

Coaching for Rigorous Mathematics Instruction

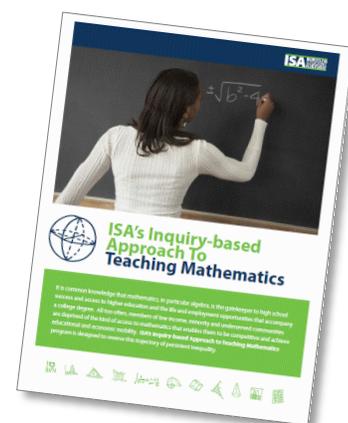
ISA Blog – by N. Gerry House, ISA President

ISA math coach Julie Arcement often begins the initial coaching session by sharing background information about herself and asking questions about the teacher’s background. “Many teachers have never had a coach before and are curious about the coaching relationship. Their first questions are usually:” ‘Are you here to evaluate me? Why am I getting coaching? Are other teachers being coached also?’” Arcement assures them that her coaching role is not that of an evaluator and explains that as a coach she is there to serve as a resource, support, and thought partner. She knows that she must first build a trusting relationship with teachers before any true coaching can take place. After establishing the intent of the coaching relationship, Arcement gets to know more about the teacher and how he views his classroom. As part of the conversation, she also highlights the teacher’s strengths on which they can build. She and the teacher talk about the students in the class—their backgrounds, strengths, and their growth areas. The teacher also agrees to introduce Arcement as his coach to his students the following week when he will also let them know that his coach will be a regular visitor to the classroom and that things will go on as usual. Arcement ends this first session by sharing ISA’s curriculum resources and asking the teacher to think about the following questions, and they will discuss them at their next session: What is math and why do we teach it? What do you want your students to understand about math? What do you want your students to be able to do with their mathematical learning?

These types of reflective questions help teachers begin to hear, process, and become conscious of their own beliefs and methods; why they do what they do as math instructors; and be more intentional about what they teach and how they teach it. The ISA coach is also modeling for the teacher how to frame questions that inquire into the thinking of another individual and help that person clarify his own thought processes rather than supplying them with answers. It is this same type of inquiry method that coaches will guide teachers to use with their own students. This initial meeting sets the tone for all future sessions between the teacher and the coach and establishes a pattern for the coach to help the teacher strengthen his own meta-cognitive process for inquiry pedagogy in classroom practice.



ISA’s math specialist,
Julie Arcement



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*ISA’s Inquiry-based
Approach to Teaching
Mathematics*

Subsequent Coaching Sessions

Subsequent sessions will always include the following:

- The coach observes the teacher and his students in their actual classroom.
- The coach makes detailed notes about what the teacher is doing and what the students are doing. She may even take pictures of student work and facilitate a lesson or part of a lesson to model how to engage students with inquiry.
- The coach and the teacher meet after the class period, and the coach will guide the teacher through an inquiry process about his own classroom practice. The types of questions posed may include: Tell me what you thought about today's lesson? What did you want your students to think about today? Did they make the connections you planned for? Why or why not? Were the activities you planned in line with the outcomes that you wanted? Is that what they actually did? What did you learn today about your students' thinking? Did you think there were any misconceptions about this math concept? What might be the source of their confusion?

This pattern of observation, inquiry, analysis, and adjustment then repeats itself as Arcement and the teacher meet during every coaching visit. "Initially," says Arcement, "most teachers are skeptical about using the inquiry-based approach with their students, but over time the teachers and their students become committed to this type of teaching and learning as the best way to develop the full range of students' talents and abilities. "The ISA coaching process is so successful because it is relevant, embedded, and we use curricular resources developed by ISA coaches and teachers," Arcement explains. "The teacher and I are working together to improve daily classroom practice and student results. Everything that we do is authentic and nothing is contrived. It is so rewarding as a coach to see the change that takes place in teachers and students as they engage with mathematics differently."

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