Reciprocity of Student and Teacher Discourse Practices in Monologically and Dialogically Organized Text Discussion

Maren Aukerman, Erika Moore Johnson, & Lorien Chambers Schuldt

**Abstract:** Scholars have established, not only that teacher discourse can play a reciprocal role in the quality of students’ discursive participation, but also that a teacher’s individual discursive moves can assume forms that seem at odds with the kinds of participation they elicit. Here, we examine whether one possible key to understanding this paradox lies in the role of larger discourse practices. We examined the relationship between teacher and student discourse practices during text discussions in a cross-case analysis of two second-grade bilingual classes. We coded all discourse moves across 10 text discussions to identify regular moves for each setting, then examined how these moves embodied goals linked to larger discourse practices. We found teachers and students in the two classrooms engaged in distinctively different discourse practices, which were either largely dialogic or monologic. Furthermore, we found that even when individual student moves were not teacher prompted, they could reflect discourse practices highly responsive to those of the teacher.

**Keywords:** text discussion, discourse practices, reciprocity, dialogic pedagogy

**Dr. Maren Aukerman** is an Assistant Professor of Curriculum and Learning at the Werklund School of Education at the University of Calgary. Her research examines how children and adolescents interact and think as readers when they participate in text discussions where students have substantial interpretive authority and are encouraged to engage with each other’s textual ideas in meaningful ways. Her work has been published in *Reading Research Quarterly, Journal of Literacy Research, Language Arts,* and *Research in the Teaching of English.* She is the recipient of a Spencer/National Academy of Education post-doctoral fellowship, which supported this research.

**Dr. Erika Moore Johnson** is a post-doctoral scholar in the Stanford Teacher Education Program and at Understanding Language at Stanford University. Her research focuses on how teachers can offer effective, responsive literacy instruction to culturally diverse student populations. Her work has been recently published in *Teaching and Teacher Education.*
One must not underestimate the role teachers’ questions play in shaping the character of classroom discourse as it affects learning. Questions presume answers. As negotiations of sorts, question-answer sequences reveal important features of teacher-student interaction and hence the character of instruction. (Nystrand, 1997, p. 37).

As a field, we are still far from knowing how to characterize the critical elements of Dialogic practices.... Coding transcripts for, or orienting teachers to, particular forms of talk in isolation (such as known-answer questions or follow-up evaluative comments) is likely not the best ‘unit’ of discourse to attend to (O’Connor & Michaels, 2007, p. 285).

There is increasing consensus among many literacy scholars that dialogic pedagogy—teaching organized in ways that allow student perspectives to meaningfully shape the course of classroom dialogue—can facilitate students’ assessed text comprehension, their argumentation skills, and their development of positive identities as readers (Aukerman & Chambers Schuldt, 2015; Wilkinson, Murphy, & Binici, 2015). Yet, as the quotes above indicate, there is little consensus about how to characterize the critical elements of such pedagogy on a practical level. On the one hand, a number of scholars have convincingly documented that certain kinds of individual discourse moves, such as uptake (asking students to elaborate) and text-related open-ended questions (those that do not have a “known” or single right answer), appear to make a difference in the quality of classroom discourse and mastery of subject-specific content. These moves, they argue, are integrally related to dialogic pedagogy (Applebee et al., 2003; Nystrand, 1997).

And yet, other scholars, equally convincingly, have documented that the presence of open-ended questions offers no guarantee of inviting student thinking, and that classrooms that rely on known-answer questions can nonetheless make ample space for student thinking to be heard and explored in substantive ways (Boyd & Markarian, 2015; Boyd & Rubin, 2006; Kachur & Prendergast, 1997). In light of these studies, as O’Connor and Michaels (2007) note above, directing teachers to make changes simply at the level of individual discourse moves in order to foment student thinking may not be what is called for.

The field is faced, then, with a bit of a paradox. The evidence suggests that individual teacher forms of talk (discourse moves) do matter somehow, and yet teachers and education researchers arguably risk missing something important about fostering student dialogue when the form of individual teacher discourse moves becomes the primary focus for eliciting quality classroom talk. The stakes in this debate are considerable: research evidence suggests that teachers, even those with an interest in such

---

1 We acknowledge that there is a gender spectrum and that myriad pronouns exist that we can use when referring to individuals in our writing. Throughout this article we use pronouns to refer to individuals that correspond with the pronouns that they use to refer to themselves.
teaching, find the transition to dialogic pedagogy difficult (Aukerman, Belfatti, & Santori, 2008; Billings & Fitzgerald, 2002; Christoph & Nystrand, 2001). Understanding the most important levers for enacting such pedagogy could help teachers with the transition.

Our goal in this study was to help explore the paradox by examining individual teacher moves in light of their function. We did so by systematically comparing two second-grade bilingual classrooms selected because they exhibited differences in the amount of student talk about text. In each classroom, we analyzed every utterance over the course of five discussions, first identifying discourse moves (specific forms) and then mapping these onto discourse practices (their broader functions). We asked:

What discourse practices characterized teacher talk?
What discourse practices characterized student talk?
What was the relationship between teacher and student discourse practices in each class?

Our findings reshape the debate over the role of particular discourse forms (such as known-answer questions) by suggesting that it is not the individual form of a teacher utterance that matters per se, but rather how these forms coalesce into broader discourse practices that serve particular instructional goals.

Theoretical Framework

In order to contextualize our discussion of form, function, and discourse practices, we first describe what we mean by dialogically and monologically organized instruction. We then highlight the paradox to which we have already alluded in our introduction: that individual discourse forms seem to play a role, and yet are inadequate as an explanatory mechanism for determining the degree to which instruction is dialogically organized.

Finally, we introduce the idea of discourse practices as a potential key to resolving this paradox, and to understanding the ways in which teacher and student language function in reciprocity with one another.

Dialogic Pedagogy

Over the past several decades, reading researchers have paid increasing attention to a set of discussion-based approaches to teaching comprehension grouped collectively under the label dialogic (Wilkinson & Son, 2011). While several different pedagogical lineages use this term (e.g., Freire, 1985; Whitehurst et al., 1999), we build upon the conception of dialogism first developed by Bakhtin (1981), a literary theorist, and later applied to the field of education by Burbules (1993), Nystrand (1997), and others. For Bakhtin, all language is heteroglot, filled with multiple voices within and against which an individual situates their “own” perspective:

The importance of struggling with another’s discourse, its influence in the history of an individual’s coming to ideological consciousness, is enormous. One’s own discourse and one’s own voice, although born of another or dynamically stimulated by another, will sooner or later begin to liberate themselves from the authority of the other’s discourse. (p. 348)

Discourse is inevitably dialogic because it is always already multi-voiced (even the words of a single speaker borrow from multiple alien voices). However, language is not always treated as though it was heteroglot (Bakhtin, 1981). Within many settings (including traditional classrooms), individuals are expected to accept an alien perspective as
Authoritative. Bakhtin noted that they often do so without any struggle in which that alien perspective is examined, questioned, or put to the test in order for the individual to make a decision as to whether it is “internally persuasive” (p. 348).

While Bakhtin did not critically examine schools in light of these ideas, educators who build on Bakhtinian dialogism typically share the pedagogical belief that students should have instructional opportunities to develop understandings that they find internally persuasive, rather than simply being presented with the authoritative word of the teacher to be embraced uncritically. Not all classrooms provide such instructional opportunities on a regular basis—indeed, most do not (Nystrand, 1997). Those that do, we believe, share two key features: opportunities for “struggling with another’s discourse” (Bakhtin, 1981, p. 348), and willingness to treat understandings as emergent and multiple rather than as predetermined and singular.

Opportunities for struggling with another’s discourse. The presence of multiple voices is part of all classroom discussion, even discussion that is teacher-centered and pays little attention to student thinking, as Nystrand (1997) has pointed out. More specific to dialogic pedagogy as we understand it is the centrality of struggle—one that takes place not only between different interlocutors, but also within each interlocutor as they work to engage with the ideas they encounter (Bakhtin, 1981). Dialogic pedagogy must go beyond simply making sure that various voices get heard, important though that might be: students must also have the chance to wrestle with the possibilities offered in their peers’ textual ideas.

In a sense, peer ideas should become texts to be explored alongside the written text that is under discussion—to be considered, evaluated, adopted and/or transformed. Moreover, just as texts can serve as windows into the experiences of literary characters who are different from the child engaged in reading (Bishop, 1990), classroom dialogue can offer windows into the interpretations of other readers, a sine qua non for being able to wrestle with those interpretations in order to ponder their internal persuasiveness. Teachers can facilitate children’s opportunities to “see into” the readings of others if their discourse serves to surface student interpretations and reasoning, what we call building windows into student thinking.

“Teachers can facilitate children’s opportunities to “see into” the readings of others if their discourse serves to surface student interpretations and reasoning, what we call building windows into student thinking.”

Treating meaning as emergent and multiple rather than predetermined and singular. One way of conceptualizing the goal of classroom talk is as a singular fixed endpoint, a pre-given meaning. Burbules (1993) calls this conceptualization a teleological view of dialogue, arguing that it “may actually impede the possibilities of dialogue as a method of open communication and investigation” (p. 5). Instead, he proposes that meaning in dialogue ought to be conceptualized as non-teleological—in flux and always already under construction and revision. We share this view: in previous research, we have observed that multiple, contested, evolving meanings are par for the course (cf. Aukerman, 2007) and that considerable gaps may exist between students’ publicly stated and private held positions (Aukerman & Chambers Schuldt, 2016). These gaps call into question both the possibility and the desirability of a unified, teleological reading of a text within a classroom.
There are efforts by individual readers and certainly by teachers to contain the multiplicity of understandings, to pin down meaning. Such a tension, between unbridled multiplicity and efforts to contain difference, hearkens back to key ideas in Bakhtin (1981). Bakhtin acknowledged centripetal forces in language, that is, those exerting their pull toward the unitary and singular. Yet he maintained that, in dialogism, those forces always exist in tension with simultaneous centrifugal forces, that is, with forces that pull meanings and perspectives in multiple directions. If language is subject to both centripetal and centrifugal forces, then the meaning of language—including the meaning of text—can never be fully stable or uniform. Teachers facilitating text discussion, we believe, must take this difficult reality seriously, not only by making space for different perspectives, but also by remaining wary of textual consensus and unanimity as end goals.

**Monologic Pedagogy**

Arguably, simply by being in a classroom with others, students are exposed to other voices; and, even in a classroom where the teacher strives to have everyone understand things in a pre-determined way, children will inevitably develop their own, multiple, understandings. Seen from this perspective, all classrooms are dialogic spaces. However, most classrooms do not invite or encourage struggle among multiple voices (Nystrand, 1997), instead privileging the perspective of the teacher. Most of them also treat meanings as singular and pre-determined. In reading classrooms, such instruction often includes teacher attempts to monitor whether students have the “correct” interpretation of the text (i.e., the teacher’s interpretation) and correct them if they do not. Such instruction is monologically organized (Nystrand, 1997).

While we recognize that monologism as Bakhtin described is never entirely possible in a classroom context, we draw on Nystrand’s (1997) argument that classrooms in which teachers privilege a single, authoritative knowledge that mirrors the teacher’s pre-existing thinking are organized in monologic ways. In this paper, we use the term monologic pedagogy to describe this orientation. At the other end of the spectrum, a teacher may privilege a multiplicity of voices and understandings and organize a classroom to make these central (what we describe as dialogic pedagogy). We realize that these differences may exist on a continuum, and may not be constant in a given teacher’s instruction. Still, because these pedagogies result in qualitatively different learning experiences for students, we believe they are useful to explore.

**The Power and Paradox of Dialogism in Language**

Nystrand and Gamoran (1997) were among the first educational researchers to study the relationship between Bakhtinian dialogic pedagogy and learning. They posited that there is something special about classrooms where the discourse is dialogically organized. They captured a correlation between student achievement on end-of-year tests and certain forms of teacher language, such as text-related authentic questions and uptake (incorporating a student’s idea into a subsequent question). Subsequent research has established that dialogic pedagogy can positively impact children’s assessed reading comprehension and their argumentation strategies (Aukerman, Martin, Gargani, & McCallum, 2016; Murphy, Wilkinson, Soter, Hennessey, & Alexander, 2009; Wilkinson, Murphy, & Binici, 2015). Furthermore, instruction that is more dialogically organized may also affect children’s beliefs about knowledge, reading, and their own identities as readers (Aukerman &

For all of this promising research, it remains less than fully clear what the precise role of teacher language is in dialogic pedagogy. The two strands we identified above as central to classroom dialogism—struggle with other voices and meaning as emergent—do not (as we have defined them) contain or pre-specify any specific discourse forms on the part of either students or their teachers. Yet much of the literature on classroom discourse focuses on the form of the individual discourse move.

For example, seminal studies of classroom discourse (Cazden, 1988; Mehan, 1982) established the ubiquity of Initiation-Response-Evaluation (I-R-E) exchanges, where the teacher asks a known-answer question, a student responds, and the teacher evaluates that response, leaving little room for students to develop their thinking. Nystrand (1997) has characterized moves that orient learners toward reproducing known information (for example, I-R-E discourse) as associated with monologically organized instruction, on the opposite end of a continuum with dialogically organized instruction. By contrast, there is evidence that specific moves associated with dialogic pedagogy, such as uptake and open-ended questions, encourage students to elaborate on their thinking, foment exploratory talk about ideas, and promote collaborative disagreement (e.g., Applebee, Langer, Nystrand, & Gamoran, 2003; Nystrand, 1997; Sherry, 2014).

Nonetheless, other researchers have pushed back on the notion that the form of individual teacher moves determines the dialogicality of a classroom exchange (Boyd & Markarian, 2015; O’Connor & Michaels 2007). Boyd and Markarian (2015) have documented that an ostensibly closed language form (such as a known-answer convergent question) can nonetheless open dialogue and generate student thinking depending on “what it asks students to do, and how it is taken up in a classroom community” (p. 277). In other words, language function can trump language form in certain cases. But if the form of an individual teacher utterance is not determinative in how students take up teacher utterances, how, if at all, does it matter?

Bakhtin may be of some help here. He maintained that “the linguistic significance of a given utterance is understood against the background of language, while its actual meaning is understood against the background of other concrete utterances on the same theme” (Bakhtin, 1981, p. 281). In other words, every utterance lives in—and simultaneously builds—a linguistic context. As part of an ever-emerging constellation of discourse practice, what the individual utterance seeks to accomplish linguistically is historically situated within the purposes enacted by a whole series of utterances. We argue, then, that within classroom discourse, one needs to look at utterances, not in isolation, but in terms of how they pattern as discourse practices in concert with other discourse moves.

In developing our notion of a discourse practice, we define it as consistent, recurrent action taken through talk in the service of accomplishing a goal, drawing upon prior definitions of practice (e.g., Miller & Goodnow, 1995; Scribner & Cole, 1981). Our definition underscores the ways in which talk is tightly tied to the purposes of the interlocutors. Because the nature of the goal is constitutive of the discourse practice, the action taken through a particular discourse move may differ, even if the discourse move looks “the same.” A student might, for example, seek to appear knowledgeable to the teacher by citing evidence from a text in response to a teacher’s request. Another student, who seeks to convince a peer or prove a point, might cite exactly
the same evidence from the text in response. Same discourse move, different discourse practice. Notably, our position has some resonance with Boyd and Markarian’s (2015) argument that a focus on surface features is insufficient to identify a dialogic stance in a classroom. They argue:

To discern dialogic teaching involves more than consideration of surface interactional structures. It involves identifying patterns of discourse, examining the discursive act as a whole (Mercer, 2008), and considering teacher discursive actions in terms of how they function (p. 273-4).

Yet, although they acknowledge that patterns of discourse play some role and that teacher language must be examined in terms of how it functions, Boyd and Markarian (2015) have sometimes sought to decouple form and function. For example, they suggest that, “Dialogic teaching and learning are more a matter of communal and epistemic functions than interactional form” (p. 277). We see the relationship between form and function as more patterned and interrelated. A discourse practice is, by the definition we have elaborated above, a consistent, recurrent action taken through talk (cf. Miller & Goodnow, 1995; Scribner & Cole, 1981). It comes into being in patterns of talk that take shape, at least in part, through recurrent forms of expression—specific types of discourse moves. At the same time, this patterned language is in the service of accomplishing a goal—preserving the focus on function.

We thus concur with Boyd and Markarian (2015) that focusing on the form of a discourse move to the exclusion of its function is potentially misleading, but we think it is equally problematic to treat function as fully decoupled from form. We believe that each individual discourse move functions as a (typically modest) contributor to goal-directed action. Taken in isolation, the particular form of any move does not strictly dictate how it participates, and widely differing forms could easily serve a common function. At the same time, through recurrent action, the forms of discourse moves become tethered to particular classroom goals. For this reason, the forms of individual discourse moves are neither determinative nor blithely arbitrary. Discourse practices take shape as speakers anticipate and respond to the recurrent, goal-directed actions of other interlocutors that emerge as salient in a given classroom.

Reciprocity at the Level of Discourse Practices

For Bakhtin (1986), the spoken word never exists in isolation. Shaped by a phenomenon he calls addressivity (p. 95), it is fundamentally responsive. It exists in relationship with the multiple utterances that precede it, as well as in anticipation of the speech that might be subsequently uttered in response. Following from this work, Nystrand (1997) has argued that classroom dialogue also entails reciprocity: “The roles of the teacher and learner... each respectively and mutually entail those of the other, the one in effect defining the parameters of meaning and communication of the other” (p. 10). Nystrand speaks of roles as being reciprocal, and Bakhtin (1986) describes addressivity in ways that extend well beyond the level of the individual utterance. Yet, as documented above, reciprocity has been catalogued in studies of classroom discourse only at the level of individual discourse moves.
Given the limitations of an exclusive focus on the form of individual discourse moves, we wondered whether Nystrand’s reciprocity principle might appear, in addition, at the level of discourse practices operating in a classroom. To determine if this might be the case, we sought to understand whether and how reciprocity between teacher and student roles might function at the level of discourse practices in two contrasting classroom contexts.

**Method**

In the following section, we describe our methods of data collection, including site selection, a description of the classroom contexts, and data sources. We then outline our analysis of classroom talk for teachers and students in terms of form, function, and discourse practices.

**Data Collection**

Data for this analysis were drawn from a larger study examining reading instruction in two second-grade bilingual classrooms located in different schools serving high-poverty neighborhoods in the same urban district in western United States. Given our focus on understanding teacher and student discourse patterns during text-based discussions, we used a cross-case analysis (Maloch et al., 2013) to allow us to deeply examine each classroom.

**Site selection.** We began by purposively selecting classrooms whose teachers identified that they regularly held discussions around texts with their students. To identify sites, we visited classes in several urban districts, seeking to identify classrooms where reading discussions took place regularly. We initially identified a second-grade classroom at Mundo Elementary School and conducted an intensive month-long pilot study in the classroom; we found that the teacher, Max, frequently conducted discussions around texts, and that student voices appeared to play a notable role in the Mundo Classroom (MC) discussions, as indexed in our initial observations by the relative amount of teacher and student talk time.

We subsequently identified a second-grade bilingual classroom at another school in a neighboring area of the same urban district, Estrella Elementary, that we believed would provide an illustrative comparison of classroom discourse during text-based discussions. Initial observations in the Estrella Classroom (EC) indicated that the teacher, Esther, structured reading discussions more traditionally, with a more typical balance of teacher-student talk (cf. Cazden, 1988; Mehan, 1982).

**Classroom contexts.** The classrooms were similar in many other ways: they were both early-exit transitional bilingual classrooms in which students transitioned to reading instruction in English in third grade, but engaged in reading instruction primarily in Spanish throughout their 2nd grade year (more than 95% of instruction we observed in both classrooms was in Spanish). Each served an exclusively Latino (mostly Mexican immigrant) population, and the majority of students received free or reduced lunch (90% at Estrella, 87% at Mundo). Both teachers used the same district-mandated curriculum, Foro Abierto de la Lectura (Abarca & Domínguez, 2003), the Spanish translation of Open Court Reading (2000). Student academic performance as indexed by fall benchmark reading assessments was roughly similar (83% below mastery in the EC, 93% below mastery in the MC). In addition, the two teachers were well regarded by

---

2 Esther is a pseudonym, as are the names of all students and schools. Max requested that we use his real name.
their administrators. Esther, who identified as White, had been teaching for 6 years, and Max, who identified as Puerto Rican American, had 27 years of experience. Both expressed commitment to bilingual education and appeared to have good relationships with their students, as evidenced by consistently positive classroom interactions and spontaneous hugs from students on the way out the door to recess.

In addition, interviews with the teachers helped us to better understand the context and teachers’ purposes. The teachers described distinct goals for discussions and for student learning more broadly. The EC teacher described the importance of explicit instruction. She viewed comprehension strategy instruction as the lynchpin of her teaching and frequently described testing as an influence on her practice. For example, she stressed the importance of linking concepts to tested skills so that students would understand “how is it going to help us on the test ... making sure that before we closed the unit or the teaching of that skill that we did give them at least one exemplar of, ‘What’s that going to look like on a test?’” (Interview, October 22, 2010).

In contrast, Max, in the MC, expressed skepticism about both testing and comprehension strategy instruction. Although he administered the same district-mandated assessments, they did not play a large role in his instruction. In fact, he told us during class discussions. “I’m not interested in the ‘right’ answer. I’m not the least bit interested in that. I’m interested in the argument. I’m interested in students demonstrating integrity for their thinking and their colleagues’ thinking” (Interview, August 20, 2009). While there can be a complicated relationship between teachers’ goals and instructional practices in the classrooms (cf. Alvermann, O’Brien, & Dillon, 1990; Richardson, Anders, Tidwell, & Lloyd, 1991), the distinct goals teachers articulated for students, along with the initial observed differences in the discourse environment, suggested differences in potential dialogicality in these classrooms, which we investigated further in this study.

18 of the 20 students from each classroom participated in the study. One of the authors observed each classroom at least once per week from October to June (except for several weeks devoted to standardized testing), collecting audio and video recordings of the reading discussion and related activities. We focused our observations and analysis on the weekday when text was discussed most.

The most extensive discussions of the basal text in the EC generally took place on Mondays, when Esther introduced story vocabulary and conducted a teacher read-aloud with interspersed text discussion. Phonics instruction, independent and partner reading of both the basal story and trade books, as well as skills practice and assessment generally took place later in the week.

The most extensive text discussions in the Mundo Classroom (MC) occurred on Thursdays, when Max facilitated discussion of a text the students had read at least once earlier in the week. Other weekly reading activities included word study (phonics and vocabulary), picture walks, paired reading, and small- and whole-group discussion of basal selections and trade books. While some differences identified in our analysis could be due to differences in when the discussions took place in each classroom, we elected to examine the occasions where students had the most extensive opportunities to flex their discursive muscle around text in each classroom.

Data Sources

Data for this study were drawn from 83 hours of audio and video recordings of language arts instruction across the two classes, most of these
during text discussions. Transcripts were made from the audio recordings primarily, but speakers were confirmed using video recordings, which also served to supplement the audio recordings for visual cues and non-verbal gestures (e.g., pointing to a page in the text or gesturing to a student) as well as occasional inaudible utterances. (See online supplement, Appendix A, for transcript conventions.) So that we could make direct comparisons, we focus only on discussions where each teacher facilitated a whole-class discussion of the same basal selection.

Our analysis thus focuses on discussions of five selections (two fiction, three nonfiction) in each classroom. These 10 discussions totaled approximately 380 minutes. They included 1907 EC turns at talk, and 1886 MC turns at talk. Analysis comes from all 10 discussions (5 per class), but we illustrate our findings with examples from two discussions: “Jalapeño Bagels” (hereafter “Bagels”), the basalized version of Wing’s (1996) story of a boy of Jewish/Mexican heritage who decides to bring jalapeño bagels to represent his culture for his school’s International Day, and “Fossils Tell of Long Ago” (hereafter “Fossils”), the basalized version of Aliki’s (1990) nonfiction text about how fossils are formed and what they can teach us. Transcript excerpts come from discussions conducted February 26, 2010 (MC) and January 10, 2011 (EC) for “Fossils,” and June 9, 2010 (MC) and April 4, 2011 (EC) for “Bagels,” and were translated by the authors.

Data Analysis

We began by open coding (Strauss & Corbin, 1998) the transcripts in order to understand the kinds of discourse moves present in both classrooms. Results of open coding were then used to develop a coding scheme (see online supplement, Appendix B), which we used to code all teacher and student utterances (Stubbs, 1983) in Dedoose (Version 7.6.21). To determine the nature of a question or statement being expressed through an utterance (defined as a single turn at talk), we considered what happened that led up to the particular discourse move, and what happened after it was said when needed.

We also distinguished between utterances related to different kinds of instruction/intellectual work (e.g., vocabulary questions versus requests for predictions for teacher moves). We looked at whether and how students explicitly referenced the text, for example, by mentioning the words directly (as indexed by “It says that...”) or by pointing out specific aspects of the pictures. We noted whether such moves were prompted or unprompted by the teacher.

We applied multiple codes to the same utterance where applicable. All transcripts were coded by the first author and by one of the other authors. Interrater reliability was calculated at 88% and 83% respectively; disagreements were resolved through discussion. We elaborate on the coding within the context of our findings below.

After coding all utterances, we began by categorizing teacher and student talk into four categories: content-related talk (all teacher and student talk focused on the content of the text), management-related talk (talk focused on managing behavior or reading procedures such as calling on students, asking students to locate a page etc.), reading aloud (teacher or students reading aloud without additional commentary), or other (bids to read, inaudible comments, etc.). For this study, we focused on a deeper analysis of the content-related talk moves (n= 32 teacher and n=31 student), though we report briefly on the proportion of all categories in each classroom in the findings section.

Given differences in number of teacher and student utterances in the classrooms, we then calculated the prevalence of teacher and student moves as a
percentage of the total number of teacher or student content-related talk moves in each classroom, allowing us to compare trends across classrooms for both groups. We examined the frequency of the teacher and student content-related talk moves, finding that moves fell into several frequency clusters (see Table 1). Many teacher and student moves occurred rarely, less than 1% of the time in a classroom. Other teacher and student moves occurred occasionally, in 1% to 3% of content-related talk moves in a classroom. Still others occurred with more frequency, from 4% to 28% of interactions in at least one classroom.

We categorized moves that occurred at least 4% of the time in a classroom as regular moves for that classroom, a categorization sensitive enough to capture moves that occurred, on average, every 20 utterances. In order to understand the ways that patterns of discourse functioned in each classroom, we focus our analysis here on these regular moves.

Since similar forms of language could function in a variety of ways, we then examined the function of the regular teacher and student moves in each classroom. To determine function, we considered both the illocutionary force (Searle, 1969) of the utterance (that which it was intended to accomplish regardless of form) and the context of the utterance. After multiple passes through the data, we established constellations of individual moves that functioned similarly in a given classroom; these, taken together, constituted a discourse practice.

For example, we found that, in the EC, three student moves (topic-related personal experiences, topic-related assertions, and responses to teacher’s familiarity questions) served similar functions. We combined these in the discourse practice titled showcase connections and topical knowledge. While any discourse move simultaneously serves multiple goals and speaker’s purposes are only partially apparent to others, we focused this analysis on the ways moves unfolded during discussion, and what happened before and after each individual move, in order to understand the patterns in discourse practices more broadly.

**Findings**

Below, we describe differences in the classroom talk patterns in the MC (Mundo Classroom) and EC (Estrella Classroom). We begin by comparing the type and quantity of talk during discussions in each classroom. We then describe the content-related talk by the teacher and students in each classroom, with attention to the regular teacher and student moves that made up discourse practices in each setting. Throughout this section, we illustrate these with examples from classroom transcripts.

### Comparison of Classroom Talk Patterns

In observed lessons, most of the teachers’ talk related to content (66.8%), followed by management (18.2%), “other” (8.7%), and reading aloud (6.4%). The majority of student talk in both classes related to content (68.7%), “other” (24.4%), solicitation of

<table>
<thead>
<tr>
<th>Table 1. Frequency of Content Moves</th>
<th>Percentage of total teacher or student content moves in MC or EC classroom</th>
<th>Number of moves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rare moves</td>
<td>Less than 1%</td>
<td>Teacher moves: 24 Student moves: 24</td>
</tr>
<tr>
<td>Occasional moves</td>
<td>1%-3%</td>
<td>Teacher moves: 12 Student moves: 16</td>
</tr>
<tr>
<td>Regular moves</td>
<td>4%-28%</td>
<td>Teacher moves: 18 Student moves: 14</td>
</tr>
</tbody>
</table>
turns (3.8%), and reading aloud (3.1%). As shown below in Figures 1 and 2 respectively, the percentage of types of teacher talk and student talk was similar in both classes, with minor differences. For instance, in the EC, the teacher comparatively spent more time reading aloud to students, while the teacher in the MC spent more time managing the discussion. Students in the EC did more reading aloud, and students in the MC spent slightly more time speaking about content.

However, when we examined the contributions of teachers and students in each classroom, we found substantial differences in how content talk was divided. As seen in Figures 3 and 4 below, EC students contributed fewer than 39% of the content talk moves and Esther, the teacher, contributed more than 60%. In the MC, the pattern was reversed, with students doing two thirds of the talk and the teacher, Max, contributing only one third of the moves.

Below, we discuss each EC discourse practice (first those of the teacher, then those of the students) in terms of the regular classroom moves constituting it. We illustrate the regular moves with transcript examples that were reflective of talk in each classroom. We then do the same for the MC.

**Estrella Classroom Teacher Discourse Practices**

We begin by examining the teacher’s moves within the EC, the classroom where there was proportionally more teacher talk and less student talk. There were nine regular teacher moves in the EC. Their relative frequency in each class is depicted in Figure 5. The moves instantiated the following EC teacher discourse practices: a) monitoring and reinforcing accurate understandings; b) telling; c) connecting reading to life and text; and d) referencing skills.
Monitoring and reinforcing accurate understandings. In the EC, correct recall of information was highly valued. Esther frequently asked convergent questions (15.3%; n=164), ones posed to determine whether students understood word meaning (n=73), textual information (n=41), background information (n=37), or a targeted skill, strategy or literary device (n=13). When a student responded to a convergent question, Esther typically followed up with evaluation (17.6%; n=189) signaling whether the student’s comment was correct. Through such utterances, Esther assessed student understandings, communicated to students whether they were right, and guided students toward more accurate understandings:

Esther: What part of the bagel represents his dad? If you were listening then you should know. Tomás?
Tomás: Oh, the jalapeños represent his mother?
Esther: The jalapeños represent his mother’s culture, how? Because she is …?
Tomás: A cook?
Miguel: I know, I know.
Esther: Yes, she is a [cook ... (Tone suggests that she is seeking another answer.)

In this exchange, Esther accepted Tomás’ response that the jalapeños represented the mother, even though it did not directly answer her question. She then evaluated this response and asked him to elaborate. When his elaboration (“A cook?”) did not align with her understanding, she solicited another response, which she also evaluated. This pattern was in line with the common I-R-E sequence (Cazden, 1988; Mehan, 1982) in which a teacher initiates a question, students provide an answer, and the teacher evaluates the student response. Exchanges involving convergent textual questions were usually followed by a new convergent question (n=21), the teacher explaining the text or topic (n=10), or the teacher continuing to read the text (n=9).

Telling. The EC teacher frequently communicated her own understandings via explicit explanation, introducing new information when explaining the topic/vocabulary (n=152) or explaining what was happening in the text (n=66). For example, as she read the “Fossils” text, Esther drew students’ attention to several diagrams (bold indicates reading from the text):

---

3 For space reasons, only the translated version of longer transcript excerpts are included; the original Spanish is available in Appendix C.
Esther: *When the big fish died it sank into the mud at the bottom of the sea.* This is the first picture. The fish died and sank to the bottom of the sea. *Slowly its soft parts decayed.* This is the second picture. What does "decomposed" mean? Who can help me with that big word? Samuel.

Samuel: That the bones were going all over the place?

Esther: Exactly, very good.

Consuela: [The fish, the fish, here it is!]

Esther: [Their soft parts, not the] bones but soft parts like their skin, um, do we say “escalones”? Their scales, right? Their scales... all the soft parts decomposed. They were floating in the water, like Samuel said. But their spines, their bones, their harder parts remained. *Only the hard spines were left. The spines of the fish that had been eaten also remained.*

In this example, Esther not only sought to help her students understand the text, but she also added clarifying information. Moreover, her reply to Samuel here was typical: It both evaluated and supplemented his response. In addition to teacher-initiated explanation, we frequently saw Esther answering student questions (9.0%; n=97), for example, “*Sí, muchos de los dinosaurios herbívoros comieron esa planta.*” (“Yes, many of the herbivorous dinosaurs ate that plant.”)

Esther also demonstrated and prompted vocabulary hand signaling (5.8%; n=62) when a targeted vocabulary word appeared. For example, during her introduction of *mezclar* (to mix), Esther showed the students how to pantomime stirring. Later, while reading the word aloud in the text, Esther initiated a stirring motion and students responded with the same motion. Vocabulary hand signaling incorporated telling and monitoring/reinforcing understandings simultaneously.

*Connecting reading to life and text.* Another cluster of EC teacher moves involved connecting reading to life and text, primarily through *teacher sharing* (7.5%; n=81), where the teacher shared a connection of her own or made connections to children’s experiences. For example, when the text mentioned amber, she said, “*Mi mamá tiene un collar de ámbar verde que yo le compré en España.*” (“My mother has a green amber necklace that I bought her in Spain.”) Similarly, when, in the “Bagels” text, she was previewing the vocabulary...
word “recipe,” Esther shared information about her own family recipes with students before asking them to define the term. She said, "La cuarta es ‘receta.’ ¿Qué es una receta? Mi familia tiene muchas recetas especiales, y yo las tengo juntas en un encuadernador para nunca perderlas—porque son cosas muy especiales para mi familia." ("The fourth is recipe. What is a recipe? My family has many special recipes, and I have them all together in a binder so I don’t ever lose them—because they are very important things to my family.")

Esther also connected to students’ lives by asking familiarity questions (4.6%; n=49) that were yes/no questions to determine if students had experienced/heard/knew something. In the EC, familiarity questions highlighted experiences Esther saw as potentially helpful to students’ understanding of the text or topic, for example, “¿Ustedes han visto carbón?” (“Have you all seen coal?”).

**Referencing skills.** The final EC discourse practice we identified was referencing skills through skills statements (4.9%; n=53): statements referring to skills such as knowledge of synonyms (n=27), to strategies such as making connections (n=15), and to literary devices such as similes (n=11). Often, the teacher named a skill or strategy in passing, such as saying, “Sería una conexión personal.” (“That would be a personal connection.”). At other times, she offered a more elaborated explanation. For example, while reading the “Fossils” text, Esther stopped to reinforce the skill of using common prefixes to determine word meaning:

Esther: **Millions of years ago, a leaf of a type of fern detached.** What does “detached” mean? We have seen many words with "de"... it is a good thing we are studying "de". Detached. If we put our finger on "de", what is left?

Samuel: “Tached.”

Esther: Okay, and “tached” comes from the verb-?

Students chorus: Attach.

Esther: So what does it mean to detach a leaf?

Samuel: That it does not attach ...

Esther: Okay, it does not attach, and attach can mean put, right? Or stick. Therefore the leaf was un-

Student: Stuck.

Esther: Unstuck, [very good.]

In this exchange, the teacher explicitly drew student attention to a previously taught skill, and walked

---

**Figure 6.** Regular Estrella Classroom student moves
students through how they could identify and derive meaning from morphological information in a potentially unfamiliar word.

**Estrella Classroom Student Discourse Practices**

We found eight regular EC student moves. Their relative frequency in each class is depicted in Figure 6. The moves instantiated the following EC discourse practices: a) displaying requested information; b) showcasing connections and topical knowledge; c) procuring information; and d) responding to received information.

**Displaying requested information.** The most frequent EC student move (16%; n=110) was a vocabulary comment, where a student provided word meanings, almost always in response to a convergent question. (We counted all attempts, regardless of whether the answer was the one the teacher sought.) In this example, vocabulary comments served to display teacher-requested information:

Esther: What is a fossil, Consuela?
Consuela: It’s a skeleton?
Esther: A… It can be a skeleton, but it can be more things. Samuel?
Samuel: Footprints.
Esther: Okay, a footprint, an animal, or – Elena?
Pedro: Bones? [Bones?
Elena: An] egg.
Esther: It can be an egg. It can be– Pedro.
Pedro: I was not raising my hand.
Esther: A /p/, /p/, /p/. Pl-
Samuel: Plan[t?
Esther: Pla]nt. So, it can be a footprint, an animal, an egg, a plant that – (Esther makes the vocabulary signal for hardens, pounding fist into hand)
Students chorus: Harden s!

Esther: It hardened and turned into a – Students chorus: Sto[ne!
Esther: Sto]ne. Very good.

In this exchange, students’ successive attempts at the correct response are apparent, as is their tentativeness. In the latter part of this exchange, as the questioning moved them toward Esther’s simplified definition of the term fossil, students also began responding chorally to Esther’s convergent questions. *Choral recalls* (collective responses to convergent questions) took place regularly in the EC (9%; n=60), particularly in relation to vocabulary. Choral recall was paradigmatic of the discourse practice of displaying requested information: participating students had the same answer to display.

Students also responded to non-vocabulary-related convergent questions individually (11%: n=76). *Individual recall* was defined as individual oral participation answering a convergent question that was text-related (n=29), topic-related (n=41), or skill-related (n=6). These followed an interactional pattern similar to that of as vocabulary comments.

**Showcasing connections and topical knowledge.**

EC students frequently participated by showcasing connections and topical knowledge, mostly via comments related to personal experiences (17.4%; n=119). For example, after Tomás spontaneously declared that his mother liked bagels, several peers also shared their experiences with bagels. As in this example, students often engaged in *showcasing topic-related personal experiences* (n=85). This sharing did not involve using personal experiences to make claims about textual meaning. Less frequently, student sharing involved references to other texts (n=27), including references to movies, television, and traditional written texts. For instance, in “Fossils,” after Esther explained that minerals were smaller than plankton, Adrián asked,
“¿Planctones son los que salen en Spongebob?” (“Planktons are the things that appear in Spongebob?”) As with showcasing experiences, students seldom explicitly linked such references to the basal text being discussed.

Students also regularly made topic-related assertions (6.4%; n=44), claims that were not in response to convergent questions, but added new information or perspectives on the topic. For example, after Esther paused from reading “Fossils” to discuss the colors of amber, Adrián pointed to a bulletin board picture, saying, “Oh, Ms. Lawson, Ms. Lawson. Aí está el ámbar verde.” (“Oh, Ms. Lawson, Ms. Lawson. There’s green amber.”) Students used such assertions to present themselves as knowledgeable, but never developed them beyond the initial utterance. The teacher acknowledged topic-related assertions about half the time, generally by evaluating them and then providing explicit explanation or reading the text aloud. Few topic-related assertions drew peer responses (n=5).

Finally, students in the EC provided responses to the teacher’s familiarity questions (5.9%; n=40), or authentic questions about what they knew or had experienced related to the text or topic. For instance, during “Fossils,” Esther described to students how minerals dissolved in water. To gauge their familiarity with the term dissolve, she asked, “¿Ustedes han visto alguna vez sus papás poniendo un paquete de café o un paquete de vitaminas, o un paquete de polvo en un vaso de agua?” (“Has anyone seen your parents putting a packet of coffee, or a packet of vitamins, or a packet of powder in a glass of water?”) Students quickly indicated that they had seen this before, and Esther explained how the contents were dissolving in the water. Unlike the comments related to personal experiences or the topic, familiarity responses were always prompted by the teacher.

**Procuring information.** We found that EC students asked many authentic questions (14.5%; n=99): questions about the general topic (n=24), vocabulary (n=23), procedures (n=14), the text (n=13), and information the teacher had shared about her life (n=15). For example, while reading about characters in “Bagels” who make bread, Esther shared that another teacher at the school also made bread and noted, “Ella me dió la receta” (“She gave me the recipe”) Lorenzo immediately inquired, “¿Está bien?” (“Is it good?”) He did not secure a reply.

Frequently, students asked questions that aimed to obtain clarifying information from the teacher. For example, when contextualizing the term “coal”, Esther pointed out that the students may have seen their parents using coal for barbeques, Adrián then asked, “¿Como cuando hacen la carne asada?” (“Like when they make grilled meat?”) Esther answered, “Uh huh,” and continued reading the text. This example was typical of EC student questions: when they were answered, it was generally by the teacher (n=45). Thus, while these questions originally stemmed from the students, they largely functioned to help reinforce the teacher’s position as the authoritative voice in the classroom.

**Responding to received information.** Finally, we found that students reacted (5.7%; n=39) to the text or the discussion of the text. Sometimes these were reactions to the text being read (n=18). For instance, when Esther read a sentence aloud from “Bagels,” “Tal vez lleve bagels con semillas de sésamo o queso crema” (“Perhaps take bagels with sesame seeds or cream cheese”), the students chorused, “Mmmm.” Other times (n=21), students reacted to the topic under discussion or to the comments of the teacher or students. For example, during the “Bagels” discussion, Esther engaged students in a discussion of challah after it was referenced in the story. Before moving on to the next topic, she said,
“Tal vez les puedo llevar pan de challah porque lo venden cerca de mi casa.” (“Perhaps I can bring you some challah bread because they sell it near my house”), to which students responded, “Yay”.

Mundo Classroom Teacher Discourse Practices

We now turn to the teacher discourses moves and practices in the Mundo Classroom, the class initially identified as having proportionally less teacher talk and more student talk. We identified 10 regular teacher moves in the MC. Their relative frequency is depicted in Figure 7. These moves instantiated three MC discourse practices: a) building windows into student textual thinking; and b) inviting students to consider and respond to one another’s textual thinking; and c) signaling and inviting listening.

Building windows into student textual thinking.

As we have argued above, in order for intellectual wrestling to take place, it is imperative that children “see into” the interpretations of others. We believe that teachers can discursively build windows (cf. Bishop, 1990) that help students to observe how other students are interpreting text and how they reached those interpretations. Several MC teacher moves allowed the teacher and students to better understand how fellow students were making sense of the text. Max regularly asked text-related authentic questions (6.0%; n=32), that is, open-ended questions posed with no intended answer (Nystrand, 1997). For example, when Ramón discussed a fish in the “Fossils” diagram sequence, Max wanted to know, “¿Todavía estaba vivo allí?” (“Was it still alive there?”) Several students said the fish was already dead, but Ramón insisted it was still alive; this sparked further discussion.

Max also posed convergent questions (6.0%; n=32) on a regular basis, about as frequently as he did authentic questions. When convergent textual questions did occur, however, they were contingent on points raised by students and were used to determine whether students shared a common understanding of a topic. In one such instance, students were discussing the last line from the “Bagels” text where the narrator, when asked why he chose to bring jalapeño bagels to school, tells his parents, “Because I’m a mix of you two.” One student offered the following:

Rosita: Like his father is from Yiddish [sic].
Unidentified student: Perhaps like (inaudible).
Max: And the mother, where is the mom from?
Unidentified student: From New York.
Unidentified student: New York.
Max: The mom is from New York?
Several students: No.
Marisol: No, the dad.
Unidentified Student: The mom.

In this exchange, Max used a convergent question about where the mother was from to determine if there was general agreement. But when students offered conflicting responses, Max did not evaluate them. When the session drew to a close four minutes later, students were still expressing disagreement. Thus, what began as a convergent question facilitated rather than curtailed divergent responses and further surfacing of student thinking. Indeed, MC students’ answers to a convergent question were usually (n=29) followed by further talk about the topic already under discussion.

Max also used uptake (13.7%; n=73) more frequently than his combined use of authentic and divergent questions. Uptake was a discourse move that asked a student to elaborate an idea (Collins, 1982), for example:

Dalia: Rafael said that (inaudible) the fish is still alive (inaudible).
Max: What fish is alive?
Dalia: This one (indicates the smaller fish).

Max used uptake to ask students to explain a particular point or to broadly request more information, such as, “Díame más.” (“Tell me more.”) All of Max’s uptakes were open-ended questions. In addition, Max’s most frequent move was posing clarification questions (17.4%; n=93). He restated what the student had said with interrogatory intonation, checked about what page the student was discussing, or otherwise solicited feedback on what point had been made, for example, “¿Qué dijiste tú?” (“What did you say?”)

Inviting students to consider and respond to one another’s textual thinking. The MC teacher regularly invited students to comment on peers’ ideas and questions, a move called invitation (6.0%; n=32), for example, “Están de acuerdo con lo que dijo Emilia?” (“Do you agree with what Emilia said?”)

Half of Max’s invitations asked students to discuss a peer’s idea (n=16); the other half solicited peer responses after student-posed questions. Moreover, when several students’ ideas were in play, he often pointed that out; we coded such utterances as distinguishing comments (4.3%; n=23). For example, after students disagreed about the meaning of “cultura” (culture), Max said, “Entonces tenemos dos ideas, que, que cultura significa una panadería, o lo que dijo Emilia, algo de tu casa.” (“So we have two ideas, that, that, culture means a bakery, or what Emilia said, it’s something from your home.”) He also made references to previous student comments (7.9%; n=42), as in this exchange:

Max: Someone was saying that, earlier, there were seas and now there are deserts.
Someone mentioned that the water dried up.
Student: Dalia.
Max: So, it stopped raining, and Ramón said, he was saying that there was a storm, and the storm swept away all the dinosaurs.

Finally, Max asked students to attend to particular places in the text that other students were drawing upon, comments orienting students to consider text used by peers (4.1%; n=22). For example, after Iris spontaneously read from the text, Max said, “Iris, tú leíste algo. ¿Pueden ir todos a la página 27?” (“Iris, you read something. Can you all go to page 27?”)

Signaling and inviting listening. The MC teacher used two discourse moves to signal and invite listening. First, he regularly made brief non-evaluative responses (5.4%; n=29) to students’
comments, such as “uh-huh” and “okay.” This signaled to students that he was listening and understood what had been said but did not provide any evaluation of the comment. Second, Max regularly provided repetitions of students’ comments (11.8%; n=63) verbatim or near verbatim. The repeating of student comments appeared to serve two purposes: First, like “uh-huh,” it signaled to students that Max understood what a student had just said without evaluating the comment. Second, it provided other students with an additional opportunity to hear their peer’s comment. By inviting students to listen to the comment again, Max reinforced his expectation that students listen carefully and respond to each other’s textual ideas.

Max’s use of repetition to signal and invite listening is evident in the “Bagels” discussion. When Ramón argued that the boy in the story likes bagels but not lox, Max replied with “Okay,” and repeated near verbatim Ramón’s assertion. Then Valentín, without prompting by the teacher, signaled agreement with Ramón’s assertion, and directed the class to supporting evidence found in the text, saying, “Porque aquí dice…. [En página] 373... (“Because it says here…. [On page] 373...”) Max then directed all the students to examine page 373 to see if they agreed with Ramón and Valentín’s assertions.

Mundo Classroom Student Discourse Practices

We found six regular student moves in the Mundo Classroom. Their relative raw frequency in each class is depicted in Figure 8. The moves themselves instantiated the following MC discourse practices: a) making textual claims; b) monitoring and responding to peer claims; and c) making use of the text in the service of claims.

Making textual claims. Perhaps the quintessential MC student move was a textual assertion (28.3%; n=323), a claim that added new information or understandings about the text and was not in response to a convergent question. Sometimes students made textual assertions by paraphrasing the text, while at other times they grappled with larger issues raised by the text, often across multiple turns at talk. For example, after Emilia proposed that the dinosaurs had died underground because ground had piled on top of them, just like fish in a diagram in the story, Alfredo disagreed:

Alfredo: I didn’t agree with her because how can they go underground if they’re supposed to be buried?
Rosita: So, because, so, the animals, like the fish that is underneath there, because the, the fish, like, because, because it went down

![Regular Mundo Classroom Student Moves](image-url)
because the earth is making it go down.
Rogelia: But the earth is pushing it.
Rosita: Uh huh.
Rogelia: And then it does it more and more and more. (Makes a pushing motion with hands.)
Hector: (Inaudible).
Max: Hector, I can’t hear you. Louder.
Hector: Like, ah. In this page, um, here first it sinks, and then the earth comes up, and then more and more earth, and then it makes a fossil.

Alfredo’s textual claim contested Emilia’s idea about what was happening in the text; he did not think her idea plausible, and explained why. Rosita explained and described what she thought was going on in the pictured diagram (which showed four frames with a fish successively becoming more buried) to explain to Alfredo why the idea of dinosaurs being buried was more plausible than he thought. Hector, too, drew on the image to speculate about how fossilization, described and pictured in the text, happened as he interpreted it. Rosita, Rogelia, and Hector each contributed new textual information, but (as was typical in the MC) there was also continuity across their different utterances as they examined each other’s ideas.

Making use of the text in the service of claims. Not all textual assertions made by students directly referenced the text, but many did so. MC students often drew on the text in explicit ways in order to defend their claims to peers, generally without any teacher prompting. Frequently, we observed students making textual citations (9.0%; n=94), when they directly quoted (n=64) or paraphrased (n=30) written text in the service of a textual point/question. For example, when the class was discussing Marisol’s question about why the “Bagels” narrator looked unhappy, Dalia pointed out: “Aquí dice, El lox sabe a pescado. Prefer-, prefiero la mermelada. Por eso.” (“It says here, Lox tastes like fish. I pre-, prefer jam. That’s why.”)

MC students also used pictures to bolster their textual assertions. Unprompted references to illustrations (4.5%; n=47) typically functioned much the same way as references to words: they provided evidence for textual assertions under discussion (n=40). For instance, in “Fossils,” the students debated how dinosaur fossils ended up underground, and Hector used the illustrations to support his opinion, saying, “En esta página, um, aquí primero se hunde, y luego se le va subiendo tierra, y luego más tierra y luego más tierra, y ya se hacen un fossil.” (“On this page, um, here first it sinks, and then the earth rises up, and then more and more earth, and then a fossil is made.”) Finally, another way in which MC students used the text to support a claim was by sharing text location information (6.6%; n=69), defined either as providing a specific page number or as saying “Aquí dice” (“It says here”) without teacher prompting.

Monitoring and responding to peer claims. MC students monitored and responded to each other’s claims, for example, through concurrence (8.0%; n=84), where a student agreed with a peer’s textual claim (i.e. “Uh-huh.”). We identified more instances of position-taking (17.6%; n = 184), defined as either voicing a disagreement about a textual idea, or weighing in on a disagreement already on the table. When position-taking occurred, multiple students usually weighed in. For example, Rosita’s assertion that the “Bagels” narrator brought both bagels and “monkey bars” to school elicited vehement position-taking:
Table 2. Discourse Practices Overview

<table>
<thead>
<tr>
<th>Teacher discourse practices</th>
<th>Student discourse practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Monitoring and reinforcing accurate understandings</td>
<td>• Displaying requested information</td>
</tr>
<tr>
<td>• Telling</td>
<td>• Procuring information</td>
</tr>
<tr>
<td>• Referencing skills</td>
<td>• Responding to received information</td>
</tr>
<tr>
<td>• Connecting reading to life and text</td>
<td>• Showcasing connections and topical knowledge</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Estrella Classroom</th>
<th>Mundo Classroom</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Building windows into student textual thinking</td>
<td>• Making textual claims</td>
</tr>
<tr>
<td>• Inviting students to consider and respond to one another’s textual thinking</td>
<td>• Making use of the text in the service of claims</td>
</tr>
<tr>
<td>• Signaling and inviting listening</td>
<td>• Monitoring and responding to peer claims</td>
</tr>
</tbody>
</table>

Table 2 indicates, each class manifested its own distinctive set of teacher and student discourse practices, with no overlap. Even when students in the different classes shared apparently similar information about the text, they did so via different moves. For example, in the EC, Lorenzo, via individual recall, identified the ethnicity of the mom in the “Bagels” text (“¿Mexicana?”) in response to a teacher convergent question. MC students also discussed the origins of the mom, but they did so through position-taking about whether the mom was from New York; they were responsive to, and willing to contest, each other’s claims.

The individual student discourse moves, taken together, also instantiated distinctive discourse practices in each setting. While there were occasional outlier discourse moves (instances where students engaged in a move that did not fit with the predominant discourse practices of the class), the discourse practices were remarkably stable in terms of the patterns they exhibited. In the “Bagels” example above, Lorenzo displayed requested information, and indeed all EC student discourse moves...
practices were related to displaying, procuring, and responding to text-related information. MC student discourse practices, by contrast, focused on constructing textual claims and on engaging with the textual claims others were making; in their discussion about where the mom in “Bagels” was from, they were monitoring and responding to each other’s claims.

The teacher discourse practices in the EC largely aligned with ways in which monologically organized instruction is typically described (Nystrand, 1997). In keeping with other studies of prevalent instructional discourse moves (e.g., Mehan, 1982; Nystrand, 1997), the teacher posed questions to check for understanding and used evaluation as the main form of feedback. In addition, she underscored her position as authoritative. She did this through regular use of explanation to fill presumed gaps in student textual and topical knowledge, through talking about skills and through answering student questions.

Yet, it is not solely the discourse practices of the teacher that determine the degree of dialogism in instruction. For us, identifying whether the classroom discourse is relatively more monologically or dialogically organized depends on the role of the students in that discourse. In the EC, students acknowledged the teacher’s textual authority and responded to it as they engaged in the discussion (cf. Billings & Fitzgerald, 2002). Most of their talk was directed at the teacher, was offered in response to teacher questions, and was directed toward seeking to match the single textual meaning held by the teacher. While EC students raised many questions, they did so in the service of accessing the teacher’s topical knowledge and textual interpretation. There was little evidence of students struggling intellectually with one another’s textual interpretations, perhaps in part because student textual interpretations were seldom made visible.

The students appeared to accept the teacher’s word as authoritative whether or not it was internally persuasive (Bakhtin, 1981). For these reasons, we categorized the discourse in this classroom as monologically organized.

It is worth noting, however, that at least one EC student discourse practice, showcasing connections and topical knowledge, did not neatly fit on either end of a monologic/dialogic instructional continuum. On the one hand, this discourse practice was a way for students to relate to the text through the prism of their own experiences and knowledge. The showcasing of their own connections took students somewhat afield from discussing the text at hand, but such showcasing was a legitimized way for students to share ideas that were original (in contrast to, for example, seeking to reproduce teacher interpretations). On the other hand, we saw students frequently utter their connections with a questioning intonation, apparently to secure teacher validation (e.g., “¿Planctones son los que salen en Spongebob?” “Planktons are the things that appear in Spongebob?”). In practice, then, eliciting students’ personal experiences frequently served as another way in which the teacher sought to activate background knowledge that could eventually lead students to the text’s presumed single meaning.

The MC provided a striking contrast. We located evidence of non-teleological dialogue (Burbules, 1993) where meaning emerged through struggle among multiple voices; such struggle characterizes dialogic pedagogy. Importantly, MC teacher discourse practices paved the way for multiple, contested meanings for the text to become public. In fact, the teacher seldom weighed in with his own textual understandings, either via telling or evaluation, even when the students’ articulated textual understandings were off the beaten track or could be considered incorrect. The text could, and did, mean different things to different students, and
these interpretations had the opportunity to surface in part because the teacher built windows into student textual thinking. Beyond simply surfacing multiple understandings, he also signaled that student textual understandings were important matters worth heeding and further examining. Student textual interpretations could, and should, be explored by other interlocutors, and the teacher consistently spoke up in order to invite other students to consider and respond to what they had heard.

MC students regularly made assertions about what they thought the text meant, and they elaborated on their points both in response to teacher uptake and what they heard from peers. Although students exercised considerable authority to voice textual interpretations, peers frequently contested these interpretations. Throughout the discussions, students sought to persuade others of their positions and appeared to expect to be internally persuaded before accepting a peer idea as true. Students responded to each other’s questions and ideas directly, and the discussion prompted by individual student ideas typically extended across many turns at talk, often with minimal talk from the teacher. Finally, while our definition of dialogic pedagogy does not directly depend on students drawing on textual evidence, the struggle to be internally persuaded/persuasive appeared to stimulate students to directly link their textual assertions to evidence they found in the words and the pictures.

While the intellectual climate of these two classrooms differed greatly, in each setting, we found considerable reciprocity between what the students and their teachers were doing. In some cases, that reciprocity was indeed visible at the individual move level, echoing the work of others who have found that students produce predictable forms of language in response to specific talk moves by the teacher. It is not surprising, for example, that students produced individual recalls in a class where initiation (via convergent question) and evaluation were integral to teacher discourse (cf. Cazden, 1988; Mehan, 1982). Furthermore, the fact that students contributed more textual assertions in the class where the teacher pursued more uptake is also in line with previous findings (e.g., Boyd & Rubin, 2006; Santori, 2011).

However, our analysis also reveals that differences in student participation patterns in the two classes cannot solely be attributed to individual teacher discourse moves. For example, there were virtually no instances of the EC teacher asking students to discuss textual and personal experiences (beyond the simple yes/no of familiarity questions). Nonetheless, students regularly shared experiences, both personal and those linked to familiar texts. Students also frequently asked authentic questions intended to procure information—a move almost never prompted by the teacher.

Analogously, the MC teacher did not regularly ask students to substantiate their assertions with textual evidence, and yet students integrated references to the words and pictures as they built their arguments. Moreover, students’ references to each other’s ideas, and their work to position themselves relative to other students’ positions, far outpaced the frequency with which the teacher prompted these kinds of moves; the same could be said for their overall use of textual assertions.

One way in which teachers may have set the stage for reciprocity in moves was through undertaking similar moves themselves, or modeling (Cazden, 1992). For example, the EC teacher shared her own experiences regularly, potentially providing both a model and implicit permission for students to do the same. The MC teacher made regular reference to students’ ideas by attributing them to particular
students, potentially spurring students to do likewise.

But not all variation in the nature of student talk in the two classes can be explained by seeing it as a response to teacher utterances at the level of the discourse move. For example, EC students’ frequent authentic questions were neither prompted for nor modeled by the teacher. We believe the broader functions that language played in each setting were also at work in directing students toward particular forms of talk. In a class where the teacher regularly engaged in telling and where monitoring for accuracy was a key instructional dimension, she positioned herself as being chiefly responsible for imparting and evaluating knowledge (cf. Nystrand, 1997) as the primary knower (Berry, 1981). In such an intellectual environment, authentic questions directed at the teacher functioned as bids to tap into the teacher’s knowledge and help students align their understandings with those of the teacher.

The student discourse practice of procuring information thus reciprocated (Nystrand, 1997) the teacher’s discourse practices. This was true even when the teacher did not directly prompt students to procure information. And such reciprocity, too, suggests that the process of shaping classroom discourse is not unidirectional. When students posed questions to procure information, they also created conditions under which teacher telling was a reasonable (albeit not the only possible) response.

In the MC, even though the teacher spent little time explicitly directing students to provide textual evidence, his interest in their thinking provided an occasion where turning to the text, and describing one’s ideas in terms of the text became sensible and appropriate. Moreover, his interest in highlighting students’ positions provided an additional reason for students to situate their assertions in the text, since rooting ideas in the text potentially made those ideas more acceptable to peers.

There is also evidence suggesting that students’ discourse practices shaped one another’s, most visibly in the MC, where one student’s disagreement with another often spurred additional students to monitor and respond to peer claims on disputed topics. Even EC students were responsive to one another’s utterances when, for example, they responded to other students’ predictions with predictions of their own.

That said, as others have suggested (e.g., Billings & Fitzgerald, 2002), we believe that teacher language may be particularly pivotal in shaping classroom discourse. We propose that the ways in which teachers guide classroom discourse, though enacted turn by turn, gradually develop across utterance and time, in part through the larger discourse practices in play (cf. Nystrand & Graff, 2001). Teachers’ purposes for contributing to the discussion—evident in the ways their discourse functions—directly shape students’ purposes.
Indeed, our findings suggest a mechanism to explain why the teacher’s stance may still be accurately described as dialogic, even when individual teacher discourse moves do not have a dialogic form (Boyd & Rubin, 2006). It is not just that individual moves can function in different ways, as Boyd has previously argued, but also that the function of individual discourse moves may be at least partially contingent upon the larger discourse practices that assume importance in a classroom context. Thus, we argue that individual examples of apparently anomalous discourse forms (e.g., uptake in a setting characterized by monologic pedagogy) should not be used to conclude that form is irrelevant to teacher stance. Rather, we should look at how varied discourse forms, working collectively across time, coalesce to establish and maintain discourse practices that sustain (or inhibit) dialogic discourse. In a nutshell, we see discourse practices as a key link, heretofore under-theorized in the research literature, between dialogic stance (Boyd & Markarian, 2015) and discourse form.

Limitations and Recommendations for Future Research

Our study is modest in scope—we examined the discourse in two contrasting classrooms during a single type of activity. We have established that reciprocity of student and teacher discourse practices can help explain the paradoxical role of individual discourse moves. However, more research is needed to establish how discourse practices might function across longer timescales (cf. Mercer, 2008), such as a school day or school year. Additional research might also help unpack whether discourse practices within dialogically organized classrooms are relatively stable within a particular type of activity, such as text discussions, or if there is more variation in discourse practices that function dialogically depending on the setting, age of students, and so forth.

Implications

Nonetheless, our findings do provide evidence that discourse moves, taken together, can constitute durable discourse practices that function in ways that do not neatly map onto individual discourse move sequences such as I-R-E exchanges (Cazden, 1988; Mehan, 1982). We believe that this line of research could prove generative for other scholars of classroom discourse interested in how teachers establish and maintain a dialogic stance toward their teaching (e.g., Boyd & Markarian, 2015; O’Connor & Michaels, 2007). Indeed, we encourage researchers who have rightly pushed back against a monolithic view of teacher discourse move type as the definitive marker of dialogic discourse to examine whether and how their own data might be explained in terms of discourse practices. For example, Boyd and Rubin (2006) found that convergent questions could produce extended student talk; we wonder if a re-examination of their data could reveal that those convergent questions, like those in the MC, are contributing at the level of the discourse practice in ways that are overlooked when the form of the discourse move is emphasized.

We also believe that professional development and pre-service teacher education aimed at fostering teacher learning of dialogic pedagogy may do well to go beyond urging pre-service or practicing teachers to adopt certain discourse moves associated with dialogically organized instruction, such as uptake or authentic questions (Caughlan, Juzwik, Borsheim-Black, Kelly, & Fine, 2013). It also may be beneficial to support teachers in learning to identify larger student and teacher discourse practices and in attending to their fundamental reciprocity. In order to support teachers in attending to patterns in teacher and student language, teachers could watch clips of their instruction and use a simple coding scheme to identify evidence of discourse practices in the classroom. Teacher educators and school-based
coaches could then help teachers reflect on the kinds of discourse practices they most value and take steps to support them in developing these in their discussions.

We argue, then, that the primary pedagogical question that should shape attention to classroom discourse is not so much “when to tell” (Lobato, Clarke, Ellis, 2005) or other attention to discourse at the move level, but rather what kinds of student discourse practices to invite, and how teacher discourse practices can best do that kind of inviting. Given the relatively small number of discourse practices in each class and the substantial reciprocity between teacher and student discourse practices, there are likely to be trade-offs, no matter what choice teachers make. One teacher is unlikely to be able to “do it all” in fostering student discourse practices, particularly within a single classroom activity type, such as text discussion. Teachers who regularly function as information providers during text discussions may position students well to be procurers of information even as they short-circuit students’ focus on each other’s ideas. Teachers who abdicate textual authority and make space for students to explore other students’ ideas may make students less likely to verbally procure textual information from them, even as they open opportunities for students to make textual assertions and disagree with one another.

While both the EC and the MC practices are valid forms of classroom interaction, we see the EC student practices, which focused on displaying and procuring information, as more limited and limiting. We think that the dialogic discourse practices undertaken by MC students in this study—making textual claims, monitoring and responding to peer claims, and making use of the text in the service of claims—represent more meaningful, agentive engagement with text and with others. For this reason, we suggest that teachers seek to organize their own discourse practices during classroom text discussions in ways that elicit these kinds of dialogic student discourse practices, keeping in mind that reciprocity goes beyond individual moves. If and when a valued student dialogic discourse practice does not appear to have a foothold in a classroom, then a shift in larger teacher discourse practices may well be the needed lever to push the class toward new and more dialogic ways of making meaning together.
References


### Appendix A

**Transcript Conventions**

<table>
<thead>
<tr>
<th>Convention</th>
<th>Signification</th>
</tr>
</thead>
<tbody>
<tr>
<td>:</td>
<td>Extension of a sound</td>
</tr>
<tr>
<td>-</td>
<td>Abrupt cut-off or unfinished word</td>
</tr>
<tr>
<td>...</td>
<td>Trailing speech</td>
</tr>
<tr>
<td>(.)</td>
<td>A short but noticeable pause</td>
</tr>
<tr>
<td>/p/</td>
<td>Letter sound</td>
</tr>
<tr>
<td><strong>Underlined text</strong></td>
<td>Emphasis</td>
</tr>
<tr>
<td><strong>Bold</strong></td>
<td>Text read aloud</td>
</tr>
<tr>
<td>[ ]</td>
<td>Overlapping talk</td>
</tr>
<tr>
<td>()</td>
<td>Contextual information</td>
</tr>
</tbody>
</table>
Appendix B

Codes for Teacher Talk and Student Talk

All utterances should be coded. If a teacher utterance is interrupted by a student utterance, each half should be coded separately to the extent possible (if there is not enough info in an incomplete utterance to be able to guess at what was being done by the teacher, it should be coded as “Other”). Multiple codes may apply to the same utterance.

**Codes for Teacher Talk**

<table>
<thead>
<tr>
<th>CODE</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RESPONDING TO STUDENTS</strong></td>
<td></td>
</tr>
<tr>
<td>Evaluation</td>
<td>Teacher ratifies or rejects a student interpretation of the text (or word meaning, or related comprehension skill).</td>
</tr>
<tr>
<td>Valuing Contribution</td>
<td>Teacher signals that a student comment is valued but does not provide ratification or rejection of it.</td>
</tr>
<tr>
<td>Signals Understanding with brief non-evaluative comment</td>
<td>Teacher signals that s/he has understood what has been said (without evaluating it) with brief non-evaluative comment (Ok, uh-huh). Distinguished from clarification because it is not seeking confirmation/response from the student.</td>
</tr>
<tr>
<td>Signals Understanding with repetition</td>
<td>Teacher signals that s/he has understood what has been said (without evaluating it) by repeating verbatim or near-verbatim Distinguished from clarification because it is not seeking confirmation/response from the student.</td>
</tr>
<tr>
<td>Answering a vocabulary question</td>
<td>Teacher answers a student’s vocabulary related question.</td>
</tr>
<tr>
<td>Answering a text-related question</td>
<td>Teacher answers a student’s text related question (excluding vocabulary).</td>
</tr>
<tr>
<td>Question Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Answering a procedural question</td>
<td>Teacher answers a student’s procedural question, such as what page is being read, etc.</td>
</tr>
<tr>
<td>Answering a skills question</td>
<td>Teacher answers a student’s question about a skill/strategy.</td>
</tr>
<tr>
<td>Answering a question related to the topic of discussion</td>
<td>Teacher answers a student’s question about the topic (typically this will occur pre-reading).</td>
</tr>
<tr>
<td>Answering a question about a personal experience</td>
<td>Teacher answers a students’ question about a personal experience that the teacher has shared.</td>
</tr>
<tr>
<td>Clarification request</td>
<td>Teacher restates what a student has said, or otherwise solicits their feedback on whether teacher has understood the student’s point. The utterance must be directed toward the student whose point is being clarified and should be interrogatory. In order to be a clarification request, the utterance must receive a student response. Include queries that ask student to clarify their position, such as “Tu no estás de acuerdo?” Also include requests to repeat an idea (for the benefit of other students), but not requests to repeat just because a comment wasn’t heard the first time.</td>
</tr>
<tr>
<td>Expresses confusion about an idea on the table</td>
<td>Teacher expresses lack of understanding about a student idea.</td>
</tr>
<tr>
<td>Uptake</td>
<td>Teacher requests other forms of elaboration that do not fall into the above categories.</td>
</tr>
<tr>
<td>Invitation, Vocabulary-related</td>
<td>Teacher invites other students to respond to a student’s question about word meaning.</td>
</tr>
<tr>
<td>Invitation, Student idea or question</td>
<td>Teacher invites other students to respond to a student’s question, idea (non-</td>
</tr>
<tr>
<td>Highlights Distinction between two student ideas</td>
<td>Teacher points out that two students are not saying exactly the same thing, points out difference of opinion, or summarizes several different ideas on the table.</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Page Request</td>
<td>Teacher asks a student what page he/she is referring to or a specific location on a page.</td>
</tr>
<tr>
<td>Page Direct- Contingent</td>
<td>Teacher asks or directs students to turn to a page/story/passage on the basis of a student’s contribution to the conversation.</td>
</tr>
<tr>
<td>References a student idea</td>
<td>Teacher refers back to a previously uttered student idea or student question (before the previous turn at talk). In general, the student must be named for it to count. Only include instances where the student is directly addressed (but not named) if the teacher is coming back to an idea that has been off the table Include general references to points raised by students in a previous discussion, or part of the discussion, if there is explicit signaling that the teacher is coming back to a student idea. Also include questions that reference a student idea and ask the student whose idea it was.</td>
</tr>
<tr>
<td>Language regulation</td>
<td>Teacher insists on Spanish or provides the Spanish word as a form of correcting code-switching into English. Do not include places where translations are discussed/provided that are not corrective or regulative in nature.</td>
</tr>
<tr>
<td>Deferring answering a question</td>
<td>Teacher refers answering a question by suggesting “Vamos a ver ....”, etc.</td>
</tr>
<tr>
<td>Prompting students to search the text</td>
<td>Teacher prompts students to search the text for evidence.</td>
</tr>
<tr>
<td>Requests for evidence</td>
<td>Teacher requests proof/evidence. Include evidence-oriented questions such as, “Where does it say that?” Also include statements such as, “Does the text tell us?”</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>MEANING-RELATED QUESTIONS/PROMPTS</strong></td>
<td></td>
</tr>
<tr>
<td>Vocabulary question (noncontingent)</td>
<td>Teacher poses a test question about vocabulary that no student has signaled wanting to know the meaning of.</td>
</tr>
<tr>
<td>Convergent Question, Text-related</td>
<td>Teacher asks a question to determine whether students have a convergent understanding of the events/facts in the text. Teacher poses a question/prompt in which s/he is seeking a particular answer (known to the teacher), or poses a question/prompt that attempts to establish whether a student or students share a common understanding about a facts/event in the text. Include fill-in-the-blank questions where the teacher starts a sentence and asks students to complete. Exclude instances where the teacher asks students to finish a sentence s/he is reading. Exclude vocabulary.</td>
</tr>
<tr>
<td>Convergent Question, Topic-related</td>
<td>Teacher asks a question to determine whether students have a convergent understanding on factual matters related to the topic of the text. Teacher poses a question/prompt in which s/he is seeking a particular answer (known to the teacher), or poses a question/prompt that attempts to establish whether a student or students share a common understanding about a facts/event in the text. Exclude vocabulary. This will typically involve prior knowledge questions, but could also occur during reading. Include fill-in-the-blank questions where the teacher starts a...</td>
</tr>
<tr>
<td>Question Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Convergent Question, Skill-related</td>
<td>Teacher asks a question to determine whether students have a convergent understanding of a skill, strategy, or literary device. Teacher poses a question/prompt in which s/he is seeking a particular answer (known to the teacher), or poses a question/prompt that attempts to establish whether a student or students share a common understanding about a skill, strategy, or literary device.</td>
</tr>
<tr>
<td>Convergent Question, What did peer say?</td>
<td>Teacher asks a student to repeat a different student’s point.</td>
</tr>
<tr>
<td>Request for predictions</td>
<td>Teacher asks students to make predictions about what will happen in the text.</td>
</tr>
<tr>
<td>Expresses confusion about text</td>
<td>Teacher expresses confusion about some aspect of the text.</td>
</tr>
<tr>
<td>Familiarity question seeking to establish what students know or have experienced</td>
<td>Teacher poses a question, typically soliciting a yes or no response, about whether students know something, have experienced something, etc. Include questions about whether students remember something, or heard something (including previous utterances in the conversation).</td>
</tr>
<tr>
<td>Text-related authentic question</td>
<td>Teacher asks any authentic text-related question that does not fall into the above categories. Treat questions as authentic if the question does not appear to be aimed at establishing if there is convergence of understanding, even if the question involves information related to facts/events in the text that a teacher would likely already know. Include restatements of previously stated teacher questions.</td>
</tr>
<tr>
<td>Prompt to share</td>
<td>Teacher asks a question asking students to share personal experiences.</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------------------------------------------------------------</td>
</tr>
<tr>
<td>Topic-related authentic question</td>
<td>Teacher asks an authentic question related to the topic that does not fall into the above categories. Typically, these will be questions related to prior knowledge and will occur before reading, though occasionally they may occur during reading as well. Treat questions as authentic if the teacher does not appear to be aimed at establishing if there is convergence of understanding, even if the question involves information related to facts/events in the text that a teacher would likely already know. Include restatements of previously stated teacher questions.</td>
</tr>
<tr>
<td>Soliciting suggestions for hand signals to represent vocabulary</td>
<td>Teacher asks students to suggest hand signals that will subsequently be used during reading when a vocabulary word is encountered. Or teacher asks students if they want to use a particular signal (provided by the teacher) for a word.</td>
</tr>
</tbody>
</table>

**ADDITIONAL TEACHER MOVES**

<table>
<thead>
<tr>
<th>Reading Text</th>
<th>Teacher reads text aloud.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explaining Text</td>
<td>Teacher paraphrases or explains text (excluding vocabulary, excluding answers to student questions).</td>
</tr>
<tr>
<td>Explaining Topic</td>
<td>Teacher provides background information and other information related to the text, or explaining vocabulary. (Exclude answers to student questions, as these are separately coded).</td>
</tr>
<tr>
<td>Commenting on Text or Topic</td>
<td>Teacher makes a comment that expresses an opinion or a wondering about the nature of the text, the topic, the writing, etc.</td>
</tr>
<tr>
<td>Category</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Signal</td>
<td>Teacher uses or solicits use of hand signal related to reading, or comments on student signal use.</td>
</tr>
<tr>
<td>Managing and Facilitating the conversation</td>
<td>Teacher gives directions or makes any utterance related to management of procedure/behavior, getting students to listen, reminding them of what they are supposed to and not supposed to be doing, nominating student turn-taking, asking students to be on a particular page (when it’s not contingent on a student turn), etc.</td>
</tr>
<tr>
<td>Decoding Guidance</td>
<td>Teacher offers guidance in helping students read words correctly and/or fluently.</td>
</tr>
<tr>
<td>Urging participation</td>
<td>Teachers urges the participation of more students.</td>
</tr>
<tr>
<td>Sharing experiences or connections</td>
<td>Teacher shares a personal experience or connection related to something she has experienced, read, or seen. Include connections that the teacher draws to the lives and experiences of the children. Exclude references to future events or lessons (e.g. fieldtrips).</td>
</tr>
<tr>
<td>Referencing tests and test-taking</td>
<td>Teacher mentions testing in relation to what students are doing/practicing.</td>
</tr>
<tr>
<td>Referencing or explaining a skill</td>
<td>Teacher explains, points out, or draws attention to the need for particular skill, strategy, or literary device (e.g., a simile) to be used.</td>
</tr>
<tr>
<td>Emphasize Text carries meaning</td>
<td>Teacher emphasizes that the text carries meaning.</td>
</tr>
<tr>
<td>Presents Evidence</td>
<td>Teacher presents textual or other evidence (but does not comment on the evidence) related to a matter being discussed.</td>
</tr>
</tbody>
</table>
Other

<table>
<thead>
<tr>
<th>CODE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td>Teacher makes statements that are incomplete and thus not codable, and non-text-related utterances (e.g., responses to bathroom requests, comments directed at researcher or another adult. Referencing future events such as field trips, page numbers that are noncontingent on a student utterance).</td>
</tr>
</tbody>
</table>

### Codes for Student Talk

<table>
<thead>
<tr>
<th>CODE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STUDENT QUESTIONS</strong></td>
<td></td>
</tr>
<tr>
<td>Student question about vocabulary</td>
<td>Student poses a question related to word or term meaning, or vocabulary signal.</td>
</tr>
<tr>
<td>Student question: Text-related procedural</td>
<td>Student poses other questions about the text, typically procedural; questions that are judged not to be text related (such as questions about going to the bathroom) should be coded as Other. Include questions aimed at clarifying what they are being asked by the teacher, or at clarifying teacher instructions.</td>
</tr>
<tr>
<td>Student challenge</td>
<td>Student poses a challenge to another student’s position and requests a response.</td>
</tr>
<tr>
<td>Student authentic question</td>
<td>Students asks other authentic question posed about the text or text-related topic (except procedural, vocabulary, evidence, and challenge questions).</td>
</tr>
<tr>
<td><strong>STUDENTS SHARING KNOWLEDGE AND UNDERSTANDINGS</strong></td>
<td></td>
</tr>
<tr>
<td>Student Recall</td>
<td>Student provides a requested word or phrase in response to a teacher convergent question. Includes responses to recall questions aimed at assessing prior knowledge, skills, strategies, or literary devices.</td>
</tr>
<tr>
<td>Choral Response Recall</td>
<td>Students as a group provide requested word or phrase for test question related to text or topic. Includes fill-in-the-</td>
</tr>
<tr>
<td><strong>blank-type questions and the prompted use of vocabulary hand signals. Do not include choral reading.</strong></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td></td>
</tr>
<tr>
<td><strong>Student Vocabulary</strong></td>
<td>Student provides a definition or information about a word’s meaning. Also include any instances where a student initiate or suggests a hand signal related to vocabulary (but not instances where the students are using the hand signal when prompted or signaled to do so).</td>
</tr>
<tr>
<td><strong>Student Prediction</strong></td>
<td>Student predicts about what will happen in the text.</td>
</tr>
<tr>
<td><strong>Answering authentic questions about what you know or have experienced</strong></td>
<td>Student responds to a teacher’s authentic question seeking to establish what students know or have experienced.</td>
</tr>
<tr>
<td><strong>Student Textual Assertion</strong></td>
<td>Student makes a claim about the text that is not in response to a recall question. (Must contribute some propositional information beyond “I know,” or “I agree,” etc.) Exclude predictions.</td>
</tr>
<tr>
<td><strong>Student Topical Assertion</strong></td>
<td>Students makes a claim but is not a claim about the text or related to an argument/claim being made about the text. Typically, such assertions will take place before the text is read (students sharing background knowledge about whales, for example), though there may occasionally be examples of such an utterance during the reading and discussion of the text.</td>
</tr>
<tr>
<td><strong>Sharing experiences and connections</strong></td>
<td>Student shares experiences and information they appear to perceive as salient to the topic or text, drawn from their personal experience or outside sources (e.g., I saw on the computer that…., I saw in a movie that…).</td>
</tr>
<tr>
<td><strong>I don’t know</strong></td>
<td>Student indicates s/he is not sure or does not know something.</td>
</tr>
<tr>
<td><strong>Metatextual assertion or comment</strong></td>
<td>Student makes a comment about how texts, in general, work, or about genre.</td>
</tr>
<tr>
<td><strong>STAKING, MONITORING, AND CHALLENGING CLAIMS</strong></td>
<td><strong>Concurring Opinion</strong></td>
</tr>
<tr>
<td>Activity Description</td>
<td>Text</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| a signal word, e.g., Ajá or Sí. Or it can be a confirmatory repetition of another student’s utterance. | Position-Taking  
Student makes a statement that aligns in agreement or disagreement after an idea has been challenged or a student initially proposes a dissenting view. Must include a signal word such as Ajá, Sí, No, I agree, I disagree, But, etc. Or it can be a confirmatory repetition of someone else’s position, if disagreement is on the table. |
<p>| Student explicitly references the idea of another student (must be named or addressed) or attributes an idea to another student speaker. Also include any instances where students deny attribution on an idea that has been claimed (e.g., You didn’t say that). | Referencing or attributing a peer idea |
| Student explicitly signals that s/he has changed his/her mind. | Student changes mind |
| Student explicitly that an idea does or doesn’t belong to oneself. Or an explicit reassertion of a previous point, e.g., “Yo dije” or “Yo no dije.” | Claiming or disowning an idea |
| Student confirms a position related to an idea on the table. This typically happens in response to a clarifying question by the teacher. | Confirming a position |
| <strong>READING FROM AND DRAWING ON THE TEXT</strong> | |
| Student references an illustration, unprompted | Student references or draws attention to an illustration. This should be done without a specific prompt from the teacher. (The teacher might still be asking the student a question like “Tell me more”, but should not be asking the student about the illustration.) |
| Student references an illustration, prompted | Student references or draws attention to an illustration after the teacher draws the student’s attention to the illustration or poses a question about the illustration. |
| Student references an illustration, student prompted | Student references or draws attention to an illustration after another student draws the student’s attention to the illustration, or poses a question about that illustration. |</p>
<table>
<thead>
<tr>
<th>Student Reads from or paraphrases Text in the service of a claim unprompted</th>
<th>The student reads from or paraphrases the text in the service of an assertion/question without being specifically asked/prompted to do so by the teacher or by another student. (The teacher might have asked for more info in a general way, just not in a way that directs the student to use textual evidence.) The text must be used in the service of some other point the student is making or question that is being raised. The point/question need not be explicitly stated so long as it is apparent that the text being read is being referenced for such a purpose with explicit reference to the text (e.g., “Dice que…”).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Reads from or paraphrases Text in the service of a claim when asked to do so by the teacher</td>
<td>Student reads from or paraphrases the text in the service of an assertion/question when specifically asked/prompted to do so by the teacher. The text must be used in the service of some other point the student is making or question that is being raised, though that point/question need not be explicitly stated so long as it is apparent that the text being read is being referenced for such a purpose.</td>
</tr>
<tr>
<td>Student Reads from or paraphrases Text in the service of a claim when asked to do so by another student</td>
<td>The student reads from or paraphrases the text in the service of an assertion/question when specifically asked/prompted to do so by another student. The text must be used in the service of some other point the student is making or question that is being raised, though that point/question need not be explicitly stated so long as it is apparent that the text being read is being referenced for such a purpose.</td>
</tr>
<tr>
<td>Student makes a general claim that the text supports an idea</td>
<td>A general assertion that the text (or another related written text) supports or disqualifies an idea. Add child code indicate whether student-prompted, teacher-prompted, or unprompted.</td>
</tr>
<tr>
<td>Student asserts that the text does not provide the information being discussed</td>
<td>A general assertion that something is NOT specified in the text. Add child code indicate whether student-prompted, teacher-prompted, or unprompted.</td>
</tr>
<tr>
<td>Identifying text location, unprompted</td>
<td>Referencing a page number or locating a specific place in the text without prompting.</td>
</tr>
<tr>
<td>Identifying text location, teacher prompted</td>
<td>Referencing a page number or locating a specific place in the text when prompted by the teacher.</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Identifying text location, student prompted</td>
<td>Referencing a page number or locating a specific place in the text when prompted by another student.</td>
</tr>
<tr>
<td>Student Reading- Teacher Prompted</td>
<td>Student reads the text when prompted to do so by the teacher. Do not include instances where the text is being used in the service of a claim or question about the text.</td>
</tr>
<tr>
<td>Choral Reading</td>
<td>Include choral reading and choral “fill-in-the-blank” reading.</td>
</tr>
</tbody>
</table>

**ADDITIONAL STUDENT MOVES**

<table>
<thead>
<tr>
<th>Bidding to have a turn at talk</th>
<th>When a student solicits a chance to talk in the conversation. Do not include bids to read.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Reaction</td>
<td>Students show a reaction, emotive response, or positive/negative evaluation related to something that has happened in the text or is under discussion related to the text-related topic. Include uttered opinions about the text or events in the text.</td>
</tr>
<tr>
<td>Student corrects teacher on procedure or language</td>
<td>Student corrects a teacher’s pronunciation, spelling, grammar, or procedural detail.</td>
</tr>
<tr>
<td>Student corrects teacher on topical information</td>
<td>Student corrects a teacher on a matter related to the topic that s/he has brought up.</td>
</tr>
<tr>
<td>Other</td>
<td>“Oh”, calling other student name, Inaudible, “Um”, Responses to procedural requests, jokes, correcting another student, commenting on another student’s participation or correcting their pronunciation of a word, bids to read, comment on the nature/quantity of another student’s participation, “No puedo ver,” “Huh?”, assertions about what is being talked about such as “Ese no es el problema”, repeating a teacher utterance, sound effects.</td>
</tr>
</tbody>
</table>
Appendix C

Original Spanish dialogue for transcript excerpts

The following are the original excerpts of Spanish dialogue that appear in translated form in the article.

Excerpt 1

Esther: ¿Cuál parte del bagel representa a su papá? Si estaban escuchando deben de saber. ¿Tomás?
Tomás: Oh, ¿los jalapeños representa [sic] a su mamá?
Esther: Los jalapeños representan la cultura de su mamá, ¿cómo? ¿Porque ella es ....?
Tomás: ¿Cocinera?
Miguel: Yo sé, yo sé.
Esther: Sí es cocin[era.... (Esther's tone suggests that she is looking for another answer.)
Lorenzo: [¿Mexicana?]
Esther: Sí,] pero levanta la mano.
***
Esther: What part of the bagel represents his dad? If you were listening then you should know. Tomás?
Tomás: Oh, the jalapeños represent his mother?
Esther: The jalapeños represent his mother's culture, how? Because she is ...?
Tomás: A cook?
Miguel: I know, I know.
Esther: Yes she is a [cook ... (Esther's tone suggests that she is looking for another answer.)
Lorenzo: [Mexican?]
Esther: Yes,] but raise your hand

Excerpt 2

Rosita: Como su papá es de yiddish [sic].
Unidentified student: Tal vez como (inaudible).
Max: Y ¿la mamá, de dónde es la mamá?
Unidentified student: De Nueva York.
Unidentified student: Nueva York.
Max: ¿La mamá es de Nueva York?
Several students: No.

Marisol: No, el papá.

Unidentified student: La mamá.

***

Rosita: Like his father is from Yiddish [sic].
Unidentified student: Perhaps like (inaudible).
Max: And the mother, where is the mom from?
Unidentified student: From New York.
Unidentified student: New York.
Max: The mom is from New York?
Several students: No.
Marisol: No, the dad.
Unidentified Student: The mom.

Excerpt 3

Esther: Cuando el pez grande murió se hundió en el lodo del fondo del mar. Este es el dibujo uno. El pez se murió y se hundió en el fondo del mar. Lentamente se descompusieron sus partes blandas. Es el dibujo dos. ¿Qué quiere decir “descompusieron”? ¿Quién me puede ayudar con esa palabra difícil? Samuel.

Samuel: ¿Qué se, que se estaban yendo a todas partes los huesos?

Esther: Exactamente, muy bien.

Consuela: [¡El pez, el pez, aquí está! (Inaudible)]

Esther: [Sus partes blandas,] no los huesos, pero sus partes suaves como su piel, sus um, ¿se dice escalones? Sus escamas, ¿verdad? Sus escamas... Todas las partes suaves se descompusieron. Se fueron flotando en el agua como dijo Samuel. Pero sus espinas, sus huesos, sus partes más duras se quedaron.

***

Esther: When the big fish died it sank into the mud at the bottom of the sea. This is the first picture. The fish died and sank to the bottom of the sea. Slowly its soft parts decayed. This is the second picture. What does "decomposed" mean? Who can help me with that big word? Samuel.
Samuel: That the bones were going all over the place?
Esther: Exactly, very good.
Consuela: [The fish, the fish, here it is! (Inaudible)]
Esther: [Their soft parts, not the] bones but soft parts like their skin, um, do we say “escalones”? Their
scales, right? Their scales . . . all the soft parts decomposed. They were floating in the water, like Samuel said. **But their spines, their bones, their harder parts remained.**

**Excerpt 4**

Dalia: Rafael dice que (inaudible) el pescado todavía está vivo.

Max: ¿Qué pescado está vivo?

Dalia: Este (indicates the smaller fish). Rafael dice que está vivo.

***

Dalia: Rafael said that (inaudible) the fish is still alive.

Max: What fish is alive?

Dalia: This one (indicates the smaller fish). Rafael says that it’s alive.

**Excerpt 5**

Max: Alguien estaba diciendo de que antes hubo mares y ahora son desiertos. Um. Alguien mencionó que el agua se secó.

Student: Dalia.

Max: Entonces, um, dejó de llover, y Ramón dijo, estaba diciendo, que había una tormenta, y la tormenta se llevó a todos los dinosaurios.

***

Max: Someone was saying that, earlier, there were seas and now there are deserts. Um. Someone mentioned that the water dried up.

Student: Dalia.

Max: So, um, it stopped raining, and Ramón said, he was saying that there was a storm, and the storm swept away all the dinosaurs.

**Excerpt 6**

Esther: **Hace millones de años se desprendió una hoja de un tipo de helecho.** ¿Qué quiere decir “desprendió?” Hemos visto muchas palabras con “des”, qué bueno qué estamos estudiando “des”.

Desprendió. Si ponemos nuestro dedo encima de “des”, ¿qué queda?

Samuel: Prendió.

Esther: Okay, y prendió viene del verbo –
Students chorus: ¡Prender!

Esther: Prender. Entonces, ¿Qué quiere decir desprendió una hoja?

Samuel: Qué no se, prende...

Esther: Okay, que no se prende, y prende puede decir poner, ¿verdad?, o pegar. Entonces, ¿la hoja se despe-?

Student: gó.

Esther: Se despegó, [muy bien.]

***

Esther: Millions of years ago, a leaf of a type of fern detached. What does "detached" mean? We have seen many words with "de" ... it is a good thing we are studying "de". Detached. If we put our finger on "de", what is left?

Samuel: “Tached.”

Esther: Okay, and “tached” comes from the verb-?

Students chorus: Attach.

Esther: So what does it mean to detach a leaf?

Samuel: That it does not attach ...

Esther: Okay, it does not attach, and attach can mean put, right? Or stick. Therefore the leaf was un-

Student: Stuck.

Esther: Unstuck, [very good.]

Excerpt 7

Esther: ¿Qué es un fósil, Consuela?

Consuela: ¿Es un esqueleto?

Esther: Salúd (to student who has sneezed). Un ... puede ser un esqueleto, pero puede ser más cosas. ¿Samuel?

Samuel: Huellas.

Esther: Okay, una huella, un animal o – ¿Elena?

Pedro: ¿Huesos? [¿Huesos?
Elena: Un] huevo.


Pedro: I was not raising my hand.

Esther: Una /p/, /p/, /p/. Pl-

Samuel: ¿Plan[ta?

Esther: Plan[t]. So, puede ser una huella, un animal, un huevo, una planta que se – (Esther makes vocabulary signal for *endurece*, pounding her fist into her hand)

Students chorus: ¡Endurece!

Esther: Endureció y se convirtió en –

Students chorus: ¡Pied[ra!

Esther: Piedra. Muy bien.

***

Esther: What is a fossil, Consuela?

Consuela: It’s a skeleton?

Esther: Bless you (to student who has sneezed.) A... It can be a skeleton, but it can be more things. Samuel?

Samuel: Footprints.

Esther: Okay, a footprint, an animal, or – Elena?

Pedro: Bones? [Bones?

Elena: An] egg.

Esther: It can be an egg. It can be– Pedro.

Pedro: I was not raising my hand.

Esther: A /p/, /p/, /p/. Pl-

Samuel: Plan[t?

Esther: Plan[t. So, it can be a footprint, an animal, an egg, a plant that – (Esther makes the vocabulary signal for *hardens*, pounding her fist into her hand)

Students chorus: Hardens!
Esther: It hardened and turned into a –

Students chorus: Sto[ne!

Esther: Sto]ne. Very good.

Excerpt 8

Max: ¿Solamente ese niño, o todos los niños?

Student: Todos los niños.

Dalia: Todos.

Student: Todos.

***

Max: Just that boy, or all the children?

Student: All of the kids.

Dalia: All of them.

Student: All of them.

Excerpt 9

Alfredo: Eh, este, yo no estaba de acuerdo con ella (points toward Emilia), porque cuando dijo que los dinosaurios se murieron debajo de la tierra, yo no estaba de acuerdo con ella porque ¿cómo se pueden ir para abajo de la tierra, si lo deben de enterrar?

Rosita: Entonces porque así, eh, ah, los animales, como el pez que está abajo acá porque la, el pez, como, porque se, porque se fué para abajo porque la tierra se está haciendo para abajo.

Rogelia: Pero la tierra lo está puchando.

Rosita: Uh huh.

Rogelia: Y luego se hace más y más y más. (Rogelia makes a motion with her hands, pushing them lower)

Hector: (Inaudible).

Max: Hector, no te oigo. Más alto.

Hector: Como, ah. En esta página, um, aquí primero se hunde, y luego se le va subiendo tierra, y luego más tierra y luego más tierra, y ya se hacen un fósil.

***
Alfredo: Uh, this, I didn’t agree with her (points toward Emilia), because when she said that the dinosaurs died underground, I didn’t agree with her because how can they go underground if they’re supposed to be buried?

Rosita: So, because, so, eh, ah, the animals, like the fish that is underneath there, because the, the fish, like, because, because it went down because the earth is making it go down.

Rogelia: But the earth is pushing it.

Rosita: Uh huh.

Rogelia: And then it does it more and more and more. (Rogelia makes a motion with her hands, pushing them lower.)

Hector: (Inaudible).

Max: Hector, I can’t hear you. Louder.

Hector: Like, ah. In this page, um, here first it sinks, and then the earth comes up, and then more and more earth, and then it makes a fossil.

Excerpt 10

Iris: Pero todos los títulos dicen lo que va a ser.

Dalia: No:, en todos los títulos no:.

Dalia: I know, pero no todos.

***

Iris: But all titles tell what it’s going to be about.

Dalia: No:, not in all the titles.

Dalia: I know, but not all.

Excerpt 11

Adrián: A lo mejor el niño se va a llevar esto (inaudible) se va a poner donas.

Noelia: No, le va a poner challah.

***

Adrián: Probably the boy is going to take this (inaudible), he’s going to take donuts.

Noelia: No, he’s going to take challah.
Excerpt 12

Dalia: No:!
Rafael: Sí.

(inaudible crosstalk)
Rafael: Aquí dice.
Dalia: I know, pero ella dijo de que se quería llevar los bagels y las barras de chango.

***
Dalia: No!
Rafael: Yes.

(Inaudible crosstalk)
Rafael: It says here.
Dalia: I know, but she said he wanted to bring the bagels and the monkey bars.