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Laura Beth Kelly  
Rhodes College, [kellyl@rhodes.edu](mailto:kellyl@rhodes.edu)

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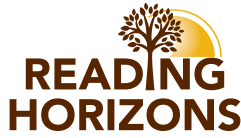
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## Bilingual Children's Talk About Informational Text: Focus on Ideas, Images, and Print

Laura Beth Kelly, Rhodes College

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### Abstract

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Current standards push for elementary students to have text-based and text-centric discussions of what they read. This study explored what bilingual third-grade students talked about during small-group text-based discussions of informational texts. The author conducted a qualitative analysis of 10 video-recorded discussions, five of books matched to students' reading levels and five of complex texts one year ahead of students' reading levels. Two groups of three students participated. All students needed additional support to read successfully at grade level. Findings show that only a quarter of student talk clearly connected to printed text. Their talk oriented toward ideas, images, and texts. Ideas and images provided an accessible entry point into the discussion for all students and in some cases facilitated interactions with text. When students did talk about text, it did not always further develop the discussion topic. For the students needing the most support to read at grade level, more talk about text and ideas occurred with difficult books, whereas matched books led to more conversations oriented toward images. Implications include the need for teachers and researchers to value responses beyond overtly text-oriented ones in discussions.

**Keywords:** small-group discussion, informational text, text-based discussion, small-group reading

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The Common Core State Standards (Council of Chief State School Officers, 2010) drive literacy instruction in most of the United States. These standards represent several shifts in literacy instruction over the local state standards that preceded them (Zwiers et al., 2013), including an emphasis on complex text at earlier grades (Hiebert & Mesmer, 2013; Strickland, 2013), a focus on close reading and citing the text to build arguments (Fisher & Frey, 2012), and increased use of informational texts (Coleman & Pimentel, 2012a).

Despite heavy emphasis on text-dependent questions driving text-based discussions during activities like close reading of complex texts (Fisher et al., 2014), questions remain about how bilingual children respond to teachers' attempts to facilitate such discussions. How does children's talk relate to text, and how does it support comprehension?

This study was part of a larger study about how bilingual third graders talked about, comprehended, read fluently, and participated in discussions of informational texts matched to their reading levels and texts one year ahead of their reading levels (Kelly, 2019a, 2019b). In this article, I explore how bilingual children grounded their talk about informational texts—whether in printed text, image, or related ideas. I contrast how this focus changed when reading difficult books versus books matched to their reading levels because much of the focus on text-based discussions emphasizes children tackling complex texts (Council of Chief State School Officers, 2010; Frey & Fisher, 2013).

Appendix A of the Common Core standards elaborates factors that contribute to text complexity, including qualitative, quantitative, and reader and task factors. Qualitative factors include structure, language and levels of meaning, and background knowledge. Reader and task factors relate to the specific students (such as their motivation) and what tasks the teacher assigns with the reading. Computers easily measure quantitative factors such as word length and frequency, sentence length, or text cohesion. Often, only these quantitative considerations factor into formulas that produce reading levels (Nelson et al., 2012). The standards make clear that teachers should not rely on one single quantitative measure, should conduct qualitative analysis that may overrule the quantitative reading level of a text, and should employ “their professional judgment, experience, and knowledge of their students and the subject” when assigning books to children (Council of Chief State School Officers, 2010, Appendix A, p. 4). However, the standards do provide “text complexity grade bands and associated Lexile levels” (Council of Chief State School Officers, 2010, Appendix A, p. 8), which give quantitative text difficulty recommendations for each grade.

The standards specify skills that students should develop; they are not a curriculum, and they leave considerable latitude for teachers to develop literacy instruction in response to their students (Halladay & Moses, 2013; Moses, Busetti-Frevert, & Pritchard, 2015). However, “such goals can never be completely separated from the methods that might be used to reach them” (Shanahan, 2014, p. 10), so it is hardly surprising that these shifts have come with hard texts and activities that foreground print, like close reading (Stillman & Anderson, 2017).

Standards and policies often apply to all students without unique consideration of the assets and needs of bilingual readers. Although some previous research documented how children talk about text, none was designed from the beginning to systematically compare how talk differs when children talk about challenging text versus texts at their reading levels. Understanding how talk changes for students learning English in response to text difficulty is a step toward understanding the impact of complex texts for students reading in a second language.

### **Theoretical Framework**

This study rested on the assumption that reading is transactional (between readers and texts and between readers; Rosenblatt, 1978) and occurs in a sociocultural context (RAND Reading Study Group, 2002) in which children collaborate to uncover and build meaning from texts. Rosenblatt (2013) explained that the thoughts the text calls up for the reader, or the “‘evocation,’ and not the text, is the object of the reader’s ‘response’ and ‘interpretation’” (p. 933). When students talk about their evocations from the text, it serves as “a powerful means of stimulating growth in reading ability” (Rosenblatt, 2013, p. 948). When the group shares “interchange about the problems of interpretation” (Rosenblatt, 2013, p. 948), they become critical interpreters. This study explored the range of children’s

responses in small-group discussions about texts of various levels and shed light on how different types of responses (not just the text-centric ones currently prioritized in standards documents) support children's participation and comprehension in text-based discussions.

### **What Do Children Talk About During Text-Based Discussions?**

This literature review details how children focus their talk about texts. Few studies specifically include bilingual students at mid-elementary age discussing informational texts. Thus, I highlight studies that included bilingual participants and/or talk about informational texts across a range of early literacy and elementary settings. I argue that children routinely talk about more than "just" text and that such talk supports their sense-making processes. The literature base has yet to address how the focus of children's talk changes for different difficulty levels of text.

### **Children Talk About More Than Just Text**

Shine and Roser (1999) documented that preschool students responded in a variety of ways to informational texts. They found that children observed and inferred from text, but also explored related ideas (not in the text) and made many comments related to illustrations. They argued that particularly for young children, "personal stories, ritualistic word games, nonsense language, and active embodiments of the text are not 'off-task' distractions, but rather the very stuff of children's response and the clues to their developing understanding" (Shine & Roser, 1999, p. 245). Tower (2002) replicated this study, and she categorized children's talk about events as events in the text (24% of their talk about events), events presented in illustrations (47%), and prior events in their own lives (29%). When she reflected on her data, Tower wondered, "Is it safe to assume that language in information books is the most (or even a) salient feature for preschool children?" (p. 58). This question may also apply to children navigating the early years of reading in a second language due to their developing English proficiency and need to rely on multiple modes (beyond printed English) to infer meaning.

Aukerman and Chambers Schuldt (2016) also found that student talk generally revolved around text (which they called linguistic content), image, and related ideas (which they called modally unspecified, meaning they did not derive from linguistic content or image in the text). In their study of bilingual second-grade whole-class literature discussions, the teacher often asked questions requesting textual evidence, yet students still responded without referencing the text. When students did use the text, they used it to build on or contest peers' ideas. However, by the end of the year, students clearly situated their talk in the text more often, and the most proficient readers did so especially. The authors speculated that students increased their use of print to make their ideas more persuasive to peers; they noted that more print use did not come about as a result of the teacher prompting for it.

I have documented how first-grade students, including emerging bilingual students, rely extensively on their own background knowledge and life experiences to move text-based discussions forward (Kelly & Moses, 2018). Such contributions do not always appear initially tied to the text, but making personal connections supports children's comprehension (Eilers & Pinkley, 2006).

These studies show that children's talk "exceeds" the print. Children draw on a variety of multimodal resources within texts (Kachorsky et al., 2017) and their own background knowledge (Kelly & Moses, 2018) to contribute to discussions.

## **Talking About Pictures Helps Students Participate and Comprehend**

Poole (2008) observed that talk differed in small-group reading among fifth graders and their teacher when children talked about informational print versus when they talked about the accompanying pictures. She found that talk about print foregrounded impersonal, fact-based, isolated bits of knowledge and often occurred with known-answer questions following the common sequence of teacher initiates, student responds, and teacher evaluates. But, when students talked about pictures, talk came to life differently. Students used more context-dependent language, talked more, initiated more turns, and used more personal language. Poole found this talk about pictures, rather than print, more academic because “students in these sequences assumed more interactional authority, spoke more often in full clauses, were more apt to speculate, and showed more engagement with the topic” (p. 401).

Auckerman et al. (2017) observed second-grade bilingual students talking about texts, and they found students engaged in collaborative talk that drew heavily from peer ideas and illustrations. Many students in their study found pictures an accessible way into talk about text, which other research has documented (Moses, 2013). Furthermore, Auckerman et al. described how the collaborative talk about print and illustrations allowed students to engage texts more difficult than their individual reading levels.

When students encounter information presented in multimodal formats, proficient reading involves more than decoding and understanding words (Moses, 2015). Indeed, authors of informational texts present their work multimodally (Lemke, 1998), and to read it proficiently young children need to read the graphics as well as the text (Duke et al., 2013). Moses (2015) studied how bilingual first graders interacted with informational texts and found that graphics helped students draw out background knowledge and access content, and facilitated learning new words as the images drove them to share their understandings with peers and revisit the text.

Belfatti (2012) conducted 25 dialogic small-group reading sessions with fourth graders about informational science texts and found that these students also relied heavily on images. She concluded that students used talk about images to support their comprehension by

raising attention to textual and conceptual confusion, staking out and making public textual and conceptual positions, substantiating claims with textual evidence, evaluating text and peer claims, engaging others in furthering their present understanding, constructing counter-arguments, and revising their ideas when new, more compelling information was presented. (p. 224)

Belfatti’s analysis showed how students collaborated to synthesize print and image in efforts to understand both better.

These studies show children drawing on graphics in text for a range of purposes. Graphics facilitated participation and deeper involvement in print for bilingual students (Aukerman et al., 2017; Moses, 2015). They led to stronger academic conversations for fifth graders (Poole, 2008), and they helped fourth graders navigate science content in dialogic discussions (Belfatti, 2012). Several studies suggested that children rely on print more (and graphics less) as they become older and thus stronger conventional readers (Aukerman & Chambers Schuldt, 2016; Roy-Charland et al., 2007).

## Talking About Ideas Helps Students Connect and Comprehend

Even when reading informational texts, children make up to 30% of their conversational turns personal stories that relate to the print and help them understand it (Heller, 2006). In one study, first- and second-grade students made connections from informational science read-alouds to other written texts, oral texts, other media, hands-on explorations from their science class, and personal life events (Pappas et al., 2004). The researchers argued for the value of this talk because it “highlights the ways participants made sense of new ideas by linking them with other experiences in and out of the classroom” (p. 162) and “enable[s] us to capture the cultural resources—the funds of knowledge—that participants bring to read aloud discussions” (p. 179). These authors also observed that although teachers welcomed students’ narrative personal responses during read-alouds, such responses decreased over time and students moved toward more “scientific-type recountings” (p. 187) when sharing connections as they learned more about scientific discourse.

López-Robertson (2012), after conducting literature discussions with second graders in a bilingual classroom, agreed that talk about personal experiences provides an important way for students to demonstrate their home knowledge relative to text. She worried that “[placing] such high importance on text-based analysis” to the extent that personal stories are not welcomed in the discussion leads to “children...viewed as deficient or lacking in the skills necessary to make meaning in the classroom” (p. 230).

In addition to sharing personal connections, talk about text leads to talk about related ideas. Belfatti (2012) observed how textual discussions about informational science texts quickly extended beyond text to related ideas as “textual inquiries become braided with scientific ones” (p. 221). Students wondered about their reading and tried to connect the science they learned with other familiar concepts.

One study approached the research question addressed here, about how student talk differs in relation to text difficulty. Boyd (2015) compared two text-based small-group discussions among fourth- and fifth-grade bilingual students. In one group, students discussed a difficult text that resulted in “few elaborated contributions,” and in the other, they read something “easy to understand and connect with, and students made elaborated contributions” (p. 373). In both lessons, students talked and the teacher asked questions roughly evenly, but in different ways. The harder text led to the teacher asking text-based questions with right answers grounded in previous contributions. Students responded with more text-based talk as they attempted to grasp the basic meaning of the text (a poem with figurative language). When students discussed the easier text, a narrative picturebook that they gave the impression of readily understanding, the teacher asked more authentic questions with multiple possible answers. Boyd classified the talk that resulted as “text-inspired” rather than “text-based” (p. 385) because students made connections and talked about related ideas rather than struggling to understand the basic ideas conveyed by the text as they had with the more difficult text.

Across these studies, students talked beyond print. This talk allowed teachers to welcome the students’ funds of knowledge (Heller, 2006; López-Robertson, 2012; Pappas et al., 2004) and support inquiry beyond the words on the page (Belfatti, 2012). These studies showed that talk tied closely to print did not always result in richer conversations (Boyd, 2015; Poole, 2008). The studies suggest value in a variety of student talk, but none of them provide a systematic comparison of how bilingual students talk about matched versus difficult texts.

Talking beyond print enabled practices, described in this section, that support comprehension. Literacy practices such as participating in a discussion, interacting with peers, sharing background knowledge, making personal connections, and analyzing graphics all improve children’s comprehension (Duke et al., 2013; Echevarria et al., 2016; Eilers & Pinkley, 2006; Fuchs & Fuchs, 2005; Mayer, 2012; Murphy et al., 2009). This study compared how bilingual students focused their talk with texts matched to their reading levels and challenging texts beyond their reading levels, something missing from the current literature.

### Methods

Six third-grade students, bilingual in English and Spanish, participated in 10 small-group readings and discussions about English informational texts with me. I visited the classroom as a researcher and pulled the participating students out of class during small-group reading time. We met daily except when the school’s schedule interfered, so both groups completed all their sessions within 4 weeks. I did not observe or impact students’ regular classroom-based literacy instruction. Their teacher reported that literacy instruction revolved around a basal reader and that small groups met to work on fluency and phonics.

A volunteer teacher nominated students to participate based on their current or former status as English learners and her judgment, based on district benchmark assessments, that they needed additional support to read at grade level. I divided the students into two groups to match texts to their reading levels (Table 1). According to an informal reading inventory that I administered (Pinnell & Fountas, 2010), Group 1 read about 1 year below grade level, and Group 2 read about 1.5 years below grade level.

Table 1  
*Participants*

	Pseudonym	Fountas and Pinnell informal reading inventory level
Group 1	Alyssa	K
	Jack	K
	Rosa	L
Group 2	Elise	H
	Gabriela	H
	Sarah	H

*Note.* On-level for these students would have been Fountas and Pinnell Level O.

Students met with me in a quiet office space in the school. Across 10 sessions, we read five books that matched students’ reading levels and five that fell one year ahead of their reading levels. I determined book levels using the Fountas and Pinnell (2005) text gradient system. I refer to text difficulty (rather than complexity) throughout the findings

and discussion to acknowledge that I did not conduct a qualitative analysis of the texts or children that would capture the full range of factors that might make these texts complex to them.

I interspersed matched and difficult books across the 10 days randomly, and I did not tell students—nor did they ever comment that they realized—that some books were harder than others. I selected all informational texts (Table 2) to avoid confounding genre with difficulty. By selecting similar topics (animals, habitats), I attempted to minimize how much students' background knowledge and interest would differ by book. When possible, I chose award-winning texts or authors (mostly from the National Science Teachers Association's list of trade books).

Table 2  
*Books Discussed (in order)*

	Matched	Difficult
Group 1	[levels J-L] <i>Penguin Chick</i> (Tatham, 2001) <i>Antarctica</i> (Cowcher, 1990) <i>Acorn to Oak Tree</i> (de la Bedoyere, 2016) <i>What Do You Do With a Tail Like This?</i> (Jenkins, 2008) <i>Pop! A Book About Bubbles</i> (Bradley, 2001)	[levels M-O] <i>Fossils</i> (Squire, 2011) <i>What If You Had Animal Hair?</i> (Markle, 2014) <i>Seed, Soil, Sun</i> (Peterson, 2012) <i>Where Are the Night Animals?</i> (Fraser, 1998) <i>Looking Closely in the Rainforest</i> (Serafini, 2010)
Group 2	[levels G-I] <i>About Fish</i> (Sill, 2017) <i>Dandelions: Stars in the Grass</i> (Posada, 2000) <i>About Birds</i> (Sill, 2013) <i>Red-Eyed Tree Frog</i> (Cowley, 2006) <i>Amazing Animals</i> (Franco, 2002)	[levels K-M] <i>Best Foot Forward</i> (Arndt, 2014) <i>What Do You Do When Something Wants to Eat You?</i> (Jenkins, 2001) <i>Cool Cars</i> (Simon, 2004) <i>I Am a Frog</i> (de la Bedoyere, 2012) <i>Spiders</i> (Bishop, 2007)

Each small-group session lasted about 30 minutes. Sessions began with a 2-minute book introduction from me and a 5-minute read-aloud in which I modeled fluency and jump-started students into the book. Students then read for 5–7 minutes independently to finish the book if needed, reread, and mark what they wanted to talk about. In most cases, this time allowed us to read and discuss the entire picturebook. With two longer books, I identified a section of each book that we would read so that we could adequately discuss it in our limited time. We concluded with 10–12 minutes of discussion, driven by questions and comments that students generated during independent reading. This format kept my role and participation structure the same each day. Variables like students' English levels, personalities, and the genre of the books remained stable across 10 days.

The data reported here come from verbatim transcribed video recordings of



the discussions. The transcriptions also noted nonverbal behaviors such as pointing. I developed codes around the focus of talk when I observed that students often did not talk about the words on the page as I had imagined when planning text-based discussions. I thus coded for *talk about ideas*, *talk about images*, and *talk about print*. The codes became structural codes (Saldaña, 2013) to illuminate how students focused their discussion with matched and difficult texts. I coded all individual student turns of talk, both questions and statements. I considered a turn of talk everything a student said before the next student started talking, so longer back-and-forth discussions about the same topic resulted in multiple instances of the same code, reflecting the length of the interaction.

Students oriented their talk in ways that made distinguishing their focus clear. They talked specifically about images, often pointing to them, and when they referred to the print, they used exact words and made clear that they were reading. Their talk about ideas lacked these clear connections to print and images. When students did talk about two or more areas at once, I coded all areas of focus (ideas, images, and print) that applied. Table 3 displays the codebook. An experienced literacy researcher reviewed 25% of the transcripts and verified that I applied the codes consistently. This researcher reviewed each line of student talk, determined how she would code it, then checked how I had coded it, and found that in all cases we agreed about whether talk centered on ideas, images, or print.

Table 3  
Codebook

	Description	Sample coded talk
Talk about ideas	Student talks or asks about idea introduced in text without specific reference to any particular text. Does not include one-word answers to teacher questions. Examples: general questions, sharing connections.	“Do they make the nest or do they just find it?”
Talk about images	Student talks or asks about pictures, with or without pointing. Examples: commenting on what animals look like, expressing amazement at photo, asking about how something was drawn/photographed, asking what something in picture is.	“So, the seahorse is here, and the one spray is coming out of his stomach. What’s happening there?”
Talk about print	Student talks or asks about exact words in the text. Student directly refers to text by saying “it says” and then paraphrasing. Student references exact numbers from text. Student answers question with words from text. Examples: rereading, asking what a word means, quoting.	(Two students reading from text to answer a peer’s question) “The frog is hungry, but it will not eat the ant.”

For each code, I identified transcript segments that I judged representative of how students talked about ideas, images, and print in matched and difficult books. I present and analyze these transcripts in the findings. I also totaled the instances and percentage of total talk that centered on ideas, images, or print to compare the focus during discussions of matched and difficult texts.

### Findings

How Group 1 balanced their talk about ideas, images, and print remained consistent whether they discussed matched or difficult books. However, for Group 2, difficult books sparked more talk about ideas and print, whereas matched books led to much more talk about images. Table 4 shows how often both groups engaged at these points. The differences between matched and difficult text—which primarily occurred for Group 2—had to do with how often they talked about each category, not about the way they used such talk. I include some exceptions, such as how Group 1’s talk about difficult text revealed a struggle not evident in their talk about matched text.

#### Ideas

Engaging with ideas referred to students talking or asking about ideas introduced in the text without specific reference to particular text. Examples include asking general questions, sharing connections, and answering questions without specific reference to the text. Students in Group 1 engaged with ideas exactly the same number of times with matched texts as with difficult texts. However, students in Group 2 engaged with ideas quite a bit more (35 more times, or 14% more of coded talk) in difficult texts.

Table 4  
*Frequency of Talk About Ideas, Images, and Print*

	Ideas (D)	Ideas (M)	Images (D)	Images (M)	Print (D)	Print (M)
Group 1 totals	120 (56%)	120 (58%)	44 (21%)	36 (17%)	50 (23%)	52 (25%)
Group 2 totals	131 (62%)	96 (48%)	32 (15%)	68 (34%)	49 (23%)	38 (19%)

*Note.* Columns marked with (M) refer to discussions about matched texts, and columns marked with (D) refer to discussions about difficult text. The percentages given in parentheses are percentages of total coded talk.

In discussing *Seed, Soil, Sun* (a difficult book), Rosa mentioned that she had learned about using worms to compost from a TV program. The book discussed the ways that worms return organic matter to the soil, but Rosa’s intertextual connection (to a media program) showed how she engaged and then extended an idea from the text without specific reference to the words on the page.

Rosa: I saw on TV that worms were eating... that people put like a bucket, and they put soil, then they find worms. They put food. Then they let them free to go.

Alyssa: So they’re helping them.

Researcher: So they put the worms in there to do what? Jack, you were saying like a bucket of rotten food?

Jack: Mm-hm.

Researcher: Yeah, the worms will eat through the food and turn it back into soil with their droppings.

Alyssa: So they eat it? The droppings?

Researcher: No, they don't eat their own droppings. They eat food and the things that are in the soil. It says they eat "debris," so like pieces of dirt, leaves, rotten food, like Jack was saying.

In this example, I turned students back to the print by drawing their attention to the word *debris*, but student contributions to the discussion revolved around ideas.

With both matched and difficult books, students talked about ideas to answer teacher questions. They would respond to me by stating ideas introduced in the book without specifically referring to the words, as in the following transcript about *Penguin Chick* (a matched text).

Researcher: The father penguin is gone. Why?

Rosa: Because the baby penguin is growing up.

Jack: 'Cause the baby penguin can't get in the dad's patch.

Researcher: He doesn't fit in the brood patch anymore. And what else? What did he need the father penguin for?

Alyssa: To protect the baby chick from the egg.

Researcher: Okay, so he protected him. What else did the parents do?

Jack: The dad kept it in its pouch, where it didn't roll away.

Other times students engaged with ideas by raising questions that the text made them think of. For example, in the same discussion of *Penguin Chick*, Alyssa wondered, "Does the mama sleep in the ocean? Or does she get out?" and Jack became curious about whether penguins have nostrils. Students also engaged with ideas when they explained why a particular page captured their attention as when Rosa said, "The noses are interesting so they can dig. It's like a shovel" while discussing *What Do You Do With a Tail Like This?*

Students also combined talking about ideas with talking about images and print. In the following transcript from a discussion of *Best Foot Forward* (a difficult text), Gabriela pointed to a picture (image), Sarah started reading (print), and then the group had a conversation that built up several related ideas before the girls chorally read (print again) to confirm their ideas.

Gabriela: Why are there things right here? (pointing to spots below padding on tiger foot)

Sarah: "With the soft, cushioned pads on its feet, a tiger can creep up very quietly on its prey, and then click! Out comes the claws!"

Researcher: Okay, so from what you were just reading what does it have? What are these things on its feet?

Sarah: Claws!

Researcher: They're not the claws because the claws are these parts. (flipping back and showing picture)

Gabriela: Cushions.

Researcher: The cushions! It said they have cushioned pads on their feet. Why would they need cushioned pads?

Gabriela: So it feels comfortable where it is.

Gabriela: Like their shoes.

Researcher: Yeah. You have shoes so you're not always hitting the bottom of your feet. The tiger has its cushioned pads.

Sarah: Or like if it was too hot and the sun was burning like here, and then if you would step on it, you could burn yourself.

Researcher: Mm-hm. One of these other animals had cushioned feet. Do you remember which one?

Elise: This one.

Sarah: Elephant!

Researcher: What does it say about the elephant and its feet because it's so heavy?

All three: (overlapping reading)

Researcher: Yeah. What word do you see that's the same between here and here?

All three: Cushion.

Sarah: That they have cushion.

When students shared ideas about feeling comfortable, cushions being like shoes, and cushions providing protection from heat, they talked ideas in between talking image and text.

## Images

Talk about images referred to students talking or asking about visual elements in the books. Examples include commenting on what animals looked like, expressing amazement at a photo, asking what something in the picture is, answering my question by pointing to a photo, and asking how the artist drew or photographed something. Group 1 talked images roughly evenly with both levels of text (eight more times or 4% more of talk in difficult books). In contrast, Group 2 talked images over twice as often with matched texts as with difficult texts.

Sometimes students engaged with images superficially as when Alyssa looked at a wasp's nest in *Acorn to Oak Tree* (a matched book) and said, "Dude, that looks awesome!" or Jack blithely commented about the star-nosed mole that its facial features "look like worms." However, most examples of coded talk about images revealed that students used images as a deeper part of their sense-making process. For example, Sarah asked about why birds fly in a V formation after seeing the illustration in *About Birds* (a matched book), and Elise compared illustrations of birds in the same text. *About Fish* (also matched) has

minimal print, so in the following transcript, the students used the pictures to supplement their understanding of how seahorses are born.

Elise: So, the seahorse is here, and the spray is coming out of his stomach. What's happening there?

Gabriela: Just, they just poked out?

Researcher: They just come out, right? This is the moment that they're being born. Do they have eggs, or do they just come out that way?

Gabriela: Just come out that way.

In reading *Antarctica* (a matched book), Jack used the pictures to identify a relevant page to answer his and Alyssa's question. After she found the same page, Alyssa also used the pictures to address their question, and Jack used them to disagree with me and substantiate his point that scientists had established a large camp, not a small one, to do their research in Antarctica.

Jack: Do people still live there [Antarctica]?

Alyssa: People don't live there, right?

Researcher: People don't live there, but people are there. So what are they doing?

Jack: Exploring.

Researcher: Yeah, they're exploring. Sometimes they're scientists. They're studying the land and the ice and the animals.

Alyssa: Like, if they visit over there, do they have to camp?

Researcher: Was there something in the book about that?

Jack: Yeah. Here. (pointing to the page)

Alyssa: "Just behind ..." Oh, "men build a base camp"

Researcher: So they don't live there, but they do have a camp for where they stay.

Alyssa: (pointing to picture) That?

Researcher: I didn't see that at all. But, yeah, a little camp back there in the snow.

Jack: It doesn't look little because it has another part right here. (pointing to illustration continuing across page break)

Researcher: Oh, yeah. It's on both sides. It's not little. There's lots of space there.

This interaction shows how students attended to all the resources in the book. Jack had paid attention to the images (when I had not), and he and Alyssa used them to answer their own questions even as I tried to push them back to the print to find where it said people built a base camp.

In other cases, the images sparked conversations that provided opportunities to push students back into close reading of the text. In reading *Red-Eyed Tree Frog* (a matched book), Elise became interested in why the frog was photographed sitting by an ant if it was looking for food, but was not actually going to eat the ant.

Elise: I thought the frog was going to eat the ant, but it didn't. If the frog's not going to eat the ant, is it just staring at it?

Researcher: Why is the frog even there if it's not going to eat the ant? What do

you think?

Gabriela: To get a better look at it.

Researcher: Why does it need a good look?

Gabriela: Because it might not-

Sarah: It might be poisoned or

Gabriela: It's prey.

Elise: (shrugging) Something like that.

Researcher: What do you think happened right after they took this picture?

Elise: Maybe the frog ate it already.

Gabriela: Maybe the frog left.

Researcher: So those are two different answers, and the book supports one of those ideas more than the other. Do you think the frog ate it, or do you think the frog left based on what it says right here?

Gabriela: Left.

Sarah: Left.

Researcher: What does it say?

Sarah and Elise: "The frog is hungry, but it will not eat the ant."

Here the pictures led to a conversation in which students offered multiple explanations and then evaluated them in light of the print.

In one discussion, students focused on pictures so much that they barely referred to print at all. In the difficult book *Best Foot Forward*, Group 2 largely ignored the print while innumerable questions and comments about photographs drove the discussions: What are these red things? Do they hurt? Is this a cut? It's weird how it has these holes. Do these open? Are those feet? Why does it have a big one, a small one, and a medium one? Why are there things right there? What are these little things? Why is it a different color? The data do not address whether these questions reflect curiosity in response to a compelling book format with close-up photos, children's attempt to make meaning from images since the text was difficult, both, or something else. The talk about images for Group 2 with this book represented a departure from their normal behavior, though: Overall, they talked images twice as often in matched books as in difficult books.

## Print

Engaging with print included students talking or asking about one or more exact words in the text. Students engaged this way when they reread, asked what words meant, quoted, referenced exact numbers from text, answered questions with words from text, or directly referenced print by introducing a paraphrase with "it says...." Students talked less about print than I expected for text-based discussions. In Group 1, their print talk represented 23% of talk about difficult books and 25% of talk about matched books. Group 2 talked about print 11 more times (or 4% more of their talk) when discussing difficult texts.

Students talked about print to answer a question that I asked or when I pushed them to in the course of discussion. For example, in discussing *About Fish*, Gabriela referenced the print to report that fish lay 77 to 190 eggs. Jack referred to the print when

he introduced a paraphrase with “it says” and then went on to explain that a diagram in Penguin Chick showed winter, spring, and summer in a penguin’s growth (referencing the words on the diagram). Sarah used language from the print when she answered a question about dandelions (in discussing the matched book *Dandelions*) by explaining “they bloom like golden stars.” The following transcript from the matched book *I Am a Frog* provides a representative example of how print talk sometimes resulted from me pushing students into the text.

Gabriela: But the eggs that they lay, do they do like turtles? Do they just leave it? Do they just leave them, or do they stay with them?

Researcher: So we read something about that. It’s actually on this page too. Do they just leave them, or do they stay with them?

Sarah: Some leave them, and some stay with them.

Researcher: Tell us how you know that from the book.

Sarah: Because it tells you on “Super Dad” (the heading on a call-out box).

Researcher: What was the first sentence there, Gabriela?

Gabriela: “Most frogs don’t look after their babies.”

Researcher: Most frogs don’t. And then what’s the very next sentence? That helps you too.

Gabriela: “They lay eggs, and swim away before they hatch.”

Even after the read-aloud and independent reading, basic questions addressed in the text lingered for Gabriela. Sarah answered Gabriela’s question and even knew where to find the answer, but it took my prompting to drive Gabriela to attend to the relevant print about her question.

Students also returned to the print when I pushed them to use the language of the books to talk about their ideas. In discussing the matched book *Acorn to Oak Tree*, Alyssa brought up the different color of the top part of the acorn:

Researcher: Yeah, what’s that top part called?

Jack: Stem.

Researcher: It has a special name. Oh, it’s actually on this page. Page 8 and 9. See if you can find it because the diagram has it.

Rosa: Cops.

Researcher: Say it again.

Rosa: Cops.

Alyssa: Cup-pool.

Researcher: I think you probably say cup-ule. So Alyssa was wondering.... She knows that the seed turns brown when it gets ripe. She was wondering if the cupule turns brown.

Jack: It does.

Print talk occurred in instances like this one where students collaborated to sound out words as I pushed them back to the text to use the vocabulary of the books to talk about

scientific ideas.

When students engaged with print, they sometimes read in labored word-by-word reading that caused the rest of the group to lose focus. In this discussion of *What Do You Do With a Tail Like This?* (a matched text), students became interested in the afterword material that provided more detail about each animal. Thus, they elected to discuss difficult material from the end pages despite having a matched book, an example of how reading levels (calculated based on the main text, not supplemental material) do not capture all the features that contribute to text difficulty.

Researcher: Rosa, tell us about it.

Rosa: “The horned lizard, often called a horny toad lives in Afri- the American Southwest. It is small, 3 to 5 inches in length and covered with sharp spikes. The lizard feeds on ants and other insects and protects itself.”

(Alyssa and Jack looking around. Rosa’s reading is mostly word by word or phrase by phrase.)

Researcher: Oh, hang on. You skipped a line there. “It protects itself in an unusual way.... If threatened, it first tries holding very still.” And then you can pick up. “If that doesn’t work...”

Rosa: “If that doesn’t work, it puffs itself up with air to make itself larger.”

Researcher: And then if it still feels threatened, what’ll it do next?

(Jack opens book.)

Alyssa: Its eye will blink.

Researcher: It says, “It will squirt streams of blood from the corner of its eyes.”

Alyssa: Where does it live?

Jack: Desert.

Researcher: Where did it say?

Alyssa: (surprised) Here in Arizona?

Researcher: Well, what did Rosa just read? (All three look at book.)

Alyssa: Arizona southwest.

Researcher: The American southwest. So Arizona is in the American southwest. So maybe. Could be. So watch out for bleeding lizards. (laughs) It says that it squirts a stream of blood from the corner of its eyes. Why does it do that?

Alyssa: It’s angry.

Jack: To protect.

Researcher: We should probably read that last sentence. It explains. (Rosa is looking behind her. Alyssa and Jack begin reading slowly, and Alyssa is in the wrong place.)

Researcher: Where it says, “This probabl-” Yeah, Jack.

Jack: “blood from the corner of its eyes. This probably confuses its predator in time to get away.” (Reading is word by word. Rosa is looking behind. Alyssa is looking at book and researcher.)



Although this transcript came from a discussion about a matched book, it tells more about how students respond to difficult text because they chose to discuss the afterword. They evidenced interest in the topic: Rosa introduced an idea, Alyssa asked questions about it, Jack answered them, and they read together to confirm their thinking. But they struggled. They read word by word, they skipped lines, and they kept losing their place. When their peers read in this way, they lost focus, despite caring about the topic and participating in the discussion. They leaned back or they looked around the room, and they could not answer questions based on what others had just read.

The above transcript shows the longest example of difficult text challenging the group to benefit from each other's reading. However, in other sessions, students read from the text to participate in the discussion, but they did not know how to use the print to move the conversation forward. Rosa seemed shy and made fewer comments and questions than the rest of her group. Reading from the print (both matched and difficult) gave her a way to participate without having to think of something original to say, but it did not inspire group discussion. When asked to share her thinking, she often picked a favorite page, said "it says..." and started reading. Jack and Alyssa did not follow along with her reading or know how to build a discussion around it when she stopped.

Sometimes print talk in this study arose from my prompting (as when I specifically asked students to justify or explain from the text), involved short and simple responses, or did not stimulate group discussion as reported above. However, sometimes students used print for purposes that both reflected understanding and moved the conversation forward. In this transcript from the difficult book *Seed, Soil, Sun*, Alyssa selectively read to explain something that captured her attention.

Alyssa: I marked this page because it's cool when the cow takes some of its milk, and in the milk it has plants, grass, and corn and soil beans [sic].

Jack: Does a cow eat and then-

Alyssa: And "when you drink milk from a cow, you are drinking a food made of what the cow eats."

Researcher: You don't usually think milk is a plant, right, because it doesn't grow on a tree or anything, but Alyssa really understood this page because it says really milk does come from plants because the cow can't make any milk if it doesn't do what?

Alyssa: Eat.

Researcher: Eat plants, right? And the cow eats plants. Alyssa read all those plants it eats.

In the ensuing discussion (not reported here), Alyssa and Jack co-developed this idea further. Alyssa's use of print here clarified her original claim and showed Jack that her idea came from the book.

In one final example of using the print to move conversation forward and develop comprehension, Jack used print to clarify a point of confusion for Alyssa in discussing *Looking Closely in the Rainforest*, a difficult book. Alyssa marked a page that piqued her interest so the group could discuss it. That page described how banana plants have leaves so big that some people use them as umbrellas.

Alyssa: Like, the peel of a banana, they make an umbrella out of it.

Researcher: Oh, they do make an umbrella from something from that tree. It's not the peel, though. Read that again. (Alyssa silently looks back at text. Jack says the leaves.) Show her where you found that.

Jack: (pointing) Oh, here. "The people use banana leaves as umbrellas."

Students sometimes used print to develop points and support ideas, but they used print to answer questions, make basic observations, find book language when I sent them back to the text, or read in a way that derailed other group members. These uses occurred with both matched and difficult texts, although disfluent reading that caused students to lose interest happened more with difficult texts. While students seemed eager to talk, they did not seem eager to read (or listen to anybody else read) as part of the discussion.

### Discussion

As a whole, the results indicate much less talk about print than I expected for text-based discussion groups. The students in Group 1 talked mostly about ideas, then print, and lastly images, and this pattern did not change according to the difficulty level of the books. However, the students in Group 2, who read further below grade level than Group 1, engaged differently with books of different levels. They talked much more about images in matched books. Although they talked mostly about ideas with both levels of books, difficult books generated talk about ideas more often than matched books did.

These results align with the work of other researchers who have found that children's text talk fits into categories relating to ideas, images, and print (Aukerman & Chambers Schuldt, 2016; Shine & Roser, 1999; Tower, 2002). The prominence of ideas and image talk also suggests that welcoming talk beyond "just" the text provides an important entry into participation and comprehension for young bilingual students (López-Robertson, 2012; Moses, 2015).

The results for the students in Group 2 differed from what might be expected based on earlier research suggesting that students attend to print more when the text falls within their reading level (Roy-Charland et al., 2007). In this study, Group 2 actually talked about print more with difficult text. Bilingual students in Boyd's (2015) study also had more text-based talk with a challenging text, though she did not consider it particularly rich talk.

### Text-Based Talk ≠ Better Talk

Students require support to engage in text-based discussion well. It became clear that students in this study did not know how to connect their talk about ideas, images, and print in ways that allowed the three strands to support each other. They seemed to lack experience making text-based assertions and providing textual evidence, so their talk about print lacked the excitement that their talk about images and ideas had. As in Poole's (2008) study, talk about print in this study resulted in short interactions when students responded literally to questions. Like Boyd (2015) found, text-based talk involved low-level efforts to grasp literal meanings. Though I wanted children to talk about print, when they did, their conversations lacked richness, as evidenced by my role in pushing them to text and their difficulty paying attention when other students read text. Students needed support on how and when to read from the text, how to follow-up on their own reading, and how to respond to a peer's reading during discussion. Disfluent reading did not inspire discussion, a noticeable drawback of difficult texts.

## **Simple Texts Have Less Text to Talk About**

Wong Fillmore (2014) advocated for grade-level content instruction for students learning English, which connects directly to the issue of simple texts. In this study, the difference between matched and difficult texts was less pronounced for Group 1. But for Group 2, a pronounced difference existed between the two levels of text. Because Group 2 read further below grade level than Group 1, for them matched texts were relatively simple. These books often had much less text on a page than the difficult texts, overall contained less text in the whole book, and may have developed fewer complicated ideas. Group 2 needed difficult books to talk about print and ideas. They struggled to engage print and ideas when their matched books contained limited text and few ideas, often only a few words or a sentence to a page. In conversations about matched books, Group 2 overwhelmingly talked about pictures, perhaps because those books lacked enough text and ideas to build a conversation around.

This finding corresponds with a core component of close reading of complex texts that the passage students read has to merit multiple reads and have ideas worth talking about (Fisher & Frey, 2012). Instructional conversations (Goldenberg, 1992) and collaborative reasoning (Zhang & Dougherty Stahl, 2011), two small-group reading protocols demonstrated to be successful with emerging bilingual students, have the same requirement for substantive text. Collaborative reasoning specifically requires a challenging text that raises controversies, has unresolved issues, and leads students to take multiple points of view. Students as young as first grade have rich conversations and do more inferring when they talk about substantive texts with some level of ambiguity or challenge (Moses, Ogden, & Kelly, 2015).

Teachers may provide supports to enable students reading below grade level to participate in discussions of difficult texts. Students might first experience the text as a read-aloud, in shared reading, with a partner, through audio, or in a supported reading group. Experts commonly recommend reading challenging texts aloud to students so that their developing reading proficiency does not limit their access to interesting texts (Beck & McKeown, 2001; Giroir et al., 2015) and grade-level content (Coleman & Pimentel, 2012b).

## **Multimodal Texts Lead to Multimodal Engagement**

When teachers use picturebooks and other multimodal texts (texts that combine multiple modes of presentation like words, photos, diagrams, etc.), they should expect children to engage with all the modes.

Other researchers have found, as in this study, that in many reading experiences, children become “more attuned to the illustrator’s rather than the author’s craft” (Martinez et al., 2003, p. 224). Particularly for bilingual students, viewing images is an inclusive literacy practice (though not one valued on standardized assessments) that leads to critical thinking, meaning construction, engagement and motivation, and positive literate identities (Moses, 2013). Images in informational texts serve a variety of purposes for bilingual readers, including helping them understand content, prompting discussions with their peers, pushing them to read the text to get more information, and complementing what they have read in the text already (Moses, 2015).

Picturebooks, including the informational ones used in this study, contain both pictures and words that readers use to construct meaning. Both the pictures and the words matter, and readers modify their understanding of the one based on the other (Sipe, 1998). Readers

who attend only to the print do not fully understand the book (Arizpe & Styles, 2002; Serafini, 2010; Sipe, 2008). Teachers who plan text-based discussions of multimodal texts should expect engagement around the visual as much as around the printed words.

### **Classroom Implications Related to Text Difficulty**

If teachers want bilingual students to discuss texts, how hard should those texts be? This study showed that students had successful discussions about both matched and difficult texts. Difficult texts had both advantages and drawbacks. When students tried to read difficult texts in discussions, they sometimes struggled with their reading and lost the attention of their group members. However, for students who needed the most support to read at grade level, difficult texts provided substance worth talking about that they seemed to struggle to find in their matched books. I suggest teachers make space for bilingual students to discuss both levels of text and that they often consider factors beyond levels (like student interest or cross-curricular connections) when providing and recommending texts to students.

### **Future Research**

This work did not suggest that text difficulty always affects bilingual students' discussions in the same way given that Groups 1 and 2 changed the focus of their talk in different ways depending on whether they read a matched or difficult book. Future work could include more students to determine whether this effect (or lack of one) is reliable. Future studies could also explore how age, reading proficiency, and language background interact with text difficulty. In this study, those factors remained constant within the groups, but it seems likely that reading proficiency may explain some of the different results between Groups 1 and 2.

Future studies could explore how bilingual development and identity impact children's text discussions. This study did not compare bilingual and monolingual students. Furthermore, the fact that many factors always influence children's responses to text limits this study: Despite attempts to use similar texts, factors like background knowledge and interest (not just difficulty levels) influence how children respond to texts. Additionally, this study was small; it had only six participants and occurred within the span of 4 weeks. Certainly, a larger and longer study would provide more insights into how children talk about different levels of text and what other factors are at play.

Future work should involve collaborations with teachers to understand and develop supports to help all students successfully participate in text-based discussion. The field should know how more support and longer experience with text-based discussions support bilingual students in discussing difficult texts.

### **Conclusion**

In this study, six bilingual students considered to read below grade level had engaging, meaningful conversations about matched and difficult texts. They derived important benefits from both challenging material (like more talk about ideas and text) and matched texts (like ability to reread text fluently in the course of the discussion). This study suggests that talk about ideas, images, and text support participation and understanding of informational texts for bilingual students. It also suggests that bilingual students should have supported access to challenging texts alongside reading level-matched texts as they continue to build reading fluency in their second language.

## About the Author

Laura Beth Kelly is an assistant professor of educational studies at Rhodes College, in Memphis, Tennessee. She is a former classroom teacher who holds National Board Certification in reading and language arts for early to middle childhood. Her current research explores language and literacy learning and teaching in culturally and linguistically diverse educational contexts.

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