



# Noyce Teacher Noticing When Observing Other Noyce and non-Noyce Teachers

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## Collaborating Projects

The Rice University Noyce Master Teaching Fellowship Program (RU-MTF) - DUE #1556006  
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The Louisiana Mathematics Masters in the Middle (LaM<sup>3</sup>) - DUE #1240054  
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## Goal

The overarching goal of this collaboration opportunity was to have teachers from the two program to connect with and learn from one another and share/exchange ideas about effective teaching strategies for successful mathematics instruction.

## Overview of the Visit

|        | Related Project Goal   | Visit goal   |
|--------|--|--|
| RU-MTF | To further develop leadership, mentoring, and adult education skills | To interact with other Noyce teachers                            |
| LaM3   | To influence the instructional practices of their colleagues         | To observe classrooms outside of their regular education context |

|                                   | February 12  | February 13   |
|-----------------------------------|--|---|
| Eight LaM3 Middle School Teachers | Observed one Noyce & two non-Noyce teachers  | Observed one Noyce, one non-Noyce teachers & met with instructional coordinator |
| Two LaM3 High School Teachers     | (HS 1)<br>Observed one Noyce, one non-Noyce teachers & met with instructional specialist | (HS 2)<br>Observed one Noyce & two non-Noyce teachers                           |

## Theoretical Framework

Teacher noticing (van Es & Sherin, 2002):

- Identifying what is important in a teaching situation
- Making connections between specific classroom interactions and the broader concepts/principles of teaching and learning that they represent
- Using what one knows about the specific teaching context to reason about a given instructional situation

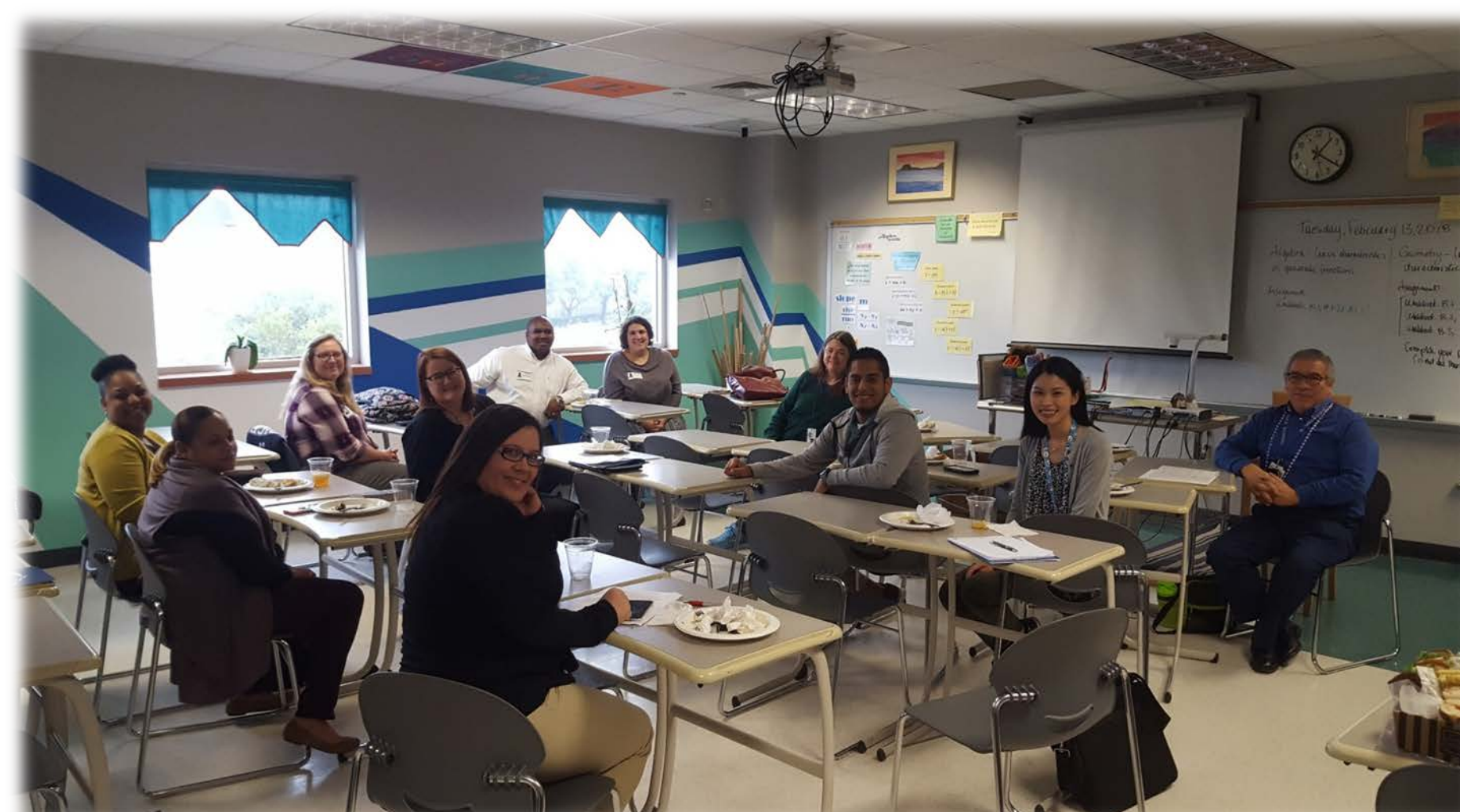
## Research Questions

When observing both Noyce and non-Noyce teachers:

- What did the observing Noyce teachers notice?
- How did the observing Noyce teachers interpret what they noticed?

## Data Collection

- Transcriptions of two focus groups conducted with observing Noyce teachers at the end of each day of the visit
- Written reflections from observing Noyce teachers
- Field notes taken by researchers during classroom observations and informal meetings at schools



## Results

Important elements in teaching situations:

- Classroom management
- Student engagement
- Rigor
- Teaching strategies
- Questioning
- Procedural versus conceptual learning (Grant, Hiebert, & Wearne, 1998; Star & Strickland, 2008)

Connections:

- School culture
- Local and state standards
- Education context
- How certain instructional activities are performed (Cavanagh & McMaster, 2015)

Reasoning:

- Why certain instructional activities are undertaken in different education contexts
- Self-reflections
  - Self-improving
  - Self-enhancing
  - Self-revising (Seidel et al., 2010)



*"I realized that procedural fluency is not something that is practiced in my classroom very often ..... Would my struggling students see more success if my lessons looked more like the ones that I saw [during the visit]?"*

## Results (continued)

*"I'm thinking about how it is "faster" to present a lesson and use manipulatives to demonstrate something than it is to allow the students to self-discover... [D]ue to time constraints, mainly because of testing, teachers are sacrificing constructing their lessons in a way that students will learn and remember material best."*

*"Both [high] schools had impressive achievement levels while being very different in methods and atmosphere."*

*"I consider myself as having great classroom management; however, after observing at the [Middle School], I can see areas where I need great improvement."*

## Significance

Through the domino effects generated by 18 teachers involved who presumably became more cognizant of desirable instructional practices through noticing, this collaborative effort will plausibly impact 1,800 students who will be the recipients of improved attention to mathematics instruction.



## References

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