

Session Title:

A Research Based Instrument for Observation of Mathematics Classrooms

MSP Project Name:

Mathematically Connected Communities- Leadership Institute for Teachers

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Feedback Session**Strand 3****Summary:**

The OLE2 is a classroom observation instrument to document behaviors in K-12 mathematics classrooms that lead to effective teaching and learning. It emerged from a need for a valid and useful instrument to use for NSF funded research projects studying students' learning K-8 mathematics classrooms and teaching practices in the Leadership Institute for Teachers (LIFT). One goal of the LIFT research project is to study student and teacher classroom interactions and determine their relationships to student's achievement. The OLE2 has four major components broken down into concrete observable actions with exemplars to clearly measure each component. This instrument measures: 1) the teaching of the math 2) the ways students engage in the learning experience, and 3) the opportunities that make mathematics understanding accessible for students. The session affords opportunities for learning about the instrument's development and uses and to provide feedback to researchers and developers in the Leadership Institute for Teacher project.

Section 1: Description of product, tool, process, curriculum, or instrument*What is the OLE2?*

OLE2 is an instrument to document behaviors in K-12 mathematics classrooms that lead to effective teaching and learning.

There are four major components in the OLE2:

- The teacher demonstrates an understanding of mathematical concepts for teaching mathematics.
- The teacher provides opportunities for students to develop their conceptual understanding and to make sense of the mathematics.
- Students ask questions, offer alternative solution strategies, and generate conjectures to show their understanding of the mathematics.

- Students engage in collaborative interactions with each other as they do mathematics in the lesson.

Each component is broken down into concrete, observable actions with exemplars to clearly describe what each rating (0-4) looks and sounds like.

Why is OLE2 useful?

The OLE2 can be used:

- To establish a common vision for effective mathematics teaching and learning.
- To support the mathematical practices of the Common Core State Standards and to document these practices in an observable way.
- To encourage collaborative practice that supports student achievement in mathematics.
- To provide data that can facilitate PLC discussions.
- To develop professional growth opportunities that are specifically aligned with what is happening in classrooms.
- To research changes in mathematics teaching and learning in a classroom environment.

Section 2: Question, issue, or challenge that is the primary focus of the session:

- What are the perceived strengths and areas to be strengthened, in light of the Common Core Standards, of the Observation of Learning Environments (OLE2) instrument?
- How might the instrument support both research and teacher professional development?
- In what ways can the OLE2 be used in other projects to study and improve math teaching and learning?

Section 3: Types of people who you think might be most interested in discussing this and offering feedback:

Evaluators, principals, project directors for math, K-12 administrators, PI's

Section 4: How will you structure this session? What is your plan for participant interaction?

Initially, participants will be provided with an overview of the observation instrument the OLE or Observation of Learning Environments. A brief description of the processes that have been used to validate the instrument will be shared. Then participants will be asked to address questions regarding the instrument, its strengths and possible ways to strengthen the implementation process or its uses in research and potential impact on teaching practices. The participants will engage in small group discussion around these questions then interact as a whole group sharing feedback to support learning and instrument improvement.