EMERGENT BILINGUALS AS TEACHERS: CONSTRUCTING STORYLINES IN AN ELEMENTARY MATHEMATICS CLASSROOM

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Stereotypes and storylines for emergent bilinguals (EBs) permeate U.S. culture, have been historically deficit-oriented, and determine ways teachers and students interact with each other in classroom contexts. As a way to disrupt and challenge such narratives, one elementary teacher, Courtney, leveraged her authority to construct and foster the storyline of mathematical competence for EBs across multiple school years. One of the most frequent ways Courtney did this was to interactively position EBs as teachers in whole class mathematical interactions.

Keywords: Equity and Diversity, Classroom Discourse

Stereotypes and storylines of mathematical competence permeate U.S. culture (Nasir, 2016). For emergent bilinguals (EBs), their stereotype and storyline has historically been deficit-oriented, focusing solely on their linguistic deficiencies, need of remediation, and ill-preparedness for school, and the added challenges they pose to over-worked teachers. Such stereotypes and storylines can circulate in classrooms and determine ways teachers and students interact with EBs (de Araujo, Smith, & Sakow, 2016; Turner, Dominguez, Maldonado, & Empson, 2013; Wood, 2013; Yoon, 2008). For instance, if teachers position EBs in deficit storylines, EBs opportunities to learn, have access to, and achieve success in mathematics are restricted. In contrast, when teachers position EBs in ways that call attention to and value their mathematical and linguistic competencies and diverse cultural assets and experiences, a storyline of mathematical competence can be fostered. Too frequently, however, EBs are shut out of such storylines. Thus, it is critical for productive storylines be established and fostered for EBs in classrooms. Yet, to do this, teachers must be strategic in their use of classroom discourse to interactively position EBs in identified and desired storylines.

One theoretical lens to examine the creation of storylines for EBs via classroom discourse is positioning theory (van Langenhove & Harré, 1999). Positioning theory foregrounds discourse and proffers a way to critically analyze how language-in-use can construct and foster storylines for groups of students through moment-to-moment interactions. More specifically, positioning theory enables the researcher to examine how teachers' interactive positions of EBs individually acts to establish and foster different storylines for EBs collectively over time.

Positioning Theory and the Role of the Teacher

Positioning theory (van Langenhove & Harré, 1999) is composed of three central components: acts, storylines, and positions. *Acts* refer to the social meaning(s) of people's intended actions, (Harré, Moghaddam, Cairnie, Rothbart, & Sabat, 2009). *Storylines* are "strips of life [that] unfold according to local narrative conventions" (Harré, 2012, p. 198) that are constituted and reconstituted through social interactions. Oftentimes, these refer to the multiple categories, stereotypes, or cultural values (e.g., teacher/student, reform/traditional instruction, correct/incorrect) people draw on in social situations that are used to define the expectations and conventions of interactions in that setting (Herbel-Eisenmann, Wagner, Johnson, Suh, & Figueras, 2015). For example, a teacher in a classroom may draw on the storylines of teacher/student, reform/traditional instruction, and correct/incorrect mathematics answers

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simultaneously to motivate his/her interactions with students. Hence, within each social interaction there are multiple storylines at play, all drawn from and on participants' cultural, historical, and political backgrounds and experiences. Additionally, the ways individuals enact storylines are or become socially recognizable. For instance, if a teacher employs a storyline that contradicts historical or culturally shared narratives (e.g., incorrect answers are just as valuable as correct answers), the acts may not initially be conceived as socially recognizable, however, over time they become socially recognizable as the storyline is taken up.

The ways people enact storylines are referred to as *positions*. Within storylines, people assume a position, called reflexive positioning, and are positioned by others, called interactive positioning. These positions are metaphorical and determine the social expectations and range of available acts of speakers and listeners. In this way, each position is relational and the range of acts that are available is contingent upon each given situation. Some situations can further restrict the range of available positions. For example, in institutional settings, such as schools, individuals' rights and duties are socially prescribed.

Role of the Teacher

Given their position in the classroom, teachers' discursive practices represent a powerful tool that can be leveraged to create, foster, or shift storylines for groups of students in mathematics. The storylines established and fostered by the teacher can expand or restrict students' ability to exercise agency, participate, and learn. For example, if a teacher constructs a storyline of mathematical competence for an EB that is supported through her/his positioning moves (e.g., calls on student to share her/his mathematical thinking, invites student to take on the role of teacher, allows student to control the mathematical tools), the social expectations, opportunities to co-construct mathematics, and range of available positions would be different compared to a student whose storyline was of mathematical incompetence. The consequences of teacher positioning are further magnified by the appropriation of positions and storylines by peers (Turner et al., 2013; Yoon, 2008). Thus, teachers' interactive positions and storylines of EBs can affect EBs' ability to participate, contribute, and learn.

When teachers' discursive practices are employed in whole class settings, the interactive positions and subsequent storylines for EBs are made visible to everyone. Consequently, research (Turner et al., 2013; Wood, 2013) has found that these public displays affect how peers interactively position EBs in the future. Moreover, the storylines constructed by teachers can act to counter or reinforce storylines for individuals through group associations. For instance, storylines constructed for individual EBs can act to counter deficit-oriented stereotypes of EBs as a whole. In order to better understand the ways teachers' interactive positions can create and foster storylines for EBs that can counter deficit-oriented storylines, this study was guided by the question, *What storylines for EBs does an elementary teacher construct and foster through her acts in whole-class mathematical interactions?*

Methodology

Data for this study were drawn from a three-year longitudinal professional development intervention focused on EBs development of mathematic and linguistic competencies, the enhancement of mathematics curriculum for EBs, and the facilitation of productive classroom interactions for EBs (see Chval, Pinnow, & Thomas, 2014 for more information). Data collected included classroom video and audio recordings.

To answer the research question, a case study design (Stake, 1995) was used to examine the discursive practices of Courtney, a white female, monolingual third-grade teacher. Courtney taught at a school that was predominately white (>70%) with less than 10% of the student

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population Latinx. In addition, over half of students received free and reduced lunch. Prior to Courtney's participation in the intervention, she had taught for two years and had received no formal education in pedagogy for EBs or had opportunities to teach EBs. Consequently, Courtney's participation in the intervention coincided with her first opportunity to teach EBs. Thereafter, in each year of the study Courtney taught 1-3 Latinx EBs.

Data Selection and analysis

To identify the storylines Courtney constructed and fostered for EBs through her interactive positions, a subset of the data was analyzed. Data was restricted to the first two years of the study due to the number and retention of EBs. In each of the first two years, Courtney had three Latinx EBs (see Table 1 for a summary of student demographics). Each student was classified as an English language learner by the school district based on their scores on the Assessing Comprehension and Communication in English State-to-State for English Language Learners (ACCESS) assessment. Based on their ACCESS composite scores, the EBs in this study can be considered to be at an "intermediate" level of English language proficiency.

Table 1: Summary of student demographics

Year	Student	Birthplace	ACCESS Composite Score
1	Alonzo	Mexico	4.6*
1	Yasmin	USA	3.8*
1	Ignacio	Mexico	3.9*
2	Samuel	USA	4
2	Bryce	USA	3.8
2	Lea	USA	Not available

*ACCESS scores were only available for the following school year.

Across the two years, there were a total of 45 lessons, each approximately one hour long, that were video and audio recorded. To identify the storylines created and fostered for EBs related to mathematics, only those interactions where an EB participated, was asked to participate, or was interactively positioned by the teacher or peers in whole class settings were transcribed and analyzed. In my analysis, I first identified the Courtney's acts at the utterance and turn taking levels in MAXQDA (see Figure 1). Then, I open coded (Strauss & Corbin, 1990) the acts to identify Courtney's interactive positions of EBs and the storylines that were told via the acts.

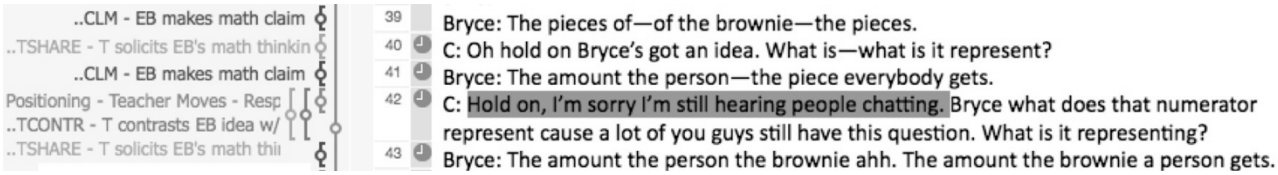

Figure 1. Example of a coded classroom transcript in MAXQDA.

Findings

Across the two years, Courtney constructed and fostered multiple storylines for EBs via her interactive positions. One of the most frequent storylines she promoted was EBs as teachers. Courtney cultivated this storyline in numerous ways, such as asking or allowing EBs to: share problem-solving strategies, control the classroom conversation, assign work, revoice a peer's thinking, and correct peers' mathematical errors. In this way, Courtney positioned EBs physically or metaphorically as teachers, which was a privileged role in the institutional space

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(of the classroom). To illustrate the several ways this storyline was advanced in classroom interactions, representative classroom excerpts are presented below.

Share a Problem-Solving Strategy

Courtney leveraged problem-solving sharing opportunities as a chance to position EBs as teachers. Frequently, these sharing opportunities occurred at the conclusion of the lesson and were used as a way to share different student approaches to a single problem or highlight specific aspects of a problem-solving strategy (e.g., how to draw efficient pictures). As students worked individually or in small groups on mathematics tasks, Courtney circulated and traditionally selected three students to share who represented a range of strategies. Often, each student's work was scanned, which served as a visual referent as the student shared at the board. This was a particularly useful tool for EBs since they could gesture and point while explaining in English. When students presented, they were physically and metaphorically positioned as a teacher. In this way, the student was physically located in the space routinely reserved for the teacher (i.e., standing at the front of the classroom while peers sat on the carpet) that acted to garner the attention of the class. As a result, the student was positioned as an expert who had ideas worthy of consideration and could explain those ideas to peers.

The following transcript from Oct. 22 illustrates this practice. At the close of the lesson, Courtney selected three students to share their strategy to the problem, "Clayton rolled 8 dice. Each landed on 4. What was Clayton's total? How do you know that is Clayton's total?" Lea (EB) was the second student to share and her work was shown on board (see Figure 2).

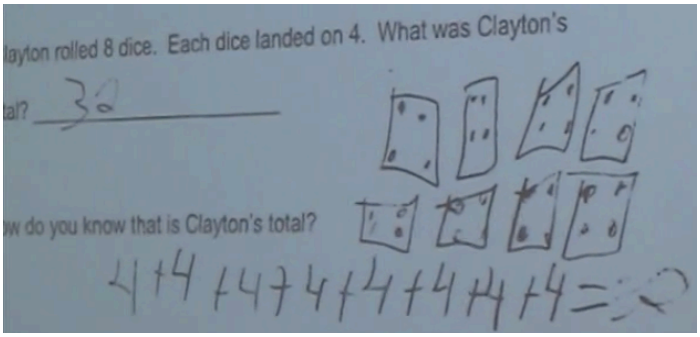

Figure 2. Lea's written work to solve the problem of calculating the sum for eight die each showing a value of four.

1 Courtney: Alright the next person to share is Lea. Lea will you get up. [Administrative talk]
2 Lea: (gets up and comes to board) First um I added four and then um I added four plus four plus four plus four. First I drew a picture of eight dice and then added four plus four plus four plus four plus four plus four plus four plus four equals 32.
3 Courtney: So why did you—how many four—how many times did you need to count up by four?
4 Lea: Well I needed to count um I needed to count eight times so I could get (inaudible)
5 Courtney: Ok so when she—when she—what'd um—any comments about Lea's strategy?
6 Lea: Janie.
7 Janie: Nice work and I like your strategy.
8 Lea: Carl
9 Carl: I like the way how you like, drew a picture of this stuff (gestures across work)—numbers.
10 Lea: Ok. Laura

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11 Laura: Um I think the way that you drew your picture of the four plus four plus four kind of (inaudible) but I still think you did a great job.
12 Courtney: Alright so she wrote a number sentence and she wrote up a picture to go along with that. I like—I like your strategy a lot. Nice job Lea. (clapping and cheers)

In this excerpt, we see how Courtney invited Lea to the front of the room to share her strategy with the class with her written work as a visual referent. This act physically positioned Lea in the role of the teacher (at the board), metaphorically positioned her as an expert who had a problem-solving she could explain and peers could learn from, and provided an opportunity to be an active classroom participant. At the board, Lea described her strategy for calculating the sum of 32 (turn 2), which included drawing a representation of the dice rolled (Figure 2). Next, Courtney asked Lea for clarification of the number of times she added four (turn 3), which enabled Lea extended talk time and to maintain control of the conversational floor.
In sum, interactions such as this illustrate the ways Courtney interactively positioned EBs as teachers by allowing EBs to physically assume the space of the teacher, explain problem-solving strategies to peers, and control the classroom conversation.

Control Classroom Conversation

Another way Courtney interactively positioned EBs as teachers was to allow EBs to control the classroom conversation around their mathematical ideas, which occurred after EBs had shared their problem-solving strategies. Frequently, Courtney would ask classmates if they had any comments, questions, or compliments for the presenter, which the speaker would then field. Not only did this practice provide opportunities for EBs to retain the conversational floor but also reinforced the expectation that peers will consider and respond to EBs' mathematical ideas.

The transcript above illustrates a common way Courtney employed this practice. After Lea shared her problem-solving strategy, Courtney invited peers to comment (turn 5). This act reinforced the classroom norm that students would attend to and think about each other's mathematical thinking, signaled that Lea's ideas were worthy of further consideration, and kept Lea's mathematical thinking at the center of the conversation. Courtney then allowed Lea to control the conversation of peer comments on her problem-solving strategy, a practice that is often reserved for the teacher (Mehan, 1979). Lea fielded comments on her mathematical thinking from Janie, Carl, and Laura (turns 7, 9, and 11). Lea's peers had many comments they could make, however, in each comment there is evidence of their attention to Lea's mathematical thinking, particularly her problem-solving strategy and representation. Moreover, each peer comment included praise (e.g., "I like your strategy"), although Laura's was back-handed (turn 11). Courtney did not allow the conversation around Lea's ideas to end on this note, but concluded with a positive evaluation, "I like your strategy a lot."

Overall, this excerpt illustrates another way Courtney interactively positioned EBs in the role of the teacher, both physically and metaphorically, which advanced the storyline of EBs as teachers. These interactive positions also allowed opportunities for EBs to use mathematical discourse, have extended talk time, and control the conversational floor.

Assign Work

Assigning work to the class is a practice often reserved for the teacher, however, there were instances in the data where Courtney would allow EBs to do just this. For example, on Nov. 11, Courtney walked through a task with the class at the carpet. In the task, each student was to create their own book of stamps. To do this, they would determine the face value of a stamp, the total number of stamps in their book (shaped in an array), and the total value of the book. In the demonstration, Courtney asked Alonzo to select the face value of the stamp and then calculate

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the total value of the book. After Alonzo did this, Courtney asked the class what she must do next according to the checklist of instructions.

1 Courtney: So all of these altogether is 75, (writes 75 on board) 75 what, dollars?
2 Choral: 75 cents
3 Courtney: Ok, so should I just write that [the total value of the book] or
4 Student: No
5 Courtney: What's the next step that I have on my checklist, Clark what's the next step I have on my checklist?
6 Clark: Um explain, explain your strategy.
7 Courtney: Oh, I have to explain my strategy. Ok so how can I explain what Alonzo had asked us to do? Yasmin, how can I explain it?

What is important in this interaction is the way Courtney framed the next step of the instructions to "explain your strategy." Although the checklist specified students should do this, Courtney reframed this task as something Alonzo had asked them to do (turn 7). With this act, Courtney interactively positioned Alonzo as someone who asked the class to do mathematical work—acts traditionally reserved for teachers in instructional spaces. Thus, Courtney's interactive position promoted the storyline of EBs as teachers.

Revoice Peers' Mathematical Contributions

Courtney frequently revoiced students' mathematical explanations in whole class discussions. Less commonly, were explicit requests from Courtney for students to take on this practice. For instance, on Oct. 27, Courtney asked the class if someone could revoice Emily's strategy to calculate the total value of her book of stamps (see Figure 3).

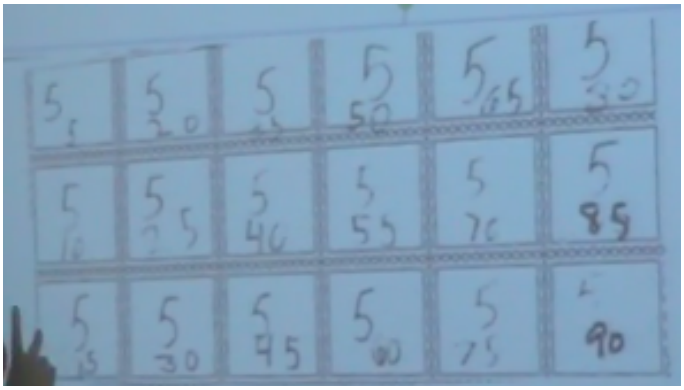

Figure 3. Emily's book of stamps and her written work.

1 Emily: I counted by 5s and 10 and (inaudible) instead of going like this (gestures across a row), I got, and then I did 5 times 18.
2 Courtney: Ok um, can someone else explain her strategy?
3 Lea: (hand raised)
4 Courtney: Lea can you go up there and explain what Emily did?
5 Lea: She did like (gets up and moves to board) (5.0 second pause)
6 Courtney: Shhh.
7 Lea: She did like, she counted by fives and go like 5, like 10, 15, all the way to 90 (points to 90).

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8 Courtney: Alright. Laura. Thank you Lea for explaining her strategy you must've been paying close attention.

In this excerpt, Courtney interactively positioned Lea as a student who could revoice a peer's problem-solving strategy, attended to and thought about a peer's mathematical ideas, and could articulate those thoughts publicly (turn 4). Lea paused in her explanation (turn 5) and Courtney moved to silence the class (turn 6), which positioned Lea as a student who should be respected, had an idea everyone should hear, and had the conversational floor. Lea continued (turn 7) and supported her explanation with gestures to the written work. Lea's explanation evidenced she understood Emily's strategy of repeated addition. Next, Courtney thanked Lea for her explanation and then positioned her as a student who followed the classroom norms of paying attention, stating "you must've been paying close attention" (turn 8).

Overall, this interaction represents another way Courtney interactively positioned EBs as teachers. In this case specifically, Lea was positioned physically and metaphorically as a teacher when she described Emily's strategy. As with the previous excerpt, Courtney allowed Lea to control the space in the front of the room and did not approach her.

Correct Peer Mathematical Errors

A final way Courtney interactively positioned EBs as teachers was through invitations to correct a peer's work at the board. For example, on Apr. 26, the class discussed two representations of 97 cents, "$0.97" and "¢97," written on the board and agreed "¢" was to be written on the right-hand side of the value (e.g., 97¢). Courtney then stated,

> Alright so the 97 cents, oh instead of having the 97 cents at the back of the cents sign it's in the front of this one isn't it. Alright, so how can we fix that? So, who can fix that up for me? Who can fix it? Who wants to? You want to fix it Samuel? Yeah go fix it, fix somebody's work for me. You're their editor. You're going to fix up what somebody did.

In her turn, Courtney invited an EB to come to the board to correct the error, a practice often reserved for the teacher. Courtney picked Samuel, an EB, who was asked to be an "editor" for the peer. Courtney's act invited Samuel to take up the physical space of the teacher (by coming to the board) and situated him as a person who can correct peers' mathematical work. Courtney went further by calling Samuel an "editor"—a powerful title for him in a class full of native English-speaking peers. In short, this interaction represented another way Courtney interactively positioned EBs in the role of a teacher—a person who can correct others' work.

Discussion and Conclusion

Courtney, a white female, monolingual elementary teacher presents a case of a teacher who leveraged her authority in the classroom to interactively position EBs in ways that fostered the storyline of EBs as teachers–a privileged role in the institutional space of the classroom. An examination of the data revealed that Courtney did this through interactive positions that asked or allowed EBs to: share problem-solving strategies, control the classroom conversation, assign work, revoice a peer's thinking, and correct peers' mathematical errors. As a result, Courtney employed interactive positions at the individual level, which advanced the storyline of EBs as teachers for the collective. In this way, Courtney promoted a storyline for EBs in mathematics that challenged dominant narratives that EBs require remediation and extensive mathematical support (Chval & Pinnow, 2010; de Araujo et al., 2016; Polat & Mahalingappa, 2013).

Courtney characteristically represents many elementary teachers in the U.S. As such, her case is common, yet unique. She not only represents the majority of elementary teachers in the

U.S., but her success in advancing productive storylines for EBs in mathematics situates her in the unique position to offer insight into the ways teachers can use their discursive practices to put forth storylines for EBs in mathematics that challenge dominant narratives. Thus, there is much to learn from Courtney that other monolingual teachers can integrate into their practice. Most notably, the interactive positions identified can be implemented by other teachers to advance the storyline of EBs as teachers of mathematics. For example, a teacher may begin to reflect on the storylines they construct for EBs through their acts. Alternatively, a teacher may ask EBs to take on roles and responsibilities that are typically reserved for teachers (e.g., assigning work, control the classroom conversation, teaching peers). Given the growth of EBs in the U.S., it is essential that teachers understand how their interactive positions can be used to promote storylines individually and collectively to create change in public perceptions of mathematical ability.

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