A COMPARATIVE CASE STUDY ON THE COMPLEXITIES OF RESPONSIVE TEACHING

BACKGROUND

- Responsive teaching refers to practices that elicit, respond to, and take up students' thinking to connect to the math itself.
- Number Talks are short lessons utilizing mental math to transform student perspectives on math from memorized answers to investigated processes.
- This research stems from a larger study on 11 early career teachers from the Graduate School of Education invited for an online discourse community, in which they gave and received feedback on Number Talks to refine responsive teaching practices.

This is a comparative case study on the decomposition of two early career teacher's development of practice asking the following:

1. What do early career teachers focus on in their instructional routines and inquiry group participation?
2. What are early career teachers looking to gain from inquiry group participation?

METHODS

Coding Scheme for Dialogic Practices in Number Talks

<table>
<thead>
<tr>
<th>Coding Scheme</th>
<th>Description</th>
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<tbody>
<tr>
<td>E1</td>
<td>Asks a student to describe a strategy for getting the answer</td>
</tr>
<tr>
<td>E2</td>
<td>Asks a student to explain other students' thinking or strategies</td>
</tr>
<tr>
<td>E3</td>
<td>Asks questions to surface understanding of the strategy</td>
</tr>
<tr>
<td>OI1</td>
<td>Asks students to restate others' thinking or strategies</td>
</tr>
<tr>
<td>OI2</td>
<td>Orienting students to the math</td>
</tr>
<tr>
<td>OI3</td>
<td>Orienting to others' thinking to restate understanding or why students were struggling here is what I've done in the past that's worked.</td>
</tr>
<tr>
<td>OM1</td>
<td>Connects student ideas to previous ideas work</td>
</tr>
<tr>
<td>OM2</td>
<td>Makes explicit any math ideas surfaced in the discussion of student strategies</td>
</tr>
<tr>
<td>OM3</td>
<td>Forces deliberate direct question on key math ideas emergent from students' strategies</td>
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Refinement of codebook on responsive teaching practices

- Tagged codes on eleven participant's Number Talk videos using Torah, Excel for analysis.
- Participants divided into two focus groups after cycle two to reflect on experiences.
- Formative analysis memo to create a comparative case study on two teachers.

RESULTS

Kayla and Holly are both elementary school teachers from the Urban Teaching Apprenticeship Program (UTAP) with varied experience levels and different developmental stages of responsive teaching implementation. Below are their thoughtful reflections of experiences within the study, and a strategy that compares their use of responsive teaching practices in Number Talks.

Focus

My favorite type of feedback is when someone's like, 'I agree that I saw that this didn’t work out the way you wanted to, or I understand why you were struggling here is what I've done in the past that's worked.'

Gain

By re-watching myself, it was so helpful to analyze my movements and the way I said certain things, and try to come up with what I wanted feedback on.

Focus

"You could try displaying the 3 rectangles and simply opent with 'What do we notice or wonder?' Then, [...] I want you to think about what might come next, with a focus on what [student] just shared about." Then, it can also be really organic and have the kids feel like they're shaping the lesson, while you're very purposely helping them explore or think about a more specific approach to the problem.

Gain

I left my school to go to Penn because I wanted to codify, a lot of what I felt [...] What I wasn’t expecting that I really enjoyed was then seeing how those [student] habits just kind of came to live and breathe in the way my students wanted to interact with the math.

DISCUSSION

Findings highlighted the benefits of decomposing early career educator's responsive teaching practices despite different focuses (learning versus guiding), gains (teacher confidence versus classroom insight), and approaches to responsive teaching (elicitating versus orienting).

This study suggests that collaborative reflection on practice allows early career educators, regardless of their place on the teacher learning continuum, to develop their responsive teaching, even if their practice, goals or takeaways differ. A discourse community can provide enhanced awareness, structure among the ambiguous, and a sense of purpose.

ACKNOWLEDGEMENTS

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