

# Teach Students How to Be Intentional when Choosing Solution Strategies

October 12, 2018

8:00 a.m.–11:00 a.m.

SRATE Conference @ Florida State University Panama City Campus

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| 8:00 a.m. | <b>Welcome, Introductions, and Objectives</b><br>The goals for this bridge event are to: <ul style="list-style-type: none"><li>▪ Expose teachers to rich problem-solving tasks that highlight the need for students to recognize and generate strategies for solving problems.</li><li>▪ Help teachers learn how to teach students to evaluate and compare different strategies for solving problems.</li><li>▪ Model for teachers how to monitor and reflect on the problem-solving process to articulate reasoning behind strategy choice and identify which strategy presented the most efficient means of obtaining the solution.</li><li>▪ Discuss student misconceptions and overgeneralizations and how they impede student learning.</li><li>▪ Provide teachers with a listing of resources supported by the What Works Clearinghouse and the National Council for the Teachers of Mathematics.</li></ul> | Mr. Kevin DiMatteo<br>Event Coordinator<br>REL Southeast  |
| 8:05 a.m. | <b>Research in the Area of Problem Solving and Introduction to the Practice Guide on Problem Solving</b> <ul style="list-style-type: none"><li>▪ Give participants practice in multiple strategies in a way that will allow them to</li></ul>   | Dr. Tim Jacobbe<br>Associate Professor of<br>Mathematics and<br>Statistics Education<br>University of Florida |

compare the efficiency of solution strategies and the importance of students being able to articulate the reasoning behind their methods.

- Overview of *Research Evidence on Multiple Strategy Instruction and Problem Solving (Improving Mathematical Problem Solving)*.

8:45 a.m.     **In-depth Examination of Recommendation 3 of the Algebra Practice Guide**     Dr. Tim Jacobbe

- Highlight the importance of recommendation 3 from *the Algebra Practice Guide*.
- Discuss various problems and how some problems have solution methods that are more efficient than others (e.g., using visuals, guessing and checking, etc.).

9:25 a.m.     **Simplifying Problems**     Dr. Tim Jacobbe  
Present a process for simplifying a problem in order to make it accessible to all students.

9:55 a.m.     **Intentionally Choosing Strategies**     Dr. Tim Jacobbe

- Emphasize the importance of intentionally choosing strategies when solving problems.
- Contrast “key word” approaches with problem-solving that highlights how students need to learn to reason through problems rather than memorize “key words” that will “expire” depending on the problem type.

10:55 a.m.     **Wrap Up and Stakeholder Feedback**     Mr. Kevin DiMatteo