

# Bilingual Negotiations in the Science Classroom<sup>1</sup>

Juliet Langman, Holly Hansen-Thomas, and Robert Bayley  
The University of Texas at San Antonio

## 1 Introduction

Within the social constructivist view of learning, focus is placed on learning through collaboration in planned and unplanned educational or everyday settings. This research tradition examines the ways in which novices and experts on the one hand, and peers on the other hand, negotiate meaning as they solve problems. Gelman et al. examine how novice learners structure their environment in order to learn: “despite their novice status as knowers of the target language ... [they] cue ‘experts’ on the nature of the relevant inputs for language learning because they bring structured knowledge to the flow of speech” (1991: 228). Such interactions on the part of the learner serve to focus attention on those aspects that are new, i.e. language to be learned. Heath (1991) further outlines how learners interpret the environment and learn to modify behavior within it, in order to match the frame. One focus of such research rests on conditions or environments suitable for learning. In this tradition, “social processes are treated as cognition” and the unit of analysis is particular conditions of social purpose and interaction (Resnick, 1991: 2).

One area of recent research based in the social cognitive tradition focuses on the nature of discourse employed to facilitate and “actuate” learning. “Through recurrent participation in social activities at home and in certain ‘proximal’ institutional settings children are cognitively apprenticed (Rogoff, 1990)” (Hicks, 1996: 1). In the area of classroom research, recent work examines how teachers orchestrate thinking (Hicks, 1996; O’Connor and Michaels, 1996) or facilitate students’ efforts to “go for the zone” (e.g. Erickson, 1996) in which learning can occur. This research focuses on the nature of talk directly related to task negotiation, but explores the surrounding off-task talk relatively little, if at all.

Focusing on peer group interactions, Levine and Moreland outline two assumptions about the effective configuration of groups, 1) “most work groups develop cultures that are helpful rather than harmful” and 2) “such groups function best when their members view the world from a common perspective” (2001: 272). If this is the case, then we need to examine how groups come to develop a common culture and a common perspective on the world, including in the case of classroom groups, the ways in which they weave in and out of task talk and social talk.

Recent work within a community of practice (CofP) framework (Lave and Wenger, 1991; Wenger, 1998) offers a means of broadening the scope of research into learning through interaction by examining the ways in which individuals participate to create environments suitable to their learning needs as well as the construction of identity through these interactions (Norton, 2000; Toohey, 2000). With respect to university level second language learners, Leki suggests that we need to expand our definition of “thinking systems to include not just a focus on the task, but also on the social academic relationships the learners develop with native-speaking peers” (2001: 39).

Relatively little research in these areas focuses on secondary school age immigrant or bilingual students. Recently, however, drawing on the CofP framework, Harklau (2003) studied how representational practices in U.S. high schools contribute to categorizing language learners through stereotypical images of immigrant identities that can contribute either negatively or positively to academic identity. In the content area of science, Cole and Zuengler (2003) investigate how scientific identities play out in secondary school and examine ways in which classroom identities have important consequence for student success.

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In this paper, we widen the scope of questions about joint learning to examine middle school age students in a science classroom comprised of bilingual as well as monolingual Spanish and English speakers. In particular we explore the question of how students' academic, linguistic and social identities work in concert to create or inhibit learning in a classroom that focuses on inquiry-based science and, as a consequence, a substantial number of small group tasks. We demonstrate how multiple identities serve to create diverse learning environments in small groups made up of similar types of students engaged in the same learning tasks. Specifically, we focus on two recent immigrants – essentially monolingual Spanish speakers – and how their identities and those of their group members serve to facilitate or inhibit learning of both English and science. The unit of our analysis is the bilingual negotiation, which we define as a set of interactions within a group comprised of both monolinguals and bilinguals, with the aim that all members participate in the exchanges and ultimately achieve an academic task set for the group. Two questions guide this research. The first asks what the process of bilingual negotiations is. The second question asks if bilingual negotiations facilitate or hinder learning on the part of the individuals and the group as a whole.

## 2 The setting

Garner School District<sup>2</sup> is one of several school districts in the greater San Ramón metropolitan area. The district, one of the poorest and smallest urban districts in Texas, is located in the city's oldest *barrio*. The enrollment is overwhelmingly Latino and includes many students from long-established Texas families as well as a smaller number of recent immigrants. Approximately 25 percent of the students in the district are designated as LEP<sup>3</sup> and receive bilingual or ESL instruction. In the elementary schools, about 30 percent of the students are enrolled in bilingual classrooms. By middle school, all students, including new immigrants, are enrolled in all-English classrooms.

In 2001-02, the period during which we collected data, 628 sixth through eighth grade students were enrolled at Madera Middle School, the site of our research. Of these, 191 were designated as LEP, 52 of whom were new immigrants from Mexico. The classroom selected for our research is a seventh grade science classroom, called group 7B, whose teacher is the science coordinator in the school. Ms. Jackson, an English monolingual, has been teaching for nine years, and is generally considered one of the best science teachers in the district. At the beginning of the school year, group 7B consisted of 22 students, four of whom were moved to a different class two weeks into the term. All but one of the students were of Mexican descent. Over the course of the first two nine-week periods, two students, both recent immigrants, transferred out of the school and one new arrival from Mexico entered. By the end of the school year, two additional students had transferred out and three new non-immigrant students had entered. Fifteen students remained throughout the full period of data collection, from August 2001 to May 2002. This group consisted of six recent immigrants whose level of English proficiency ranged from absolute beginner in the case of four to intermediate in the case of the two, both of whom had been in the United States for more than two years. The basic demographic characteristics of the district and the school are summarized in table 1.

	Garner I.S.D.	Madera Middle School
Students	13,439	628
Hispanic	97%	97%
Economically disadvantaged	96%	96%
Identified as LEP	2,924	191
New immigrants	97	52

Table 1. Garner Independent School District and Madera Middle School: Demographic Characteristics

The classroom where we worked reflected the demographic characteristics of the school and district.

<sup>2</sup> This and all other names of people and places are pseudonyms.

<sup>3</sup> The term LEP (Limited English Proficient) has come under criticism because it classifies students by what they lack rather than by what they can do. However, school districts continue to use the term as an official designation. We use LEP to refer to official classifications, otherwise, we use ELL (English Language Learner).

### **3 Negotiation in the classroom**

#### *3.1 The Classroom as community of practice*

A general description of the classroom, which operated as a community of practice, will allow us to situate the focal students we introduce below. As a general rule, students at Madera Middle School operate with the aim of supporting one another, and shielding one another from negative consequences associated with misbehaving or not completing assignments. In addition, all other things being equal, students encourage one another to pay attention and learn, although competing forces related to out of school activities often work to remove this as a goal. This spirit of cooperativeness is encouraged by the teacher through her grouping of students, who often complete labs and receive a single group grade. With respect to recent immigrants, the teacher and students extend the concept of cooperativeness to the view that others will help students understand the lesson, although this is by and large an unspoken assumption. Bilingual students are rarely specifically asked to translate (see Bayley, Hansen-Thomas, and Langman this volume on language brokering).

The students of group 7B met in the laboratory, and thus throughout the year sat in groups of four maximum on high stools facing one another across a lab table with a sink in the middle. This physical configuration supported the collaborative nature of the student interactions, as well as the experimental design format of the lessons, as various lab activities occupied the greater part of each class period.

In order to accommodate the needs of recent immigrants, the teacher further configured the groups at lab tables so that monolingual Spanish speakers would have someone to talk to, either a bilingual, or another monolingual Spanish speaker. This, it should be noted, is in violation of school policy, which requires students to be seated alphabetically. One of our focal students, Little Manuel, for example, began the semester sitting with three other immigrant students. The “expert” English speaker in the group, Big Manuel (as contrasted with our focal student: Little Manuel) had been in the United States for three years, and was able to interpret the bulk of the classroom instructions to the others at his table. After six classes, Little Manuel and a second recent immigrant, Juan, were moved to a table with two young women, both somewhat bilingual, although one claimed quite vocally not to know any Spanish, in spite of the fact that she had been in a bilingual classroom through grade five. Subsequently, in early October, after 11 classes, when Juan moved to another school, Little Manuel was moved to the front table with three girls, all bilingual, where he remained for 11 classes. Finally on November 16th when a new student, Arturo, arrived from Mexico, Little Manuel was moved as “interpreter and local expert” to sit with him for the remaining seven classes of the semester. Hence, Little Manuel always had someone to interact with, although other dynamics of the classroom led to his being moved repeatedly. In such moving around the class, his role also shifted. In contrast, Sandra, the second focal child, remained seated at a table with Annette, a bilingual, for the whole semester. The two others at that table, however, shifted numerous times throughout the semester for a variety of reasons generally related to discipline issues.

Ms. Jackson created a classroom environment where students were allowed, indeed encouraged, to talk to one another and participate in whole class discussions – the only caveat being that all were to be silent when she was talking. “Talking” here refers to those parts of the lesson in which she was lecturing, making announcements or giving instructions to the class as a whole. Ms. Jackson assumed, it emerged in later conversations, that student translators were translating her explanations of principles, phenomena, and experimental procedures accurately and relatively effortlessly. Her assumption, shared by other monolingual teachers in the school, was that bilinguals by definition can translate anything relatively effortlessly, and that the students, given their overall supportive orientation towards one another, were indeed spontaneously engaging in translation.

#### *3.2 Lab groups and representative negotiations*

In order to examine the nature of bilingual negotiations and their relative success in supporting learning, we examine interactions among two groups of learners drawn from class 7B. We examine the configuration of each group and the nature of negotiation of joint tasks within each group. In particular we examine two groups that differ in terms of the identities of the members on four critical

dimensions: linguistic, academic, social, and gender. These dimensions are critical, we argue, from the perspective of the members of the group, and therefore emerge as important in the overall accomplishment of tasks.

Through our observations and interactions with the students in group 7B science class, we determined that the grouping and thus interactions at one table, lab table 1, were significantly more successful than that at another, lab table 2. At each table, the ability to weave in and out of task talk, or between task talk and various types of social talk, marked individuals as members of value within the group, and allowed them to seek help from one another, chastise one another, and focus and refocus the group’s attention on various tasks. This ability was greatly supported by two identities, the linguistic, marked by the degree of a common language among members of the group, and the social identity, marked by the degree of connectedness or rapport with respect to non-task talk (e.g. about boys, sports, *telenovelas*, music and dance). A third identity, the academic, earmarked certain individuals as the “go to” people in the group, when questions of procedures and results arose. Finally, gender identity played a role in the interactions occurring at each table, in that an equal number of boys to girls at the lab tables resulted in a group split along gender lines. In the following sections, we closely examine the individual identities at two tables in Ms. Jackson’s class and demonstrate how the interaction of those identities contributed to either successful or failed group negotiation.

### 3.3 Lab table 1

Overall, the interactions we witnessed throughout our time in class revealed that the group of students seated at lab table 1 was quite successful in accomplishing group tasks mandated by the teacher. As shown in table 2, the four students share certain identity characteristics. First, they all speak Spanish, which is crucial for communication within the group. The three girls, Tamara, Marilyn, and Nellie, are all bilinguals who were either born in the U.S. or have been in the country since early childhood. At the time Little Manuel joined the class, he had extremely limited proficiency in English. All three girls, but especially Marilyn and Nellie, were more than willing to translate for him. His persona, that included being the smallest boy in the class, one oriented to academics, but importantly, also the best *cumbia* dancer at the school’s Halloween dance revealed his popularity and attractiveness. Group members very often used Spanish not only for academic purposes, such as when the girls helped Manuel, but also for social matters. Group members would rely on Spanish to discuss family members, Mexico, popular culture, or boys. While situational issues influenced the use of Spanish, it also appeared that this group used Spanish for covert purposes, namely, to avoid the teacher’s overhearing of non-academic and at times clearly inappropriate talk in the classroom.

Tamara “good girl”	Marilyn “hood girl/good girl”	Nellie “dressed for success”	Manuel “Cumbia King”
<ul style="list-style-type: none"> <li>• bilingual</li> <li>• average student</li> <li>• quiet</li> </ul>	<ul style="list-style-type: none"> <li>• bilingual</li> <li>• average student</li> <li>• directive</li> </ul>	<ul style="list-style-type: none"> <li>• bilingual</li> <li>• good student</li> <li>• engaged</li> </ul>	<ul style="list-style-type: none"> <li>• Spanish speaker</li> <li>• good student</li> <li>• engaged</li> </ul>

Table 2. Student Identities at Lab Table 1

With regard to schoolwork, all four group members shared an orientation towards doing well, or at least moderately well. Tamara, for example, quite active in her church and quiet and well-behaved in school, kept up average grades, but did not appear to put forth much effort. When working on group activities, Tamara often held back and allowed the other group members to play active roles. In contrast, Marilyn, oscillating between being a good girl, and a hood girl, often took an active role in group tasks whether she was clear on what she was supposed to be doing or not. In fact, she was often unsure of what the content and objectives of the lab experiments, but always eager to get involved in the action. Nellie and Little Manuel were more consistent and demonstrated their strong academic identities through both good grades and engaged participation in academic tasks. Finally, gender plays an important role in this group. The gender imbalance in the constellation of the members prevents the group from splitting up into pairs, resulting in a more cohesive whole.

All these characteristics, the ease of communication in Spanish, common social interests, a general desire to do well in school, and mixed gender, enabled this group to work together successfully.

For illustrative purposes we have chosen to provide examples of interactions that took place during one class period. The examples demonstrate how students at lab table 1 moved in and out of task talk together. On that day, October 17th, the objective was to understand Newton's First Law: an object at rest will remain at rest – an object in motion will remain in motion. The first part of the lesson, the DUST (daily understanding of science terms) was a review of the previous day's discussion of inertia. Thereafter a whole group discussion, a reading from the text, and a brief experiment on friction were carried out. The culmination of the lesson was the friction lab, which involved measuring the distance that a toy car would travel under three conditions: pushing the car on a dry surface, pulling the car back to engage the spring and releasing it on a dry surface, and finally pushing the car on an oily surface.

In (1) the students are preparing a hypothesis as the first step of an experiment on friction. Their task is to measure the distance a toy car will go under the three conditions designated by the teacher. Although the group is somewhat focused on the task, their social and academic orientations are both manifested.

(1) “*Andale muchachita*”<sup>4</sup>

- |   |  |
|---|--|
| 1. J: I'm not gonna give you my toys<br>unless you have a hypothesis. |  |
| 2. N: Miss, they can, they can.                                       |  |
| 3. ML: Write it!  |  |
| 4. N: They can move because it's oily! I<br>mean....                  |  |
| 5. J: Okay.   |  |
| 6. N: Something like that.  |  |
| 7. MN: <i>Huele a zorrillo.</i>                                       | [ 7. MN: <i>Smells like a skunk.</i>                               |
| 8. MN: <i>¿Quién no se bañó?</i>                                      | 8. MN: <i>Who didn't bathe?</i>                                    |
| 9. ML: <i>Tú.</i>   | 9. ML: <i>You.</i>   |
| 10. T: What's your last name?   | 10. T: What's your last name?                                      |
| 11. ML: <i>El que ... olió.</i>                                       | 11. ML: <i>That one that ... smelled</i>                           |
| 12. MN: <i>En la mañana.</i>  | 12. MN: <i>This morning.</i>                                       |
| 13. N: <i>Yo me bañé... traigo el pelo mojado,<br/>¿verdad?</i>       | 13. N: <i>I bathed, I came to school with wet<br/>hair, right?</i> |
| 14. MN: <i>Yo también.</i>  | 14. MN: <i>Me too.</i>   |
| 15. ML: <i>Yo lo tengo humedo.</i>                                    | 15. ML: <i>I feel sticky.</i>                                      |
| 16. ML: <i>Yo lo tengo humedo.</i>                                    | 16. ML: <i>I feel sticky.</i>                                      |
| 17. ML: <i>Dame. Hurry up!</i>  | 16. ML: <i>Give it to me. Hurry up!</i>                            |
| 18. ML: <i>Andale, muchachita.</i>                                    | 18. ML: <i>Hurry up girl.</i>                                      |
| 19. MN: <i>¡Andale, muchachita!</i>                                   | 19. MN: <i>Hurry up girl!</i>                                      |

Speakers: J = Ms. Jackson, ML = Marilyn, MN = Little Manuel, N = Nellie, T = Tamara

(1) illustrates how group members create a supportive environment as they interact on both a social as well as an academic level. Their weaving in and out of task talk is demonstrated in lines 2, 3 and 4 as some of the group members are participating in the academic task, that of writing the hypothesis. In lines 7 and 8 Little Manuel, disengaged from the preparation of the hypothesis which is taking place in

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<sup>4</sup> For the sake of readability, we have used normalized orthography. Unintelligible syllables are indicated by xx. English translations of Spanish utterances are provided in the right-hand column. In order to give an idea of the bilingual nature of many of the conversations, in the right hand column, we have italicized the utterances that were originally in Spanish.

English, introduces a discussion of bad smells. He continues on this topic by accusing one of his group mates of not bathing. Finally, however, after several assuring utterances by the girls that they did bathe before school, Marilyn brings the group back to the task with a refocusing command “*dame*” [give it to me] on line 17 as she demands control of the lab sheet. Her imperative is successful in getting them to finish this segment of their experiment so that they can begin to “play” with the toys.

In (2), we see how the group succeeds in maintaining a stronger focus on the academic task assigned to them than they did at the beginning of the assignment shown in example 1. Here they are trying to get the car to move on a dry surface, after it has been wound by being pulled back. The group members’ interest mounts in this phase as they seem to have trouble winding the car. Consequently, everyone has a different opinion on how to activate the car.

(2) *¿No tronó?*

- |   |  |
|---|--|
| 1. ML: <i>¿No tronó?</i>  | [1. MN: <i>It didn't shoot/make the noise?</i>   |
| 2. T: You have to hear it.  | 2. T: You have to hear it.   |
| 3. ML: Eh, eh, eh, xx you have to hear that sound.                                | 3. ML: Eh, eh, eh, xx you have to hear that sound.   |
| 4. N: It did.   | 4. N: It did.  |
| 5. T: But a lot, not a little bit little girl.                                    | 5. T: But a lot, not a little bit little girl.   |
| 6. ML: Oop, it's still with me.   | 6. ML: Oop, it's still with me.  |
| 7. MN: <i>¡Ya no jaló!</i> (giggles)  | 7. MN: <i>It still doesn't go!</i> (giggles)   |
| 8. N: No, you can't do that! (wind the car)                                       | 8. N: No, you can't do that! (wind the car)  |
| 9. ML: Yes, you can, you have to do it like that, Nellie!                         | 9. ML: Yes, you can, you have to do it like that, Nellie!  |
| 10. MN: <i>¡Nellie ya lo descompusistes!</i>                                      | 10. MN: <i>Nellie, you broke it!</i>   |
| 11. N: You have to do that thing when it starts, you, it can't...                 | 11. N: You have to do that thing when it starts, you, it can't...  |
| 12. MN: <i>¡Dale pa'el dentro, (m)jira, prestamelo, es que ya no, ya no jala!</i> | 12. MN: <i>Get it out from the inside, look, give it to me, it's that, it's that it still doesn't pull back.</i> |
| 13. MN: <i>Le voy a decir a la miss que lo descompusistes.</i>                    | 13. MN: <i>I'm going to tell the teacher that you broke it.]</i>   |

Speakers: ML = Marilyn, MN = Little Manuel, N = Nellie, T = Tamara

The demonstrated involvement and focused engagement on the academic task reveals how the students are able to think together, by using both Spanish and English. All participants are engaged in the task, but in different ways, depending on their role. When Nellie and Manuel started work on the project, Marilyn and Tamara were content to simply observe passively. At the beginning of the example, lines 1 and 3 Marilyn disagrees with the technique her group mates have chosen. She first verbally and then physically intervenes in the negotiation. In lines 2 and 5, even normally quiet Tamara steps into the discourse and adds her opinions as to how the task should be accomplished. Throughout the interaction, Nellie maintains an active role, whether the others are in agreement or not. In lines 7, 10, 12 and 13, Manuel has also taken an active and somewhat defensive role in the group interaction, threatening to tell the teacher that Nellie has broken the car because she refuses to give it to him. The argument that ensues on how to pull back the car in order to launch it indicates that while the interaction is not necessarily convivial, it is nevertheless focused on elements of the task.

### 3.4 Lab table 2

We turn now to examine the individual characteristics of a second lab group. Unlike lab group 1, this group does not share identity dimensions of language, gender, social and academic orientations to the same extent. This group was therefore less successful in interacting, negotiating and ultimately carrying out group tasks collaboratively.

In lab group 2 whose identity characteristics are outlined in table 3 below, we see that there is no language that all participants share. Dominic and Issac are both monolingual English speakers, and Sandra, a new immigrant from northern Mexico speaks only Spanish. Annette, the only bilingual, thus serves as the only potential mediator. A good student, Annette is pulled in conflicting directions. She keeps her grades up, and extracurricular school sports are very dear to her; however, she spends her free time with boys and her ‘homies’ – presumably gang buddies. Although bilingual she is not often inclined to play the role of translator for Sandra, who is more interested in traditional female roles, and does not participate in sports or go out with boys. Neither Dominic nor Issac is very interested in school. The grades and class participation of both boys are average to below average. Dominic plays the role of class clown, and is often singled out for being the only African-American in the class. Issac is much more interested in drawing cars and flaming words on his science handouts and lab sheets than in actually completing them. Sandra, on the other hand, wants to do well. She completes her work and attempts to become involved in group activities, but her limited English ability often prevents her from doing so. She in effect becomes invisible to many in the class. Furthermore, in terms of social orientation, this group all live in separate worlds outside their shared science class.

Dominic, “clown”	Issac, “artist”	Annette, “hood girl/jock”	Sandra, “invisible”
<ul style="list-style-type: none"> <li>• English speaker</li> <li>• below average</li> <li>• disengaged</li> </ul>	<ul style="list-style-type: none"> <li>• English speaker</li> <li>• below average</li> <li>• disengaged</li> </ul>	<ul style="list-style-type: none"> <li>• bilingual</li> <li>• good student</li> <li>• all or nothing</li> </ul>	<ul style="list-style-type: none"> <li>• Spanish speaker</li> <li>• good student</li> <li>• seeking entry</li> </ul>

Table 3. Student Identities at Lab Table 2

Lab table 2 as a whole has no ability to have a bonding conversation. Only one person, Annette, who is bilingual, can create a setting in which all can participate in interaction, whether it be social or academic. While Annette sometimes does choose to interact with Sandra, more often she focuses her attention on completing the work “on her own” as the only smart student at the table, and socializes with Isaac, the English-monolingual Latino student who sits next to her at the table. The potential benefit that Annette sees from interacting with Sandra is outweighed in most instances by the burden she experiences in being the one responsible for completing and drawing Sandra into the work.

This often leaves Sandra without any interactional partner, or leaves her to interact with Dominic, a monolingual English speaker. When they try to work together, as Ms. Jackson exhorts them to do from time to time, they are able to accomplish concrete tasks with Sandra leading the way, but they are clearly unable to engage in problem solving talk or negotiations. Lab table 2, then, is a set of individuals who do not form a group with a shared goal of working together.

The data for the following two examples were recorded on October 25th. On this day, the students were required to design and then demonstrate to the class their own experiment to illustrate the difference between potential and kinetic energy. The teacher had presented the students with options for lab tools including toy cars, bouncing balls, and various other toy-like materials. Lab table 2 has chosen cars for their materials. In (3), Sandra is unclear as to what she is supposed to be doing. Although her group members are sitting next to her, her bids for information and clarification are unheeded.

(3) *Qué vamos a hacer?*

- 1. S: ¡Ayayay! ¿Qué vamos, qué vamos a hacer?
- 2.S: ¿Nada?
- 3.S: ¿Nada más a jugar?
- 4.S: Bueno vamos a jugar.
- 5.S: A ver, prestame un carro.

- [1. S: ¡Ayayay! What are we going to, what are we doing?
- 2. S: Nothing?
- 3. S: Just play?
- 4. S: Well, then, let's play.
- 5. S: Let's see, give me a car.]

Speaker: S = Sandra

This typical example illustrates Sandra's unsuccessful approach to determining the task at hand. She carries on a two-part conversation with herself, but no one chooses to jump into the conversation to assist her. She has made assumptions about the task and has decided that, since the lab equipment for the day is a variety of toys, that they will simply be playing. Unfortunately for Sandra, who repeatedly seeks involvement and information but rarely gets it, misunderstandings such as that seen in (3) became a routine part of her interaction in the class. Lab table 2 rarely becomes engaged in teacher-mandated tasks as a group and, as a result, Sandra who is the most eager to get involved is silenced.

In (4), table 2 is still working on designing their lab. Now that Sandra has gained a clearer picture of the task, she has enlisted Little Manuel from the neighboring lab table to work with her. Shortly thereafter, however, he is sent back to his own table by the teacher.

(4) *¡Hay que levantarlo!*

- |  |   |
|--|---|
| <p>1. MN: <i>Bueno yo el verde, y tú el rosa.</i></p> <p>2. S: <i>Esperate, entonces hay que levantarlo poquito porque esta cosa no jala.</i></p> <p>3. S: <i>¿Ya?</i></p> <p>4. MN: <i>Dos.</i></p> <p>5. S: <i>Tres.</i></p> <p>6. S: <i>¡Ahora el verde, ahora verde, ahora verde!</i></p> <p>7. MN: <i>Y la rosa, a la!</i></p> <p>8. MN: <i>Hay que levantarla tantito porque...</i></p> <p>(Ms. Jackson sends MN to his group)</p> <p>9. S: <i>¡Issac! Ten Issac, ponte a jugar, ponte a jugar, ponte a jugar.</i></p> <p>10. S: <i>¡Ug! ¿Tú tienes el otro carro?</i></p> <p>11. S: <i>¡Dámelo!</i></p> <p>12. S: <i>¿Dónde está el otro carro?</i></p> <p>13. D: <i>The red is over there, the red is xx, the red is over there.</i></p> | <p>[1. MN: <i>Okay I'll do the green and you do the pink.</i></p> <p>2. S: <i>Wait then, you've got to pick it up a little bit because this thing doesn't go.</i></p> <p>3. S: <i>Ya?</i></p> <p>4. MN: <i>Two.</i></p> <p>5. S: <i>Three.</i></p> <p>6. S: <i>Now the green, now green, now green!</i></p> <p>7. MN: <i>And the pink, uhuh!</i></p> <p>8. MN: <i>You've got to pick it up a little bit because...</i></p> <p>(Ms. Jackson sends MN to his group)</p> <p>9. S: <i>Issac! Take it Issac, get playing, get playing, get playing.</i></p> <p>10. S: <i>Ugh! Do you have the other car?</i></p> <p>11. S: <i>Give it to me!</i></p> <p>12. S: <i>Where is the other car?</i></p> <p>13. D: <i>The red is over there, the red is xx, the red is over there.]</i></p> |
|--|---|

Speakers: D = Dominic, MN = Little Manuel, S = Sandra

In the first part of (4), Sandra and Manuel are engaged in an interactive discussion about the cars and how they work. These Spanish speakers are negotiating and communicating successfully; however, the teacher does not permit students to work with groups other than those they are assigned to. When Ms. Jackson realizes that Manuel is out of his seat, she sends him back to his assigned seat at table 1. In line 9, Sandra begins to make bids for the participation of her own group. She enlists Issac to participate, but instead eventually succeeds in incorporating Dominic into the negotiation. In lines 12 and 13 Sandra and Dominic, two students lacking a common language, manage to produce a successful interaction, based primarily on the fact that Sandra is using gestures to accompany her speech and the talk focuses on a concrete action. While Sandra finally does succeed in rudimentary joint negotiation of task, particularly in the parts of class that are hands-on and experiential, that negotiation does not promote "shared thinking", but only "shared doing".

## 4 Conclusion

Before learning can occur, conditions or settings that allow for such learning must be set in place. This rather obvious statement suggests the need to focus on how conditions conducive to learning are established in a wide range of settings and for a wide range of learners. In an effort to expand research

on learning in a sociocognitive frame, we have explored the discourse of joint task accomplishment through an analysis of the developing identities of individuals and the ways in which such identities work to support or inhibit learning. In this analysis, focusing on small group tasks, we find that groups that share identities and goals succeed in incorporating all members of the group – even if the goal is not that voiced by the teacher. In contrast, in groups that do not share sufficient identity orientations, the effort to incorporate all members may require more effort than some members are willing to invest. In bilingual groups, it is the bilinguals’ identity as speakers of two languages that results in their having a particular effect on the dynamics of the group as a whole. Concretely, such individuals serve as brokers of information and therefore their orientation to the group as a whole or to individual monolinguals within the group, is more likely to determine the ultimate success of group tasks. Through an analysis of multiple identities, one can gain greater understanding of the disposition of brokers to the multiple set of tasks before them: the linguistic – what and how to translate, the academic – the extent of focus on the classroom defined tasks, and the social – the willingness to interact with other members of the group. Finally, the number of bilinguals in a given group also affects the dynamics of the group. This is not simply due to the number of potential brokers, but more likely due to the extent to which brokering as an activity within the group is likely to be shared and positively evaluated. Hence, discussions of how and what to translate form part of the identity of the group as the members interact.

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