

*Vygotsky in Classroom Practice: Moving from Individual Transmission to Social Transaction*

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In this chapter we present a case study of a third-grade bilingual classroom.<sup>1</sup> The students in the class are primarily working-class Mexican children, and the school is located within their neighborhood in a southwestern city of the United States. We have selected this classroom for discussion not only because it presents a striking contrast to the rote-like, intellectually limiting instruction that characterizes working-class schooling (e.g., Anyon, 1980; Goodlad, 1984; Oakes, 1986) but because its activities do not fit well or easily into current discussions of “guided practice” or “assisted performance” derived from Vygotskian theory, especially from dyadic interpretations of his concept of the zone of proximal development. Hence this chapter demonstrates how practice can exceed, as well as inform and elaborate, our theoretical notions.

By presenting the classroom analysis we emphasize what we consider to be a more dynamic and encompassing notion of Vygotsky’s zone of proximal development. We are, of course, not the first to suggest that current interpretations of this concept may be too narrow.<sup>2</sup> Griffin and Cole (1984), for example, have suggested that “English-speaking scholars interpret the concept more narrowly than Vygotsky intended, robbing it of some of its potential for enabling us to understand the social genesis of human cognitive processes and the process of teaching and learning in particular” (p. 45).

Valsiner (1988) has pointed out that Vygotsky’s intent in his introductory explanation of the zone of proximal development was much broader, to “get across to his pedagogically-minded listeners (or readers) a more basic theoretical message: . . . the interdependence of the process of child development and the socially provided resources for that development” (p. 145). Vygotsky used this concept to emphasize the importance—in fact the inseparability—of sociocultural conditions for understanding thinking and its development (Minick, 1989; Moll, 1990b; Vygotsky, 1978, 1987; Wertsch, 1985). Hence he viewed thinking not as a characteristic of the child only, but of the child-in-social-activities with others (Minick, 1985). In terms of classroom learning, Vygotsky specifically emphasized the relation between thinking and what we would call the social organization of instruction (Moll, 1990b). He wrote about the “unique form of cooperation between the child

and the adult that is the central element of the educational process” and how by this interactional process “knowledge is transferred to the child in a definite system” (Vygotsky, 1987, p. 169). It is these systemic properties of instruction that Vygotsky thought provided a special socialization of children’s thinking.

In particular, Vygotsky concentrated on the manipulation of language as an important characteristic of formal schooling. He thought that formal instruction in writing and grammar, by refocusing attention from the content of communication to the means of communication, provided the foundations for the development of conscious awareness and voluntary control of important aspects of speech and language (Minick, 1987). He believed that schooled discourse represented a qualitatively different form of communication from everyday discourse because words act not only as means of communication, as they would in everyday talk, but as the object of study. During classroom interactions the teacher directs the children’s attention to word meanings and definitions and the systematic relation among them that constitutes an organized system of knowledge. Formal instruction, then, with its special organization and discourse, through its social and semiotic mediations, provides children with the resources to develop the capacity to consciously manipulate and voluntarily control crucial sociocultural symbolic systems.

The above theory suggests that it is incorrect to think of the zone as solely a characteristic of the child or of the teaching, but of the child engaged in collaborative activity within specific social (discourse) environments. From our perspective, the key is to understand the social transactions that make up classroom life. Within this analysis the focus of study is on the *sociocultural system* within which children learn, with the understanding that this system is mutually and actively created by teachers and students. What we propose is a “collective” zone of proximal development. As we illustrate with our case study, it is this interdependence of adults and children, and how they use social and cultural resources, that is central to a Vygotskian analysis of instruction.

### Understanding Classrooms as Sociocultural Systems

This case study presents data collected during weekly classroom observations over two academic school years in a bilingual third-grade classroom.<sup>3</sup> It is a special classroom that provides rich data for a Vygotskian interpretation. The teacher describes herself as a “whole-language” teacher. Central to this approach is a view of literacy as the understanding and communication of meaning (e.g., Goodman & Goodman, 1990). Both comprehension and expression are built and developed collaboratively by students and teachers through functional, relevant, meaningful language use. Therefore a major instructional goal of the teacher is to make the classroom a highly literate environment in which many language experiences can take place and different types of “literacies” can be used, understood, and learned by

the students. This approach rejects the typical reduction of reading and writing into skill sequences transmitted in isolation or in a successive, stage-like manner (including such practices as having children sit quietly, follow mundane directions, only read assigned texts, fill out work sheets, and take tests.) Rather, it emphasizes the creation of authentic social contexts in which children use, try out, and manipulate language as they make sense and create meaning. The role of the teacher is to mediate these social contexts, in a Vygotskian sense, so that through their own efforts children assume full control of diverse purposes and uses of oral and written language.

These classrooms, then, allow insights into the social processes of literacy development that are unavailable in more typical settings. It is this process of social mediation that we want to highlight here: not the creation of individual zones of proximal development but of collective, interrelated zones of proximal development as part of a transactive teaching system. The knowledge about subject matter is learned through different types of social relationships facilitated by the teacher. This process is mediated in the sense that the teacher controls it strategically to engage students in different aspects of reading and writing. It is also mediated in the sense that the teacher creates future contexts in which children can consciously apply in new ways what they are learning.

Furthermore, this classroom is a bilingual one, using English and Spanish. The teacher’s goal is to create conditions for learning the second language that are “additive,” that is, perceived by all as a positive addition to a first language, with a strong emphasis on communication for academic purposes. In particular, there is an attempt to integrate written language in either the students’ first or second language as part of every academic activity, where books are read in both languages and the students are free to write in their language of choice. For example, it is common for a student to read a book in English and write a summary in Spanish, or vice versa.

When presenting the case study we first describe a “typical day” to give the reader a good sense of the classroom’s daily routine, the social system that is in place. Included is a description of a thematic unit centered on Native Americans that the teacher and students jointly develop. This unit illustrates well how the teacher creates diverse circumstances for the children to use and apply their considerable intellectual and linguistic resources. We see these theme units as dynamic contexts within which the children learn by manipulating knowledge and provide the teacher and themselves with many opportunities to evaluate how well they are using reading and writing as tools for analysis and for thinking. In our terms, these units are made up of connected zones of proximal development within which the children constantly redefine themselves as learners.

### Typical Day: Creating a Literate Community

The classroom community includes 27 children (12 boys and 15 girls) who come from either the neighborhood or “barrio” surrounding the school (16

children) or who travel from other neighborhoods in the city (11 children) as part of a magnet desegregation program.<sup>4</sup> As is common in bilingual classrooms, there is considerable diversity in the children's language and literacy abilities. Fifteen of the children are monolingual English speakers and readers. Of these children, two (Sarah and Brooke) are rapidly learning to speak, read, and write Spanish. Elizabeth is the only English-dominant bilingual speaker, and she reads in both languages. Nine children are bilingual. Of the nine, Veronica, Susana, and Lupita are reading and writing in both languages; Francisco, Raymundo, and Roberto read both but are clearly Spanish dominant; and Rosario, David, and Ana are Spanish-only readers. Jaime is a Spanish-dominant speaker who came into the classroom in the fall speaking only Spanish and by the end of the year spoke and read some English as well. Acuzena is a monolingual Spanish speaker. She arrived in the United States from Mexico in the spring and reads only Spanish.

Each day for this classroom begins in the patio area of the school, where children, staff, and faculty meet to share announcements, sing, and recite the Pledge of Allegiance. After this morning ritual, the children enter the classroom, noisily put away their things, greet each other in English and Spanish, and move to the group meeting area in the center of the room. The teacher finds a chair, and the group quiets for announcements, calendar and weather information, and a discussion of the schedule for the day. She reads aloud to the children in either English or Spanish at least once each day.

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

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

The children reconvene at the meeting area before they move into a language arts block that consists of a period of sustained silent reading (which the teacher calls DEAR: Drop Everything And Read), literature study groups, and writing workshop. The children are continuing studies of sev-

eral authors. While the teacher and the student teacher meet with two of the literature groups, the other children either meet in their own author-centered literature groups independently or do DEAR.

DEAR in this classroom means an extended period of time (at least 15 to 30 minutes) spent reading any material of choice. The children and adults all read, and the reading materials are extensive and varied in type, topic, and language. The teacher frequently selects a piece of adolescent literature to read for her graduate children's literature courses. Newspapers are available and are usually the choice of the student teacher and the teacher assistant. They share articles with each other, chatting as they would over the breakfast table at home. Children read magazines, chapter books (books long enough to be segmented into chapters with few if any illustrations), books authored and published by students and the whole class, picture books, comic books, and nonfiction books. Children settle in comfortably with friends or alone during DEAR, finding niches under the loft or piano or lying on the floor. The DEAR period is not entirely silent, although it is subdued. Sometimes music plays in the background, and children enthusiastically share information and illustrations as they read.

The children and adults must use print to complete activities and "live" successfully in this highly literate classroom environment. The daily schedule is revised each morning and referred to by all participants throughout the day, for instance. Evidence of group learning, as recorded on charts and other public documents, includes the following: webs representing brainstorming sessions,<sup>5</sup> data collected during math and science experimentation, and ongoing records of thematically organized activities. They include lists of questions children generate at the outset of each new theme. Reading and writing are not only subjects in this classroom but essential aspects of the classroom's intellectual and functional daily life.

The teacher uses literature study groups to provide social reading experiences that complement the personal reading experience provided by DEAR. These study groups enable the children to share their reactions, analyses, and questions about children's trade books with their peers and teachers. The materials for literature study groups vary greatly and provide a wealth of opportunity for choice for the readers, as well as a wide assortment of literary examples. During an author's study group, the teacher supplied over 50 different books in text sets according to author, for example. The children read silently, individually or with a friend, before their groups meet for discussion. In addition to reading a variety of literature during literature study groups, the children learn biographical information about authors and illustrators, compare pieces of writing, extend their reading into writing and illustrations through literature logs and other writing projects, analyze plots, characters, settings, and other literary elements, and create story maps, among other activities. Literature groups are organized according to the interests and choices of the children, in contrast to traditional "reading groups," which are organized homogeneously by reading "ability." The groups allow children opportunities to study and enjoy literature with read-

ers of all abilities, as well as readers of two languages, and provide them with frequent opportunities to mediate each other's learning through shared literacy experiences.

The following examples, taken from the transcripts of literature groups about popular children's authors William Steig and Byrd Baylor, reveal the nature of interactions that characterize this component of the curriculum. The teacher (T) opens the first session of the Steig group by eliciting the children's reactions to one of his books:

**T:** *Sylvester and the Magic Pebble*. What did you guys think about this story?

**Rita:** I think they cared a lot for him.

**T:** What do you mean? You mean his parents?

**Rita:** Yes.

**T:** What made you think that when you read the story?

**Rita:** Because they really worried about him.

**T:** Who else wants to share something? I'd like to hear everybody's ideas. Then we can decide what we want to talk about. Sarah?

**Sarah:** I think he got the idea of it when he was little, or maybe one of his friends got lost or something?

**T:** What do you mean, he got the idea?

**Sarah:** He got the idea for his parents to think that Sylvester got lost.

**T:** You're talking about where William Steig might have gotten his ideas.

**Sarah:** Yes.

**T:** That maybe something like this happened to him or someone he knew. A lot of times authors get their ideas from real life things, don't they? Jon, what did you think about this story?

**Jon:** It was like a moral story. It's like you can't wish for everything. But, in a sense, everything happened to him when he was panicking.

**T:** When did you think he panicked?

**Jon:** Well, when he saw the lion, he started to panic.

**Richard:** And he turned himself into a rock.

**Jon:** Yeah. He said, "I wish I were a rock."

**T:** Right. And it happened, didn't it?

**Richard:** It was stupid of him.

**T:** So maybe he wasn't thinking far enough ahead? What would you have wished instead of a rock?

**Richard:** A plane. A plane.

**T:** An airplane? That would've been a good wish.

**Sarah:** I would wish him to disappear.

**T:** Wish the lion to disappear?

**Jon:** I would wish the lion could turn into a tiny gnat and fly away.

**Rita:** I wish he turned into a bird.

Note how the students contributed different levels of interpretation of the story in response to the teacher's open request. She summarizes the discussion thus far, saying, "Look at all the different kinds of things you had to say. Rita talked about the characters in the story and what they must have been feeling. Sarah took the author's point of view. And you saw it as a particular kind of story, Jon, as a moral story." The teacher asks the students to reflect on their reactions and justify them, and she is explicit about her goals. Note that she refers to the literature logs the students keep on the stories they have read.

**T:** What did you say in your log about the story when you wrote in your log yesterday?

**Richard:** That it was a good book.

**T:** Why would you say this was a good story?

**Richard:** I don't know.

**T:** I guess what I want is for kids to know why they think something is a good story.

As the discussion progresses the children use each other, their experiences, the text, and other stories they have read to mediate their understanding of the story. Throughout, the teacher participates in the discussion, revealing her thinking, contributing her observations along with the students, and elaborating on the children's comments.

As the talk continues, Sarah initiates a discussion to clarify her understanding of the text, and the group recalls the details of the plot to seek an answer. In the following segment of the transcript it is particularly interesting that after Sarah initiates an in-depth discussion she listens quietly to the group interpretation of the text. The teacher takes a notably quiet place in the lively discussion as well; in fact, twice her attempts to participate are interrupted by children. Eventually, Sarah verbalizes a conclusion to her own question.

**Sarah:** I was thinking, at the end, I always get mixed up, because when they have the rock on him, does Sylvester wish himself back, or do his parents?

**Richard:** Sylvester does!

**Rita:** No, they do!

**Richard:** Sylvester does! Sylvester does!

**T:** Can you find in the book where. . . .

**Richard:** It's right here, it's right here.

**T:** Wait a second. And Richard if you will. . . .

**Richard:** It says, "I wish I were myself again. I wish I were my real self again," thought Sylvester."

**Jon:** Yes.

**Rita:** But his parents did that too.

**Richard:** But he said. . . .

**Rita:** They found the pebble and they. . .

**Richard:** Put it on him.

**T:** Do you remember how the magic had to work?

**Jon:** It would have to be on Sylvester.

**T:** What was the only way the pebble worked?

**Richard:** If it was on the person.

**T:** If you had it in your hand, right?

**Richard:** Or on you.

**T:** So if he's a rock, he can't hold the pebble.

**Jon:** But he could support it.

**Sarah:** Yeah, he wished himself back.

As the discussion of the story continues, the children and the teacher explore several themes and interpretations that come about from a shared reading of the text. The discussion includes what the story might be like in another genre, such as a novel, how the action in the story alternates between panic and calm, and if the changing colors in the illustrations depict the changing seasons and why that would be important to the story. Near the end of the session, the teacher discusses with the students what they want to plan to do next. The teacher negotiates with the group, drawing on what has captivated them about the piece of literature. It is the teacher's way of facilitating the students' ownership of the discussion and purpose of the literature group.

Reading and writing merge during another author study about Byrd Baylor's work. After spending several days reading from a set of Baylor's books, Ilinca, Rita, and Mariah come together to discuss their impressions of the books, the commonalities across texts, and how they might share their reading with the rest of the class. Here again, the teacher mediates the children's understandings by using their ideas, questions, and interests to help them focus on meaningful discussions and presentations.

**Ilinca:** All the books are deserty. They all have to do with the desert—mostly the plants and animals.

**Mariah:** All the desert scenes look like they were painted with watercolors.

**Rita:** What I liked best was the lettering, the print. It was like in poetry. It doesn't have anything to do with poetry. Well, maybe a little. It sounded like poetry.

**T:** Poetry doesn't have to rhyme. It's more a way of expressing feelings and describing things. Do you think Byrd Baylor was expressing her feelings about the desert?

**Rita:** I can tell she's a gentle person. It sounds like she cares about the desert and doesn't want it destroyed.

**Mariah:** I read about Byrd Baylor in that newspaper article. She lives in the desert. Her house is kind of Indian style.

**Ilinca:** Maybe we could write about the desert, a plant, or animal and make it look like poetry like Byrd Baylor does. I like being in the desert. Could I write about being in the desert?

**T:** Yes, of course. That sounds like a wonderful way to share what you have learned with the rest of the class.

**Mariah:** And we could make pictures like the books too.

The group then spends time studying Peter Parnall's illustrations (in the Baylor books) more carefully, noticing how he uses simple lines and little color, and how only some parts of the plants and animals are detailed. They are not sure how to go about writing in a style similar to Byrd Baylor. The teacher suggests that first they simply write something about the desert that expresses their own feelings. She does the same, and then demonstrates breaking her prose into shortened segments to establish the rhythm that makes it more poetic. The children are pleased with the results. Here are some examples of the children's writing:

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

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

As a participant in such literature groups, rather than solely the leader, the teacher strives to respond as a reader, to move beyond traditional com-

prehension questions, and to expand on teachable moments. Most remarkable is the teacher's trust of the children's questions and ideas. She clearly does not have a predetermined agenda for discussions and resulting projects but assists the children as a more experienced participating reader in the group to summarize their ideas, merge their questions, and conceptualize ways to present their learning to themselves and others. This important role of the teacher demonstrates her trust of children's transactions with the text and with each other, and her continuous sharing of control with them in curriculum development.

DEAR and literature studies transform into a writing workshop (WW) with a quiet direction or by turning off and on the lights. Materials and work partners change, and quiet talking about reading becomes active discussion about writing projects, illustration, and publication.<sup>6</sup> At the piano bench, Racheal and Lupita finish a conference with the student teacher about spelling and return to the publication process. Their story represents an interesting collaboration. Racheal, a monolingual English speaker, approached Lupita and invited her to join her in a project so that they could produce a bilingual book, Lupita being bilingual and biliterate. Their joint story concerns a young English-speaking girl who encounters a monolingual Spanish-speaking girl and the problems they face as they develop a relationship. In the course of their dialogue, Racheal says, "Lupita, you know what we should do?" and suggests a minor revision. "No, that won't sound good," counters Lupita. "Okay, you're right," Racheal adds, "I'm not good at the Spanish, Lupita." "You're not? Then just do the letters," comforts Lupita.

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

Meanwhile, Susana and the teacher are at the computer, putting a story on the word processor for final publication. Across the room a group of girls sit at a table covered with final projects deeply involved in an author's circle, reading their writing to one another, asking each other questions, and making revisions in their texts. Ana and the teacher assistant confer elsewhere about punctuation and spelling for a final draft. The room is busy with papers, pencils, markers, and crayons as children work at real authoring and illustrating.

The descriptions above only briefly touch on the variety of literacy events taking place simultaneously in this classroom. Many students have more than one project going on at one time, and their writing (in English, Spanish, or both) includes a variety of genres and styles. The teacher believes children are readers and writers, and she strives to support and enhance their continued development and success. As she states, she and her colleagues are "working hard to give the kids the knowledge that they can be learners." The students are trusted to select appropriate materials, writing topics, and language(s) for literacy activities. The teacher helps the children take risks

with difficult materials and new genres and formats for reading and writing, with the aim of expanding their developing abilities. She describes the process of attending to traditional skills within a classroom emphasizing writing as a process:

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

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

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

The children determine which language(s) they will use to read and write. The teacher ensures that the students develop strong literacy strategies in their first language, whether it be English or Spanish, as it serves as the basis for second language development. The children's desires to read and write in a second language are fostered, encouraged, and supported. Such efforts are facilitated by paired reading between students and between students and adults. Regardless of the language of choice, however, the emphasis of using literacy to make meaning remains the same.

A few minutes before noon, the children get ready for lunch. They put away writing materials and gather at the meeting area once again. The teacher takes a moment to comment on the morning's activities and set the stage for the afternoon. Frequently, the teacher's philosophy is shared during such moments, allowing the children open insight into her beliefs about learning. "Talking is probably the most important thing we do in here because you learn the most when you can talk while you work," the teacher tells the students.

## Thematic Unit: Native Americans

When the children return from their lunch period, they become involved in work organized around thematic content. The theme under way is Native Americans. The teacher explains how much control the children have over the topics that form part of these theme studies:

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

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

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

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

The teacher makes use of the children's interests and ideas as she plans the learning experiences that will form part of the theme units. The themes involve large groups, small groups, and individual activities, and they integrate all subject areas. The organizational web (Fig. 1.1) illustrates the Native American theme as a whole.

Each theme culminates in some form of a product or demonstration of the group's learning. For example, the Native American theme produced a published class book that included all of the children as coauthors and a detailed bibliography. A theme about Egypt ended with an impressive transformation of the classroom into a museum, through which the students guided other classes. Yet another theme about the human body was presented in a class-published newspaper that was distributed to parents and



Figure 1.1 Organizational web: Native American theme.

children school-wide. These ideas evolve during the themes and are usually initiated by the children.

Four centers are included in the Native American theme study. At one side of the room, Angel, Roberto, Jaime, and Francisco are learning about corn. On their table is a basket containing blue and yellow corn chips to taste, a collection of trade books in English and Spanish about corn, a corn legend, and a colorful basket of squash and Indian corn. The teacher briefly joins the children to explain the procedure. When she leaves, the children taste the corn chips, read a book about corn, and write about each experience. The books are varied in style and language, and the children cheer when the teacher explains that she found a Spanish translation of one of the books for them (*Corn is Maize*, by Alike).

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

In another center the children view a variety of film strips. The children are using this center as a resource for their ongoing research projects by viewing the films, including helpful information in their reports, and documenting them in their bibliographies.

The fourth center involves the children who are working on individual research projects. These children and the teacher are seated around two tables that are covered with bins of books categorized according to topic, 3 × 5 note cards, and children's work folders in manila envelopes.

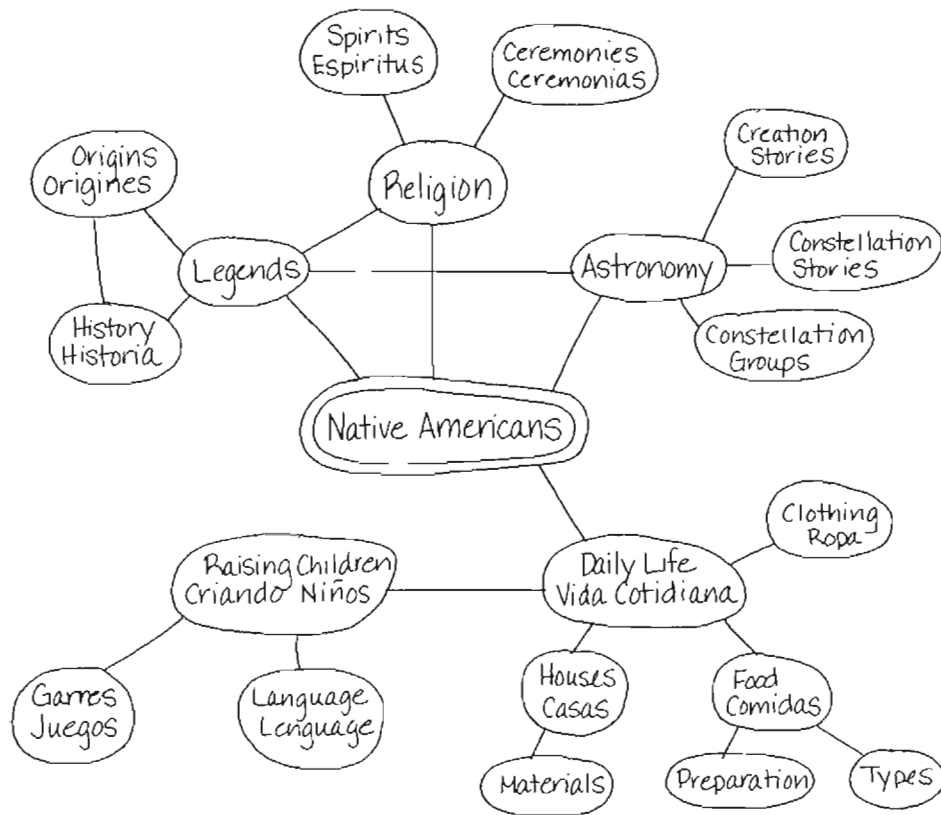


Figure 1.2. Class web: Native American theme.

Lupita, who is researching the Sioux, is reading a trade book in English called *Plains Indians*, concentrating on a section called "Games and Pastimes." As she reads, she records relevant information in Spanish on an index card. Her work provides a good example of the research process involved in this theme. The class as a large group began the theme by discussing and webbing the content they wanted to learn through their study. The result of their discussions is represented in Figure 1.2.

The students then create a web of information they want to know about their individual topics and write questions to guide their research. Examples of Lupita's questions are presented in Figure 1.3. The children may read and write in either language or a combination of the two, as Lupita's activities illustrate. As the children look for answers to their questions in resource materials, they record pertinent information on their cards, as shown in Figure 1.4.

Additionally, they record the books they use on a reference sheet that asks for information about the title, author, call number, and whether they will use the book for information or will not use the book. These sheets will

Lupita

Me gustaría saber sobre el tribu Siux.

¿En que territorio vivian?

¿Porque no querian a la gente blanca?

¿Porque se pintaban las caras y sus caballos?

¿Que se significaban las plumas en sus cabeza?

¿Porque sus jefes tenian nombres de animal?

¿Tenian una manera especial de aser la ropa?

Lupita

- I would like to know about the Sioux tribe.
- In what territory did they live?
- Why did they not like white people?
- Why did they paint their faces and their horses?
- What was the meaning of the feathers in their heads?
- Why did their chiefs have animal names?
- Did they have a special way of making clothes?

Figure 1.3. Lupita's questions about Native Americans.

②  
¿En donde cosinaban?  
Los Sioux cosinaban afuera en la lumbre con leña.

③  
¿Tenían una comida especial?  
#1 Abeses cuando mataban los animales los secaban y los dejaban para el invierno. Y luego los hacían sopa. También avio muchos vegetales diferentes y fruto. Uvas y ajo eran nomas eran unas de las comidas que

Where did they cook?  
The Sioux cooked outside on a fire with wood.

Did they have a special meal?  
Sometimes when they killed the animals they would dry (the meat) and would keep it for the winter and then they would make soup. Also there were many different vegetables and fruit. Grapes and garlic were only some of the foods they liked.

Figure 1.4. Lupita's research cards.

become a bibliography when their upcoming reports are finished. Lupita's partial bibliography is depicted in Figure 1.5.

Upon completion of the research, the children create a second individual web summarizing the information they have obtained as a way to monitor their own learning and write their reports. This entire process is graded by the teacher according to the quality of the questions, the first web, the resource list, the note keeping, the final report, the final web, and a composite overall grade. The children's final reports are bound in a published book to donate to the school's library, where it will be catalogued and shelved for the rest of the school to utilize as a reference document. Lupita's report is shown in Figure 1.6.

Other children in the class follow a similar procedure. Consider Veronica, a Spanish-dominant bilingual child, who is studying the Yaqui Indians. The teacher is sitting with her, reading to her from an adult level book written in English (*Southwestern Indian Tribes* by Tom Bahti). After she reads a passage, the teacher translates the ideas into Spanish and discusses them with Veronica in terms of her research questions. The teacher is absorbed in the process herself; she is a co-researcher with Veronica, eager to learn and discuss new knowledge with her student. Veronica incorporates a second

Recurso Source #	Numero de Identificación Source Call #	Books	Libros	√ = will use x = will not use
1	970.004 HU	Hughes, Jill (Author) Last Name, First Name Autor Apellido, Nombre	Plains Indians Title Titulo	<input checked="" type="checkbox"/>
2	745.5 PU	Purdy Susan (Author) Last Name, First Name	North American Indians. Title	<input type="checkbox"/>

Figure 1.5. Lupita's bibliography.

source of information in her research project: She has interviewed a Yaqui teacher assistant in the school and kept a written record of her interview questions and the responses she elicited, which are incorporated into her final report; the interview is documented in her bibliography.

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

From the initial web, through the intermediate stages of planning, center activity, research work, and publication, the theme studies include authentic, captivating, integrated learning experiences, where the children use literacy to search for knowledge and to present their ideas to others in the classroom community and in the school.

## Discussion

This classroom, organized into center activities, literacy events, and theme research projects, is structured so that children may work in various ways to

## LOS INDIOS SIOUX

por María Guadalupe

Yo se llamo María Guadalupe y quise aprender del tribu Sioux porque casi no se mucho de ese tribu. Aprendí de los juegos que jugaban. También aprendí de los vegetales que comían y los nombres de los jefes.

Los Sioux vivían cerca del Trin River. Los Sioux no hacían muchas canastas.

A veces, cuando mataban los animales, los secaban y los dejaban para el invierno. Luego lo hacían sopa. También había muchos vegetales diferentes y frutz. Uvas y ajo eran unas de las cosidas que les gustaban. Los Sioux cocinaban afuera en la lumbre.

Estos son unos de los nombres de los jefes del tribu Sioux: Sitting Bull—jefe del tribu Sioux, Chief Ball—Hunkpapa Teton, Chief Red Horn Bull—Ogalala, and Rain-in-the-face.

También aprendí los juegos de los Sioux. Uno se llama "tiren lo del caballo" que jugaban antes de cazar o de peliar. Jugaban tirando a otros al suelo. También había otros juego que dos hombres tenían que poner un palo por un hoyo. El que ponía el palo por el hoyo primero ganaba.

## THE SIOUX INDIANS

by Maria Guadalupe

My name is Maria Guadalupe and I wanted to learn about the Sioux Tribe because I hardly know anything about that tribe. I learned about the games they played. I also learned about the vegetables which they ate and the names of their chiefs.

The Sioux lived near the Trin river. The Sioux did not make many baskets.

Sometimes, when they killed animals, they dried them and left them for winter. Later they would make them into soup. Also there were many different vegetables and fruits. Grapes and garlic were some of the foods which they liked. The Sioux cooked outside on a fire.

These are some of the names of the chiefs of the Sioux tribe: Sitting Bull—chief of the Sioux tribe, Chief Ball—Hunkpapa Teton, Chief Red Horn Bull—Ogalala, and Rain-in-the-face.

I also learned the games of the Sioux. One was called "pull him off the horse" which they played before hunting or fighting. They played by throwing others to the floor. There was also another game in which two men had to place a stick in a hole. The one that put the stick in the hole first would win.

Figure 1.6. Lupita's final report.

accomplish their individual and group academic goals. There is no limit to what the children may learn about Native Americans or themes centered around other concepts. There is no ceiling on the possible level of intellectual work or the learning potential of the children. The teacher allows and encourages children to stretch their abilities and to take risks with new experiences, materials, and challenges. Simultaneously, the design of the curriculum and the participation of the teacher support the children and ensure success, acting as a safety net for those children who take risks, especially in their second language. Throughout, the children are perceived not only as active participants in their own learning but are encouraged to be responsible for their own academic development and behavior; and they are actively involved in diverse classroom activities. The classroom is socially and culturally organized to support and advance those goals.

The curriculum indicates a value placed on the children's learning *processes* as well as on completing products. With the Native American theme, the children not only learn information about their theme of study, but they learn the valid procedures of research. These third grade children are responsible for conceiving their own questions, guiding their own learning with biliterate materials and experiences, and following a sophisticated research sequence. They are expected to display skills at using reference materials and to articulate their awareness of the reasons for keeping records of reference materials. The research process culminates in a report, wherein children learn to produce a piece of writing in a specific genre at the same time that they are providing the school library with real, researched, referenced information. The research process will be repeatedly initiated by the children as they explore other subject areas in the future.

Bilingualism in this classroom is both a goal and a powerful resource for learning; it is an integral part of their classroom community and a means for children to expand their literate and social experiences. In the study centers and groups, Spanish is used interchangeably with English, so the children learning English can both understand the content in their dominant language and expand their vocabulary and comprehension in their second language. Whenever appropriate information is recorded in either language, with decisions for language choice made by the children and the teacher. The teacher strives to provide the children with materials in English and Spanish because they expand the children's literate worlds and to use their bilingualism to create interesting, advanced conditions for literacy use and language learning. In general, however, the students' and teacher's bilingualism is used as a resource to expand opportunities to obtain, create, and communicate knowledge and to develop the social relationships so essential to this classroom's work.

The materials in the classroom form part of the collective zone, serving as cultural mediators, helping to extend the amount and type of learning possible for any child. Included in the materials for the Native American unit, for example, are a great number of books, such as information books, legends, cookbooks, music and art books, and many pieces of children's lit-

erature of various genres that deal with Native American topics. Many of the books are at an adult level. The children read these books selectively and glean information pertaining to their self-selected topics and specific questions. The books are sometimes difficult, but the teacher assumes that with her assistance the students can read and use them. This point is illustrated by the interaction between Veronica and the teacher, described above. The teacher helped Veronica, a dominant Spanish speaker and reader, translate and discuss a difficult text from English into Spanish, rather than assuming that Veronica could not handle the information or that she needed an easier task.

Although adult-directed lessons are relatively rare in this classroom, there is definitely adult involvement in the children's work. The teacher's guidance is purposely mediated, almost hidden, embedded in the activities. It is clear that the teacher assumes a variety of roles during the course of a day and even during one theme. These roles can be succinctly described as follows:

1. As *guide and supporter*, the teacher is crucial for helping children take risks, focus their questions and ideas, and translate them into manageable activities, ensuring that each child finds academic success.
2. As *active participant in the learning*, the teacher can research theme topics along with the children, combining her own content questions with demonstrations of the research process.
3. As *evaluator* of the children's individual and collective development, the teacher uses anecdotal records, notations of children's individual interests, and reflections about transcripts from literature study groups, and demonstrates her knowledge about children and learning.
4. As *facilitator*, the teacher utilizes conscious planning of the environment, curriculum, and materials to provide functional and purposeful uses for language, literacy, and learning processes.

All of these teacher roles constitute mediation.

An essential factor contributing to the success of this classroom and its value for interpreting Vygotskian theory is the reality that children have considerable control over virtually all aspects of their own learning experience. They select groups, reading materials, writing topics, theme topics, and language to use for each. They generate their research questions and negotiate their learning tasks with their teacher. The teacher allows and promotes this sharing of power, based on her trust of them as learners. She explains it as follows:

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

children's behalf and on my own is much more genuine and meaningful when it is like that.

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

### Practice Informing Theory

We have depicted a classroom characterized by a complex but coordinated set of practices that form part of a third-grade curriculum. These practices capture some key elements of Vygotsky's concept of a zone of proximal development but, as we have tried to show, in a broader and much more socially distributed fashion. This classroom contains elements that may exceed Vygotsky's formulation or, at the very least, shed light on how narrowly we may have been interpreting and applying his ideas.

When examining the practices that constitute our case study it becomes evident that the usual definition of the zone of proximal development is pretty barren; it cannot help interpret what goes on in this diverse, yet systematic, classroom. Limitations are largely overcome when the concept is understood as part of a broader theoretical framework that takes the development of mind in social practice as its central problematic (Minick, 1989). It then becomes clear that the zone is itself a mediating concept, a "connecting" concept, as Bruner (1987) suggested, that helps integrate Vygotsky's more encompassing theoretical view (for more detailed discussions see Minick, 1989; Moll, 1990a; Valsiner, 1988).

One aspect of this broader view is particularly relevant to our case study: the centrality of the concept of mediation to Vygotsky's formulations, including not only social interactions but semiotic mediations. This semiotic emphasis brings with it a focus on meaning as central to human activity (e.g., Bakhurst, 1986) that is often ignored during discussions of the zone. The emphasis is usually on the transmission of skills from adult to child, as is the case with typical classrooms. Yet our case study suggests that a different, more transactional view of the zone is possible, one that focuses on the co-construction of meaning as facilitated by the various activities that make up classroom life.

Central to this formulation is the emphasis on the active child developing the cultural means to assist his or her own development. In our case study the children select topics for study at the beginning of the year, choose books to read and issues to analyze, specify research questions to address, use literacy in various ways as part of classroom activities, create texts for authentic purposes, and publicly display their learning, including the development of novel products, based on their real questions about the world.

The role of the adult is to provide mediated assistance, indirect help, that does not displace the direction and control children give to the tasks and activities. The goal of this mediated assistance is to make children consciously aware of how they are manipulating the literacy process, achieving new means, and applying their knowledge to expand their boundaries by creating or reorganizing future experiences or activities. Our case study suggests that an apt definition of the zone, at least as applied to classroom analysis, must include the active child appropriating and developing new mediational means for his or her own learning and development.

Finally, our case study highlights issues about social relationships and teaching that are not usually considered within Vygotskian formulations, especially as they relate to education. We have mentioned the importance of the sharing of control between teacher and students, the development of mutual trust, the importance of the authenticity of materials and tasks, the types of discourse that make up learning events, the use of bilingualism as a resource, and the teacher's and students' perception of their roles as learners. We consider these qualitative issues in educational practice. We studied them holistically, as separate issues and in relation to how they form the classroom's social and cultural system. Our methods included participant observations, interviews of teachers and students, collection of materials, and audiotape and videotape analyses. We find these methods indispensable if the units of study are active subjects within diverse and dynamic social environments. These methods are fully compatible with Vygotsky's developmental emphasis, his insistence on a historical method, and his focus on how humans use cultural resources as tools to transform the present into the future.

## Notes

1. This case study formed part of a much broader study that included household observations and close collaboration with teachers for analyzing and developing classroom practices (e.g., Moll & Greenberg, 1990). Portions of this chapter were included in the project's reports to the funding agency, the Office of Bilingual Education and Minority Language Affairs, Department of Education. We appreciate their support.

2. For additional discussions of this key theoretical concept, see, e.g., del Río and Alvarez (1988); Minick (1985, 1987); Moll (1990a); Palacios (1987); Rivière (1984); Rogoff and Wertsch (1984); Sharp and Gallimore (1988); Valsiner (1988); Vygotsky (1978, 1987); Wertsch (1985).

3. Kathryn F. Whitmore conducted these observations. For purposes of this chapter we have collapsed several observations into a description of one representative day, concentrating primarily on language arts activities. We would like to thank the teacher for sharing with us her observations, transcripts of lessons, and the writing of the students. She actively collects data in her own classroom not only as part of her graduate studies but to understand better how she is teaching and how the children are learning. She has been our teacher as well.

4. Readers not familiar with the politics of race in the United States may not know this term. In brief, it is usually meant to depict a school located in a Black or Latino neighborhood that has been made attractive to Anglo-Saxon families because of a special characteristic, for example, an emphasis on teaching with computers. The hope is that these families will voluntarily send their children there to integrate what would otherwise be an ethnically or racially segregated school. Alternately, desegregation schools may be located in predominantly Anglo neighborhoods, and minority children are bussed into the school. All desegregation programs receive additional funding and programs, including such personnel as fine arts teachers, counselors, and librarians.

5. Many elementary classrooms use webs, which resemble spider webs in their final design, to record information and questions. Webbing is especially helpful as a visual tool for categorization and organization of ideas. An example of a content theme web in Figure 1.2.

6. Writing workshop is part of a process approach to writing that is becoming common in classrooms in the United States. It involves the following steps: topic selection, composition of a first (rough) draft, sharing the draft with friends and readers, revision of the draft, editing in a conference with the teacher or teacher assistant, illustration if appropriate, and final publication. Final products are usually shelved in the classroom library for open reading.

7. The translation of Lupita's writing is not a literal one. For example, it is difficult to capture invented spellings from one language to another. Consequently, the translation is void of miscues and invented spellings.

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