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

Adem Ekmekci, Anne Papakonstantinou, & Richard Parr – Rice University
Peter Sheppard – University of Louisiana at Lafayette

Collaborating Projects
The Rice University Noyce Master Teaching Fellowship Program (RU-MTF) - DUE #1556006
Co-PIs: Richard Parr, Judy Radigan, Richard Tapia
The Louisiana Mathematics Masters in the Middle (LaM3) - DUE #1240054
PI: Peter Sheppard
Co-PIs: Patricia Beaulieu, Melissa Gallagher

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

Overview of the Visit

<table>
<thead>
<tr>
<th>Related Project Goal</th>
<th>Visit goal</th>
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<tbody>
<tr>
<td>RU-MTF</td>
<td>To further develop leadership, mentoring, and adult education skills</td>
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<tr>
<td>LaM3</td>
<td>To influence the instructional practices of their colleagues</td>
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February 12

<table>
<thead>
<tr>
<th>Eight LaM3 Middle School Teachers</th>
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<th>February 13</th>
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<tbody>
<tr>
<td>Observed one Noyce &amp; two non-Noyce teachers</td>
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<tr>
<td>Observed one Noyce, one non-Noyce teachers &amp; met with instructional coordinator</td>
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<tr>
<th>Two LaM3 High School Teachers</th>
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<td>(HS 1) Observed one Noyce, one non-Noyce teachers &amp; met with instructional specialist</td>
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<td>(HS 2) Observed one Noyce &amp; two non-Noyce teachers</td>
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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

Reasoning:
- Why certain instructional activities are undertaken in different education contexts
- Self-reflections
  - Self-improving
  - Self-enhancing
  - Self-revising

Results
Important elements in teaching situations:
- Classroom management
- Student engagement
- Rigor
- Teaching strategies
- Questioning
- Procedural versus conceptual learning

Connections:
- School culture
- Local and state standards
- Education context
- How certain instructional activities are performed

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

“...due to time constraints, mainly because of testing, teachers are sacrificing constructing their lessons in a way that students will learn and remember material best.”

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