Engaging emergent bilingual students in daily academic talk

Rosita Apodaca
IFL executive director

Sara DeMartino
IFL ELA fellow

Tabetha Bernstein-Danis
Assistant professor,
Kutztown University of Pennsylvania

English learners (ELs)—or emergent bilinguals (EBs) as educators now refer to these students to remove the deficit stigma from their identity (Garcia et al., 2008)—must engage in academic conversations every day to gain access to the world of knowledge. Their educational mission is the simultaneous acquisition of knowledge and English. As educators committed to equity know, EBs cannot wait until they are fluent English speakers to participate in academic conversations. Academic language is an essential component of an equitable educational program for EBs, and equitable teaching practices that embed academic language development for these students must support deep thinking, conceptual understanding, argument, and discussion. All of these practices are grounded in two Principles of Learning—Accountable Talk® Practices and Academic Rigor in a Thinking Curriculum (Resnick, L. et al., 2005). These practices are central to being ready for college, career, and life. There is a body of work that demonstrates that well-structured talk produces robust learning and helps “build the mind.” These benefits show up in standardized tests, transfer to other content domains, and persist over the years (Resnick, 2015).

Using Accountable Talk practices (or generically, “academically productive talk”) as a tool to support EBs to engage in academic conversations requires a change in mindset about how we educate students learning a new language. Rather than limiting instruction to teaching students a language, we propose using both the native language support and emerging English skills to learn concepts and ideas. Challenging academic work results in productive struggle for students and requires that a lesson’s cognitive demand is not diminished. Rather than removing the struggle and potentially encouraging learned helplessness in students, teachers need to maximize EBs’ access to challenging content without depriving them of the opportunity to grapple with difficult new concepts.

Accountable Talk Discussions

At the IFL, we believe academic discussion is purposeful and productive, occurring via sustained conversations about meaningful content that is anchored in grade-level culturally relevant texts and tasks. Students work together to co-construct knowledge, and both students and teachers negotiate meaning through “talk moves,” such as asking for clarification, paraphrasing, and building on or disagreeing with previous ideas.

The following examples show ways in which teachers can mediate rigorous discourse in a fourth grade classroom. Teachers play

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A district's perspective: CFC and differentiation

Dena Zook-Howell
IFL ELA fellow

Coaching, at its best, bolsters district goals while supporting individual needs, gracefully weaving coherence and differentiation into a tapestry of continuous learning. With Content-Focused Coaching® (CFC), both the culture and the instruction are positioned to evolve in ever-increasing complexity through the interdependence of people—coaches supporting teachers through individual conferencing and teachers supporting one another during PLCs that are truly collaborative pursuits.

We asked one of our district partners, Guilford Public Schools (GPS), to provide their perspective on the CFC model in literacy through the lens of differentiation. GPS and the IFL have been in partnership for almost 10 years, and we continue to learn from one another.

Anne Keene, associate superintendent and coordinator of coaches, notes that the learning stance inherent in CFC that negates the deficit concept and embraces coaching for all means “everyone needs a coach, another set of eyes, and a partner for co-accountability...how I question, how I plan, how I reflect—If I’m co-accountable, I will continue to refine my craft. This is the strongest benefit of CFC: a think partner who assists in the growing of my [individual] understanding.” This one-on-one relationship allows a coach to ensure that the time spent with each teacher is productive and meaningful for that teacher.

Dr. Keene further states that the PLCs that connect individual conferring with district goals speak to the balance between alignment of district message, shift in culture, and space for differentiation. “PLCs are real learning experiences,” Dr. Keene explains. “Coaches calibrate what is happening and share research and professional literature, classroom resources, and video clips,” including information about student learning trends within a unit. She says that teachers rely on the coaches for this level of support and guidance. Meaningful differentiation that speaks to problem solving is important. “No one is skipping chapters or units—this addresses equity across classrooms, and it creates the opportunity to learn for all children.”

The structures, themselves, provide a vehicle for thoughtful consideration of differentiation. But the intentional choices a coach makes within these structures speak to how well the coach knows the learning trajectories of her colleagues, her ability to match those to coaching offerings, and the opportunities for teacher agency that exist as part of the collaboration. Lindsay Fiorentino, literacy coach at A. W. Cox Elementary, offers a concrete example of such differentiation in action. “During the Ocean Animal Life unit this year, the support given to each teacher to implement the same new unit was varied. Teacher A was new to the grade level, so she met with me weekly to review lessons, student work, and plan but only engaged in a few select cycles. Teacher B engaged in weekly cycles, wanting me to be a part of the classroom community in a co-teaching capacity. Teacher C identified early on where [in the unit] she anticipated needing support (text structures, note taking) and did cycles then as needed and emailed questions for clarification.”

Meghan Ferrara, literacy coach at Calvin Leete Elementary, provides this perspective on differentiating in her coaching practice. “I have come to approach coaching cycles in a differentiated manner specific to the artifacts being examined. For example, based on the pedagogical goal set by the teacher as well as the comfort level of the teacher, there are multiple ways to examine teacher and student evidence in post-conferences as a means for reflection. Recently, I have been able to examine teacher and student moves sitting side by side with a teacher reflecting on a video segment of a lesson taught by the teacher. In another coaching partnership, we have been combining analysis of student work samples as well as the teacher-student moves from a transcript that was generated by the coach while the teacher was implementing the planned lesson. Using varied artifacts to ground the discussion has been powerful, differentiated cycle work.”

Teacher agency and differentiation are related, as Annine Crystal, literacy coach at Abraham Baldwin Middle School, reminds us. “Each teacher comes to their classroom with a unique set of prior experiences, knowledge, and beliefs that must be taken into consideration throughout their coaching work. Teachers must set goals for themselves

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District uses improvement science principles to increase math scores

Victoria Bill
IFL mathematics fellow

When a district successfully shifts their trajectory of students’ performance, many people ask how they did it. New Brunswick Public Schools’ use of strategic decision-making, grounded in improvement science principles, and greater collaboration across role groups resulted in impressive gains in mathematics scores across the district.

In what ways did the district support teaching and learning that lead to this growth in student learning?

Central office leadership in collaboration with instructional leaders across the district systematically provided classroom teachers with a full range of support—from resources to learning opportunities—that focused on the Effective Teaching Practices for Mathematics.

How did the district determine if the new learning about the effective teaching practices made its way into classrooms across the district?

New Brunswick administrators collected and used a variety of data to formatively assess the impact of the implementation of effective teaching practices. Building administrators collected and analyzed data and artifacts from third through fifth grade classrooms to find out what type of instruction was happening in mathematics classrooms. This included the instructional tasks being used and samples of student work from instructional tasks. They also collected and analyzed survey data from teachers and students along with state math assessment data.

Analysis of the data showed several correlations between the district’s support for effective teaching practices and the impact on teaching and learning in mathematics classrooms. State assessment data revealed high scores in the math domain of fractions, the area of study where teachers delved most deeply during their professional development. Teacher survey data indicated that teachers were using high-level tasks regularly in the classroom.

The analysis also provided insights into areas that needed further attention:

- Student work samples contained little evidence to indicate that students were making use of mathematical models.
- Student work samples showed few students providing evidence of mathematical reasoning.
- Student survey data revealed that the majority of the talk in the classroom was teacher talk which contrasted with what teachers themselves reported.

These insights served as the focus for the district’s next series of changes. Dr. Aubrey Johnson, superintendent, challenged principals to try small tests of change to spark an inquiry into ways to deepen and improve the learning opportunities for the students.

See below for examples of tests of change.

Early in the implementation of these change cycles, principals reported that they felt focused and re-energized by the rapid and actionable steps within and across tests of change which have also provided a window into the ways their schools are working. Additionally, student work that was collected and analyzed showed improvement in student performance, which served to bolster the efforts of principals and teachers alike.

<table>
<thead>
<tr>
<th>Test of Change</th>
<th>Evidence to Be Collected</th>
</tr>
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<tbody>
<tr>
<td>If mathematical models are made more public and used to reason about mathematics during teacher-to-administrator and teacher-to-teacher discussions, will there be an increased use of models in math classrooms?</td>
<td>Collect examples of models in math classrooms and note features of models.</td>
</tr>
<tr>
<td>If the writing in the mathematics classes is analyzed, will the list of characteristics align with characteristics of writing about mathematical reasoning?</td>
<td>Collect student work and note mathematical reasoning and process writing.</td>
</tr>
<tr>
<td>If students are asked to explain what they understand in mathematics, will they be able to talk about what they are learning?</td>
<td>Collect student responses and note patterns by grade level.</td>
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</table>
Differentiation across tiers of math instruction

Laurie Speranzo  
IFL mathematics fellow

Derek Stoll  
Math teacher at ELMS  
Syracuse City School District

What does it mean to differentiate instruction to meet the needs of every learner in a mathematics classroom? Giving different students different tasks does not yield a common learning experience; therefore, the availability of holding rich mathematical conversations with the whole class is lacking. But we know that we need to meet students where they are and support students in their exploration of the math. Thus, there is the need to differentiate the questions that are asked of students as they engage in high-level tasks.

**Differentiation in Tier One Instruction**

In the Syracuse City School District, Derek Stoll is a math teacher at Expeditionary Learning Middle School (ELMS). Derek shares the power of implementing tasks’ differentiating questions. “Creating opportunities for students to have access into a complex task allows students to get invested in the mathematical learning inside a classroom, as well as pushed at a variety of levels. Planning questioning based on problem-solving strategies has been really helpful in providing targeted feedback to different mathematical learners.”

Derek refers to planning questions based on strategies. As students are working individually or in small groups, the questions that assess and then advance student thinking differ based on the work they produce; some students/groups may get questions that ask them to try applying their strategy to a different set of numbers, some may get questions that ask them to create a model that matches their thinking, and some may get questions that ask them to write about their reasoning. However, all students are asked questions that push their thinking forward toward the goal of the lesson.

Derek does name, however, that differentiated questioning is not easy. “This work is very challenging to plan (especially when you are the only math teacher in your building) but working with other sixth grade math teachers and testing out tasks on other teachers in the building help build a greater awareness of what types of strategies [students may use to solve the task] and what questions students will need to be successful.”

**Differentiation in Tiers Two and Three Instruction**

There is an additional layer to the work around differentiation that is occurring at ELMS this year. Under the leadership of principal Kevin Burns, and with Derek coordinating data collection, ELMS has taken on differentiating additional learning opportunities for students who have unfinished learning in their prior knowledge.

In an attempt to ensure that students are receiving exactly what they need, the school has created dedicated time and data usage for Tier Two and Tier Three services. Derek says, “This year we have organized our master schedule to have every sixth grade student receiving a math intervention at the same time every other day. With this unique opportunity, we have utilized the SOAR materials from the IFL to create a series of universal screeners. Using these targeted screeners, we created specific subgroups that are addressing gaps of unfinished learning in 6- to 10-week cycles of intervention using the SOAR materials.” Knowing that Tier Two and Tier Three instruction is meant to be flexible and concept-specific, Derek adds that the SOAR materials “have been really powerful tools to specifically provide some targeted instruction and flexibility for students to receive mathematical instruction at their level and be moved based on students’ problem-solving strategies, mathematical conceptual understandings, and efficiency to solve problems within contexts.”

Like with planning for Tier One differentiation, there are challenges here as well. Derek names that teachers providing instruction need “consistent and thoughtful professional development on the domain they are addressing with a math specialist that can look at student work (using progress monitors also created with the SOAR materials) and align the SOAR intervention lessons based on what students need.” As Derek notes, progress monitoring is essential to ensure that the identified instructional supports are effective and that student understanding is advancing. Tiered instruction may need to be modified based on the data collected during progress monitoring.

One measure that has been instrumental in the implementation of differentiated intervention time at ELMS has been team meetings. The meetings allow time to delve into looking at student work and analyzing students’ unfinished learning and next steps of individual students based on what they need. While an ambitious undertaking, the model that ELMS has adopted this year speaks to meeting the needs of the students at every level of instruction, truly defining differentiation in the math classroom.
Creating a map to bridge differences

When we are working with teachers on their curriculum, we often find ourselves having to reinforce the idea that it’s important to do the tasks that we’d like our students to do. This is sometimes called dogfooding—it’s slang in the corporate world for testing your own product to work out the kinks. Teachers should complete their own tasks to make sure that the product generated by students in response to the task is the product the teacher was expecting students to create. Another reason for dogfooding in education is to anticipate the range of responses. Anticipating how students could potentially respond to a task (either in the correct or incorrect space) provides an opportunity for teachers to pre-plan for differentiation and contingency work based on what student responses tell the teacher about where the students are in their learning.

We’ve found success using a Continuum of Potential Responses tool (Mihalakis & Renner, 2016) with teachers to plan for instruction. The tool, shown below and completed for a task on an excerpt from Ta-Nehisi Coates’ Between the World and Me (2015), asks teachers to consider both less valid and more valid responses to a task, what those responses tell teachers about where students are in their learning, and how teachers might differentiate instructional next steps based on where students are.

This work first begins by asking teachers to identify an “ideal” response and rationale for why the response is ideal. In this example, teachers were identifying the ideal response to the question “What is Coates saying about race in this text?”

**“Ideal” Response:** The progress of Americans is built on violence towards black bodies (lines 12–16). Race is used in America to keep a hierarchy (lines 41–43) and is a modern invention of racism used to destroy and humiliate people (lines 33–34; 39–40; 46). Coates is also saying that how race is defined will continue to change over time to keep the “ruling class” in charge (47–50).

**Why Is That Response Ideal?**

This response gets major parts of Coates argument about race in America—that race is a construct used to oppress and control to keep the “ruling class” in power. It shows that students have a clear grasp of the content of the task that can be built upon as students move through additional tasks.

Teachers then prepare for work that will bridge the gaps between where students are in their understanding of a text or of content and where they need to be to move forward in the work and toward the learning goal, rather than marching through a sequence of work in lock step.

One of our urban partner districts has begun to utilize this document as a co-planning tool for teachers of English learners (ELs) and their ELA counterparts. The document provides an entry point for teachers to have a conversation around how ELs may respond to complex texts and tasks, and allows teachers the opportunity to work together to co-plan for difference—to think together around differentiated instruction and potential next steps to bridge gaps in student understanding around the texts and content. Having teachers of ELs and content-area teachers work together facilitates conversations around how to help ELs engage with complex texts and tasks, something that many content-area teachers have expressed frustration over knowing how to do. However, a critical component of utilizing this document, and something that is frequently a hurdle, is finding time for teachers to work together to anticipate a range of student responses. Shared PLC time among teachers of ELs and content-area teachers has proven to be an ideal time to work through co-planning instruction.

When teachers begin to use the Continuum of Potential Responses tool during their co-planning time, we recommend that they start by discussing the ideal response(s) to the task they will be planning. This ideal response is what you would expect to hear if students totally got the text and the task you were asking them to respond to (not just what you think, say, a 10th grader would say). Teachers then work from the ideal responses to anticipate what their students might say in response to the task to create a map of differentiated next steps. We always recommend that teachers come back together after working with students to revise the Continuum of Potential Responses with the actual responses that students give and to refine the next steps based on those responses. This will provide a more complete map that you can use (and continue to revise) with future students.

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**Continuum of Potential Responses**

First, do the task and brainstorm as many possible responses as you can, preferably with colleagues. Consider writing each response on a sticky note so you can then group similar responses before filling out the chart below. The number of categories will vary; add or subtract columns as needed.

<table>
<thead>
<tr>
<th>Category/Response Type</th>
<th>Less valid</th>
<th>Neutral</th>
<th>More valid</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sample of Potential Response(s)</strong></td>
<td>Coates is a TV reporter. Coates was a slave. Coates’ son was shot.</td>
<td>Coates gave an interview on TV and the reporter misunderstood. Coates stated that whites were successful because of brevity and violence. Black people are being killed.</td>
<td></td>
</tr>
<tr>
<td><strong>Diagnosis</strong></td>
<td>Student is making unwarranted claims based on information in the text. They are comprehending words in the text, but then incorrectly ascribing those words experiences to Coates.</td>
<td>Student understands what’s happening in the text, but can’t get at Coates’ overall message and why he is writing this text.</td>
<td></td>
</tr>
<tr>
<td><strong>Potential Next Steps</strong></td>
<td>For these two groups of students: Reread Between the World and Me. As you read, pay attention to natural breaks in the text—places where Coates transitions to new topics or ideas. Mark those places. Then, go back and reread each section. What is Coates saying in each section? How does each section build from the ones before it and contribute to the whole? (done in pairs)</td>
<td>These students are ready to move on to the next task; however, considering the density of Coates’ text, they may benefit from work with the contingency task as well (individually).</td>
<td></td>
</tr>
</tbody>
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*Note: This tool provides an opportunity for teachers to co-plan for instruction.*
Emerging bilingual students continued from page 1

an important role in augmenting ways for students to be successful when they use complex academic language. The development of this complex language positively impacts students’ vocabulary and reading outcomes, allowing them to more quickly keep pace with their native English-speaking peers.

To reach these goals, EBs need opportunities to listen to academic language in authentic contexts. They also need opportunities to use purposeful language, such as to explain, disagree, agree, or build on others’ ideas. Teachers who call on various students to explain their thinking about the same idea provide students with opportunities to hear new concepts explained multiple times in multiple ways, maximizing their ability to make meaning from these new ideas. EBs also need to be taught vocabulary indirectly during discussions to get to the gist of the subject being discussed and directly after they have had the opportunity to hear it used in context.

Developing knowledge and academic language requires having something meaningful to discuss, and that usually means using culturally relevant texts. Fillmore (2010) says that the only way for students to acquire the language of literacy is to encounter these structures and patterns in the materials they read. The texts they discuss need to be sufficiently complex so that students can discover how academic language works.

The teacher whose work is illustrated here had one or more of the following goals of Accountable Talk practices in their lessons (Michaels, S. and O’Connor, C., 2012):

- Help individual students to share their reasoning so that it can be heard and understood.
- Help students to orient to others and listen to what others say.
- Help students to work on deepening their reasoning.
- Help students to work with the reasoning of other students.

**Example 1: Building on Ideas**

In the first example, EBs are engaged in an instructional unit on child labor. The teacher is working to help students understand a complex informational text through utilizing Questioning the Author (QaA) for comprehension. In the excerpt, the teacher has asked students to explain why the author used different examples of child labor from around the world.

Student 1: That there is not only one place that has child labor. That they have it like around the whole world.

[Turn and talk]

Teacher: Carlos, go ahead Carlos.

Student 2: I want to add something else. Because, he is telling us about all these places because if somebody wants to stop child labor, they just can’t say one country. Because other countries does it. So, you can’t say, “Oh El Salvador does child labor” because they, they will tell on the other people. “Egypt does it too, so you can’t just blame us too.”

Student 3: …if they are going to do something for that for the whole world should care. Because there’s… child labor in the whole world. Even in the United States.

Rather than explaining to students why an author might use various examples to support his or her point, the teacher presented students with an open-ended question, gave students an opportunity to talk about the question (represented by crosstalk in the transcript), and then gave students an opportunity to share their thinking with the whole group. The teacher’s use of a probing question and then providing students an opportunity to clarify their thinking first with a classmate allowed EBs to have confidence sharing their thinking in front of the group and building on the ideas of others.

**Example 2: Academic Vocabulary**

In this second example, the class is still engaged in the QaA lesson on an informational text about child labor. In this excerpt, the teacher has just asked a question about the agricultural work referenced in the article.

Student 4: Okay, I think the author is trying to tell us that, it isn’t like…all they’re getting right to have children do um like carry a lot of things and they are not like learning, and they are just like… They are doing things like adults are supposed to do.

Teacher: How did you know that children were not learning? Where in the text did you…

Student 5: Right here. Their work is harsh and violates their rights to health and education. Education is the same as learning so…

Teacher: What do you mean by exploding the kids?

Student 7: They’re, they’re using them, like that’s not right. They shouldn’t be doing that.

Student 5 in this example utilizes the author’s language (harsh and violates, both Tier Two vocabulary words) to help Student 4 explain why he thinks the authors say that children are not learning. Tier Two vocabulary words are more difficult for both native English speakers and EBs to learn because they are words not often heard in everyday speech. The teacher provided exposure to less frequently used Tier Two words through her choice of text. Students also continue to build on peers’ thinking, an expectation that was set for students at the beginning of the year and had become commonplace for students.

The teacher is also willing to accept the student’s use of imprecise language. Student 7 confuses the word exploiting for exploding possibly because explotar means both exploit and explode in Spanish, but rather than correct the student or ignore the student’s use of the improper term in English, the teacher asked the student to explain his thinking. This explanation helps the teacher and the student’s peers to better understand what the student meant when he said “exploding,” and it also allows the teacher some additional insight into the student’s thinking about the ideas in the text. Even though the student used the wrong word, he was still comprehending an essential concept from the text. Both of these examples provide just the tip of the iceberg when it comes to considering the arsenal of tools teachers need to build EBs’ academic English and content knowledge. Overall, we recommend the following for teachers of EBs to push their students to meet goals more on par with their native English-speaking peers:

1. Start with a good set of norms that are established with the help of the students for using talk respectfully, and for ensuring equitable participation.

2. Utilize culturally relevant texts that provide opportunities for students to see themselves, develop knowledge around a topic or idea, and learn ELA content.

3. Design high-level tasks that engage students with open-ended questions by utilizing classroom routines that ask students to generate, share, revise, and reflect on thinking.

4. Have a set of talk moves that serve as tools for accomplishing the established goal(s).
5. Have a set of mediation tools to support the varied levels of language acquisition represented in the room.
6. Be willing to accept imperfect language from students as they learn to master English and academic language.

Engaging EBs in complex tasks around challenging texts in English is no simple feat, but with the right tools at teachers’ disposal, we know that it is one they can accomplish. Careful planning and consideration about appropriate texts, student characteristics, and the tasks that best scaffold instruction help facilitate EBs to engage in the kinds of discussions that will not only build English, but also create critical thinkers and speakers.

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References

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that are relevant and meaningful to their own specific situation (students, grade, subject, etc.). Coaches must work with teachers to determine which potential goal(s) make the most sense under the umbrella of overarching district priorities. Coaches allow teachers agency over their own learning by asking probing questions that encourage deep reflection. Such an interaction, rooted in mutual respect, positions both coach and teacher to be continuous learners, and to begin with a unique dialogue dependent on aspects particular to the teacher.

Differentiation has both a cognitive and social value. Meeting individual needs is one way that coaches build relationships, as well as supporting professional learning. When coaches are viewed as a trusted resource, a cultural revolution is underway. Dr. Keene shares the following phrases from teachers describing the coach in their building: “Makes me a better teacher” and “Safe person to ask” as well as “Makes me think more deeply—clarifies ideas when I engage in cycles” and “Helps me reflect on my learning.” “Coaching is now a part of our culture,” Dr. Keene explains. “No one says, ‘I don’t want to be coached.’ Instead, they say, ‘The coach has my back.’”

Dr. Crystal speaks to the socio-cognitive value of the coach-teacher relationship in this way: “Teachers must trust coaches and feel safe enough to be vulnerable, take risks, and change course based on evidence of student learning and reflection.” Such trust is not the result of a one-size-fits-all approach. Rather, differentiation is one significant hallmark of Content-Focused Coaching implemented thoughtfully and responsibly.

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Welcome Courtney Francis

We are pleased to announce Courtney Francis has joined our team at the Institute for Learning as the new director of online learning and product development!

Courtney received an MS in Educational Technology and Applied Learning Science from Carnegie Mellon University in 2018, supercharging her ability to design learner-centric educational tools based on cognitive science, data analysis, and technology trends.

Courtney is looking forward to applying her expertise in educational technology and product management experience in industry, startups, and academia to help IFL’s online courses reflect our important education research and the effectiveness of our face-to-face workshops, and to position IFL to apply our research-backed instructional methods more broadly in real-world settings. Read more about Courtney on our website at https://ifl.pitt.edu/about-us.csh.html.

Improvement science continued from page 3

The principals reflected on their work and named three common practices:
- Stay focused on mathematics content and student reasoning.
- Take an inquiry stance and cultivate inquiry.
- Engage in authentic collaboration.

Why did the common practices named by the administrators matter?

Taking an inquiry stance when positioning the test of change was one of the ways principals engaged teachers in the work. Principals created space to work alongside teachers so that they could take on issues and problems of practice collaboratively. Together, they brainstormed ways they might engage in small tests of change and identified the evidence they would collect to learn about the change. Since this practice was new to everyone, working jointly allowed them to establish clarity about why the evidence was needed, the types of evidence that would be helpful to analyze, and processes for collecting evidence that would be least disruptive to teaching and learning.

As data were collected and analyzed, principals took great care to cultivate dispositions in which everyone avoided leaping to definitive conclusions. Teachers and administrators had to learn to be tenacious, to probe their own and others’ ideas and interpretations, to doubt, and to be skeptical. Working in this way is a learned process and requires a great deal of discipline on behalf of both the principals and the teachers.

Throughout this process, principals and teachers focused on very important practices in mathematics—the use of models and explanations and writing about mathematical reasoning. These effective teaching practices are ones that will support students in deepening their understanding of mathematics. When analyzing student work through these lenses, teachers and administrators can gain a deeper understanding of what students know and what they need to learn.

Additional insights will also be shared by New Brunswick principals at the IFL Leader Summit in June.

*See the February issue of Bridges to read more details of this growth in student achievement in mathematics.*
Registration is now open! Mark your calendars and book your travel to attend the 2019 IFL Leader Summit in Pittsburgh June 4 – 6, 2019. This year's event—Achieving the Promise of Instructional Equity Through Improvement Science—is designed for district and school leaders to learn about and use improvement science as a means for leading meaningful change that focuses on equity as a primary driver.

Keynote speakers Ryan Gallagher of High Tech High Graduate School of Education and David Kirkland of New York University's Steinhardt School of Culture, Education, and Human Development will bring deep expertise in the areas of improvement science and educational justice to our conference. Gallagher and Kirkland, along with researchers from the University of Pittsburgh and IFL fellows, will guide attendees to take an equity stance toward their study of district data and understand the ways in which content knowledge, pedagogical practices, and student thinking can move mathematics and literacy instruction toward equitable and rigorous learning environments. Attendees will gain new knowledge and practical strategies for bringing this work back to their district.

This summit, like past IFL conferences, will provide exceptional professional development opportunities for every participant. We will feature concurrent sessions in mathematics and English language arts and a special workshop with leaders from the Center for Urban Education at the University of Pittsburgh. Everyone is invited to a poster session highlighting research from the field. We encourage districts to sign up for a consultation with an IFL fellow to discuss how to begin implementing this work in the district.

We look forward to seeing veteran attendees, and we are excited to welcome new partners to our city in June. Register today to reserve your spot.

Explore shopifl.com today!