is the most important one I have made. Its ramifications have reached far beyond the classroom" (González et al., 1995).

THE POWER OF SOCIAL NETWORKS

So far we have highlighted pedagogical consequences that have to do with transformation in teachers, their views and work and instructional activities that can be developed by combining academic tasks with household funds of knowledge. In this section we want to address the enormous potential of the social relationships developed through the sorts of qualitative household analysis we advocate for creating structural support for the teachers' and students' work. James Coleman (1987, 1988; see also, Coleman & Hoffer, 1987), based on his sociological analysis of schools, has proposed the concept of "social capital" to capture something similar to what we mean.[3] Coleman 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" (1987:36). He suggests that social capital comes about through the social relations (and mutual trust) 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" (1988:98). Social capital, then, is not a possession or a trait of people but social (and cultural) resources for persons, resources that can be used, mobilized, to achieve certain interests or goals.

As an example Coleman (1987) cites his analysis of the reasons why the dropout rate is much lower in Catholic schools than in public or other private schools. He points out that the lower drop-out rate is 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 (1987:36).

> 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 (1987:37).

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 that it allows the resources of one relationship to be harnessed and appropriated for use in others. It is the flexibility of the social networks that permits resources used for a purpose in one situation to be redirected to assist in another context. This means that social capital from outside the school can be used, often in combination with other resources, to influence the structure and outcomes of education, as Coleman (1987, 1988) has suggested and as our case studies of teachers illustrate.

Thus, Coleman's work makes a case for the importance of the families' and community social capital in shaping educational outcomes, namely, staying in school or not dropping out. The analysis also highlights the importance of channeling social capital through an academic curriculum (Coleman & Hoffer, 1987). 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" (Coleman & Hoffer, 1987:144). These advantages,

they specify, were non-trivial; they involved placement in academic programs of study which required homework, English courses, and a number of advanced science and mathematics courses. 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 and with teachers.

Our analysis complements the concept of social capital by bringing it to life concretely in the form of household funds of knowledge that teachers can document and analyze. From our perspective, social capital, as well as funds of knowledge, is a useful theoretical concept made pedagogically relevant only through the actions of teachers. Our work shows how funds of knowledge are constituted through the historical experiences and productive (and other) 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 have discussed. There are abundant and wide-ranging funds of knowledge in the community, social and intellectual resources that can become social capital and applied to education. Our analysis of household social networks and funds of knowledge points to the potential for establishing a similar support community to the one described by Coleman and colleagues but based on neighborhood or residence: social relations among parents and among parents and teachers that

facilitate intergenerational contacts with students about academic and social matters.

There is one final point from Coleman's analysis that we should mention. It seems that the social capital of the community, as with the Catholic, church-based community in his analysis, compensates in part for its absence in specific families (Coleman & Hoffer, 1987). In our terms, that means that it may be more important for the teachers to develop social relations with a few "case study" families in the classroom's community, "thick" relations of the type fostered by a funds of knowledge approach, than attempt to visit all of their students' homes without the time or effort to develop and sustain relations of trust. As our work with teachers has shown, a strong social bond develops rapidly between the teachers and the families. Creating a social network with a few "core" families may be important as well in helping the teacher develop the theoretical and methodological wherewithal to capitalize on the funds of knowledge of the households not studied but now considered as containing valuable resources as well.

CONCLUSION

We have argued in this paper for an approach in which teachers become qualitative researchers of local households as part of their pedagogy. This approach is based on teachers themselves redefining the resources available for teaching through the documentation and analysis of the funds of knowledge available in their students' households. The insights gained by understanding, through systematic inquiry, household life and dynamics, and the resources available within and among these households, come to mediate in important ways (we claim) how teachers think about local communities and how they think about teaching the children from those communities.

How can this project be implemented elsewhere? Our basic recommendation to teachers and administrators is to start with the formation of teacher study groups. These study groups (we suggest meeting weekly) are the key for the intimate involvement of teachers. As Sarason (1982) has emphasized, no innovation has a realistic chance of succeeding unless teachers are able to express, define, and address problems as they see them; unless teachers start defining, through their intellectual involvement and contributions, the innovation as their own.

In our work these study groups rapidly became the "center of gravity" of the project. The initial training of teachers in ethnographic methods took place in these settings. This later included the selection of households, the development of strategies for approaching families, discussions and interpretations of findings, and problem solving as we progressed with the work. The discussions of theory, readings, and the planning of activities also took place in the study groups.

In addition, these settings became the "mediating structure" between households and classrooms. This is where we discussed how to use in classrooms what we were learning in households. All teaching innovations and attempts to integrate funds of knowledge into instruction were initiated in these study groups. As teachers implemented new activities, they were discussed here, as were the discussions of conference presentations and articles written by the project participants, including teachers.

These study groups were also the place for developing the relationships among the project participants. As soon as teachers made their initial visits to a household and had data that they collected themselves, the relationships between teachers and researchers became more symmetrical, a relationship among peers doing research. It was no longer the case of university-based researchers bringing into the discussion "their data" to impress upon teachers the importance of household resources. The household research and the identification of resources now became a "joint activity," a collaborative effort. We should add that in no case did the researchers relinquish their expertise in these research matters, no more than the teachers relinquished their expertise on teaching. We continued to take the lead in discussions of household theory and research methods; the teachers took the lead in discussion of teaching and learning in classrooms. But we forged the project together.

Furthermore, these settings became the place to educate others about the project. The principals were invited to attend and learn more about the work. One of the principals not only conducted her own household visits but accompanied reluctant teachers on their initial visits. A district superintendent visited a study group a few times to hear the teachers describe their work and the conditions they needed to continue their involvement. Teachers and researchers visiting from other states or countries were also invited

to the study group. And the study group became the model for a graduate course on field research methods for teachers.

Through our collaboration with teachers we also understood better the difficulties of sustaining the project in a school and of introducing innovations based on the project into practice. As is well known, teachers face various constraints including district goals which must be accomplished, a curriculum to follow, tests to administer, in-services to attend, and what seems an overwhelming amount of paper work to complete. We do not underestimate the difficulty of the process we have undertaken and the time needed to sustain, develop, and improve the work. 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 (Gallimore, 1985).

So, without doubt, time is a crucial element. Teachers need the time to meet and think as well as the time to conceptualize and conduct the household research and consider the implications for their practice. Gaining additional time for teachers usually implies some sort of restructuring of the school day, where teachers can have a reasonable amount of time during the week to meet. In our school systems, especially those serving working-class students, teachers as well as students are tracked, and neither have much control of or say about their work and their goals. The formation of study groups to collaborate with others, indeed, to form a community with others, is a strategy to provide teachers with the autonomy to be active thinkers about their work and, with support, make change a possibility.

And now a word about money. We paid the teachers in the project for their participation. They were remunerated for their participation in the study groups and in any other activities 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? We assume it did. The teachers were pleased that they were getting paid, after all, they are professionals participating in a research project, but they were also strongly motivated to participate by the opportunity to learn more about the families in ways that may benefit their students. If our experience is any indication, most

teachers are concerned about the students in their class, 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 welcome change but not a necessary one to get teachers to meet, conduct household research, share data, 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 other teachers to discuss and deal with substantive issues in education.

What are the next steps in our research? We are considering several activities. One is to develop the work in other communities, especially major urban centers. Is this project, with teachers making household visits for research purposes, feasible in a place like Chicago or New York City? We certainly think so. After all, other researchers and educators, although with a different emphasis, have been doing community-based work in these communities for many years. We also think that the theoretical concept of funds of knowledge and the emphasis on households as units of study will travel well. Regardless of ethnic background or social class, families will organize into household units, although, of course, with considerable variability. And these households will be developed and maintained through the productive activities of its members, where funds of knowledge will be used to exist, to make a go of it in life. So that regardless of community or household characteristic, funds of knowledge will play a central role in the life of families. And it is these funds of knowledge, the concrete manifestations of cultural practices within specific conditions of life, not culture in the abstract, that is of interest here, and of immediate relevance for teaching. Nevertheless, whether our approach is feasible in a major urban center, and with a variety of cultural groups, remains an empirical question.

We are also interested in specifying more carefully the curricular implications of our work. We are better at organizing systematic inquiry into household dynamics than at creating systemic links to classroom practice. For example, can we document mathematical funds of knowledge that are of practical relevance for classrooms in elementary or middle schools? How can we assess the effectiveness of instructional innovations developed through household analysis? To provide convincing evidence that our approach has a positive influence on classroom learning is one of our highest priorities.

We would also like to pay more attention to the role of children in household life and in the development of funds of knowledge. We are aware that knowing a lot about adults in households does not necessarily tell us anything important about children or about how to teach children in schools. Children's social worlds, to a great extent, may be independent from those of adults yet mediate their relationships with adults and adult institutions, such as schools (see Andrade & Moll, 1993). It is important to balance the data collection efforts in households between adults and children.

Finally, there is also the possibility of training pre-service teachers in our methods, so that when they enter schools they have both theory and methods to approach local communities. These novice teachers now have the vaguest notions of community, especially if they have never lived in the school's community, much less concrete ideas about how to turn community information into assets for their teaching. Perhaps we can learn together.

NOTES

1. Portions of this article have appeared in González, Norma. 1995. "Processual Approaches to Multicultural Education." *Journal of Applied Behavioral Science* 31(2):234-244. Portions of this research were funded by the National Center for Cultural Diversity and Second Language Learning, through the Office of Educational Research and Improvement (OERI) of the U.S. Department of Education, under Co-operative Agreement No. R117G10022. The findings and opinions expressed here are those of the authors and do not necessarily reflect the positions or policies of OERI.

2. This case example was developed by James Greenberg and borrows from the household research of Javier Taipa (1991).

3. We should point out that there are many differences in the concepts of social capital and funds of knowledge, most having to do with the theoretical and methodological underpinnings of the concepts. Funds of knowledge is an anthropological concept developed from ethnographic field research on household and community dynamics (see Greenberg, 1989; Vélez-Ibáñez, 1988); social capital is a sociological concept based on statistical, comparative analyses of school achievement, based primarily on test scores.

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