

## **Funds of Knowledge for Teaching Project**

The underlying rationale for carrying out this work stems from the assumption that the educational process can be greatly enhanced when teachers learn about the everyday lived contexts of their students' lives. In our particular version of how this can come to be accomplished, ethnographic research methods involving participant-observation, interviewing, life-history narratives, and reflection on field notes, help to uncover the multidimensionality of student experience. Teacher-ethnographers venture into their students' households and communities, not as 'teachers' attempting to convey educational information, but as 'anthropological learners', seeking to understand the ways in which people make sense of their everyday lives. While the concept of making home visits is not new, entering the households of working class, Mexican-origin, African-American, or Native-American students with an eye towards learning from households is radical departure from traditional school-home visits.

What we describe is a very different type of home visit by teacher-researchers. These are research visits for the purpose of identifying and documenting knowledge that exists in students' homes, and, in the process, establishing a relationship between school and community. In contrast to other school-home visits, these visits are part of a "systematic, intentional inquiry by teachers", as Lytle and Cochran-Smith (1990:84) define teacher research.

### **Who Are the Teachers?**

We feel strongly that only teachers who **voluntarily** desire to participate be included. Any project which adds to teachers' duties and demands on their time has to take into account the extra burden that it places on teachers' schedules and lives. There can be little benefit derived from mandating visits in which the teacher has no desire to be in the household, nor the household any desire in receiving them. However, when there is sincere interest in learning about and from households, relationships and "confianza" can flourish.

Teachers participating in the project in its various iterations have been primarily elementary school teachers, although recently middle-school teachers have participated. They come from a variety of backgrounds and ranges of teaching experience. Both minority and non-minority teachers have said they have benefited from the process. Hispanic teachers from the community voiced that conducting household visits was in many ways "like coming home to my grandmother's house", triggering childhood memories for them.

### **How Do We Find Out about the Knowledge in the Community?**

In recent years, building on what students bring to school and on their strengths has been shown to be an incredibly effective teaching strategy. What better way to engage students than to draw them in with knowledge that is already familiar to them, and using that as a basis for pushing their learning? But here is the challenge and dilemma: how do we know about the knowledge they bring without falling into tired stereotypes about cultural practices? How do we deal with the dynamic processes of the lived experiences of students? How can we get away from static categorizations of assumptions about what goes on in households? How can we build relationships of "confianza" with students' households?

Our answer to these questions focuses on the talk born of ethnography: respectful talk between people who are mutually engaged in a constructive conversation.

### **What Are the Methods for Doing This?**

As the Funds of Knowledge project has evolved, the approach to ethnographic training has shifted as we have learned more about what works and what doesn't. Not surprisingly, what works is exactly what our basic assumption is predicated on: the more that participants can engage and identify with the topic matter, the more interest and motivation is generated. What does not work is a top/down classroom style approach in which participants can learn methodological technique, but which strips away the multidimensionality of a personal ethnographic encounter. In other words, we learn ethnography by doing ethnography.

The principal theoretical construct used in this project to capture household knowledge is what we call "funds of knowledge". This term refers to historically accumulated and culturally developed bodies of knowledge and skills essential for a household's functioning and well-being. We use qualitative methods, principally participant observation and an open-ended interview format, to elicit a household's funds of knowledge which may include information about

farming and animal husbandry, associated with a household's rural origins, or knowledge about construction and building, related to urban occupations. The funds of knowledge may also include knowledge about many other matters, such as trade, business, and finance on both sides of the border. This concept allows researchers to capture each household's unique body of knowledge related to its own particular history principally through analyzing the social and labor history of the households. No two households will encompass exactly the same funds of knowledge, giving educators an appreciation of the wealth of knowledge and resources their school community may embrace. In addition, it facilitates an understanding that culture is complex and heterogeneous, rather than an homogeneous construct of shared traits. This understanding acts to undo prevalent deficit stereotypes of poor and minority households.

In addition to documenting household funds of knowledge, our research 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, labor and basic cultural values. We find that children in the households are not passive bystanders but active participants in a broad range of activities mediated by these social relationships. 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 research suggests that within these contexts, much of the teaching and learning is motivated by the children's interests and questions; in contrast to many classrooms, knowledge is obtained by the children, not imposed by the adults.

### **How Do We Find Funds of Knowledge?**

As we have reiterated, building on students' strengths and on local knowledge is a commonsensical way to approach pedagogy. On the surface, this seems like a remarkably simple task. However, we soon encounter more complex questions: How do we know what our students' strengths and funds of knowledge are? How do we approach the dynamic processes of the lived experiences of students without falling into assumptions about what we suppose their out-of-school experiences to be?

As our entire project is geared toward process rather than product, our approach to exploring funds of knowledge has involved an ethnographic process. Rather than specific techniques, we have attempted to see the familiar through an anthropological lens. Our answer to these questions focuses on the talk born of ethnography: respectful talk between people who are mutually engaged in a constructive conversation. Throughout this process, ethnography has been both foregrounded, as in, for example, the household visit stage, and backgrounded, as the foundation for building mathematical discourses in classrooms.

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It is difficult to reduce a complex process to formulaic terms, because anything called ethnography is always in jeopardy of reductionistic misuse. However, there are certain points that are key in adopting an anthropological lens. First of all, it is important to read ethnographic literature. Teachers have always been provided with a reader that contains numerous examples of ethnographic work relating to educational settings. Second, it is important to role-play or discuss a non-evaluative, non-judgmental stance to the fieldwork they will be conducting. We may not always agree with what we hear, but our role is to understand how others make sense of their lives. Sense-making processes may be contradictory or ambiguous, but in one way or another, understanding what "makes sense" to others is what we are about. Third, it helps to be a good observer and even more, to pay attention to detail.

The household visit begins long before the actual entrance into the home. Driving down the street, we can observe the neighborhood, the surrounding area, the external markers of what identifies this as a neighborhood. We can look for material clues to possible funds of knowledge in gardens (botanical knowledge?), patio walls (perhaps someone is a mason?), restored automobiles (mechanical knowledge?) or the nature of ornaments displayed (made by whom?). During our initial training session, (although we recoil from the word "training", since ethnography is not something one can be trained in, but we have failed to find an adequate substitute...exposure to ethnographic methods?) we show a video which contains two short segments of ordinary community scenes and ask participants to talk about what they notice. The first video contains a family yard sale and shows a great deal of activity going on at once. We stress that this is usually what happens on a household visit: life doesn't stand still so that we can observe it. The vignette usually elicits comments on what is being sold (wood doll furniture might indicate carpentry skills;), the interactions involved (the older siblings are caring for toddlers, indicating cross-age caretaking), and language use (code-switching between Spanish and English is evident throughout). It is fascinating to notice how our own interests and our own funds of knowledge often color and filter what we observe. One teacher commented that he noticed a fountain in the backyard because he was installing one himself. The second video segment is particularly rich for our BRIDGE project since it shows a nine-year old boy in a backyard workshop, working with his father to build a barbecue grill. The scene is replete with measurement, estimation, geometry, and a range of other household mathematical practices. Because we do not often think of routine household activities as containing mathematics, this "slice of life" helps to "mathematize" the household visits.

Fourth, and perhaps most importantly, we ask respectful questions and learn to listen to answers. As a part of the process of entering the households, we have a series of questionnaires which explore household networks, labor histories and daily activities. These topics have proved to be fertile areas for tapping into funds of knowledge. The questionnaires are not prescriptive and are meant to be used only as a guide to indicate the breadth and depth of possible questions. Most teachers have found that they can ask only one or two questions about, for instance, family histories, and find that long, evocative narratives about how families came to be where they are now, are forthcoming. In our context, these networks reveal in many cases, strong cross-border ties with families in the north Mexican state of Sonora, linking children with activities and funds of knowledge on both sides of the border. Questions on labor history have also served as one of the main sources of information on possible funds of knowledge, as skills are often embedded in work contexts. However, it is important to remember that funds of knowledge are not limited to the formal market sector. Informal market strategies, such as yard sales, selling tortillas, sewing, car repairs, etc., can yield rich areas which can be tapped for pedagogical wealth.

One outcome of respectful ethnographic talk is an increased sense of "confianza" or mutual trust, as parents and teachers come to view each other in multidimensional terms.

### **What About "Culture"?**

Because the term "culture" is loaded with expectations of group norms and often static ideas of how people view the world and behave in it, we have purposely avoided reference to ideas of "culture". The term "culture" presumes a coherence within groups which may not exist. Instead, we have focused on PRACTICE, that is what households actually DO. In this way, we open up a panorama of the interculturality of households, that is, how households draw from multiple cultural systems, and use these systems as strategic resources.

### **How Do We Make Sense of the Ethnographic Experience?**

One key element in jointly coming to understand the ethnographic process has been the format of 'study groups'. These meetings take place after school and rotate at one of the participating school sites. The study groups provide a safe space for BRIDGE participants to come together and share experiences in visiting households, classroom mathematical connections, and the constraints of teaching contextualized mathematics within a prescribed curriculum. The study groups also provide the glue which holds together the different facets of mathematical discourses. These discourses center on constructing knowledge around how children learn best, and how mathematical contexts are created. In this safe space, we can also explore our own ideas about what we have found in the households, how it may connect to mathematical practices, and further our own mathematical understanding. As we become both learners and teachers of mathematics, our insights and connection to mathematical pedagogies expand.

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