



Edited by Maria Luiza Dantas Patrick C. Manyak

Home-School Connections in a Multicultural Society

Learning from and with Culturally and Linguistically Diverse Families



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Home-School Connections in a Multicultural Society

Learning from and with Culturally and Linguistically Diverse Families

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12 How Knowledge Counts

Talking Family Knowledge and Lived Experience into Being as Resource for Academic Action

Elizabeth Yeager and Ralph A. Córdova, Jr.

It was early in the year in our fourth grade classroom, the day we were beginning to think about our work in science. We were building a list together of the 'actions of scientists,' trying to construct a beginning idea of work *we* would be doing as scientists that year. I explained what we were going to do and then I asked the question for the first time.

Mr. C.: So, what do scientists do?

Vanessa was the first to raise her hand, slowly followed by several other students.

Vanessa: They ask questions.

Mr. C.: Like what?

Vanessa: They learn about plants ... I interviewed my grandma about spider webs and how she stops cuts with them. I made an oral history ...

I immediately recognized that Vanessa was referring to experiences she and several other classmates had had in their third grade year, because I was their third grade teacher. What's more, the other 16 students who had been in that class recognized and accepted what Vanessa said as well. What Vanessa shared with our class—that she drew on her work with and interview of her grandmother as a resource for describing the work of scientists and saw her grandmother's knowledge as a form of scientific knowledge—did not surprise me. I also knew that she had asked to use her work with her grandmother as the basis for her science fair project in third grade—and had done so. In fact, what Vanessa said seemed 'ordinary', so ordinary that we (the other students and I) accepted, without further comment, the action that Vanessa proposed—"They ask questions"—and her rationale. I wrote the action on the chart we were constructing together and we continued this beginning of the work of science in our class in fourth grade.

(Ralph Córdova, teacher)

In this vignette, Vanessa and her teacher, along with other students in this fourth grade classroom, accepted as 'ordinary' an interaction in which Vanessa linked work with and knowledge from a family member's lived experience with the academic work of science. Through this interaction, Vanessa, a student from a linguistically diverse family and school-defined as having a 'learning disability,' proposed to the group a potential action, an inquiry practice, in which scientists

might engage—asking questions. She also drew on family knowledge and her own academic and literate work in acquiring that knowledge—interviewing and writing an oral history—as evidence to support her proposal, thereby linking her own actions with the actions of scientists.

It was this perceived 'ordinariness' of talking about and drawing on family knowledge and experience in the context of academic work that raised questions for us, initially as teacher researchers of life in our own classrooms, and then as researchers more distanced from the classroom. How did talking about and drawing on family knowledge and lived experience as resource for work in academic disciplines become 'ordinary' for Vanessa and her teacher, as well as other students who accepted what Vanessa proposed to the class? Where did Vanessa's statement come from—what were the roots of and routes to this moment in time in the early weeks of this fourth grade class?

In this chapter, we examine questions raised by Vanessa's and her teacher's interactions. Since Vanessa linked what she said in fourth grade to what she had done the year before, with the same teacher, we travel back in time by engaging in what we call backward mapping across time and events to examine the first days of Vanessa's (and her peers') third grade experience. We do so in order to unfold the ways in which Ralph, one of the authors of this chapter, and Judy,¹ his teaching partner (job share) in third grade, created opportunities for learning (Tuyay, Jennings, & Dixon, 1995) that honored and included family members and their potential funds of knowledge, while constructing, with their students, a *common language, or discourse, for learning of the classroom* (Lin, 1993). In and through this process, family members and their knowledge/lived experience were shaped as resources for accessing and engaging in/with complex disciplinary knowledge and practice, a resource on which Vanessa and others drew as they began (re)constructing what would count as the work of science in fourth grade.

THEORETICAL APPLICATION: LANGUAGE OR DISCOURSE OF THE CLASSROOM

The local discourse of the classroom is jointly constructed over time by members of a particular social group through what they say and do together. Ways of talking and enacting disciplinary knowledge become commonplace to insiders, though outsiders can only understand it by taking a close look into the history of the classroom community. The language or discourse of the classroom creates opportunities for learning; that is, what is constructed and *available* to be learned at the group level. Teachers' discursive decisions to include family knowledge as an academic resource has direct implications to how students view their own and their family members' lived experiences. Imagine being a student in a particular classroom and grade level and being asked by

¹ The authors would like to express their appreciation and thanks to Judy Hug, third grade teacher, for helping to write this chapter into being through her teaching with Ralph Córdova in the year studied and for her job-sharing work for eight years with Ralph.

your teacher to guide a new student into the classroom routines and learning events, roles and expectations, and ways of interacting. What would the new student need to know in order to appropriately participate in classroom routines? What would become apparent about the classroom culture, social practices and academic resources?

Addressing questions of how family knowledge comes to count, or not count, in classrooms as academic resource, is important for teachers and researchers, given the complexity teachers and their students face as, every day, students enter diverse classrooms bringing with them, as Moll and his colleagues argue, "funds of knowledge" that are constructed in and through their family, neighborhood, and community experiences (González, Moll, & Amanti, 2005); that is, funds of potential knowledge(s) resources on which they do or could draw for understanding, acting, talking, and being in the world. Often, however, these "funds of knowledge" and experience can be lost as potential resources in the face of increased reliance on standardized measures of achievement, time constraints, and the potential narrowing of what is available to be learned, particularly in disciplinary areas such as social science, science, mathematics, the arts, and others. Rather than seen as resource, home, neighborhood or community knowledge and lived experience may be viewed from a deficit perspective, as barriers to learning, and as irrelevant to the academic work of school (e.g., Comber, 2000).

One challenge presented to teachers, then, is not only to understand how to learn from family funds of knowledge themselves (González et al., 2005), and how to afford students opportunities to work with and learn from family members in a variety of ways (e.g., Botelho, Turner & Wright, 2006; Córdova, 2008; Dyson, 1999; Olmedo, 2004). It is also how to discursively shape with students a *view of* family members, and their funds of knowledge and lived experience, as *relevant* to, and potential resource for, accessing and engaging in and with academic disciplines—how to 'talk,' as well as 'act,' family members, as well as their funds of knowledge, into being (Dixon & Green, 2005; Green & Dixon, 1993) as academic resources and part of the everyday life of classrooms.

To make visible how this occurred in Ralph and Judy's third grade class, we first examine how teachers oriented students to life in what they named their classroom "community" and initiated academic work on the first day of class, as well as how practices initiated or foreshadowed on the first day were also identified across the first week of school. Finally, we briefly focus on how academic work with family members in social science and science was initiated and included inquiry and literate practices initiated during the first week of class. In doing so, we hope to make visible *how* teacher/student discourse matters in (re)shaping family members and family knowledge and experience as resource for academic action.

Additionally, we provide ways of understanding how Ralph's role of teacher as ethnographer became an important resource for his work in developing a discourse of the classroom, as he, and Judy, constructed *opportunities for learning* (Tuyay et al., 1995) what it meant to be a student, mathematician, historian, ethnographer, scientist, interviewer, and more in this classroom (Reveles,

Córdova & Kelly, 2004; Yeager, 2003). We draw on what was learned by taking an ethnographic perspective on everyday classroom life to uncover what occurred in Ralph and Judy's classroom. We do so in the hope that what we make visible might serve as resource others may draw on who seek to create opportunities for students to access and engage with rich disciplinary knowledge and practice while drawing on funds of knowledge from multiple sources.

An Ethnographic Perspective as Resource

To frame how an ethnographic approach became a resource for both Ralph and his students, we first present his voice as a teacher researcher in order to uncover the ways in which teachers can connect research and practice and begin to *theorize that practice* as they work with students (and their families or family knowledge) in the small moments of classroom life (Yeager & Green, 2008).

Classrooms ought to be places where culture(s) is created, not reproduced. In other words, we become aware of the ways in which teachers and students co-construct and create a space for learning that has never existed before. And if we create culture, what sort of culture is it that we envision for ourselves as teachers and for our students? I need, then, to engage my students, from the very first day of school, in developing conversations where the subject of learning is not just the "official" curricular content, but how we shape it. And through our learning and developing understandings, how we are then shaped by the very cultural setting we've been in the process of co-constructing. This leads me, as a teacher researcher, to develop ears and eyes that notice on two levels: the moment-to-moment events of everyday classroom life and how it is shaped by my students and me, and the overtime constitutive constructing of classroom life. From these two angles of vision, then, I see the need to pay attention not only to how I purposefully introduce ethnographic language and theoretical approaches to my students in the moment, but what consequence it has for student learning, in and across moments.

My students learn that we are always in the process of becoming. For example, becoming scientists is a dynamic process in which we're always engaged; not something you arrive at once you are an adult and in college. If it's something we create together, what sort of scientists do we wish to become? What do scientists do? Where in our everyday lives can we find examples of scientific inquiry, whether explicit or tacit? My students also learn that we must stop frequently to examine what it is that we have been learning about science, but also about ourselves, the doers of science—young scientists.

This requires an orienting lens and for me, an ethnographic perspective enables me to always ask, "what's happening here?," as I attune myself to learn to see learning.

(Ralph, Santa Barbara Classroom Discourse Group, 1992)

Ralph's perspective on teacher as ethnographer provided him (and later his

students) with a lens for understanding life in his classroom and constructing opportunities for learning for his students. We begin our exploration of how theory guided our ethnographic perspective by presenting excerpts from an essay on his classroom community by a student, Arturo, who became a student ethnographer in Beth's, another author of this chapter, fifth grade class.

In our Tower [name of classroom, located in school tower] community, we have our own language as well as the languages we bring from outside (like Spanish and English) which helped us make our own language. So, for example, someone that is not from our classroom community would not understand what insider, outsider, think twice, notetaking/notemaking, literature log and learning log mean. If Ms. Yeager says we are going to "make a sandwich", the people from another class or room would think that we were going to make a sandwich to eat. Of course we aren't, but that is part of our common language . . .

... These words are all part of the common Tower community language and if someone new were to come in, we would have to explain how we got them and what they mean. We also would tell them that we got this language by reports, information, investigations, and what we do and learn in our Tower community.

(Arturo, 1994-95)

In his essay, written at the end of the school year on what it meant to be a member of his particular classroom community, Arturo makes claims about the ways in which life in classrooms shapes and is shaped by the discursive and social interactions. He argues that outsiders to his class need to understand how ways of knowing, being and doing are talked-into-being over time in relationship to particular events and activity at the group as well as individual level. The argument that Arturo makes about the interdependent nature of learning and development echoes conceptual arguments in sociocultural theory. For example, Lima (1995) argues:

We have two dimensions of development [and by implication, learning]: one that resides in the individual and the other in the collectivity. Both are interdependent and create each other. Historically created possibilities of cultural development are themselves transformed by the processes through which individuals acquire the cultural tools that are or become available in their context.

(pp. 447-448)

In other words, Arturo, at age 10, like Ralph, understands the constructed, local and situated nature of the developing text(s) of the classroom. He also understands how he, as a member of the class, is afforded particular opportunities for learning, which in turn, shape personal or individual knowledge of content, practices, and processes required within the group (Yeager & Green, 2008). In

our research community (Santa Barbara Classroom Discourse Group), we call these consequential progressions (Putney, Green, Dixon, Durán, & Yeager, 2000).

In the sections that follow, we will continue to tie the understandings that Arturo and Ralph inscribe, and that Vanessa makes visible in her interaction with her teacher and her peers, with current theories about classrooms as cultures-inthe-making and learning as a collective and individual, interdependent process. In this way, we make visible how everyday knowledge and practices of students and the professional knowledge of this teacher constitutes sociocultural theory that is consistent with perspectives on the study of language, discourse in use, and knowledge construction. Drawing on this view of theory-practice relationships, we construct a theoretical perspective on the *language of the classroom* that teachers can draw on to construct their own principles of practice for exploring and discursively shaping multiple knowledges and lived experiences as academic, social, and cultural resources, not barriers, in their classroom (e.g., Dixon, Frank & Green, 1999; Green, Dixon & Zaharlick, 2002).

Initiating Family as 'Ordinary': Toward a Language of the Classroom

In order to trace the roots of and routes to Vanessa's and Ralph's interaction during the first weeks of fourth grade, we chose to examine, given the space and scope of this chapter, the beginning of the year during which the actions Vanessa referenced occurred-the first day of class in third grade. As Arturo argued above, life in classrooms, including what is 'talked-into-being' as a common discourse of the classroom, is constituted in the discursive work that members of the group do together, and requires teachers and students alike to continually shift how they are reading and interpreting the developing texts being constructed. What is constructed as "class" and ways of being, knowing and doing in that class, occurs over time in and through small moments of actions and interactions that are both explicit and implicit. How students know where to sit as they first enter the classroom, or how they are greeted as they enter, are examples of small moments that are both visible and often invisible, that students must learn to read and interpret in order to know what to do, how to position themselves within the group, who they can be, what can be talked about, how, with whom, in particular contexts, what to do, what to display and what to know (Yeager & Green, 2008). Thus what occurs on first day(s) is important to understanding how particular ways of being, knowing and doing in a classroom are initiated.

The small moments that occur over time and events, particularly when taken cumulatively, have potential important consequences for the kinds of opportunities for learning what it means to be a student (or mathematician, reader, writer, historian, scientist, member of a group, and so forth) that are available and to whom they are available. Moments of discourse and action can be seen as texts that become observable and available to be read by members, if members learn how to read them. This reflects arguments made by Erickson and Shultz (1981), who view people as contexts for each other and people's actions as texts to be read and interpreted.

In unfolding the events of the first day in this third grade classroom, we make visible the discursive work of teachers and students across those events. Through this process, we identify ways Ralph and Judy initiated, through constructing a series of *public texts* with students, in and through discourse and actions, a range of practices for talking and acting a discourse of the classroom into being, in and through which students were afforded opportunities to orient to drawing on family members and family knowledge and lived experience as potential resource for engaging in the everyday life of the classroom.

Figure 12.1 represents a map of the unfolding sequence of activity, constructed



Figure 12.1 Day 1: formulating family as 'ordinary' classroom resource.

from video records of the first day. In this figure, the work of students and teachers is represented as actions. In column one of Figure 12.1, we identify the major events on which time was spent across the first day. In columns 2 and 3, we identify moments within those events in which the notion of 'family' was initiated or *foreshadowed* as what would be an 'ordinary' part of everyday life, as well as moments in which teachers began to orient students toward a view of family members and family knowledge as resource for academic action.

As can be seen in Figure 12.1, column one, we have termed the first event, the "onset of community", although, based on teacher knowledge, 'class' might be said to have begun prior to the official start of school that day. That is, students visited the classroom before class to talk with teachers. Many came with family members, some of whom the teachers knew from having had siblings in previous years. When the bell rang, students gathered outside the classroom, were greeted and teachers introduced themselves, especially important since these teachers shared one job and Ralph would be teaching one day per week (participating fully in the first and last weeks of school, at family events, and during parent-teacher-child conferences, among other things). In addition, students were instructed how to come first to the floor as a group after entering and putting materials on desks.

It was in the floor space that students were oriented to 'group,' as teachers welcomed students, asked them to share what they already knew about third grade, and introduced students to 'routines' of the class, such as how they would independently indicate whether they were eating lunch in the cafeteria on a particular day. Judy introduced students to the routines in English while Ralph, a bilingual teacher, explained these routines in Spanish (even though this was not 'officially' a bilingual class). Drawing on two languages as resource enabled all students, including those few who were more proficient in their heritage language (Spanish), to access what was being made available at the collective level. In and through these opening sequences, the teachers initiated ways of being, doing and knowing that included making choices, sharing personal/historical experiences with the group, and asking questions, thus affording students opportunities to contribute to the construction of public texts available to be 'read' by the group.

It was in the second phase of the first event—Explaining materials—that class as a "community" was formulated and named. As seen in column two, it was also during this phase that the notion of "family" was initiated. Students were seated at their table groups with a box of supplies, such as crayons, placed in the center. As seen in the following transcript segment, Judy began this phase by providing students with a *rationale* for taking responsibility for caring for the materials, both individually—as members of a larger group—and as a table group.

You are a member/ of a community of learners./ When you walk/through that door/ you become part of a big/ family/ that works/ together./ . . . And we/ become/ like a family together./ We have/ to learn/ to be good/ to one another/and respect each other/ and respect/ the classroom/ that we all/ share/ together./ So that's what/ families do,/ right?/ They take care of each other,/ they help/ each other,/ k?/ They're there/ for each other./ Well, this is a bigger family . . .

In this segment, Judy is creating what we call a *meta-discourse about key organizing practices* (Yeager & Green, in press), and a referential system for how to name these practices. Through this *meta-discourse* (Yeager, 2003), Judy afforded students opportunities for ways of being and acting with each other and with the classroom that were linked to being members of a community, which, in turn, was linked to being in a family. At the same time, she defined what families do (*naming the practice*), in this moment, in particular ways—taking care of each other, helping each other. In this small moment, which had potential consequences for future events, Judy (and later Ralph, in Spanish) afforded students opportunities for drawing on what they might already know about families as resource for knowing how to take particular kinds of responsibility in relation to other members of their classroom community or "family."

THEORETICAL APPLICATION: META-DISCOURSE

Meta-discourse is language used to talk *about* practice (i.e., talk about actions and language use). It is reflexive and responsive. Building on discourse-inuse perspectives, this perspective on meta-discourse supports a view of teacher *discourse*, rather than instances of teacher 'talk', as central to both historically linking texts and practices across time and (re)formulating classroom life for students, making what is constructed and what students need to bring and use in order to make sense of the evolving text of the classroom available. This chapter shows the use of teacher meta-discourse to (re)formulate family knowledge as academic resource. Teachers, *with* students, made discursive choices that served to contextualize practices, while making connections necessary for students to draw on family knowledge as resource for learning disciplinary knowledge. What kinds of discursive choices and connections might you make to make visible for students what resources they would need to bring and use in a particular new context, such as reading this chapter?

As seen in Figure 12.1, similar small moments occurred across the day in which particular practices were initiated or *foreshadowed* ("you *will* be doing this") that signaled to students the potential role of family members in the everyday work of this classroom. For example, as seen in column two and three of this event map, when the academic work of D.E.A.R. (Drop Everything and Read), a period for daily reading books of choice, was initiated, the teachers foreshadowed ways in which this event would occur on subsequent days. Not only would students choose and read books in the classroom, they would also have the opportunity to bring and share about books from home, and to read to a parent volunteer. Significantly, teachers did not formulate these practices as special, but as ways of doing that would be regular parts of the school day across the year.

Finally, homework was formulated (begun to be talked into being) as something that would be shared with parents on a nightly basis. Students were to *talk*

with family members about their work. Students could choose the version of the homework that was in the language (Spanish or English) most accessible for family members. Again, what was foreshadowed on this day had potential consequences for the ways in which students would access family knowledge and experience across the year. Family members were initiated as important participants in the students' academic experiences.

As Figure 12.1 makes clear, Ralph and Judy initiated a series of public texts on this first day in ways that served to formulate or foreshadow practices that were to be ordinary, routine parts of everyday life and that began to orient students toward family members as active participants in the academic, cultural and social life of the classroom community-and to construct a discourse of the classroom that linked being a member of this community with ways of being, talking, and acting with and about family. In asking students to share personal/historical/family knowledge, including what they knew about third grade, for example, Judy invited students to create intertextual ties (Bloome & Egan-Robertson, 1993) between background knowledge (including family knowledge) and current actions needed to participate in the group in order to create a developing text that was available to all students and to create the discourse practices and referential system that initiated, what Arturo called, "our own language of the classroom." In order to understand how family members and family knowledge and lived experience were initiated-or foreshadowed-as potential resource for accessing and engaging in disciplinary work, however, we shift our ethnographic eyes (Frank, 1999) or lens to take a more focused look at one event-the initiation of academic work in mathematics.

Initiating Academic Work: Formulating Family Knowledge in Context of Inquiry Practices

The event called the "Watermelon Investigation" occurred both prior to and following recess on the first day of class in third grade, and continued until lunch. Ethnographic data indicate that this event was actually part of what we call a *cycle of activity* that occurred over the first five days of school, culminating on Day 5 in a process of thinking back on and individually and collectively evaluating the work of the investigation.

As seen in Figure 12.1, the investigation on Day 1 unfolded across six phases, in which students would orient to the work as mathematicians, would investigate watermelons (investigating weight on this first day), using a variety of inquiry and literate practices to do so. The investigation occurred in shifting interactional spaces (Herás, 1993). In other words, students moved from whole group spaces to table group to working alone, back to table group, and to whole group in order to do the work of the investigation. Thus students were afforded opportunities to access the mathematical investigation and its content in multiple spaces, both public and private.

Ralph initiated the Watermelon Investigation by situating it within a "tradition" in his classrooms. During this phase, he *invited students to contribute to the public text* by sharing any historical knowledge they might have about the

investigation tradition, including what they might know from siblings who had been in Ralph's previous classes.

During this time, he also told students that they would be "thinking like" mathematicians and "doing the work" of mathematicians. Ralph afforded students the opportunity to draw on personal/historical knowledge of mathematics, while at the same time *reformulating* that knowledge in particular ways in the context of making a list of the actions of mathematicians. Ralph invited students to contribute to this list by asking them, "What do mathematicians do?" During this process, he made a reference to what he knew to be second grade curriculum by invoking what students might know about verbs and "action words" and what they represented. He also asked students to "Think about your own experience. What do *you* do?" In other words, the teacher reformulated (talked into being) sharing personal/historical knowledge and experience as an academic practice in this context.

Table 12.1 presents a transcript segment in which Ralph makes visible, using a *meta-discourse* about the actions and practices, what it is he is asking students to do and why. This table represents a way of closely looking at the discursive work that is potentially being accomplished in and through the talk (Bloome, Carter, Christian, Otto, & Shuart-Faris, 2005). In this case, the teacher is speaking to the whole group as they construct the collective text, a list of "actions of mathematicians." The teacher first situates what it is he is asking students to do and then provides a rationale for this that is linked to doing the work themselves as members of the discipline. In other words, he affords students opportunities for *positioning themselves as mathematicians* in their

Teacher discourse	Potential work being accomplished
so/I want us	Providing rationale for engaging in particular
to think about	practice (generating list of actions of
what it is	mathematicians)
that mathematicians/do	,
because/I want you	
to be/thinking/like	Orienting students to actions as members of
mathematicians	discipline—will be thinking as mathematicians
we're going/to start another	Foreshadowing future work in new academic
project	discipline
next week/some time	
in social studies	
where you're going/to do interviews	Foreshadowing new practice—interviews
with your families	Will be gathering information from families
I'm going to ask/you to think like historians	Foreshadows work with families in context of work students will be doing as members of discipline
	(thinking like historians)
people/who do and/write	Families as potential resource for "people who do
histories	or write histories"

Table 12.1 Day 1: orienting students to family in context of academic work

future work by situating what they will do in this context of *thinking like mathematicians*.

He then reformulates what it means to do the work of members of a discipline in this class, by foreshadowing work in another discipline, social science, where students will be asked to "think like historians", "people who do and write histories". In doing so, the teacher also foreshadows what students will do in the context of a particular inquiry and literate practice—interviewing. Critically, by *linking the work that students will do with family members to the work of members of an academic discipline*, the teacher, in and through his discursive choices, orients students to a locally situated view of family members and knowledge as potential resource for doing that work as historians, as resource for learning what it means to be "people who do and write histories."

In the next phase, the teacher and the students jointly framed what it would look and sound like to investigate watermelons. In doing so, Ralph initiated and engaged students in a range of inquiry practices that they would later use when they worked with their own watermelons in table groups, always discursively linking these practices to both the list of actions of mathematicians and to the work students were doing by "thinking like mathematicians." The inquiry practices included, for example, generating and asking questions about the watermelon (a practice also critical to interviewing), making estimates and supporting estimates with evidence (as opposed to "guesses"), gathering data (observing, holding watermelons to estimate weight, using a scale to weigh watermelons), as well as literate and social practices such as writing to record data, sharing ideas, estimates and evidence with others, listening to others.

As students each made personal estimates about a watermelon in the whole group, Ralph asked, "What is your estimate? What evidence are you basing that on?" As students shared, personal/historical/family experience and knowledge, such as holding a baby brother who seemed to weigh much the same as the watermelon, going to the store with a family member and holding a watermelon, holding a toy that seemed comparable, were accepted as legitimate forms of supportive evidence for the estimates made. Later, students would have the opportunity to revise their estimates based on new data/evidence, such as weighing the watermelon using a scale. In this initial framing of the investigation, then, personal/historical/family experience was reformulated as one potential resource on which to draw for engaging in the academic inquiry practice of supporting with evidence.

Throughout this investigation, as students worked with their table group to investigate their own watermelon, Ralph continually made visible multiple ways in which members were taking up actions of and thinking like mathematicians, as well as the *value of multiple sources and kinds of data (including family experience)*, some stronger as supportive evidence than others, depending on how they were used. In this way, he made visible the interdependence of collective development and the development of individuals-in-the-collective, such as Vanessa, as well as the importance of the common language and practices being formulated to what would constitute that interdependent relationship over time.

(Re)Formulating Patterns of Practice Across Days

By unfolding much of the first day of class, we made visible ways in which Ralph and Judy initiated and formulated, to talk into being, practices that would potentially become part of students' repertoire of action for knowing, being and doing in this classroom, including those that would link family, family members, and family knowledge and experience to what would count as everyday life, including disciplinary knowledge and practice. In using a meta-discourse about practices, teachers not only named those practices, and then made visible what engaging in those practices would look and sound like in this classroom, they also provided an explicit rationale for engaging in and using the practice (Yeager, 2003; Yeager & Green, 2008) (e.g., this is what mathematicians do; this is what members of the class do; this is what families do). In this way, they helped students initiate a set of norms and expectations, as well as roles and relationships, for different events within the class, which were important for constructing a common community, or what we call, a culture-in-the-making, of which drawing on family members and family knowledge as resource for academic action would be an integral part.

To become part of a repertoire of actions, to become *patterns* of practice or *principles* of practice, however, processes and practices must be repeated, constantly (re)formulated over time, both proposed to and recognized by the collective and, potentially, by individuals-in-the-collective. In the following brief analysis, we make visible patterns of practice that were (re)formulated across the first week of school in this classroom.

As Table 12.2 shows, a range of practices in at least five major areas were formulated or foreshadowed on the first day of class. Practices formulated on the first day were sometimes repeated everyday across the first four days of school as part of an ongoing process (ethnographic evidence shows that these same practices continued across the first three weeks of school). But sometimes new things were introduced and/or Ralph or Judy reformulated with students how a practice would be used in new ways in new contexts. For example, practices involving family members, such as talking with parents about home and school work, in a general way, were reformulated on subsequent days during the first week.

Table 12.2 Range of patterns of practice initiated and (re)formulated—first week of third grade

Major areas of practice

- Inquiry practices (e.g., observing; asking questions; gathering data from multiple sources; supporting with evidence; interviewing to gather data)
- Literate practices for engaging in academic work (e.g., writing to learn; sharing ideas, personal/historical experience; note taking; reading)
- Social practices (e.g., working in multiple interactional spaces; caring for materials)
- Practices involving doing the work of and "thinking like" members of academic disciplines
- Practices for orienting to and engaging with family members/knowledge as resource

On Day 2, for example, students were given a photo of themselves engaging in the work of mathematicians with watermelons; then asked, for homework, to describe, in writing, what was happening in the picture (foreshadowing their future work as ethnographers) and to tell a family member about the investigation. On the following day, the practice was again reformulated as sharing in the public space what was learned with and/or from family members. In this case, as a student shared what she had described and how she was asked questions by a family member, Ralph asked, "Who asked you and what did you say?" After the student responded, the teacher continued, "So you told her about the watermelon investigation. Did you tell her something specific about the watermelon investigation? What did you tell her?" Ralph made visible to the students that what was being shared was important information and potentially helpful to all as they moved further into the investigation. In this way, the teacher discursively reformulated talking with family members (and what they asked and shared with the student) in explicit ways, including asking others to listen carefully, as resource not only for the particular student, but also as potential academic resource for the group as a whole.

Finally, each practice that was foreshadowed on Day 1 was (re)formulated across subsequent days. For example, interviewing, foreshadowed by the teacher on the first day as an important discipline-based inquiry and literate practice that students would engage in (and referenced by Vanessa in fourth grade), was initiated on Day 3 as a way of learning about other students, and reformulated as interviewing family members to gather data in the second and third weeks of school.

In each case, as Ralph or Judy discursively formulated the practice, he or she named it as part of the common language of the classroom and then reformulated it with students in each of the new contexts. Building a repertoire for actions in the first moments, then, is not just a tool but an ongoing way to reformulate practice as resource for future academic study.

Reformulating Family Knowledge as Disciplinary Resource

In this section, we present a brief analysis of the ways in which patterns of practice (re)formulated during the first week of school were again reformulated in the context of initiating the study of "everyday life" and disciplinary work as ethnographers and scientists. We focus on how the teacher made meta-discursive choices that served to frame for students the work they would be doing as integrally linked to the work of engaging in and with family members and their "funds of knowledge" as resource for academic action within and across disciplines. Since practices that were referenced by Vanessa in her interaction in fourth grade (e.g., interviewing) were among those (re)formulated in particular ways during the first weeks of school in third grade, we focused on Ralph's teaching Mondays when what we will make visible occurred.

Day 5 of the school year consisted of a series of linked events that, together, served to (re)formulate the inquiry practice of *observing carefully to gather data*, initiated during the Watermelon Investigation, as the work of ethnographers

who seek to understand and learn from "everyday life" in different groups or "communities" and spaces. In the initiating event, Ralph and his participantethnographer partner, John, framed for students what it meant to be an ethnographer who "notices" what is happening in everyday life and engaged them in observing as ethnographers and taking notes on video segments from the first week of school.

In discussing what students "noticed" in the video, the teacher situated the work of noticing everyday life in the context of understanding what counted, where, when, as academic disciplines: "Just like we began noticing what we do as mathematicians in our Watermelon Investigation, we will be noticing what scientists do when we learn science." In doing so, Ralph made what we call an *intercontextual link* (Floriani, 1993) between what students had done in a previous disciplinary context and what they would be doing in another, science—in the context of a third discipline, ethnography. Finally, as Arturo theorized in his essay, Ralph and John discussed how everyday life, whether in classrooms or at the grocery store, is made up of what people do and say together and how people who "notice" that life in particular ways can learn from people by studying what they do: "This year we're going to learn to become noticers, or ethnographers..."

At the end of the day, students were introduced to a homework assignment that built on their work in the morning, in which they would "practice" being ethnographers by observing and taking notes on an everyday family event at home, and bringing the notes to share with others in their next class session with Ralph. The following transcript segment is from Ralph's framing of this particular assignment and makes visible the ways in which he meta-discursively provided students with a rationale for observing everyday life at home as resource for doing current and future disciplinary work:

Tonight we're going to practice/being an ethnographer . . . /The reason that we're going/to be/doing this/ . . . /Next Monday/when we're here/we're going to be able to see/what all of our families do./We're being ethnographers right now/and you need to know how to do this,/so when we start social studies,/ you know how to be able to use/these skills of observation/to help you/

Another way of thinking about the work Ralph accomplished in and through his meta-discursive choices, is that, in affording students at the collective level a rationale for what studying an everyday family event would later enable them to do, he created a discursive pivot (Córdova, 2004; Larson, 1995) in the space of explaining the homework around which and to which individuals-in-the-collective could orient in order to make sense of their past, present, and future linked actions.

Finally, the teacher linked what was discursively formulated as "everyday life" in the morning event to what students would be doing as homework, by making visible that home is a space where everyday life occurs and therefore a place for engaging in academic work as ethnographers, as well as a place where families engage in actions that can be studied and brought into the classroom as data for

future disciplinary learning in the group. In doing so, he linked home with classroom, signaling the permeability (Córdova, 2008) of both places as potential spaces for learning.

Ethnographic evidence indicates that what was (re)formulated on Day 5 was consequential for what was initiated as 'preparing the mind' to do science and "think like scientists", in and through work with family members, (as well as in other disciplines), on subsequent teaching days for Ralph. For example, on Day 10, Ralph invited students to share with the class what they learned from observing everyday life at home. In placing their family observations in the public space as potential resource for the collective, the students, with their teacher, were able to contribute to the public text being constructed and in so doing shaped a collective view of everydayness as potential material resource for engaging in disciplinary work and building disciplinary knowledge. In and through this process, Ralph was able to subsequently frame the day's homework as drawing on family knowledge in order to begin constructing disciplinary knowledge and practice in science. He did so by (re)formulating interviewing as an ethnographic practice that included inquiry practices in which students had already engaged. In and through this homework, an interview with a family elder about "a favorite science memory," students would be able to access one kind of scientific knowledge-applied knowledge and/or experience in everyday life.

Across the first three weeks of school, practices both initiated and foreshadowed on Day 1 were discursively reformulated as patterns of practice, available to students as potential resource. Practices such as collecting data based on family interactions, and sharing and discussing the data in the public space of the classroom as a way to (re)formulate what could count as learning mathematics, social studies and science, were becoming "ordinary" parts of everyday classroom life.

Conclusion and Implications for Teaching and Research: What We Are Learning?

In this chapter, we have made visible a set of principles of practice that guided teachers in discursively creating, with their students, a common language or *discourse of the classroom* in which family members and family knowledge were (re)formulated as academic resource for accessing new and varied knowledge(s), as well as engaging in discipline-based inquiry practices such as gathering data from multiple sources, generating and asking questions (as interviewers), observing, and supporting with evidence, among others. In turn, what was (re)formulated across time served to shape shared family knowledge and what was learned from disciplinary-based work with family members as resource for the collective as well as for the individual student member of the classroom community.

Drawing on our ethnographic perspective enabled us to make visible how family knowledge as academic resource was formulated as part of the discourse of the classroom in third grade and how Vanessa drew on the opportunities afforded her in the previous year to position herself as a scientist in fourth grade, contributing to what was available to be known and understood by the collective. In doing so, we were able to look again at how what we took for granted in our

classrooms—drawing on family knowledge as resource for academic/disciplinary action—had been constructed as such, in hopes that this might serve as resource for others or for starting new conversations about how multiple funds of knowledge come to count in particular ways in classrooms.

In other words, engaging in multiple layers of analysis, from an interactional ethnographic perspective (e.g., Castanheira, Crawford, Dixon, & Green, 2001) as both teacher researchers and researchers more distanced from the classroom, became an important way for us to make visible not only *that* family members' knowledge and lived experience were valued as academic resource by both teachers and students, but *how* that knowledge and lived experience was discursively shaped as a powerful, disciplinary resource for both the collective and individuals-in-the-collective.

From this perspective, 'talking funds of knowledge into being' requires more than a shift in curriculum or pedagogical stance in order for interacting with and drawing on family knowledge and lived experience to move beyond activity and beyond the moment for an individual student. Teacher talk, or rather teachers' discursive choices-what they say, when, how, for what purposes-with students, matters. Teacher meta-discursive choices can afford students opportunities for linking particular actions to new perspectives about whose knowledge counts, when, where, how, under what conditions, and for what purposes-and for understanding that different knowledges and knowledge practices count in different ways for different purposes. As Arturo describes, we create the everyday, common language (discourse) of the classroom in and through what we do and say. When teachers, with students, draw on multiple resources to shape a particular kind of common discourse of the classroom, then it is possible for both teachers and students, as well as family members, to view family, home, and community funds of knowledge as relevant to, and resource for, accessing and engaging with rich, complex disciplinary knowledge and practice.

Ideas for Discussion, Extension, and Application

- 1. If, as a teacher, I view family members and family knowledge as resources for school learning, then what do I need to know, ask, and do in order to "talk this view into being" with my students? What do I hope our evolving classroom texts and practices would look and sound like from the first moments of the first day of class?
- 2. How can teachers continually construct with their students, across the year, a view that connecting to and inquiring into what has been accomplished can be a foundation for subsequent learning?
- 3. How could teachers engage with their principal, teacher colleagues, parents and community members in conversations focused on bringing into focus the overlapping nature of school and family social worlds so that all can learn from each other?

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