Coaching Vignette: Ms. McCarty

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EFND 598

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I worked on coaching math in fourth grade with Ms. Kimberly Morand during the 2022-2023 school year. Ms. Morand is in her sixth year as a full-time mathematics specialist and coach with Gwinnett County Public Schools. She is currently the math coach for upper grades at Burnette Elementary School in Suwanee, Georgia. In working with upper grades, Ms. Morand specializes in helping third, fourth, and fifth grade teachers reimagine their lessons to include concrete manipulatives in order to lay a foundation for student understanding of abstract mathematical thinking. Ms. Morand attends math planning once a week with the third, fourth, and fifth-grade teachers to help plan upcoming lessons and units. As such, the mathematics teachers at Burnette are very used to seeing and interacting with her in a professional capacity. At Burnette, upper grades are semi-departmentalized.

**Co-Planning**

 Ms. Morand, Ms. McCarty, and I met briefly at the end of math planning on Tuesday afternoon to schedule a time on Wednesday after school to discuss Ms. McCarty’s lesson plan for her Thursday lesson on fractions. During their meeting on Wednesday, Ms. McCarty said her students were struggling to see that the “bigger the denominator gets, the smaller the pieces get.” Ms. McCarty stated that she had used the “drawing models method,” but that some of her students were making mistakes while drawing them. Ms. Morand was there as support, but allowed me to direct the coaching session. I guided the conversation by asking what particular mistakes were being made. Ms. McCarty said that many of her students were trying to draw circular models, and their models were either all different sizes or partitioned unequally. I probed Ms. McCarty to discover what methods she had used to introduce her fraction concepts: was there a concrete manipulative? Did students always create models on their own? Were they using fraction bars? Ms. McCarty said she had used fraction bars in the past, but some of her students became distracted with “lining them up perfectly” or “stacking them into pyramids” and missed the lesson or the concept behind them.

 Knowing that this can be an issue with fourth-graders, I suggested Ms. McCarty lean into that “building instinct” within her fourth-graders and try using pattern blocks instead of fraction tiles. Ms. Morand provided Ms. McCarty with a class set of pattern blocks, and we discussed how we might circumvent the problems Ms. McCarty has had in the past using manipulatives. Ms. McCarty postulated that she could allow students five to seven minutes at the beginning of class to allow students to explore the pattern blocks as an activating strategy. She could prompt her students to build shapes or animals, etc., using the pattern blocks so they become familiar with how they fit together and allow active learning simultaneously. Ms. Morand and I agreed with this assessment and suggested she might use tangram patterns for students to keep them on task and direct learning. Ms. Morand provided tangram mats she uses with younger grades.

 I then guided the conversation into how Ms. McCarty would present the lesson. Ms. McCarty will use board-size pattern blocks in the same color the students have. Ms. McCarty will first review what a fraction is and how the numerator and denominator relate to being a part of a whole. Ms. McCarty will then build two fractions (with the same numerator, different denominator) using the pattern blocks. She will prompt the students to make noticings about their fractions. Ms. McCarty asked what she would do if no one responded. Ms. Morand suggested she lead them by prompting the direction of the conversation: “what do we notice about our pieces in each fraction?” Ms. McCarty will then scaffold and have students follow along in making two more fractions with their pattern blocks and comparing to decide if they are greater than or less than. Ms. McCarty will give the students two fractions to build and compare with their elbow partners while we circulate to check for understanding. Students will then break off into pairs with their pattern blocks to build and compare fractions, recording their answers on recording sheets. This will serve as the formative for the lesson for Ms. McCarty. At the end of the lesson, Ms. McCarty will check-in with students by having them write their student number on the front of a post-it and a number one through four on the back side of the post-it: one being “I don’t get this at all” and four being “I could teach this to you if you asked.” Students will place their post-its on the “parking lot” as they exit the class.

**Observation/ Co-Teaching**

 I attended Ms. McCarty’s first block math class on Thursday morning. Ms. McCarty proceeded with the steps of the lesson as discussed during planning. However, she became involved with a student asking questions about the previous night’s homework. As a result, the “activating strategy” portion of the lesson ran about four minutes long. Some students became disinterested in the tangram cards and again began building other objects. Ms. McCarty quickly brought students back on task and began the lesson. Students were able to reiterate that fractions are part of something and that their pieces have to be the same size in that whole. Students were asked to put their hands on their desks, so Ms. McCarty knew they were listening and paying attention. Ms. McCarty built the fractions 2/6 and 2/3, asking the questions she and Ms. Morand had planned. Students were able to come up with noticings, with one student suggesting that the pieces were different sizes, so they were not the same fraction. Ms. McCarty, without prompting suggested the students build the fractions and place one on top of the other. She then asked what they noticed. Students were quickly able to recognize that 2/6 was smaller than 2/3. One student also noticed that two 1/6 pieces together was the same size as one 1/3 piece. Students were able to complete the partner work. However, one pair was more interested in building shapes than completing the assignment. Ms. McCarty ran out of time before coming to the reflection part of the lesson.

**Debrief**

 During our debrief on Friday morning, Ms. Morand asked Ms. McCarty how she thought the lesson had gone the day before. Ms. McCarty said that she liked how she was able to pivot and prompt her students to build fractions one on top of another. She said she was unsure on how to keep the pair of students engaged in the lesson so they would be able to achieve the same goal as the others. I asked how she had decided on groupings. Ms. McCarty said she generally allowed students to pick their own partners but had thought about ability grouping, placing one strong student with one student who might need extra help. I asked if there could be any drawbacks to this and Ms. McCarty said there could be a tendency for the lower student to copy the higher students. She also stated that it might have been better to do the activity as a pulled small group activity rather than partner work so she could observe her students better. I asked how she’d planned to assess her students understanding. Ms. McCarty said she would like some guidance in this area. Ms. Morand provided Ms. McCarty with a quick check from Mix and Math 360. The quick check had 4 questions and Ms. Morand suggested Ms. McCarty use the same “check-in” method as the post-it note system, but to put the number next to their name on the name line. The bell was getting ready to ring to allow students to the classroom, so Ms. Morand and Ms. McCarty planned an additional meeting during planning that day, as I would not continure in this lesson planning, to continue their debrief and discuss the results of the quick check.