A SOCIOCULTURAL ANALYSIS OF TEACHER-STUDENT
INTERACTION IN A MEXICAN 6TH GRADE CLASSROOM

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A Sociocultural Analysis of Teacher-Student Interaction in a Mexican
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This thesis is dedicated to the six young teacher trainees killed in Guerrero, Mexico last September and to the 43 that remain missing, may your people obtain justice.
ABSTRACT OF THE THESIS

A Sociocultural Analysis of Teacher-Student Interaction in a
Mexican 6th Grade Classroom
by
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It has been documented that there is a dearth of literacy and classroom discourse research in the northern regions of Mexico. In response, this qualitative study examines the social organization and discursive interaction of a 6th grade classroom in a public elementary school located in the U.S.-Mexico border city of Mexicali. The interactions that occurred between the teacher and students were transcribed and then analyzed in light of the constructs of co-authorship, consensus construction, agency and exploratory talk. The results show that (1) the students usurped some of the teacher’s authoritative roles and in this sense became co-authors of certain normative genres; (2) the classroom members exhibited a sociocultural tendency toward reaching consensus; and (3) the students engaged in exploratory talk even though they had not received any explicit training in this type of discourse. Furthermore, it was found that the teacher played an important role in facilitating consensus reaching and in promoting exploratory talk by using certain participant structures that allowed spontaneous student talk. The findings are consistent with previous studies of Mexican classroom interaction and suggest it differs from interaction characteristic of the United States and other English speaking settings. This has potential implications for classrooms in the United States that receive Mexican immigrant children who bring with them discursive and interactional practices or expectations that could be misunderstood on account of their contrast with the social organization of the new classroom community.
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When the idea for the present research on Mexican classroom discourse was conceived, international media outlets were airing news about Mexican President Enrique Peña Nieto’s education reform, the violent teacher protests against it, and the apprehension of powerful union leader Elba Esther Gordillo on suspicion of funds embezzlement. Mexican media outlets were covering all this important news as well, but according to notable Mexican journalist Carmen Aristegui (2013), some were merely imposing vicious generalizations about teachers on the public: “Many public voices, journalists, people in the media, etc., say that teachers are a bunch of so and sos, that they are bullies. This is an aberrant generalization about teachers in this country…this is a grievance.”

According to distinguished journalist Luis Hernández Navarro (2013) this unfortunate media campaign was being orchestrated by the Mexican government:

Annoyed because democratic teachers do not allow the establishment of the education reform, the federal government has embraced such a distorted image of the teaching profession. Convinced that teachers’ protests come from a poor communication strategy, [it] has saturated television, radio and newspapers with reform advertisements, which generate more criticism than sympathy.

Hernandez Navarro acknowledges that some sectors of society may have genuine hostility against teachers because obviously their continuous street protests have a significant impact on their everyday activities. However, he argues that such hostility has been intensified and influenced by the biased public image of teachers that is being depicted in the media. He maintains that such spiteful public image portrayal spreads inaccurate information about the teachers’ cause and intentions. Professor Hugo Aboites Aguilar, from the Autonomous Metropolitan University, has called this media campaign “a moral crusade against teachers” and has warned about a potential unfortunate outcome which is the clash of social classes (Aristegui, 2013).

It might be possible that the Mexican media’s biased portrayal of teachers may have influenced public opinion. Perhaps some sectors of Mexican society truly agree with such an image of teachers. It is also likely that the public has come to realize that the education system has terrible faults that should be fixed if students are to be appropriately served in
their schools. In any event, it is in this exceptional historical and social context that the present thesis aims to bring to the public discussion a much more important aspect of the lives of teachers and students: an account of the socially and pedagogically effective interaction that took place in one public elementary school classroom.
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Gracias a mi persona favorita, mi esposo Arturo, por su incondicional apoyo y por creer en mi siempre.

Lastly, I wish to express my deepest gratitude and praise to God.
CHAPTER 1

INTRODUCTION

Classroom discourse researchers have established that there are differences between the organization of everyday conversations and classroom talk. In the latter context, students are more restricted by certain implicit participant rules (Cazden, 1985; Mehan, 1979; Philips, 1972) that govern the interaction. The participant rules are enforced, most obviously, by the teacher who has the power to allocate turns at talk and control the organization of the interaction. Furthermore, the development of the learners’ competence depends in part on their ability to interact and to vocalize their ideas, observing these implicit rules (McCollum, 1989).

The literature has documented that in many English speaking settings, teachers play a major role in controlling who has access to talk by using certain turn-allocation procedures over others (Cazden, 1988; McCollum, 1989; Mehan, 1979; Sinclair & Coulthard, 1975). Cazden (2001) applies the label of “traditional lessons” to these types of patterns that allow teachers to control the talk and interaction. Traditional lessons display a triadic configuration which Mehan (1979) and others (e.g. Cazden, 1988) termed the IRE (Initiation-Response-Evaluation) sequence. In this familiar sequence, the first turn (I) is realized by the teacher who frames questions or utterances that aim to move the interaction forward. Then a student offers a response (R). In the third turn (F), the teacher provides an evaluation or comment on the student’s response. The third move has more recently been termed ‘feedback’ or ‘follow-up’ because it is also used by the teacher for non-evaluative purposes. For example, Nassaji and Wells (2000) identified two alternative roles of the third slot: adding comments that extend the discussion and asking questions that invite the students to elaborate.

Cazden (2001) considers the IRE/F sequence the “default option” of classroom discourse: “doing what the system is set to do “naturally” unless someone makes a deliberate change” (p. 31). As mentioned earlier, this type of interaction allows teachers to control the talk in the classroom and to advance the instructional agenda. The students’ access to the floor, however, is somewhat restricted by the sequence.
Nonetheless, the literature has also reported cases from other countries/from international classrooms, as well as from English speaking settings, where classroom talk and interaction is more dialogic or conversational (Candela, 1999, 2005; Kramer-Dahl, Teo, & Chia, 2007; McCollum, 1989). In these discourse communities, the teacher plays a role closer to one of interactional mediator instead of controller of the talk. Cazden (2001) refers to this type of interaction as ‘non-traditional lessons’ to highlight its contrast with the IRE/F or default sequence. Non-traditional lessons, unlike traditional ones, provide students more opportunity to speak in lengthy turns, to speak more openly and even to initiate interaction. This kind of interaction and talk may facilitate learning.

Cazden (2001) argues that the role of discourse in instructional improvement efforts consists in helping educators build a repertoire of teaching styles and lesson patterns, so that they can be able to use the most effective types of interaction for any given instructional goal or setting they find themselves in. In this light, knowledge of non-traditional types of teacher-student interaction is essential to expand the teachers’ repertoires. In a country such as the United States where classrooms are exceptionally heterogeneous, it is important for teachers to be able to adjust their teaching styles to accommodate or mesh with the discourse patterns their students have been previously socialized into.

Duff (2002) echoes Cazden in reporting that some language scholars involved in education have made a call for the creation of learning communities where the voices of all the members are heard: “[such communities] can and must provide opportunities to create constructive, cohesive learning communities where differences are accommodated and bridged, and where students and teachers negotiate their identities in culturally respectful and equitable ways through social interaction” (p. 290). The creation of this type of community may not be possible, however, if teachers are not acquainted with the discursive practices their students have been previously exposed to.

In response, the present study uses a sociocultural approach to examine the interactional patterns of a Mexican primary classroom where the interactional organization resembles that of a non-traditional lesson. The study also sheds light on the social rules and cultural expectations that govern classroom interaction. Furthermore, the analyzed data depicts how construction of knowledge and negotiation of student identities can be accomplished through students’ participation in what Candela (2005) has identified as
consensus construction and co-authorship of school institutional practices. In addition, the data depicts how student agency (Bruner, 1996) develops and exploratory talk (Barnes, 2008) unfolds as more extensive, spontaneous student talk is fostered by the teacher.

SCHOOLING IN MEXICO

The following section offers a three-part overview of schooling in Mexico: School Levels, School Routine, and School Life. The purpose of this section is to provide important background information to readers who do not possess knowledge of school life in Mexico or of its educational system.

Overview of School Levels

The Mexican Secretariat of Public Education (Spanish acronym SEP) outlines the following four levels of schooling on its official website:

1. Educación Inicial (Initial education)
2. Educación Básica (Basic education)
3. Educación Media-superior (Upper-middle education)
4. Educación Superior (Higher education)

Initial education consists of two to three years of pre-school. Children can begin to attend preschool, el jardín de niños, at the age of four. Basic education comprises both elementary (1st-6th grade) and middle school (7th-9th grade). Education in Mexico is compulsory and free until 9th grade. Upper-middle education (called preparatoria or bachillerato) consists of three years (10th-12th grade) of high school. Higher education generally consists of four years of undergraduate studies. Finally, graduate education consists of two-year long programs for master’s degrees and 3-4 year long programs for doctorate’s degrees.

The SEP also offers other literacy services for non-traditional student groups. For instance, it offers a program called telesecundaria (roughly translated into English as ‘satellitized middle school’) for students in remote, poor rural and urban areas of Mexico. Other important programs are adult and indigenous education. More recently a program for special education was also developed and implemented.
School Routine

The accounts of school life offered in this overview pertain particularly to elementary schools although several of the described practices also occur in preschool, middle school, and even high school.

School day consists generally of 3.5 hours of instruction and 30 minutes of recess. Many schools offer two different shifts with the first or morning shift starting from 8:00 A.M. to 12:00 P.M. and the afternoon shift from 1:00 P.M. to 5:00 P.M. or 2:00 P.M. to 6:00 P.M. (McLaughlin, 2002; Quiñónez, n.d.).

The students are in charge of cleaning their own classrooms (sweeping, mopping, etc.). At the beginning of the school year, a cleaning schedule is designed so that each student has his or her share in the task. Students who are scheduled to clean the classroom are supposed to arrive a little earlier to do the cleaning before school begins.

Students have about two hours of instruction and then they have el recreo (recess). Students use el recreo to eat snacks and food they bring from home or that they buy at the school’s convenient store. No free food is distributed in Mexican schools. Most schools do not have designated eating areas either. Students can eat on the playgrounds or fields as they play. In public schools, recess in not supervised by teachers, volunteer parents or staff members. “Students are to resolve issues as they arise” (Quiñónez, n.d.). After recess is over, students have 1.5 more hours of instruction and then they are dismissed. Again, note that in public elementary schools, students spend an average of 3.5 hours in the classroom.

School Life

Every Monday students, teachers, and administrators participate in the honores a la bandera (flag ceremony). During this ceremony the flag escort, which is composed by older students (usually good students), display the flag while the student body recites the pledge of allegiance and sing the national anthem. The school principal might also take this opportunity to give speeches and announcements (McLaughlin, 2002). On this day, it is particularly

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1 Of course, not all the students participate fully in the task of cleaning. Paradise (1994) explains this, and I have anecdotal evidence from my past years of schooling in Mexico (and more recently from my nephews’ experience) that actually not all children clean.
important that students wear their most formal uniform which consists of a skirt and a white shirt for girls and pants and a white shirt for boys. On Mondays, many schools require students to wear zapatos escolares, black school shoes.²

There are several important national holidays that are observed and celebrated in the schools (Johnson & Hernandez Rodriguez, 2002). The main holidays are Independence Day, Mexican Revolution Day, President Benito Juárez’s Birthday and Spring Day, which are usually celebrated simultaneously, and Mother’s Day. Some of the celebrations consist of festivals in which students perform typical and modern dances, recite poems, sing, act, etc. Students from all grades must participate in these performances. Parents and relatives generally attend these festivals. Volunteer parents usually prepare food that is sold or freely distributed in the festivals. Some holidays such as Mexican Revolution Day are celebrated with a civic parade instead of a festival. Parades are as culturally rich as the festivals since the students also engage in diverse performing activities. For example, students perform physical education routines, live music, and sometimes they display traditional costumes.

**REVIEW OF RELEVANT LITERATURE**

This remainder of this chapter reviews the literature relevant to the study and is divided in two major sections: (1) Review of Mexican classroom discourse and interaction and (2) Review of important constructs. The first section offers a survey of major characteristics of Mexican classroom and interaction documented in the literature and the second section offers a discussion of four key constructs that will be further explored in the analyses and discussion sections of the study.

**Mexican Classroom Discourse and Interaction**

The following section discusses characteristics of Mexican classroom discourse and interaction that have been documented in the literature. The discussion is divided in three sections: (1) Noise and Freedom of Movement, (2) The Role of Activities, and (3) Values.

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² Mexican schools have strict dress codes; wearing the uniform is just a small part of it. Students are expected to wear black shoes most of the time and sneakers only on specific days of physical education classes. Also, boys are expected to wear the “corte de pelo de estudiante” student haircut. Girls are not allowed to wear make-up. Piercings are absolutely prohibited for both sexes.
It is of utmost importance for me to not convey an overly generalized (or romanticized) portrayal of Mexican schools. There already exist many generalizations and stereotypes about Mexican students,\(^3\) as well as about students from other nationalities and ethnicities, that misinform teacher practices. And, oftentimes, these generalizations lead to the unfortunate profiling of students based on their color and social class (Berlin, 2002). The present literature review seriously considers Gutiérrez and Rogoff’s (2003) invitation to stay away from approaches that simplistically associate race or ethnicity with culture and result in reduced interpretations of individuals, groups and cultural practices. Thus, the surveyed studies take sociocultural and ethnographic approaches that permit a careful characterization of a group based on repertoires of practice vis-à-vis individual traits. Most importantly, the review takes Schieffelin and Ochs’ (1986a, 1986b) sociocultural approach to language analysis, which “assumes that novices do not appropriate the norms and underlying ideologies of socialization contexts in uniform ways, allowing for an important dimension of human agency” (cf. Poole, 2008b, p. 381).

Needless to say, the traits of Mexican classroom discourse and interaction reported in the next sections should not be used as basis for general statements about Mexican teachers, students or schools. The following descriptions pertain only to a small body of research that is limited to very particular sociocultural contexts in specific geographical regions of Mexico (South and Central regions).

**Noise and Freedom of Movement**

High levels of noise and freedom of movement are two important characteristics of the Mexican classroom that have been documented in the literature (Cazden, 1988, Macias, 1992; McLaughlin, 2002; Paradise, 1994; Smith, Jimenez, & Martinez-Leon, 2003) and are relevant to the present study as well. Cazden (1988),\(^4\) for example, studied the sociocultural organization and interaction of two Spanish-English bilingual first grade classrooms and noticed that particularly in one classroom students often took breaks from work to talk to

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\(^3\) Delgado-Gaitan (1987) observes that Mexican students have been considered “submissive” for respecting adult authority have also been negatively referred to as “nonlingual” (p. 337).

\(^4\) Although Cazden’s (1988) study is set in Chicago her subjects, students and teachers, were from Hispanic origin.
their classmates and even dance. Macías (1992), in his ethnographic study of several elementary classrooms in a rural community in south central Mexico, found that “[the students] talked seemingly at will throughout the class period” (p. 17). He reports that the students also moved a lot around the classroom. He argues that the observed behavior was not a sign of teacher’s poor classroom management or student misconduct, but the manifestation of an intrinsic social quality that is deeply rooted in the school classroom as well as in the wider sociocultural milieu of its members. Indeed, Macías (1992) states that the observed teachers facilitated and promoted talk and noise:

These teachers expected vocal expression from students to enhance both their own teaching and the students’ socialization. They called for it in specific instructional contexts, such as presenting in front of the group or reading aloud, but they also tolerated a high level of spontaneous verbal communication, physical expression and movement, and noise throughout the day. (p.19)

Macías (1992) offers an example of a typical teacher-whole class exchange which evinces how the teacher effectively used loudness to engage and motivate the students in the target task:

¿Cuántos? (“How many?” teacher asks in a loud voice)
Cinco! (“Five!” student answers loudly)
¿Cinco qué? (“Five what?” she [teacher] exhorts, even louder)
Cinco quintos! (“Five-fifths!” kids [the class] shout excitedly). (p. 18)

Paradise (1994), in her study of 5th and 6th grade classrooms in a Mazahua (a native American group) school located in south central Mexico, also observed high levels of noise. She noticed that during non-teacher fronted settings the students sat on top of the desks or on the floor, shared chair with a classmate, and moved a lot around the classroom. She describes a very interesting incident in which a student who was sitting on a desk with his back to the teacher remained in this position even while the teacher started to directly address the whole class. Like Macías (1992), Paradise (1994) does not interpret this behavior as evidence of student rudeness or a teacher’s poor classroom management. 5 Instead, she argues that these characteristics emerged from the autonomy acquired through early home socialization in the

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5 Indeed, both researchers documented that the observed teachers disciplined their students whenever it was necessary. In addition, Paradise (1994) observes that the teacher actively monitored the class as he walked around the classroom to interact with the students.
Mazahua interactional style. Furthermore, she posits that the reported interaction was not necessarily inadequate compared to other variants, as the students were engaged in the learning process and in the tasks.

Smith et al. (2003) echo the previously discussed findings. In their study of 34 1st and 4th grade classrooms in a small city in central Mexico, they found that while writing was extremely regulated in the schools, speaking was not controlled at all: “we observed very few restrictions on what students were allowed to say or how they said it” (p. 775). They also encountered high noise levels that seemed not to bother the classroom members. McLaughlin (2002), in his description of Mexican schools, states that “classroom life tends to be more informal than in U.S. schools. In many schools, students engage in frequent group work, often involving a great deal of student interaction and movement.” In the United States, Susan Philips’ (1972) study of classrooms in the Warm Springs reservation reports similar characteristics. Cazden (2008) argues that it is the teacher’s trust in his/her students which permits such unusual freedom of movement during “non-official” group work settings (p. 162).

**The Role of Activities**

Researchers have also documented that activities and games play an important role in Mexican classrooms (e.g. Macias, 1992; McLaughlin, 2002; Miller, 2001). Miller (2001), for example, conducted a longitudinal survey in over one hundred schools located in Mexico City and other south, central, and southeast states of Mexico. He found that from 1978 to 1999, the time students spent in activities grew considerably.

Macias (1992) explains that some Mexican textbooks are meant to be used as workbooks since they include cutouts and instructions to make things during the lessons. In his study, he observed that students engaged in different hands-on activities such as creating their own compasses and rulers. He explains that sometimes schools lack supplementary materials, and students have to use the resources that are available to them to create the
These activities were not final projects of the lesson, but materials needed to complete some tasks in their textbooks.

**Values**

In the early 1980’s, Erikson, Cazden, Carrasco, and Maldonado Guzman (1983) studied the social and cultural organization of two bilingual classrooms made up of Mexican-American participants. Erikson et al. (1983) found that the observed teachers’ classroom control styles were different from the styles documented in the literature of mainstream classroom discourse. *Cariño*, ‘a close and caring relationship’ and respect were two important features found in the study. These two values were realized in in-group forms of address (e.g. the teacher addressed the students as *papi, mami*), frequent use of diminutives (e.g. the teacher used diminutives as a form of endearment), reminders to the children of norms of interpersonal respect (e.g. the teacher reminded the students to say “excuse me”), and expressions of the teacher’s knowledge of the students’ families.

More recently, other researchers have also reported finding this warm relationship as well as respect between the teachers and the students (Johnson & Hernandez Rodriguez, 2002; McLaughlin, 2002; Miller, 2001; Smith et al., 2003). Johnson and Hernandez Rodriguez (2002) posit that the expression of *cariño* in K-6 can be seen “as an extension of the parent-child relationship.” Johnson and Hernandez Rodriguez (2002) note that Mexican children are socialized into the tradition of respecting adults as superiors, especially parents and teachers. They consider that in Mexican classrooms respect is mutual: students respect their teachers and teachers respect the students and their parents. Similarly, Delgado-Gaitan (1987) found that children were taught at home that obeying adults was a form of respect.

**SUMMARY**

Noise and freedom of movement, in particular, are characteristics relevant to the present study. In sum, excessive noise and freedom of movement in Mexican classrooms resulted from the many activities that the students engaged in during their lessons. Noise and

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6 During my observations in the classroom under study, the students needed markers to play a board game suggested in the textbook. After they had cut out strips of paper from their notebook sheets (to use as the board), the teacher asked them to go outside to collect some pebbles from the dirt to use as markers.
freedom of movement were expressions of an intrinsic social quality rooted in the social
milieu of the classroom members. Cariño and respect are two important values that parents
and teachers nurture in children. Nevertheless, I reiterate here the study’s sociocultural
approach (to the analysis of classroom discourse) which contextualizes language by the
sociocultural milieu of the participants and which cautions against overgeneralizations. The
accounts described in the previous sections should be interpreted as statements based on
observations of behaviors that took place under very particular sociocultural contexts.

**REVIEW OF IMPORTANT CONSTRUCTS**

In addition to the findings related to noise and freedom of movement, the roles of
activities, and values, this chapter will also review four key constructs relevant to the present
study that have been documented in past and contemporary research studies of classroom
interaction in Mexico: (1) Co-authorship, (2) Consensus Construction, (3) Agency, and (4)
Exploratory Talk.

**Co-Authorship**

An important construct relevant to the study is co-authorship, which Duranti (1997)
defines as the distributed responsibility of discourse community participants to construct and
interpret messages collectively, a phenomenon he posits as “widespread” (p. 316). For
example, Duranti surveys some accounts of the participant structures found in the
conversational story telling genre. He considers Mandelbaum’s (1987) interpretation of
storytelling as a ‘teller-driven’ or ‘recipient driven’ task and posits that her framework and
the assignment of fixed roles, does not necessarily apply in the case of the family narrative.
Here all family members participate in the construction of the story and thus their roles
constantly switch from tellers to recipients. Duranti (1997) introduces the label of ‘co-tellers’
as a more accurate label for the role of the participants. He argues that narratives are co-
authored not by one speaker (or author), but by many participants who at given points
become authors too.

In the context of classroom discourse, Candela (2005) interprets student participation
in normative genres as co-authorship of institutional practices. In this light, she introduces
the notion of teacher-student co-authorship of ‘normative genres’, which she identifies as
those “teachers’ interventions that organize and guide academic activities and the social participation of the pupils” (p. 324). Examples of these types of interventions are “the organization of tasks, the scaffolding that facilitates construction of knowledge, rights and obligations, and the rules and regularities that guide participants’ interactions in the social organization of the school classrooms” (Candela, 2005, p. 323). She argues that although traditionally these genres are authored by the teacher who has the authoritative role in the classroom, students influence and sometimes directly reshape the development of the normative genre discourse or institutional practices. “Individuals do contest power and compete for leadership roles in every verbal interaction” (Diamond, 1996, as cited in Candela, 2005, p. 11).

In her study of primary classrooms in a rural area of Central Mexico, Candela (2005) found that students sometimes assumed the role of the teacher in the class. “Students usurp[ed] the normative genres of the teacher in guiding and legitimating the ways in which their peers and even their teachers, have to participate in classroom academic tasks” (Candela, 2005, p. 325).

Co-authorship of normative genres entails the negotiation of power relations and social roles or identities. Candela (2005) argues that by engaging in this negotiation of power students also co-author institutional practices that define school norms: “Students contribute through their personal histories, cultures and personalities in the construction of everyday cultural practices in relation with the teacher and with the particular situations that the interaction demands” (Candela, 1999, as cited in Candela, 2005, p. 322).

**Consensus Construction**

A second major construct relevant to the present study is consensus construction, a notion explored in various ways across the literature. Mercer (1995), for example, posits that classroom talk is not different from mundane, everyday conversations in that speakers try to promote their own agendas and seek their own interests. He argues that nonetheless, in the case of classroom talk, teachers and students build their discursive interaction on a shared communicative history and thus work towards a shared future. Therefore, participants also try “to establish shared agendas and perspectives and pursue joint interests” (Mercer, 1995, p. 61).
One way in which classroom members work towards establishing shared agendas is through negotiation or what Candela (1995) has termed consensus construction. In her study of primary Mexican science classrooms, she found what she interpreted as a cultural inclination in the classroom discourse towards consensus construction, which seemed very natural in some particular teaching styles. Consensus construction, as conceived by Candela (1995) is seen as an effort from the teacher and the students not just to negotiate meaning, but also to construct a collective version of knowledge out of alternative individual versions.

In her studies of Mazahua (Native American) classrooms in Mexico, Paradise (1991, 1994) similarly found “a special orientation toward collective acceptance, rather than imposition, in the decision making processes, and an inclination towards the autonomous participation of children in their learning processes” (as cited in Candela, 1995, p. 470). Candela (1995) argues that a teacher’s tolerance of children’s autonomous participation as well as a genuine interest in seeking students’ opinions are important elements for the kind of consensus orientation that she found in her study of elementary sciences classrooms in Mexico. Furthermore, in her study teachers genuinely guided the construction of the collective version, and proposed their own versions as an alternative, instead of as the legitimate version that students should accept (Candela, 1995).

It is important to note that consensus is not an all-or-nothing proposition. As Candela (1995) states, the accepted constructed version can be viewed as the result of negotiation in which some participants are subordinated, while others repress their positions momentarily, argue their points later on, and end with a collective acceptance of classroom version, but one on which only part of the group is in complete agreement about its content. (p. 467)

Although in consensus only one part of the group might end up in complete agreement with the collective position, from a social constructivist perspective, such a caveat is better than simply having to accept a position that is imposed by the teacher.

**Agency**

In addition to co-authorship and consensus construction, a third major focus of the present study has been termed agency, which is defined as an individual’s capacity for initiating and completing activities on his or her own (Bruner, 1996; Campbell, 1994). The
capacity for carrying out activities entails the ‘know-how’ aspect which, in turn, implies the notion of judgment (i.e. whether the activity completed by the individual was successful or not) (Bruner, 1996). Bruner (1996) states that ‘judgment’ comes from outside and that it is based on definitions of success and failure that are culturally determined. Individuals may either experience a sense of autonomy and freedom when their actions are evaluated positively or a sense of incompetence when their actions are assessed negatively. Schools, as institutions whose primary job is to evaluate student performance, are the first place where individuals encounter that “outside criteria” (Bruner, 1996, p. 37). Bruner posits that agency (and self-esteem) play a major role in an individual’s development of identity and thus encourages educators to evaluate school practices in terms of whether or not they facilitate students’ development of agency. He also invites educators to reflect on what he considers a neglected role of schools:

If agency and esteem are central to the construction of concept of Self, then the ordinary practices of school need to be examined with a view to what contribution they make to these two crucial ingredients of personhood. In many democratic cultures we have become so preoccupied with the more formal criteria of “performance” and with the bureaucratic demands of education as an institution that we have neglected the personal side of education. (Bruner, 1996, pp. 38-39)

Along the same lines, Mayer (2012) defines agency as an individual’s freedom to believe and act as he or she chooses and believes that it is the job of educators to equip children so that they can exercise their freedom thoughtfully. Mayer (2012) believes that children should be taught to look for appropriate evidence and logical reasoning before they choose to accept or reject an argument. Furthermore, she believes that children should be taught that there exist many worldviews and that learning about other people’s worldviews is an important endeavor.

Mayer (2012) argues schools and educators have neglected the important work of training students to become agentive individuals who can grapple with intellectual challenges.

In this light, she urges educators to teach children about “important controversial ideas so that children can begin to learn how to negotiate intellectual conflict and diversity responsibly and also to reflect upon what different points of view might mean in terms of their personal commitment and identities” (Mayer, 2012, p. 168).
Furthermore, Mayer (2012) argues that educators should equip children with cultural tools that would engage them in public conversations and collaborative activities that they will be exposed to as adults. Only by doing this, she argues, will educators teach children how to ‘think for themselves’. Furthermore, she encourages educators to utilize discursive patterns where students are welcome to state ‘what they think and why’ openly (Mayer, 2012, p. 169). She believes that in addition to promoting agency, these spaces would promote enthusiasm for learning how to listen to other people’s worldviews.

The literature has documented successful cases from communities that have created the types of environments and facilitated the type of discursive patterns that Mayer (2012) describes (Brown, 1994, 1997; Engle & Conant, 2002; Palinscar & Brown, 1984). The program Fostering a Community of Learners (FLC), which was developed by psychologists Ann Brown and Joseph Campione and two middle school teachers in the early 1990’s, is one example. The program utilized an approach to teaching/learning science and academic literacy based on cognitive theory and developmental psychology. The participant and discursive patterns adopted in the program were non-traditional; for example, FLC made use of jigsaw groups and reciprocal teaching as well as cross-talk.7

Back in the 1990’s Jerome Bruner visited the FLC community as an observer and identified four principles, one of which was agency, underlying the program’s approach (Brown, 1997; Bruner, 1996).8 A decade later, Courtney Cazden, also an occasional observer, interviewed some students who had graduated from the program. Cazden (2008) argues that the program helped students develop a sense of agency and offers the students’ accounts as evidence of the individual development that the program promoted among the participants. For example, one of the participants reported sensing a novel “spark of intellectual hope and potential” (Cazden, 2008, p. 161). Another participant reported being aware of certain “freedoms” that were available to them such as the freedom to take different approaches to question topics and even freedom to move around the classroom. In addition, these freedoms gave the student the sense the teacher trusted the children. Cazden (2008) considers that the

7 Lemke (1982) as describes cross-talk as “dialogue between the students in which the teacher is not a constant intermediary” (as cited in Cazden, 1988, p. 57)
8 To learn more about FLC and its adopted principles, read Brown (1997).
development that the students experienced during their participation in FLC had an impact in their subsequent studies.

**Exploratory Talk**

The last relevant construct to the study is what Barnes (1992, 2008) has termed “exploratory talk.” He argues that learning is a social, collective activity⁹ that takes place when learners actively engage in the process of taking new ideas, experiences, and ways of thinking encountered in school and use them to reshape or accommodate (Piaget & Inhelder, 1969; cf. Barnes, 2008) their existing conceptions of the world. This process of constructing new ways of understanding is more readily accomplished through talk (Vygotsky, 1962; cf. Barnes, 2008). Exploratory talk is the type of talk that the students would engage in when they are trying to come to terms with the new knowledge they encounter in school. Barnes (2008) describes it as “hesitant and incomplete because it enables the speaker to try out ideas, to hear how they sound, to see what others make of them, to arrange information and ideas into different patterns…the speaker is more concerned with sorting out his or her thoughts (p. 5). He posits that this type of talk is an important tool for understanding new concepts. However, in order for exploratory talk to happen, students should feel free to speak (Barnes, 2008). In Barnes’ view, classrooms in which the traditional IRF sequence is used and where the teacher tightly controls who speaks and how do not represent a good environment for the promotion of exploratory talk.

Alexander (2008) reports that in classroom discourse that he and his colleagues recorded of English elementary classes during the 1990’s, conversational as well as dialogic interactions were almost non-existent. He describes they type of interaction he observed as follows:

Interaction tended to be brief rather than sustained, and teachers moved from one child to another in rapid succession in order to maximize participation, or from one question to another in the interest of maintaining pace, rather than developing lines of thinking. (pp. 99-100)

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⁹ He also acknowledges the individual dimension of learning; “each [student] must deal with new experiences that challenge existing schemes and pictures of the world, for only he or she has access to the particular preconceptions and misunderstandings which need to be reflected and modified (Barnes, 2008, pp. 9-10).
However, in the past two decades there has been a tremendous effort to change this (Alexander, 2008) so that there now exist several development projects in the United Kingdom that aim to implement strategies for the use of exploratory talk in classrooms (Alexander, 2003, 2004, 2005; Wegerif, 1996; Wegerif & Dawes, 1997; Wegerif & Mercer, 1997).

In the context of Mexican classroom discourse, some studies have reported that children engaged very little in exploratory talk (Rojas-Drummond, Fernández, & Vélez, 2000; Rojas-Drummond, Gómez, & Vélez, 2008). For instance, Rojas-Drummond et al. (2008) report on a cross-cultural investigation that aimed to prompt the use of exploratory talk in a Mexican elementary classroom. The researchers adapted methods and materials from researchers in the United Kingdom (Dawes, Mercer, & Wegerif, 2000; Mercer, Wegerif, & Dawes, 1999; Wegerif & Mercer, 1996). They found that the implementation of exploratory talk was possible and successful. Exploratory talk “produced a very positive effect in the subjects linguistic capacity for argumentation and in the improvement of reasoning and group and individual problem solving” (Rojas-Drummond et al., 2008, p. 335).

Mayer (2012) conceives the classroom as an interpretative community of people dedicated to working together to make sense of the world (cf. Wells, 2001). She offers a description of the role of the discourse community during exploratory talk. Exploratory talk also requires “commitment among all class members to endeavor to understand each other’s insights and contributions” (Mayer, 2012, p. 36). The relationship between personal knowing and collaborative knowledge can be strengthened, setting the stage for students’ lifelong engagement with cultural ideas, projects, and commitments (Mayer, 2012, p. 36). Mercer (1995) reminds us the ultimate goal of any educational discourse is “to get the students to develop new ways of using language to think and communicate—ways with words’ which will enable them to become active members of wider communities of educated discourse” (p. 80).

**The Sociocultural Approach**

The four constructs previously introduced are examined from a sociocultural approach. As stated earlier, this approach contextualizes language by the sociocultural milieu of the users (Ochs, 1988; Ochs & Schieffelin, 1984; Schieffelin & Ochs, 1986a).
Furthermore, it allows the careful characterization of a group based on repertoires of practice vis-à-vis individual traits, which helps prevent simplistic overgeneralizations of the social group being characterized. In addition to examining the discursive patterns in one Mexican primary classroom, the study aims to shed light on some of the cultural values, expectations, and behaviors underlying the organization of classroom talk and teacher-student interaction.

**LANGUAGE SOCIALIZATION**

Language socialization posits that sociocultural values and knowledge are transmitted from adults (or more experienced peers) to children through language-mediated activities and interactions they engage in on a daily basis (Cook, 1999). Language socialization, as initially articulated by Schieffelin and Ochs (1986a, 1986b), is concerned with analyzing the socialization of novices to use language and the socialization of novices through language. The former type is an explicit form of socialization that takes place when knowledgeable members of a social group directly teach social norms to novices. The latter, which Schiefflin and Ochs argue is more pervasive, is the one the present study is more concerned with. In their view, socialization through language is rather implicit and involves consideration of the role of sociocultural and linguistic meaning communicated through interaction. This type of socialization takes place when experts display expected ways of thinking and behaving (Wentworth, 1980) to novices through repeated, overt engagement in interactional sequences.

An important dimension of an individual’s socialization takes place in the school setting; the discourse used in the classroom represents a primary medium of socialization. Classroom talk and interaction influence students’ acquisition of sociocultural knowledge as well as cognitive knowledge (Cazden, 1985; Mehan, 1979; Michaels, 1981; Sinclair & Coulthard, 1975). Central to language socialization research is the proposition that students (or ‘novices’) are not passive recipients of socialization (He, 2003; Poole, 2008b; Schieffelin & Ochs, 1986a). Consequently, the language socialization process is considered to be bidirectional in that both the experts and the novice are active agents who can contribute and influence the outcomes of the process (Garret & Baquedano-López, 2002). Language socialization outcomes, in other words, do not consist mainly of appropriation of target forms or behaviors. Sometimes, the outcomes consist of the opposite, non-conformity and partial membership, among others (Duff, 2002).
The Goal of the Study

Almost all the studies surveyed in the previous review were conducted in Mexico City, Mexico State, or other states in south central and southeast Mexico. To my knowledge, there are not any ethnographies that document school life and classroom discourse in the northeast or northern statesregions of Mexico. Smith et al. (2003) address the possibility that schools from regions that have not been studied by researchers might present different types of literacy practices:

There are obviously many other sites that could be considered...the slow but defined trend towards school autonomy suggests that local literacy conceptions and practices in other regions may differ from the picture we have painted here. For this reason, we would like to see similar literacy research conducted in other Mexican communities. (p. 778)

In this light, the present study aims to investigate the classroom practices and interaction that take place in an elementary school in the border city of Mexicali, in the northern state of Baja California. Furthermore, it is hoped that in the future there will be more research that could inform classroom practices in both Mexico and the United States.

The study will examine the verbal interactions between a teacher and her students in a 6th grade classroom and will particularly look at the role of student initiations in the development of co-authorship and consensus construction. Also, it will look at the role of the teacher as facilitator of exploratory talk and as facilitator of students’ agency development.

Chapter Overview

In the remainder of this thesis, the chapters will proceed as follows. Chapter 2 will offer descriptions of the site, participants, and research methods. Chapters 3 to 6 will offer analyses of excerpts in terms of co-authorship and agency, consensus construction, and exploratory talk, respectively. Finally, Chapter 7 will present a summary of the analysis and a discussion of the implications of the study.
CHAPTER 2

DATA COLLECTION METHODOLOGY

This chapter will describe the methodology used to collect and analyze the data in this study. The setting from which the data were collected is described first. The participants, students in a 6th grade classroom, and their daily school routine are described secondly. Recording and transcription details are given along with a description of the textbook lesson realized by the participants. Finally, methodological perspectives on data collection and analysis will be discussed.

SCHOOL SETTING

The data collected for this study were taken from a double-shift public elementary school located in the U.S.-Mexico border city of Mexicali. Double-shift refers to a format of operation in which schools are open during two shifts, morning and afternoon for elementary schools. These schools serve two entirely different groups of students during the school day. Double-shift schools usually have separate administrations for the morning and the afternoon shifts which mean that each shift is an independent school. The purpose of double-shift schools is to serve more students without having to build new facilities.

At this particular school, the morning shift runs from 8:00 A.M. to 12:00 P.M., and the afternoon shift runs from 1:00 P.M. to 5:00 P.M. The morning shift has historically had a larger student body as well as more economic resources while the afternoon shift has historically had fewer students and less economic resources. These impressions are consistent with research on double shift schools (Cardenas, 2010). The data were taken from the 6th grade classroom in the afternoon shift. Approximately 120 students in grades first to sixth make up the entire school’s population. Most of the students who attend the school reside in the surrounding area.
The elementary school is located in a working-class neighborhood that has not yet been highly affected by the crime that predominates in the city as well as in many states of Mexico. The school is a very modest building with eight 20’x 20’ classrooms, a food stand with a few picnic tables, a playground, a yard, a set of restrooms, and the office. The school occupies an entire city block; however, half of the space consists of an empty lot. Unlike the majority of American public schools, most Mexican public schools do not have a gymnasium, cafeteria, or library. This school does not have a gymnasium or a cafeteria. However, the school yard, which has two basketball posts, functions as a basketball court, and the school’s large empty lot functions as a soccer field and as a track. During recess the children use these areas as well as the playground to play and socialize. Because there are not enough picnic tables to seat all the students, the children use these areas to eat their snacks during recess as well. The school has a small library equipped with about seven computers. However, access to these computers is restricted to students from the afternoon shift. Some of the classrooms are equipped with a computer station for the instructor’s use. The classrooms do not have a TV set or an overhead projector, however. Due to the severe heat of the region, each classroom is appropriately equipped with an AC system.

The two schools (shifts) that occupy the building share most of the facilities described above, classrooms, student restrooms, and playgrounds. Some of the physical spaces that the two schools do not share are the office, the food stands, and some storage units inside and outside the classrooms. As is common in Mexican double shifts schools, the schools share some personnel, both administrators and faculty. For example, at the time the study was conducted, the principal of the afternoon shift was a teacher in the morning shift. Also, the instructor who was observed for this study worked as a teacher in the morning shift.

**DATA COLLECTION**

Data collection involved a qualitative study characterized by multiple observations of a 6th grade classroom, which was selected for the study by the school principal. During the

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10 Schools are constant targets of theft in some areas of Mexicali. AC equipment, technology equipment, and copper wire are the main things stolen from schools. These thefts are a tremendous burden on school administrators, parents, and of course, students.
data collection period, the classroom was initially visited for two consecutive days for approximately three hours each day. This period included two lessons, math and history, which were both audio and video recorded. After that, the classroom was visited again for five consecutive days, for a total of approximately 15 hours. This last set of visits, while not recorded, was exclusively aimed at the observation of the participants in various school activities (inside and outside the classroom).

Although the database for this study includes six hours of recording, the analysis presented in subsequent chapters focuses on transcripts derived from three hours of the math lesson, and of transcripts of the lesson, which constitute the primary basis for analysis. In addition, data include field notes taken throughout the entire period of observations and during the formal and informal interviews with the teacher, charts and tables copied from the board and copies of the textbook pages used during the lesson.

**Participants**

The observed 6th grade class was made up of eight females and 14 males aged 11-12 years old. All the students were native speakers of Spanish with the exception of one student whose first language was Chinese. The teacher, Mrs. D was a Mexican middle-aged woman who had completed her education and training in Mexicali. At the time of the study, she had 26 years of experience and had been working for 10 years at the present elementary school.

During one of the structured interviews, Mrs. D indicated that former instructional techniques she learned in her training (and implemented) were teacher centered ones that dovetailed well with whole class settings, while recent teaching techniques she learned in her ongoing professional development training emphasized individual and group work. When asked about what else was different between former and newer strategies, she implied there was a change in the role of the teacher. Mrs. D indicated that she is not supposed “to give away the answer to the students;” instead, she should allow students “to figure out things on their own.” When asked how she felt about this technique, she answered that allowing students to find out things on their own definitely “slows down” the lesson because obviously students take their time. Mrs. D admitted that she was very used to stating answers or solutions directly, and that it required a lot of effort to “let students set the pace” of the lesson.
Mrs. D had a good relationship with her class. Also, most of the students had been together in school throughout their elementary years, so camaraderie was very well established among peers. The following classroom rules, which were established by the students themselves, were displayed in the classroom:

1. Asistir diario a clases (Attend class every day)
2. Cumplir con la tarea (Do the homework)
3. Portar uniforme completo (Wear the entire school uniform)
4. Respetarnos (Be respectful)
5. Mantener el aula limpia (Keep the classroom clean)
6. Trabajar en clase (Work in class)

**Noise and Freedom of Movement**

High levels of noise, which came from various sources, were observed in the classroom visited for this study. A very loud intermittent noise came from the classroom’s old AC system and made it difficult to listen to one another. Another source of noise was loud music. During the first day of the data collection period, there were dance rehearsals taking place at the school. For some unknown reason, the person in charge of the rehearsal (probably a teacher) placed a music player device, which had a very loud speaker, outside the 6th grade classroom while the class was in session. Although the rehearsal lasted about an hour, neither the teacher nor the students made a single remark about the music, and in fact, the AC system’s noise and the music seemed not to bother anyone in the classroom.

Freedom of movement was also noticeable, as students walked out of the classroom for particular reasons. For example, three students walked out of the classroom to get a 5 gallon water bottle for the classroom’s electric cold water dispenser. The dispenser had run out of water, so these students (volunteers) quickly stood up, grabbed the empty bottle and walked out of the classroom, returning with a filled water bottle. For readers not familiar with school life in Mexico, it would be helpful to know that school passes (e.g. office and bathroom passes) are not utilized in Mexico. If a student needs to walk out of the classroom, the student would just ask the teacher for permission. Interestingly, in the situation described here the students did not ask permission to go out and get the 5 gallon water bottle; they simply did it. On another occasion, during one of the initial activities of the lesson sequence,
some students were asked to go out and collect pebbles from the dirt to use as markers on a board game suggested in the textbook.

**Classroom and Daily Routine**

The daily routine of the school took place as follows. Every day, previously assigned students showed up at least 30 minutes before school began to clean the classroom, for ‘el aseo’. As mentioned in chapter 1, ‘el aseo’, is a fixed practice in primary and secondary schools. Students are expected to clean their classrooms before school begins. At the beginning of the school year, a schedule is made for this purpose. It is not unusual that parents show up to help their younger children with this task. As children grow older, they become more independent and complete the task by themselves. El aseo is always assigned to groups of students and never to individual students. At 1:00 P.M., the students lined up outside the classroom and waited for the teacher to greet them outside the classroom. From 1:00 P.M. to 3:00 P.M., the students worked on the content areas of Spanish, math, social sciences, natural sciences, etc. Student had recess from 3:00 P.M. to 3:30 P.M. From 3:30 P.M. to 5:00 P.M. the students had more lessons. Lastly, the students were dismissed at 5:00 P.M.

Note that children in Mexican double-shift public elementary schools spend a total of four hours at school and only 3.5 hours inside the classroom every day. This is very different from American schools and other European schools where children typically spend 6-7 hours at school, with 5 or more in the classroom. Also, unlike American schools, the times described below were more flexible in that after the bell rang; for example, teachers and students often lingered before they got back to work.

**RECORDING AND TRANSCRIPTION**

Four audio recorders and one video recorder were placed in the classroom to record each lesson and to capture spoken data, non-verbal interaction and movement. Certain episodes from the recorded spoken data were transcribed using a modified version of the Jefferson conventions (see Appendix.) The students and the teacher were given pseudonyms to preserve their anonymity.
THE TEXTBOOK AND THE ACTIVITIES SEQUENCE

The data for this paper is centered on a math textbook unit on multiples.\textsuperscript{11} A digital copy of the textbook is available online.\textsuperscript{12} The goal of the unit is that students learn to find the divisors of a given number. The following list shows the sequence of activities included in the textbook. The list also states the participant structure (Philips, 1983) through which the activities were to be realized.

- Game: La pulga y las trampas, *The flea and the traps*, p. 121 (small groups)
- (1) Exercises A, B, and C, pp. 121-122 (small groups)
- (2) Game: El numero venenoso, *The poisonos number*, p. 122 (whole-class) and Activity on, p. 123, top of the page (pair work)
- (3) Activity to be completed using calculators, p. 123 (pair work) and Activity on p. 124
- (4) Activity with table and questions, p. 125 (individual work)

On the first day of the lesson (first visit), the students worked on activities 1-2 and on the second day of the lesson (second visit) the students completed activities 3-4.

Most of the transcripts analyzed in this study took place during the realization of number (3) in the textbook sequence listed above, the activity on page 123. For this part of the unit the students worked in pairs to work on the problems (see Figure 1 for the pair work setup). After a few minutes of pair work, the teacher, Mrs. D., went over the questions through whole-class discussion.

METHODOLOGICAL APPROACH

This study follows a tradition of classroom discourse research which has been concerned with describing patterns of interaction among classroom members, especially teacher-student communication (e.g. Cazden, 1988; Mehan, 1979; Sinclair & Coulthard, 1975) and with investigating the sociocultural ideologies that motivate and influence the interaction (e.g. Cook, 1999; Ochs, 1988; Poole, 1994). As much with classroom discourse research, the present study will investigate a small number of participants and discursive

\textsuperscript{11} The math textbook is Hernandez Castro’s et al. (2011) *libro de text gratuito*, the free textbook distributed by the Secretariat of Public Education (Spanish acronym SEP)

\textsuperscript{12} To access textbook go to http://issuu.com/dgeb/docs/matematicas6?e=3503076/6305342
events to unveil phenomena that might not become apparent in large-scale studies that use rather macro-level approaches (Poole, 2008a).

Figure 1. Classroom pair work setup.
CHAPTER 3

CO-AUTHORSHIP

An explicit role of teachers is to organize and lead academic activities (and other social activities) that take place in the classroom. The teachers’ interventions that shape and direct routine classroom activities and student participation in them are identified as ‘normative genres’ by Candela (2005). Teachers are the legitimate authors of normative genres in the classroom setting; however, students do contest power. For example, in analyses of classroom discursive interactions, it has been observed that students sometimes usurp the teacher’s authoritative role as legitimizer of academic knowledge (Candela, 2005). This allows students to influence institutional practices in the classroom, making them co-authors of the normative genres. Candela (2005) argues that co-authorship allows classroom members to negotiate power relations, social roles and identities.

Co-authorship is possible within communities that share a sociocultural disposition to collective construction of knowledge and to “collective performance in order to reach instructional objectives” (Candela, 2005, p. 326). As indicated in Chapter 1, displays of co-authorship of institutional practices have been documented in Mexican primary classroom discourse research. Displays of co-authorship were similarly found in the data analyzed in the present study. This chapter will present the analysis of an interactional sequence that features co-authorship in terms of student usurpation of teacher’s legitimate role as legitimizer of academic knowledge.

CO-AUTHORING NORMATIVE GENRES THROUGH TALK

Teachers use their legitimate authority to promote institutional practices that “define legitimate knowledge, what learning is, and also the correct ways of, the proper moment for, and the people to be involved in knowledge construction” (Delamont, 1984; Stubbs, 1983; cf. Candela, 2005, p. 323). However, students are not passive recipients of socialization; on the contrary, students influence and restructure the development of institutional and social practices (Cook, 1999; Garret & Baquedano-López, 2002; He, 2003; Ochs, 1988; Ochs &
Schieffelin, 1984; Poole, 2008b; Schieffelin & Ochs, 1986a) by competing for leadership roles during verbal interactions (Diamond, 1996). In Excerpt 1, for example, Luis and Jovana, two students who were actively engaged throughout the target task, repeatedly give feedback to two classmates who offer incorrect answers. They give feedback to their classmates even though the teacher herself does not do so. The sequence indicates that Luis and Jovana, in some way, have usurped the teacher’s role as legitimizer of knowledge in the classroom.

Excerpt 1 took place after the Mrs. D (identified as T in the transcript) drew a table from the textbook\(^\text{13}\) on the whiteboard. The table featured a target number in the first column and numbers 1-12 in each row (see Figure 2). The students needed to color the numbers that were divisors of that target number. In the case of the sequence below, the number was 81. The sequence begins with the teacher’s initiation in line 1, where she implicitly asks the students what numbers (from 1-12) she should color.

<table>
<thead>
<tr>
<th>Number</th>
<th>Divisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>81</td>
<td>1 2 3 4 5 6 7 8 9 10 11 12</td>
</tr>
</tbody>
</table>

**Figure 2. Textbook activity.**

Excerpt 1

[1] T: 81?
[2] L: 1, el 9
   \(1, \text{ number 9}\)
   \(\text{number 3 too}\)
   \(\text{number 2 too, ¿right?}\)
   \(\text{no, not number 2 Kim}\)

\(^{13}\) See page 123 in the e-copy of the text available online at http://issuu.com/dgeb/docs/matematicas6?e=3503076/6305342
[6] L: 2 no  
   number 2 no

[7] K: cómo no?  
   how is it not?

   number 3

[9] S?: (XXX)

[10] T: 81 entre 3, a cuánto da:?  
     81 divided by 3, equals?:

     27 (.) but, not number 2

[12] S?: el 9 profe, el 9  
     number 9 teacher, number 9

[13] B: ((singing)) 9, 9, 9

[14] S?: (XXX)

[15] T: antes del 9 no hay ninguno?  
     before number 9, is there another number?

[16] S?: 4? 4?

[17] J: no 4 no  
     no number 4 no

[18] T: a ver, divide 81 entre 4  
     let’s see, divide 81 by four

[19] D: no da 20.250000  
     no, that’s 20.250000

[20] S?: el 2  
     number two?

[21] J: no el 2 tampoco  
     it’s not number 2 either

[22] T: ((81)) no tiene mitad (XXX)  
     ((number 81)) has no half (XXX)  
     ((The students discuss))
In turn 1, Mrs. D simply says 81, indicating that she wants the students to tell her what numbers (from 1-12) are divisors of 81. She does not nominate any specific students, and the students call out their answers spontaneously (turns 2-3). Luis and Jovana are the first ones to respond, and their answers, numbers 1, 3, and 9, are correct. However, Mrs. D does not provide any positive feedback. In turn 4, Kim suggests number 2 as a divisor of 81. Jovana and Luis immediately react by telling him, in turns 5 and 6 respectively, that his answer is not correct. Note that Mrs. D does not provide any feedback in this case either. Kim, in turn 7, replies to Luis and Jovana, demanding an explanation: “¿Cómo no?” (“How is it not?”)\(^{14}\)? However, neither the knowledgeable students nor the teacher give Kim an explanation. Instead, Jovana restates that number 3 is also a divisor of 81 (turn 8). In turn 10, Mrs. D asks the students to divide 81 by 3. Jovana provides the answer, which is 27, but also restates that number 2 is not a correct answer (turn 11). This is the third time that Kim’s response (from turn 4) is negatively evaluated by a peer. Note that again Mrs. D does not react to Jovana’s remark. However, this sequence shows that Luis, and especially Johanna, feel entitled to provide (negative) feedback to their peers. Interestingly, Mrs. D allows them to do so.

In turn 16, an unidentified student implicitly asks if the number 4 is a divisor of 81. Jovana quickly responds saying that 4 is not correct in turn 17. This time, unlike in the previous two cases, Mrs. D offers feedback by asking the student to divide 81 by 4 (turn 18). Jovana offers the answer to the division in the next turn (turn 19), but before she does it, she restates that number 4 is not a divisor of 81. This turn mirrors turn 11 in which Jovana offers an answer to the target question, but also makes a remark about the incorrectness of a peer’s answer. Note that in this short sequence (turns 15-18), Johanna uses direct (negative) feedback twice while Mrs. D only offers feedback once (turn 17). Also, note that Mrs. D’s feedback differs greatly from Jovana’s. While Jovana is very blunt, Mrs. is more indirect. In fact, Mrs. D does not even use negative feedback at all. It was observed during the lessons that she usually reacted to incorrect answers by suggesting students try a mathematical operation (e.g. turns 10 and 18). The operation was meant to help the students realize that the answers they were providing were not appropriate. If one were to place Mrs. D’s and

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\(^{14}\) In this particular case ‘¿Cómo no?’ (‘How is it not?’) is not Standard Spanish. Kim’s is a non-native speaker of Spanish. He probably meant to ask ‘¿Por qué no?’ (‘Why not?’).
Jovana’s evaluations in an IRE/F framework (e.g. Cazden, 1988; Mehan, 1979), it would looks as follows (Excerpt 1, turns 15-18)

I [15] T: antes del 9 no hay ninguno? [before number 9, is there another number?]
R [16] S?: 4? 4?
((E [17] J: no, 4 no
E/( I) [18] T: a ver, divide 81 entre 4 [let’s see, divide 81 by 4]

Note that turns 15-17 fit the traditional IRE/F sequence perfectly. Mrs. D poses a question in turn 15, a student offers an answer in turn 16, and Jovana gives an evaluation of that response in turn 17. Johanna’s evaluative turn is ‘usurped,’ however. In turn 18, Mrs. D offers an evaluation move that is very different from Jovana’s. Mrs. D’s third turn (18) does not consist of a negative evaluation (e.g., “no”); rather, it consists of corrective feedback, specifically it asks the student to do a multiplication that will help him/her learn whether number 4 is a divisor of number 81 or not. In this particular case, Mrs. D’s feedback in the third turn implicitly entails an initiation because it requires a reply from that student. In contrast, Jovana’s evaluation does not invite the student to do anything; the function of her ‘usurped’ third turn is merely to reject the student’s proposition in turn 15.

Let us consider the last turns in Excerpt 1. An unidentified student asks in turn 20 if number 2 is a divisor of 81. This student clearly did not realize that number 2 was discarded earlier by Luis and Jovana (see turns, 5, 6, and 11). In turn 21, Jovana tells the student that number 2 is not a divisor of 81 either. Note that again Jovana is the first one to provide feedback. Mrs. D also offers feedback to the student by telling him/her that number 81 does not have a half (turn 22). Note that this time she offers a direct answer, instead of posing a question. But this explanation of why number 2 cannot be a divisor of 81 builds on Jovana’s previous remark (in turn 21) that number 2 is not a possible a divisor of 81.

It is possible that in the interaction captured in Excerpt 1, Jovana in particular, may seem a very competitive student. However, she can also be seen as having leadership traits because, in fact, she played important leadership roles in the school community. For example, at the time of the study, she was the sergeant of the school’s flag escort. Her leadership traits are reflected in her discourse and interaction with others during the collective construction of knowledge that takes place in the classroom: “Students contribute through their personal histories, cultures and personalities in the construction of everyday
cultural practices in relation with the teacher and with the particular situations that the interaction demands” (Candela, 1999, as cited in Candela, 2005, p. 322). It is possible that Jovana’s intention was to complete the target activity effectively. Throughout the interactional sequence both Luis, and especially Jovana, present themselves as legitimizers of knowledge (these are usurped roles, according to Candela, [2005]). The fact that the students’ feedback differs from the teacher’s demonstrates that these two students are using their own individual preferences or styles for evaluating classroom members’ contributions and knowledge.

Although it may be difficult to claim that the teacher’s acceptance in this case indicates that she does not consider herself the only knowledge possessor and legitimizer of knowledge in the classroom, it is possible to argue that Mrs. D may consider these two students very competent. The participation of Jovana and Luis shows that they are highly involved in the activity as well as motivated to complete the task at hand correctly. Moreover, through these interactions, they are definitely developing their identities as knowledgeable, competent classroom members who have a certain degree of leadership and authority to validate the answers of their peers.

Candela (2005) posits that co-authorship is possible “only when teachers share with students a cultural attitude of interest in the performance of academic tasks, asking them for their full participation in classrooms activities” (p. 333). In the case of the observed classroom community, it is likely that Mrs. D accepted the interventions of Luis and Jovana in the target task as a part of that “full participation” that teachers value, “construct, and motivate” in some Mexican classrooms (Mercado, 2002).

**SUMMARY**

The analyzed sequence in Excerpt 2 mirrors in some ways the co-authorship displays identified and analyzed in Candela (2005). The sequence analyzed in this chapter offers evidence that co-authorship of normative genres may be characteristic of some Mexican elementary classrooms. Although teachers are the legitimate authors of normative genres and institutional practices, students can influence these genres through interaction and thus they become co-authors. The analyzed sequence illustrates that students sometimes can usurp the teacher’s authoritative role as legitimizer of academic knowledge. In the case of the observed
classroom, the students were highly involved in the instructional activity and the teacher was flexible enough to accept their interventions and evaluations so that it became possible for these students to position themselves as co-legitimizers of knowledge in the target activity. By allowing these students to share this authoritative role, the teacher facilitated the development of their identities as competent, knowledgeable members of the group.
CHAPTER 4

CONSENSUS CONSTRUCTION

Consensus construction is an attempt from the classroom members to construct a collective version of knowledge out of available alternative versions (Candela, 1995). In her research on Mexican primary science classrooms, Candela found what she considered to be a cultural orientation for collective meaning construction. “In Mexico, we have found that teachers and students show a special commitment to collective performance in order to achieve educational goals, especially those related to knowledge construction” (Candela, 2005, p. 326).

Candela (1995) posits that teachers play a very important role in consensus construction development. In her view, teachers must be genuinely interested in learning their students’ versions of knowledge, and they must consider them seriously. She also suggests that the teachers who facilitated consensus construction in her study probably conceived their versions of knowledge as alternative versions and not as the absolute, legitimate versions that ought to be accepted by the students. Students too play a major role in consensus construction development. In classrooms where a tendency to consensus constructions was found, students exhibited what Paradise (1994) identified as an inclination towards autonomous participation in their learning processes (cf. Candela, 1995). The data analyzed in the study reflect instances of the kind of consensus construction found in Candela (1995). This chapter will present the analyses of an interactional sequence in which the teacher and the students engage in negotiation of meaning and finally reach consensus on what is to become the legitimate version of knowledge.

BUILDING CONSENSUS THROUGH INTERACTION

Individuals in general try to promote their personal agendas during talk and this is specifically true in mundane conversation, but this also applies to other settings such as the classroom (Mercer, 1995). Yet, in the case of classroom discourse, individuals also pursue common interests and would work towards reaching common goals (Mercer, 1995).
Consensus construction is a cultural tendency that shows that the members of a group are engaged in a shared agenda. Excerpt 2 depicts how the members of the classroom community work toward reaching a common goal, which is to construct a collective version of knowledge. The teacher, Mrs. D, initiates the sequence by posing a question in turn 1. Then we see the students engaged in attempting to provide the correct answer for the question. Mrs. D invites the students to consider a particular student’s proposition in turn 16. The proposition is carefully considered by the whole class, and then it is established as the correct, collective version of knowledge.

The interaction in Excerpt 2 took place as the class worked through Activity 3 of the textbook lesson sequence. For this activity the students needed to predict how many times they needed to press number 3 on the calculator to arrive at a given number, 42 in this case. The students all had calculators with them during the activity, while Mrs. D (T in the transcript) was standing in front of the class and was reading the questions from the textbook.

Excerpt 2

[1] T: cuántas veces para que aparezca el 42?
   ((reads)) how many times for number 42 to appear ((on the calculator))?
[3] L: =13=
[7] L: 13=
[8] C: =13
[9] S?: =14=
[10] S?: =13
[12] S?: =14

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15See page 123 in the e-copy of the text available online at http://issuu.com/dgeb/docs/matematicas6?e=3503076/6305342
Let’s see, do the test 13 *3 y 13*14 (.) and 3*14 sorry

[14] D: profe
[teacher

((Students talk arbitrarily))

[15] D: Profe si 7 y 7 son 21 más otros 7serían (XX)

((to the teacher)) Teacher if 7 and 7 are 21 plus is (XX)

[16] T: Niños (. ) a ver Dora, dilo fuerte

((looking at the class)) Children (. ) ((looking at Dora)) *Dora, say it aloud

[17] D: ° que 21 son 7 =
° that if 21 is 7 =

[18] T: = veces =
= times =

[19] D: = veces si lo escribimos otras 7 va a ser van a ser 21 más y van a ser 42 y 7 más 7 son 14°.
= times if we write it 7 times more the result is 21 more and that’s 42 and 7 plus 7 is 14°

((6 sec.))

[20] T: ¿Conformes o no? ¿Le creen o no?

((to the class)) Are you satisfied or are you not? Do you believe what she said

or not?

[21] SS: sí:
yes:

[22] D: no

((Joking)) no

((Students laugh))

In turn 1, Mrs. D asks (reads from the textbook) how many times number 3 has to be pressed on the calculator to get number 42. Some students answer 13 (turns 2-4), and Mrs. D reacts by casually asking, “¿13?” (turn 5). Then students answer both 13 and 14 (turns 6-12), providing two competing answers. After listening to the divided opinions of the class for a
while, Mrs. D intervenes in turn 13, by asking the students to perform two multiplications to find out what the correct answer is (13*3 and 13*4). As discussed in Chapter 3, Mrs. D exhibited a tendency to provide evaluative (third) turns that were, in fact, initiations that consisted of a mathematical problem that students could make to revise their answer. While Mrs. D is still asking the students to perform the two multiplications Dora calls out to the teacher (turn 14). In turn 15, Dora tells the teacher why she thinks number 14 is the correct answer. Her entire explanation is not audible in the tape, unfortunately.

In turn 16, Mrs. D explicitly requires the students’ attention by saying “niños” (“children”) and then asks Dora to repeat what she just told her. In turns 17 and 19, Dora openly shares with the class the strategy (or the rationale) that she used to figure out the correct answer. In Dora’s contribution, the teacher sees the means to begin reaching agreement on the correct answer. Note that in turn 18, Mrs. D even helps out Dora by hinting with the word ‘veces’ times. Mrs. D’s invitation to Dora to state her reasoning aloud, in turn 16, reflects her desire for the class to consider whether Dora’s reasoning leads to the correct, collective answer. Note that after Dora has stated her version, Mrs. D pauses for six seconds and then looks at the students. It seems that she provides this time for the students to grasp what Dora has said. Then, in turn 16, she explicitly asks the class to validate Dora’s version by asking: “¿Conformes o no? ¿Le creen o no?” (“Are you satisfied? Do you believe what she said?”) The students show agreement in (turn 21) while Dora jokingly says that she does not believe in what she just said (turn 22).

The Role of the Teacher in Promoting Consensus Construction

Candela (1995, p. 467) notes that teachers use several discursive moves or strategies to promote consensus construction:

1. Looking for the expression of everyone’s opinions
2. Claiming the possibility of expressing disagreements
3. Reorienting the discourse in order to center the topic and achieve consensus construction
4. Utilizing preference structures to guide responses toward a common version

In Excerpt 2, we can see how Mrs. D uses some of the mechanisms listed in Candela (1995) to guide consensus construction. For example, the practice of looking for everyone’s opinion
(Candela, 1995) is realized in this sequence by means of refraining from nominating a particular student to reply. Mrs. D uses an invitation to reply, one of the three turn allocation procedures (Mehan, 1979) that teachers most often use to select the next speaker,\textsuperscript{16} when she asks the question in turn 1. Invitations to reply signal that the floor is open and any student can speak without raising his/her hand or without being previously nominated by the teacher. The fact that several students reply in turns 2-12 shows that students felt free to speak. Mrs. D also reorients the discourse to help students move from simply proposing either number 13 or 14 as possible answers, to having them actually prove their propositions. Thus, in turn 13, she asks students to perform two multiplications (13*3 and 14*3) as a way of finding out what the correct answer is. Mrs. D uses this strategy only after she has heard students repeatedly say that 14 and 13 are the answers. Note also that she does not end the debate, for example, by telling students the correct answer. In fact, early in turn 5, she simply wonders why students are saying that 13 is the correct answer, but does not tell them that number 13 is incorrect. She pretends that both 13 and 14 could be correct answers until it is demonstrated to be otherwise. Another strategy that Mrs. D utilizes to guide consensus construction is reflected in her nomination of Dora, (turn 16). She asks this student to share her rationale aloud with the rest of the class. In this turn she also directly asks the class to listen to what Dora has to say by calling ‘niños’ (children). After Dora says her strategy, Mrs. D pauses for relatively a long time (6 sec.) thus allowing students to carefully think about it. Furthermore, in turn 20, she directly asks two yes/no questions to the class that aim to finally reach consensus, ¿Conformes o no? ¿Le creen o no? (Are you satisfied? Do you believe what she said or not?).

In sum, Mrs. D has taken different steps to promote consensus construction: (1) she allowed everyone to answer the target question, (2) she has listened to different opinions, numbers 13 and 14, (3) she has suggested operations that would help the students find out for themselves the correct answer, (4) she has nominated a student to speak up and share her

\textsuperscript{16} The other two turn allocation procedures are individual nominations and invitation to bid. In individual nominations teachers indicate the task that is to be completed (or pose a question) and also name the student who is selected to speak in the next turn. In invitations to bid the teacher only states the task (or poses a question), and students can volunteer to respond. The teacher selects the next speaker from among the volunteers.
version, and (5) she has invited the class to collectively consider whether this student’s answer is the correct answer for the target question. The actions enumerated here depict the amount and kind of interactional work that teachers do to promote and guide consensus construction effectively. Yet, as mentioned at the beginning of the chapter, students also play a major role in the task. Consensus construction would not be possible without their participation, of course.

**The Role of Dora in Consensus Construction**

It was indicated earlier that in settings where a tendency to consensus construction in discursive interaction was found, students exhibited certain autonomy in their learning processes (Paradise, 1994). In this light, let us consider the participation of Dora in the interactional sequence and her special role in consensus construction development.

After Mrs. D asks the students to perform two multiplications to find out what the correct answer is, in turn 13, Dora takes the floor explain to Mrs. D why she thinks the answer is number 14. Interestingly, Dora’s utterance mirrors an answer to a metaprocess elicitation or question, which was actually never asked. Dora’s way of dealing with the Mrs. D’s elicitation is autonomous in the sense that she does not do the multiplications that the teacher suggests; instead, she uses her own method to find out what the correct answer is. Mrs. D validates that method; Dora’s rationale is considered legitimate and her answer, number 14, is nominated as the collective (correct) answer.

**SUMMARY**

The discursive interaction analyzed in this chapter is consistent with Candela’s (1995) and Paradise’s (1994) findings. There appears to be, in certain public elementary classrooms in Mexico, a cultural preference to engage in reaching consensus and for a certain student autonomy. Although teachers have a very important role in guiding knowledge construction

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17 Mehan (1979) identified four types of teacher’s elicitations (or questions): choice, product, process and metaprocess elicitations. Choice and product elicitations are usually yes/no questions that seek the responder’s agreement or seek factual information. In contrast, process elicitations seek the responder’s interpretations while metaprocess elicitations seek his/her reasoning or justification for doing something in a certain way. Both process and metaprocess elicitations require from the responders ‘deeper forms of comprehension’ (Nathan & Kim, 2009, p. 96)
and decision making processes, student participation is clearly necessary for consensus construction, for it is their versions of knowledge the classroom community evaluates and selects from. The analyzed sequence depicts how the observed teacher realized particular moves to guide consensus. It also depicts the type of participation that is required from students to develop consensus construction, specifically, the level of commitment to their own learning processes.
CHAPTER 5

AGENCY

Agency is defined by Bruner (1996) as an individual’s capacity for initiating and carrying on actions (autonomously). Agency is similarly defined by Mayer (2012) as an individual’s freedom to act and believe as he or she chooses. Both researchers have urged educators to foster agency in their students. Bruner (1996) argues that agency plays a role in identity development and Mayer (2012) argues that agency will equip students with necessary tools to participate responsibly in a democratic society. Furthermore, Mayer (2012) posits that it is important to teach students how to ‘think for themselves’, and also, how to acknowledge other people’s worldviews. This, according to Mayer (2012), is an important skill that students need to develop in order to learn how to contend with “intellectual challenges” in a responsible manner (p. 167).

Teachers can foster agency in the classroom by utilizing discursive patterns that allow students to openly vocalize their viewpoints (Mayer, 2012). For example, Cazden (2008) reports that a middle school program, which was successfully implemented in the early 1990’s, was able to promote a sense of agency in the students by using certain non-traditional discursive patterns such as cross-talk, which is identified as talk amongst students that is not tightly mediated by the teacher (Lemke, 1982). In an interview with Cazden, one of the participants highlighted as a remarkable part of his experience in the program, the freedom he was given to take his own approach to topics and questions posed by the teacher. In the data analyzed in the present study, a number of student displays of agency were identified. This chapter will analyze a discursive sequence in which a student openly states his own version (which was different from the legitimate version) but nevertheless acknowledged as appropriate by teacher). Thus the sequence can be seen as contributing to the development of that student’s identity as a competent classroom member.
STUDENT AGENCY ESTABLISHED THROUGH TALK

In Mayer’s (2012) terms, an important aspect of agency is freedom; students should have freedom in order to express their viewpoints openly. The following interactional sequence demonstrates that freedom to speak was an ongoing characteristic of the classroom. The students are in an environment in which they may feel safe to make contributions as the occasion arises, even when these contributions or interventions may contradict the teacher’s (official) version. For example, two students, Beto and Luis, intervene to state that the method they recall using the previous day is different from the method the teacher recalls. Interestingly enough, the teacher, Mrs. D, permits the students’ interventions (which may appear to some readers to be interruptions) and accepts their version.

The spoken data in Excerpt 3 took place on the second day of my visit to the classroom when the students were working on Activity 3 of the textbook lesson sequence. Mrs. D (T in the transcript) had just arrived to the classroom and was introducing the activity while she was standing in front of the class.

Excerpt 3


((page number)) 123.

In pairs. We’re going to work doing the same thing that we did yesterday on the calculator, OK?... Do you remember? Yesterday we pressed 3+3 and then we pressed

equals equals equals equals = ((3+3= = = = =))

[2] B: =Profe (X) era 3+ igual (X)=

=Profe (X) it was 3+ equals (X)=

[3] L: = Si yo le ponía 3+ igual igual igual igual

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18See page 123 in the e-copy of the text available online at http://issuu.com/dgeb/docs/matematicas6?e=3503076/6305342
=Yeah I pressed 3+ equals equals equals equals

[4] T: Por eso 3+3 igual igual igual igual
That’s right 3+3 equals equals equals equals

[5] L: No pero era nomas (X) 3 igual igual igual igual y ya empezaron a salir todos=
No but it was just (X) 3 equals equals equals equals and then all the numbers came
out=


[7] L: nada más=
just like that=

[8] T: Puede ser otro procedimiento pero ahí dice que tenemos que aplastar 3+3 y
luego nos hace unas preguntas (….) ¿Sale? en parejas
You can use a different procedure but here ((in the textbook)) says we have
to do 3+3
and then it asks us some questions (…) all right? In pairs.

In turn 1, Mrs. D uses a rhetorical yes/no question to ask the students if they remember how
the class had done certain operations the previous day. Note that she is not requesting any
answers. Nonetheless, in turn 2, Beto intervenes to tell her that what she recalls is not
accurate (They did not press 3+3==== on the calculator). In turn 3, Luis supports Beto’s
version by stating the procedure he did (3+====). However, Mrs. D does not realize that the
procedure that Beto and then Luis are recalling is different from hers, and she answers, “Por
eso…” (“That’s right…”) in turn 4. Then Luis notices that Mrs. D misunderstood him and
repeats it, this time with a more developed explanation: “No pero era (X) 3 igual igual igual
igual y ya empazaron a salir todos los numerous” (“no but it was (X) 3 equals equals equals
equals and then all the numbers came out”) in turn 5. This turn shows that Luis is
determined to get his point across and that he is not afraid of disputing Mrs. D’s version of
the method used the previous day. Finally, in turn 6, Mrs. D shows her understanding by
saying, “Ah ok.” She then in turn 8 acknowledges that Luis’ (and Beto’s) version is right in
the sense that other procedures can also be used to do the activity: “Puede ser otro
procedimiento…” (“You can use a different procedure…”). Her statement in this turn
indicates that she does not consider her procedure to be the only legitimate method.
The student interaction described in Excerpt X depicts a rather symmetrical teacher-student relationship. Beto, but more particularly Luis, negotiates his role as a knowledgeable member of the social group who has authority to state that he recalls using a different, but also correct, procedure. In turn 8, Mrs. D ends the sequence by indicating that the method to be used is the textbook’s method: “pero ahí dice que tenemos que aplastar 3+3” (“but here [in the textbook] says we have to do 3+3”). Interestingly enough, she uses some hedging devices in this turn. She uses the plural form ‘we’ to include herself as a someone who is also subject to the textbook, and she also uses the word ‘sale’ to indicate her invitation to agreement. The English translation that I provide for the word ‘sale’, (all right) does not fully reflect the connotation of mutual agreement that the Spanish word entails. Speakers usually use ‘sale’ after they have discussed an issue and the interlocutor who utters the words has a sense that other person has had the chance to understand the matter fully and thus is ready to agree. ‘Sale’ is an invitation to proceed to do something that has been mutually agreed on. Therefore, in this case Mrs. D is not harshly imposing the textbooks’ procedure on the students, instead, she is inviting Luis (and the entire class) to proceed and do the activity with her, following the textbook’s method.

Mrs. D is teaching students how to think for themselves by allowing them to intervene at any given point without asking for permission (Beto and Luis do not raise their hands to ask for permission to speak) and by welcoming different opinions (she patiently listens to all the students’ interventions in turns 2, 3, 5 and 7. Moreover, by accepting that Luis’ version is also appropriate in turn 8, she is modeling what Mayer (2012) considers very important to promote in classroom: acknowledgement of other people’s worldviews.

It is important to note that when Mrs. D states that other methods are also possible in turn 8, she did not take a calculator to confirm that the procedure that Beto and Luis proposed was accurate. She simply assumed that what they said (i.e. the method they used) was accurate too. This shows that Mrs. D may trust the students. By acknowledging these students’ contributions, Mrs. D allows them to present themselves as competent classroom members.
AGENCY AND THE USURPATION OF NORMATIVE GENRES

In addition to the analysis of Excerpt 3 just presented, the captured student interventions can also be analyzed in light of what Candela (2005) has identified as a usurpation of the teacher’s normative genres. In turns 2, 3 and 5, Beto and Luis in some way interrupt Mrs. D to correct her. According to these students, the procedure that the teacher recalls doing the previous day is not accurate. Interestingly enough, they choose to publically ‘interrupt’ her and explain to her the procedure they recall doing (their version) instead of ignoring what she says or simply going with it. However, interrupting and explaining (or more precisely correcting) are practices that the teacher, as the institutional authority, is typically, and often solely, entitled to do. Yet, here we see the students appropriating that teacher’s capacity to ‘interrupt’ and ‘correct’. These displays echo in some way Candela’s (2005) findings. In her study of Mexican primary classrooms, she reports that students usurped specific teacher’s normative genres: for example, some students gave directions and suggestions to the teacher during a science experiment that was being conducted by the teacher himself. From a language socialization perspective, student usurpation of normative genres can be considered part of the many possible outcomes of socialization in that the novices are not simply reproducing certain norms here; instead, they are reshaping them (Duff, 2002).

SUMMARY

“By creating providing for open discursive spaces, where children are invited to articulate what they believe and why, teachers give children the thrill of coming to know their own minds. These exciting and pleasurable achievements become associated, in turn, with the demanding project of learning how to listen to others who think in unfamiliar ways or hold different beliefs about the world” (Mayer, 2012, p. 169). The teacher, in her own way, is modeling and promoting the acknowledgement of other people’s worldviews in the classroom. Beto, and particularly Luis, claimed the opportunity to speak up and negotiated with their teacher in a very effective manner. They were able to establish that the method the teacher recalled (the textbook’s method) was not what they had used, but nonetheless what they used worked just as well. This negotiation was possible in part because the teacher was open to their interventions, listened patiently to what he had to say, and also accepted his
observations. The interaction demonstrates that these students were engaged in the previous day’s activities and were also attentive of the activity the teacher was introducing at the present moment.
CHAPTER 6

EXPLORATORY TALK

Exploratory talk is the type of talk learners engage in when they are purposefully ‘trying out’ new ideas presented to them in the classroom (Barnes, 2008). Exploratory talk is, by nature, full of “hesitations, rephrasings, and false starts; expressions of tentativeness; and a fairly low level of explicitness” (Barnes, 1992, p. 113). Barnes (2008) states that exploratory talk does not represent new information the students are exposed to; instead, it is the means by which the learner reshapes his or her existing worldviews. Learners work on understanding new ideas by “manipulating what is already available to them from various sources, exploring its possibilities, and seeing what can and cannot be done with it” (Barnes, 2008, p. 9).

Barnes contrasts exploratory talk with ‘final draft talk’ (also referred to as ‘presentational talk’), which is described as a rather polished talk driven by assessment and performance purposes and mostly prompted by the teachers. Barnes (2008) argues that although both types of talk play a role in the learning process, only exploratory allows learners to work on understanding new ideas in the earlier stages of the learning process (presentational talk is more suited at later stages of the learning process).

As indicated in Chapter 1, it has been documented in the research of Mexican classroom discourse that students engage very little in exploratory talk (Rojas-Drummond et al., 2000). Recently, however, there have been successful joint efforts from researchers and educators in the United Kingdom and in Mexico to promote exploratory talk in Mexican primary classrooms (Rojas-Drummond et al., 2008; Wegerif, Perez Linares, Rojas-Drummond, Mercer, & Velez, 2005). It does not seem surprising, then, that the data analyzed in the study reflect instances of the kind of exploratory talk described and recommended by Barnes (1992, 2008). It is important to point out, however, that the teacher, Mrs. D, and students in the study did not receive any explicit training on exploratory talk of the kind mentioned in the reviewed literature. In this light, this chapter will offer analyses of
interactional sequences in which several students engage in exploratory talk, a practice fostered by the classroom community.

**Engaging in Exploring Talk**

As mentioned in Chapter 1, an appropriate environment is needed in order for students to engage in exploratory talk: “Learners are unlikely to embark on it unless they feel relatively at ease, free from danger of being aggressively contradicted or made fun of” (Barnes, 2008, p. 6). The teacher and the classroom members, as a community, contribute to establish a safe environment for learners to share their thought processes as they unfold. The teacher does this by being willing to have less control over who gets to speak in the classroom and how. It has been pointed out in the literature that certain discursive organizations are better than others for exploratory talk; for example, “dialogic interactions enable some pupils to ‘talk themselves into understanding’ whereas heavily controlled interactions enforce a passive role (Solomon & Black, 2008, p. 74; quotation marks included in the original). Moreover, the teacher can help build an appropriate environment for exploratory talk by welcoming students’ responses that are not yet final-draft like. The classroom community as a whole, teacher and learners, fosters exploratory talk by engaging in collaborative knowledge, which includes student-teacher and peer-peer knowledge transmission (as opposite to the exclusive, unilateral teacher-student type of knowledge transmission).

An appropriate environment for exploratory talk was observed in the classroom visited for this study. In the excerpts that will be analyzed in this chapter, students engage freely in what seems to be displays of exploratory talk. The characteristics of the students’ utterances match some of the characteristics of exploratory talk described by Barnes (1992, 2008). The data also reflect that the classroom community has a certain disposition towards collaborative knowledge because they expand on their peers’ contributions and legitimize them.

The spoken data in Excerpt 4 is from the second day of my visit. Mrs. D (T in the transcript) was standing in front of the class and was reading questions from the textbook.
The class was working specifically on Activity 3 of the textbook lesson sequence. Item number six in the Activity 3 was the target question in the following excerpts: *Busquen una estrategia para saber si aparecería el número 2136 y escríbanla a continuación.* (Find a strategy to predict whether the number 2136 will [eventually] appear [on the calculator if they keep pressing the equals key after 3+3]). The turns take place after Mrs. D had read the question from the textbook.

Excerpt 4

[1] T: 
*Busquen una estrategia para saber si aparecerá el número 2136 y escríbanla a continuación*  
((reads)) *Figure out a strategy to find out whether ((Luis raises his hand)) number 2136 will appear ((on the calculator)) and write it in the next line=*

[2] L:  
equals Divide 3 by Two-thousand=:

[3] C:  
2136=

[4] L:  
=No (.) divide 2136 entre tres (.) después el cociente lo multiplico por 3 y ya está  
=No (.) divide (.) no divide 2136 by three (%) and then multiply the quotient by 3  
and that's it

[5] T:  
alguien más?  
((to the class)) *someone else?*  
((Students speak arbitrarily))

Mrs. D initiates the sequence in turn 1 by asking the students to look for a strategy to predict whether or not the number 2136 will appear on the calculator. Note that while she is still reading the question from the textbook, Luis raises his hand to bid for a turn. Whether or not he has a strategy ready when he volunteers is highly debatable due to the fact that he hesitates when he is talking. Hesitations are a characteristic of exploratory talk. In turn 2, Luis begins explaining his strategy but pauses twice and does not even complete a whole

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19 See page 123 in the e-copy of the text available online at http://issuu.com/dgeb/docs/matematicas6?e=3503076/6305342
phrase. Specifically, he does not completely say the number 2136: “divide 3 entre dos mil” (“divide 3 by two-thousand”). A peer, Camila, tries to help him out by saying the number 2136 in turn 3. Luis, however, is determined to provide his strategy and in turn 4 tries again, but his utterance is still not quite polished; he repeats certain phrases and pauses a few times before he can state the complete strategy: “no (. ) dividir (. ) no dividir 2136 entre tres (. ) después el cociente lo multiplico por 3 y ya está” (“no, divide, no divide 2136 by three, and then multiply the quotient by three and that’s it”). He uses the word ‘no’, which has nothing to do with the strategy itself, twice. It seems like he says the word ‘no’ to himself; however, Luis is speaking publically and not privately in this turn. The use of ‘no’ in this sense is also evidence that Luis is engaged in exploratory talk. Mrs. D, as usual, does not provide an evaluation of Luis’ response. Instead, she invites other students to share their strategies in turn 5. After that, some students discuss among themselves, but none of them offers a different strategy.

The fact that Luis raises his hand to bid for a turn while the teacher is still reading the target question indicates that he is responding hastily. It is possible that Luis was still ‘trying out’ his strategy while he was wording it for the first time and the strategy does not sound final-draft like. Interestingly, Luis seems comfortable sharing his thought process publically with the whole class. It also seems as though nobody minds that Luis does not quite have his strategy fully worded when he volunteered to share it. Barnes (1992) observed that, in his research, exploratory talk occurred in small group discussion settings, which represent a safe, intimate environment for sharing non-final draft ideas. Nonetheless, in this example, the setting is whole class and still this student uses it, suggesting that the classroom community is fostering exploratory talk. Note that Mrs. D did not push Luis to speak in haste; he volunteered. Mrs. D does not even intervene to help; it is a peer, Camila, who intervenes. Unlike this peer, Mrs. D lets Luis figure out how to word the strategy on his own. Moreover, Mrs. D seems to legitimize the knowledge conveyed through exploratory talk. Consider the following excerpt in which Mrs. D designates Luis’ strategy as the collective strategy.

Since nobody else in the classroom (not even Mrs. D) offered another strategy to predict if the number 2136 will eventually appear on the calculator if one keeps pressing the equals key after the addition of 3+3, Luis’ strategy becomes the collective answer to the target question. After the spoken data in Excerpt 4 took place, Mrs. D, with the help of Luis
and other students, restated the suggested strategy. Excerpt 5 captures the discursive interaction through which Mrs. D modifies the strategy slightly and ultimately legitimizes it.

Excerpt 5


((nods and looks at the class then walks)) Then a strategy is to divide 2136 by?

[12] C: \( =3 \)

[13] T: \( =3 \) (. ) y el cociente?

((looking at Camila)) and the quotient?

[14] SS: (XX)

((T looks at the class))

[15] L: (XXX)

[16] T: y el cociente?

((looking at Luis)) and the quotient?

[17] L: multiplicarlo

multiply it

[18] T: ¿Por qué?

by what?

[19] L: ((no response))

[20] T: ¿Por el qué?=

by the what?

[21] L: [Por el:: (..)]

[times:: (..)]

[22] T: =el dividendo o el divisor?=

=((looking at the class and then at Luis)) by the dividend or the divisor?

[23] J: divisor=

[24] T: =divisor (. ) por el?=

=divisor (. ) by the?

[25] L: por el divisor

by the [divisor]
[26]T: [divisor

In turn 11, Mrs. D begins to restate the strategy suggested by Luis. She does not restate the entire strategy, but instead invites the class to help her do so. She stops before she tells what the divisor is: “Entonces una estrategia seria dividir los 2136 entre” (“Then a strategy is to divide 2136 by?”) In turn 12, a student completes Mrs. D’s utterance by stating that the divisor is number 3. In turn 13, Mrs. D also states that the divisor is number 3, but adds an initiation--she wants to know what she is supposed to do with the quotient of 2136/3. Several students, including Luis, are heard talking, but none of them publically offers an answer to Mrs. D (turn 14). In turn 15, Luis says something to the teacher and Mrs. D looks directly at him and asks again what she should do with the quotient in turn 16. In turn 17 Luis simply says, “Multiplicarlo” (“Multiply It”). In turn 18, the teacher asks Luis what she should multiply it by, “Por el qué?” (“Times what?”). Luis does not know how to respond, in turn 19, because in his original statement of the strategy he did not use the appropriate term for number 3, which in this case is ‘divisor’. In his original statement, Luis simply said “multiply the quotient times 3,” as opposed to “multiply the quotient by the divisor.” In turn 20, the teacher asks the same question but she offers a hint ‘the’. In turn 21, Luis is trying to figure out what Mrs. D means but cannot come up with anything. In turn 22, Mrs. D offers two options, dividend or divisor. This time she opens the floor to all the students. In turn 23, Jovana gives the appropriate answer, divisor. In turns 24 to 26, Mrs. D and Luis restate that the quotient needs to be multiplied by the divisor.

As has been pointed out in this chapter, exploratory talk occurs at initial stages of the learning process as the learners are ‘trying out’ new concepts. Dialogic interactions, as opposed to other traditional patterns such as the default triadic structure, are ideal frameworks for exploratory talk. In this light, Barnes (1992) discusses two important actions taken by a teacher when a student has given a response or made a contribution, Assess and Reply. Although Barnes (1992) acknowledges the role that each one of those actions plays in instruction, he argues that ‘Reply’ is the only action that can promote students’ confidence in ‘trying out’ new ideas:

When a teacher replies to his pupils he is by implication taking their view of the subject seriously, even though he may wish to extend and modify it. This strengthens the learner’s confidence in actively interpreting the subject-matter; teacher and learner are in a collaborative relationship. When a teacher assesses
what his pupils say he distances himself from their views, and allies himself with external standards which may implicitly devalue what the learner himself has constructed. (p.111)

In this light, what Mrs. D has done in Excerpt 5 can be seen as a Reply (Barnes 1992) to Luis. Mrs. D replies by restating and expanding on Luis’ original statement of his strategy. Through this restatement, Mrs. legitimatizes Luis’ contribution. Note that Mrs. D does not assess Luis’ strategy at any given point in the interaction. As mentioned previously, Mrs. D rarely offered any type of evaluation (or evaluative third turn). It is possible that this lack of evaluative move (as it is traditionally conceived) on the part of Mrs. D makes students feel more comfortable giving non-final draft responses in a whole class setting. “A classroom dialogue in which sharing predominates over presenting, in which the teacher replies rather than assesses, encourages pupils when they talk…to bring out existing knowledge to be reshaped by new points of view presented to them” (Barnes, 1992, p. 111).

If anything, Mrs. D seems to be willing to spend time working on non-final draft responses. For example, in the following excerpt a student (Jovana) is seen attempting to explain Luis’ suggested strategy. This probably signals to Mrs. D that the student is still trying to understand the strategy, prompting a more complete explanation. Furthermore, the student’s restatement of the suggested strategy in itself also represents an instance of exploratory talk. The utterances provide information that is not provided in the expected order and they also include long pauses.

Excerpt 6

[27]J: es divider 2136:
    it’s to divide 2136:
[28]L: [entre 3 y luego multiplicarlo por el cociente=
    [by 3 and then multiply it times the by quotient=
[29 ]T: =luego el cociente multiplicarlo por el tres
    =then multiply the quotient by three ((The students write down the answer))
    ((16 sec))
[30] J: =por el cociente y el cociente:
    =times the quotient and the quotient: 
    ((1.0 sec))
[31] M: el cociente tenemos que dividirlo entre los dos mil ciento (X), que no?

_The quotient we have to divide by two-thousand one hundred (X), don’t we?_

[32] T: A ver…

_Let’s see…_

As indicated earlier, after the interaction captured in Excerpt 4 took place, Mrs. D restated Luis’ strategy (turn 10 in Excerpt 5). As soon as Mrs. D, with the help of Luis, finished restating the strategy, Jovana (turn 27) tries to restate strategy she just heard: “es divider 2136;” (“it’s to divide 2136;”). However, she pauses too early in her utterance and that apparently signals to the classroom members, specifically to Luis and the Mrs. D, that she needs help. Luis and Mrs. D help her out by jumping in and completing the utterance for her in turns 28 and 29. After this interaction, there is a long pause of approximately 16 seconds in which nobody speaks, but some students write in their textbooks. Jovana ends the pause in turn 30. In this turn she is seen again attempting to state the strategy: “por el cociente y el cociente:: (“by the quotient and the quotient::”). Note that her utterance does not include the first part of the strategy which has to be ‘divide 2136 by 3’. She begins in the middle ‘multiply the quotient times 3’. She also pauses and eventually does not complete her utterance (i.e. the strategy). Evidently, she does not understand the strategy yet, but she is working on understanding it by saying it aloud. Then, following a short pause, Mariana, who has also been trying to spell out Luis’ strategy, offers some help to Jovana in turn 31, “el cociente tenemos que dividirlo entre los (X), que no?” (“the quotient we have to divide it by (X), don’t we?”). Mariana, however, does not seem sure about her suggestion, ending her contribution with a question. And in fact what she says is not accurate.

As indicated earlier, the displays of these two students prompt an extensive explanation of Luis’ strategy by Mrs. D, which begins in turn 31 (this part is omitted). This time Mrs. D even writes the strategy on the whiteboard and has Luis help her restate the strategy on two more occasions. After the explanation, the teacher checks for understanding again specifically and asks Jovana to read what she wrote on the textbook. By then, Jovana has heard the strategy several times.
SUMMARY

Barnes (2008) notes that much of the talk teachers prompt from students is final draft or presentational and that the students are often asked to engage in it too soon in the learning process. This might seem to be true for the spoken data captured in Excerpts 4-6. However, in this particular exercise, the teacher did not discourage answers that were non-final draft. The interaction shows instead that the teacher built on a student’s initial non-polished response (Luis’ suggested strategy) and at different points in the sequence restated and carefully explained the strategy she understood him to provide. At different points in the sequence the teacher offered pauses for the students to process the strategy. These pauses could be considered evidence that the teacher was aware that most of the students were at a very initial state of trying to understand the strategy. It is important to highlight again that Mrs. D did not receive formal training in exploratory talk nor were the students explicitly asked to share their thought processes publicly; therefore, it cannot be expected that they will use this type of discourse as it is formally delineated in certain communities of learning in the United Kingdom (Alexander, 2003, 2004, 2005; Wegerif, 1996; Wegerif & Dawes, 1997; Wegerif & Mercer, 1997) and in the United States (Boaler, 2007). Nonetheless, that the displays of exploratory talk documented here still seem to serve some of the main purposes identified by Barnes (1992, 2008), working on understanding or ‘making knowledge’ through language.
CHAPTER 7

CONCLUSION

Using a sociocultural approach to the analysis of classroom teacher-student interaction, this study has examined the interactional patterns in a Mexican 6th grade classroom. The analysis was conducted in light of the IRF framework (Cazden, 1988; Mehan, 1979; Sinclair & Coulthard, 1975) and in light of co-authorship (Candela, 2005) and consensus construction (Candela, 1995) practices, which have been previously documented in the literature of Mexican classroom. Furthermore, the study has examined the role of the teacher in helping students develop agency (Bruner, 1996) as well as in facilitating student engagement in exploratory talk (Barnes, 1992, 2008). The findings of the study show that the sequences that were used in the observed classroom are different from those documented most often utilized in American classrooms and indicate that student-teacher and student-student interactions reflect and maintain expectations about the roles of the classroom community members and about how knowledge is to be constructed.

THE INTERACTIONAL ORGANIZATION

The study found that the discursive interactions under analyses included many teacher-initiated IRF sequences. What the teacher consistently did in the third turn (Follow-up) when a student response was correct was not to utter any comments (i.e. positive evaluation) and move on the next initiation (i.e. the next question on the textbook). This lack of positive evaluation on the part of the teacher is different from other settings where teachers most often praise or at least acknowledge students for their correct responses. The following example depicts this sequence.

I [1] T: de los números que muestra la tabla, cuales son los divisores del 30?
[((reads))]

From the numbers shown in the table, which ones are divisors of 30?

R [2] D: 1, 2, 3
[3] S?: 1, 2, 3
Similarly, when students offered a response that was incorrect, the teacher always refrained from giving any sort of negative evaluation or from providing the correct answer herself. What she almost consistently did was to provide a mathematical operation for the student to compute as a means of helping the student note that his or her response needed to be revised. This is illustrated in the following example:

I [1] T: antes del 9 no hay ninguno? [before number 9, is there another number?]
[3] J: no, 4 no
F/(I) [4] -> T: a ver, divide 81 entre 4 [let’s see, divide 81 by 4]

In this light, it was found that the teacher used the third turn mostly to ‘reply’ to the students as opposed to use it to ‘evaluate’ their contributions (Barnes, 1992). This choice on the part of the teacher, as opposed to, for example, providing the right answer immediately, allowed the student speaker to maintain participation in the interactional sequence and ultimately provide a correct answer. It also allowed other students to join in the interaction because they too had the opportunity to figure out what the correct answer was by doing the mathematical operation.

Nonetheless, as a whole, the lesson in the observed Mexican classroom was found to be fundamentally ‘non-traditional’, in Cazden’s (2001) terms. In other words, although the teacher posed initiations and the students answered (as happens in most traditional lessons), the interactions that followed did not always fit the IRF sequence (cf. Cazden, 2001). For instance, sometimes after the teacher asked a question and a student offered a response, the teacher did not offer any comment or evaluation. Or, in some cases, another student replied to their peers with an evaluative Follow-up move. The following example illustrates this kind of student intervention and thus one type of student-student relationship in the classroom.

I [1] T: 81?
R [2] L: 1, el 9

20-Assess’ is concerned with measuring learners’ utterances against external standards while ‘reply’ is more concerned with acknowledging the learners’ “primitive” attempts to make meaning and construct knowledge (Barnes, 1992, p. 111)
The sequence shows the teacher’s initiation in turn 1 followed by student responses in turns 2-4. These responses are not acknowledged by the teacher, however. In turn 5, however, a student negatively evaluates a response provided by one of her peers. The student who received the negative evaluation requests an explanation from his peer in turn 7.

**TURN ALLOCATION AND THE ROLE OF THE TEACHER**

In addition to the teacher’s omission of an evaluative Follow-up move, there were other traits in the observed classroom that resembled a non-traditional type of lesson, specifically a rather dialogic discursive structure. For example, talk was not restricted (e.g. at some point in the lesson a student started to sing his answer), and the students did not have to raise their hand to ask for permission to speak. The teacher rarely used individual nomination or invitations to bid that elicit handraising. Instead, she mainly used invitations to reply, a turn-allocation procedure in which teachers make an initiation that anybody can reply to without having to bid or be nominated. By using this particular turn-allocation procedure, the teacher ensured that the floor was kept open at all times. Thus, students were free to initiate interaction, to speak in lengthy turns, and even to interrupt others, including the teacher. Students had more turns and these turns were longer than typical IRF based interaction.
Therefore, it can be said that the teacher played the typical role of interactional mediator. There were other more ‘traditional’ roles that the teacher did not play, however.

The study found that the teacher did not play the role of knowledge possessor in a traditional way. Instead, she promoted knowledge construction by eliciting opinions and answers from the students and by listening carefully to what the students had to say. Sometimes the candidate answers offered by students were collectively evaluated and became the legitimate answer. In some of these occasions the teacher did not offer alternative answers (i.e. official version); the students’ candidate answers were the only ones taken into consideration. In other words, the teacher did not always seem to have a ready-made answer for some of the questions she posed to the students.

**IMPORTANT CONSTRUCTS**

Besides analyzing the interactional sequences and the participant structures used in the classroom, the study also considered four relevant constructs: co-authorship, consensus construction, agency and exploratory talk.

The study found that the observed students usurped certain authoritative roles of the teacher. A legitimate role of the teacher is that of legitimizer of knowledge. Teachers exercise this power, for example, by acknowledging and evaluating student responses. However, as previously noted, the teacher in this study refrained from providing negative feedback in the third slot of the IRF sequence. Nonetheless, students who were highly involved in the task at hand provided this sort of feedback to their peers. It was found that the teacher’s openness to all kind of student interventions permitted this type of student usurpation, which positioned the ‘usurpers’ as co-legitimizers of knowledge. In this regard, the present study echoes Candela’s (2005) findings of student co-authorship of normative genres in Mexican science lessons.

Furthermore, it was found that the observed classroom exhibited a tendency to consensus construction. This finding concurs with previous studies that posit that there appears to be a certain cultural preference for reaching consensus in Mexican primary classrooms (Candela, 1995; Paradise, 1994). Furthermore, it was observed that the teacher guided consensus reaching by (1) eliciting viewpoints from several students and attentively listening to these viewpoints, (2) intervening when necessary to offer guidance, and (3)
adopting preference strategies (i.e. individual nomination, a strategy in which the teacher poses a question and calls on a student to answer) to reach a common version. Besides this sort of teacher guidance, participation of students who are highly engaged in the academic task at hand is necessary for construction consensus. Both conditions were met in the case of the observed classroom.

Another construct the study considered was exploratory talk. It was found that students engaged in exploratory talk, which is also termed ‘non-final draft talk’ because of the hesitant and incomplete nature of its utterances (Barnes, 2008). Previous studies asserted that, in Mexican classrooms, students engaged very little in this type of talk. Nonetheless, the present study found that even though the teacher had not received any explicit training in promoting classroom exploratory talk, the type of interactional patterns she used as well as the freedom to speak that was an ongoing characteristic of the classroom facilitated student engagement in exploratory talk. This finding concurs with Barnes’ (2008) observation that classrooms where talk is not tightly control are a good environment for exploratory talk.

The study has found that in the observed classroom freedom to speak was an ongoing characteristic and that the teacher had a genuine interest in the students’ viewpoints and in listening to their contributions. This freedom, along with the student confidence that their interventions were welcomed and seriously considered, permitted that students who were highly engaged in the academic tasks at hand seized the opportunity to position themselves as knowledgeable classroom members by intervening or ‘interrupting’ the teacher to state a version that challenged the official account, which was in turn stated by the teacher and the textbook. Most importantly, it allowed the students to develop ‘agentic identities’ as math learners (Solomon & Black, 2008)

**Agency**

As stated earlier, the study takes a language socialization approach (Schieffelin & Ochs’ 1986a, 1986b) that assumes that “language socialization is a bidirectional process in which novices and experts have influence” (Garret & Baquedano-López, 2002, as cited in Poole, 2008b, p. 381). In other words, the approach suggests that novices are not passive recipients of socialization, but “active contributors to the meanings and outcomes of interactions with others” (Schieffelin, 1990, as cited in Poole, 2008b, p. 381). In this light,
the study identified several displays of novice agency in the analyzed interactions. As previously indicated, the students usurped certain authoritative roles of the teacher, a finding consistent with Candela (2005). Specifically, it was found that the students provided negative feedback to their peers even though the teacher did not provide this type of feedback to the students. Although the teacher’s feedback (or response) to incorrect answers often consisted of suggesting a mathematical operation, the students were observed responding with the expression “No,” to incorrect answers. This suggests that although the students are being exposed to and socialized into the teacher’s particular way of giving feedback, they may not be adopting it. The observed students are 6th graders who have had several years of schooling; therefore, it is possible that they were displaying a behavior (i.e. giving negative feedback) consistent with their prior socialization experience.

Furthermore, in the analysis of agency (Bruner, 1996) in Chapter 4, it was indicated that the students also usurped other types of authoritative roles of the teacher such as her legitimate capacity to interrupt and correct others. Two students were observed interrupting and correcting the teacher to explain to her that a method she recalled doing the previous day was not the method the student recalled. Interrupting and correcting are tasks that typically only teachers perform; however, in the data the students were seen doing those. This student behavior could be considered, from a language socialization perspective, as a sort of contestation of a norm (i.e. the underlying ideology that only the teacher has the power to interrupt and correct). This finding is consistent with the assumption that novices do not always absorb and reflect the norms and underlying ideologies the experts reflect; they also contest them and reshape them (Duff, 2002; Garrett & Baquedano-Lopez, 2002; Poole, 2008b).

**Other Sociocultural Dimensions**

In addition to the analysis of the four constructs just discussed, the study also looked at other sociocultural phenomena. The study found that noise and freedom of movement were two characteristics of the classroom, such findings concur with previous reports of Mexican classroom life documented in the literature (Cazden, 1988, Macias, 1992; McLaughlin, 2002; Paradise, 1994; Smith et al., 2003), including Philips’ (1972) early account of classrooms in the Warm Springs Reservation. Noise was produced by the student talk, play, and movement,
but there were also other sources such as the classroom’s air conditioning system and even music from a performance rehearsal taking place outside the classroom. It was observed that the noise did not seem to disrupt the classroom activities, however. The study also found that students had freedom to move around the classroom and to walk out of the classroom for specific reasons. For example, in one occasion it was observed that the students walked out of the classroom to pick up pebbles from the dirt which were meant to use as markers for a board game that students were going to play for their mathematics lesson.

The freedom of movement, along with the classroom’s ongoing freedom to speak, resulted in high levels of noise. Although noisy classrooms could be considered problematic by some, I argue that the social organization of the classroom was not less effective than other types of social organization because the described tendencies were rooted in the social milieu of all the participants and because the students were able to carry on the tasks of knowledge construction and learning.

**Implications of the Study**

The present study has demonstrated that the discursive interactions of Mexican elementary classrooms differ in some ways from those of mainstream American classrooms described in Mehan (1979), Cazden (2001) and others. American classrooms are rather ‘traditional’ in that their patterns of interaction fit well the IRF structure and talk is most often tightly controlled by the teacher (Cazden, 2001). In contrast, Mexican classrooms are “non-traditional” in that the interactional patterns that follow the teacher initiations do not quite fit the IRF structure (cf. Cazden, 2001). Moreover, in Mexican classrooms, students are free to initiate sequences and to interrupt the teacher if they wish, and they can do so without having to raise their hands. These types of interventions are not considered rude; on the contrary, they are welcomed and seriously considered by the teacher. Another difference between American classrooms and the Mexican classroom observed is that in the latter there seems to be a cultural preference for reaching consensus. In this context, student utterances are evaluated and legitimized collectively by the entire classroom community. Another difference between the two settings is the student usurpation of teacher’s authoritative roles. For example, the Mexican students in this study assume the usual teacher’s role of legitimizer of knowledge and evaluate their peers’ responses, but in American classroom
settings the authoritative roles of teacher are not frequently usurped (or assumed) by the students.

The study also indicated that Mexican elementary students, at least in the context observed, attend fewer hours of classroom instruction (i.e., only 3.5 hours). It also indicated that times boundaries may be more flexible than in the United States (e.g. after the bell rings teachers and students sometimes linger before going to class). The number of classroom instruction hours, for example, could have a toll on a student who all of the sudden is expected to sit in a classroom for over six hours, which is the average number of hours American students to sit in their classroom.

By analyzing Mexican classroom interaction in its sociocultural context, it is hoped that this study would help teachers not acquainted with the sort of non-traditional lessons examined as here as well as with the type of school life described here to better understand the expectations, behavior and performance of Mexican immigrants in their classrooms.

Although the study only considered one classroom, its findings are consistent with other accounts documented in the literature of Mexican classroom discourse (Candela, 1995, 1999, 2005; Macias, 1992; Paradise, 1994). Hence, the different tendencies and patterns found here potentially have implications for educational settings that receive Mexican immigrant children. As is obvious, the majority of immigrants in the United States were born in Mexico (Krogstad & Keegan, 2014) and the documented worsening conditions of insecurity and violence that Mexican citizens experience in their home country may continue to trigger immigration to the United States.

A newcomer will undoubtedly bring discourse behaviors and expectations that he or she has been previously socialized into. Some of these could sharply contrast with the host environment’s, increasing the likelihood that the newcomer’s behavior would be misinterpreted by the new teacher and peers. There is evidence in the literature that these sorts of ‘misunderstandings’ happen (McCollum, 1989; Philips, 1972) and that they could even lead to social stigmatization of the students (Berlin, 2002). For example, McCollum (1989) argues that American teachers not acquainted with non-traditional interactional patterns may see certain student initiations as socially or emotionally inadequate. These types of misunderstandings could be prevented by acquainting teachers with different types of
interactional structures, so that they can make necessary accommodations or modifications to help the newcomers.

The present study has aimed to respond to the dearth of literacy and classroom research in northern regions of Mexico. However, the need for similar qualitative, ethnographic research is still significant. Thus, it is hoped that this study will generate further interest in conducting research in various regions of northern Mexico that can inform the practice of teachers in both sides of the border.
REFERENCES


APPENDIX

TRANSCRIPTION CONVENTIONS
(. ) pause
( .. ) longer pause
[ ] overlapping
(( )) non-linguistic or contextual information
(X) unintelligible or unclear word/utterance
= Continuation of same speaker’s turn or absence of perceptible turn break between
speakers
? High rising intonation
. Falling intonation
° soft, lower volume than surrounding talk
: extension of a sound or syllabus
… deletion of some spoken language from transcript