

Teacher Leader Learning Through Participation in and Facilitation of Professional Development Addressing Problems of Practice

Anthony Muro Villa III
Kelly L. Boles
Hilda Borko

Research-Practice Partnership (RPP) Team

Stanford Team

- Hilda Bokko, Janet Carlson, & Ben Domingue
- Rebecca Deutscher
- Florencia Gomez Zaccarelli, Elizabeth Dyer, & Fady Chidiac
- Anthony Muro Villa III, Suki Jones Mozenter, Michael Jarry-Shore, David Lang, Kelly L. Boles, Victoria Docherty, & Jim Malamut
- Alissa Fong & Susan Million

University/District Partnership Coordinator

UUSD Team

- UUSD Director
- Program Administrator for Mathematics
- Mathematics Content Specialists
- 9 Middle Grades Math Coaches
- 40 Mathematics Teacher Leaders

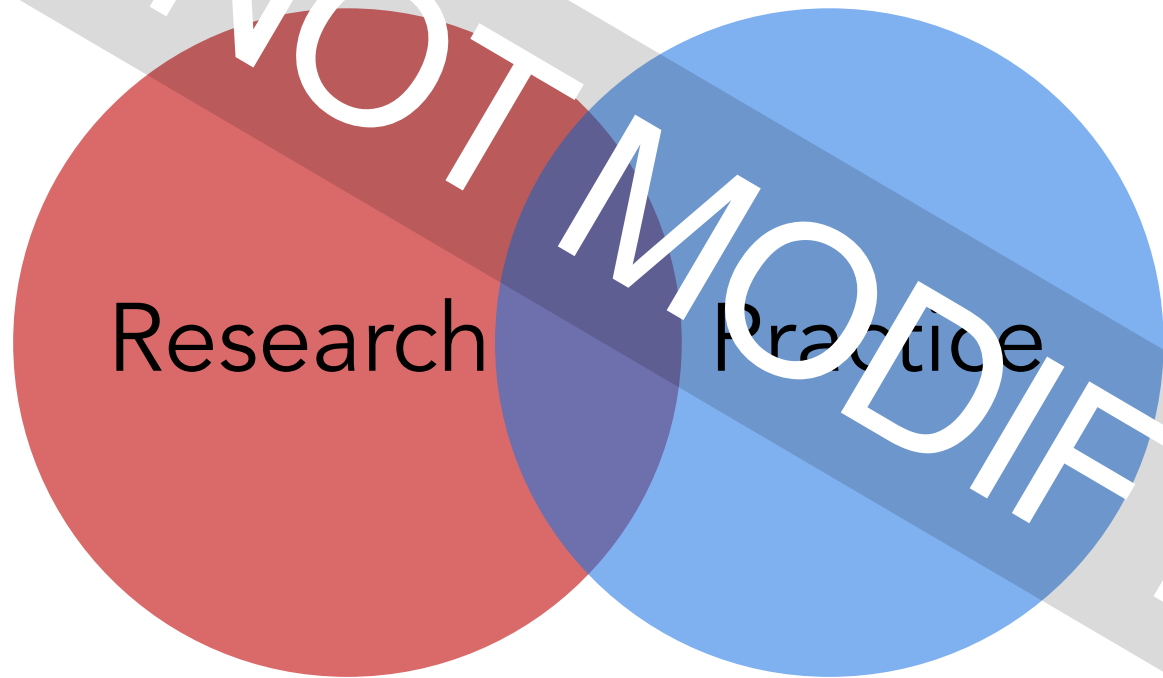


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Overview of the Session

- Context of Research-Practice Partnership
- Teacher Leader Learning Models
- Data Sources & Selection
- Findings from One School Site

CONTEXT OF RESEARCH-PRACTICE PARTNERSHIP (RPP)



The Starting Point

- UUSD
 - Dimensions of Teaching and Learning
 - New task-based Mathematics Core Curriculum
- CSET
 - Problem-Solving Cycle (PSC) Model
 - Teacher Leader Preparation (TLP) Model

UUSD's Dimensions of Teaching and Learning

DIMENSIONS OF TEACHING AND LEARNING

Agency, Authority and Identity

The extent to which students have opportunities to respectfully, explain, make arguments and build on one another's ideas, in ways that contribute to their development of agency (the capacity and willingness to engage academically) and authority (having command of content), resulting in positive identities as sense-makers, problem solvers and creators of ideas.

Students ...

- Routinely ask questions and make comments that reveal deep engagement with the learning objectives
- Are productively engaged at all times, show ability to analyze, evaluate and synthesize content
- Hold one another accountable for justifying their answers by citing evidence and/or elaborating on their thought processes, when needed
- Build on the contributions of others, assume considerable responsibility for the success of academic conversations, initiate topics and make unsolicited contributions
- Take charge of their learning and construct new knowledge by defining tasks, planning, monitoring, changing course of action, and dealing with specific obstacles
- Have opportunities to show and apply their understanding in multiple ways
- Marshal willpower and regulate their attention when encountering complex tasks and in the face of distractions
- Assume responsibility for seamless transitions

Teachers ...

- Effectively use a wide range of techniques to encourage discussions and to manage them
- Provide adequate time for students to engage in productive struggle
- Ask uniformly high questions of all students to cite evidence, evaluate and synthesize content, explain their thinking, and use language
- Scan the room for students who are not engaged and extend to them
- Consistently facilitate academic conversations, including
- Encourage students to facilitate conversations with one another

Access to Content

The extent to which classroom activity structures, scaffolds (when appropriate), and opportunities for student thinking and problem solving provide equitable access to and invite and support all students to develop the capacity to understand content that is complex, ambiguous, provocative and personally or emotionally challenging. Scaffolding, when provided, does not lower the cognitive demand or the grade level expectations, but allows all students to experience the complexity of the task. The rigor involved in the learning process requires depth of knowledge and attention to accuracy and detail.

CSTP 1.4, 1.5, 2.2, 2.3, 2.4, 3.5, 3.6, 4.1, 4.2, 4.4, 4.5

Teachers ...

- Make the purpose of the lesson/unit clear, and ensure it is situated within broader learning goals
- Design learning experiences that purpose to student interests and provide opportunities for students to construct knowledge and make connections to their own experiences
- Differentiate instruction to address students' learning styles, interests, diverse learning activities (individual, group, and/or pairings) and content, process or product
- Use a variety of materials and/or pairings on content, process or product
- Provide opportunities for all students to participate typical student activities and materials.
- Provide multiple opportunities for supportive and challenging extension activities
- Provide more opportunities for each student

Uses of Assessment

Students ...

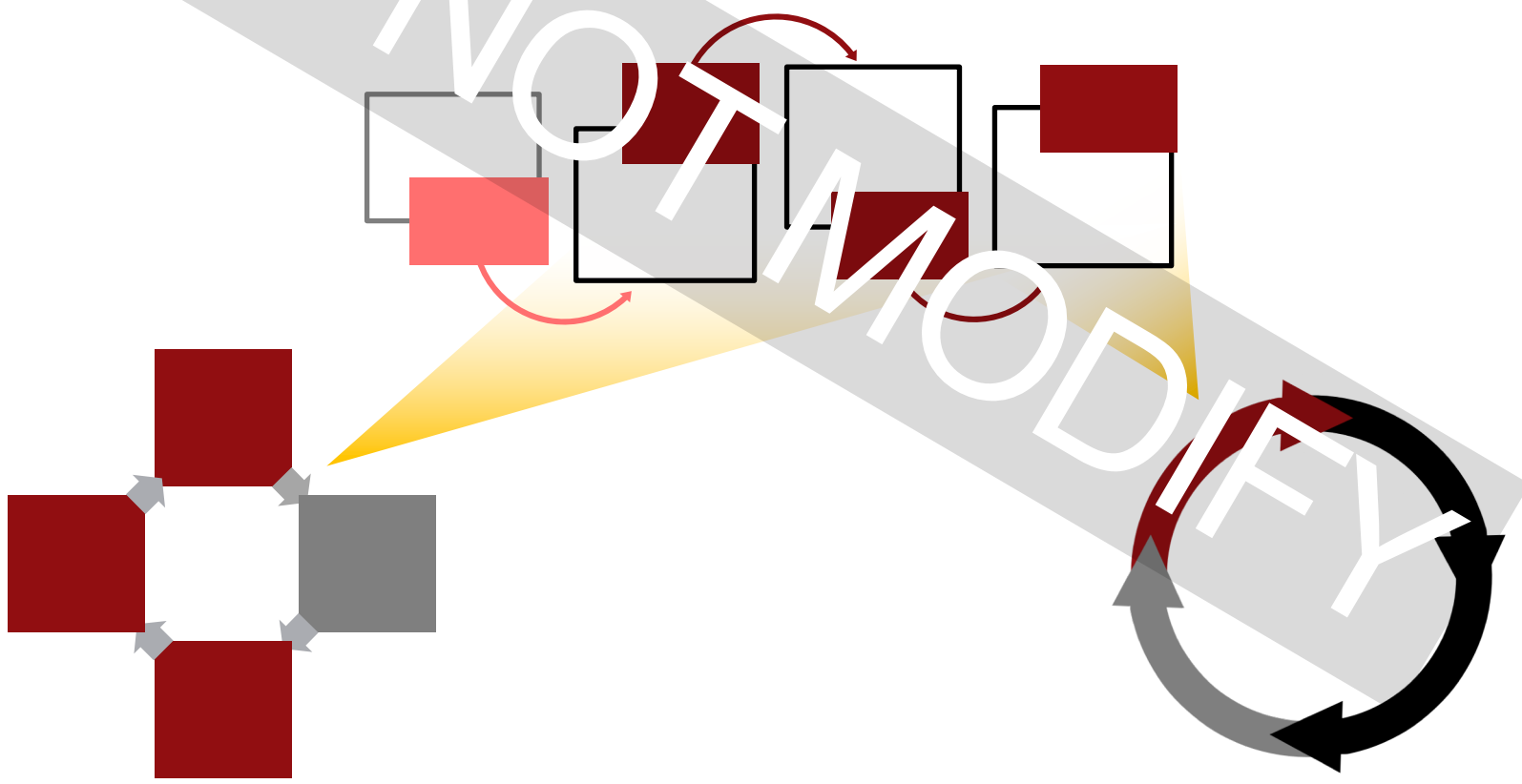
- Express their thinking, justify their findings, and apply new concepts they have learned so far
- Apply new concepts they have learned so far in real-world or creative context
- See errors as a chance for new learning in a learning, taking opportunities for revising and refining understandings
- Consistently conduct assessments of their own work and the work of peers, and provide specific and accurate feedback
- Are highly knowledgeable about the assessment criteria
- Co-construct expectations and rubrics for final products
- Demonstrate learning and understanding in a variety of ways such as letter writing, charts, models, essays, picture books, tableaux, drawings, debate, bar graphs, statistics, scaled action through public speaking, community work, and advocacy
- What opportunities exist to build on students' thinking? How do teachers and/or other students take up these opportunities?

Teachers ...

- Actively and systematically collect diagnostic and formative information from individual students regarding their understanding and monitor the progress of individual students
- Administer thought-provoking and challenging assessments that are open-ended and require a demonstration of deep understanding
- Employ a variety of formative assessment techniques and use results to inform adjustments to content, process and products and to provide opportunities for re-engagement and revision
- Ask students: What questions do you have? What do you understand? What is working for you? What can I do to help you learn better?
- Provide opportunities for all students to self-assess learning against established criteria in order to reflect on their growth as learners
- Provide feedback to students that is timely and prompts students to make active use of that information in their learning
- Confer with small groups and individuals

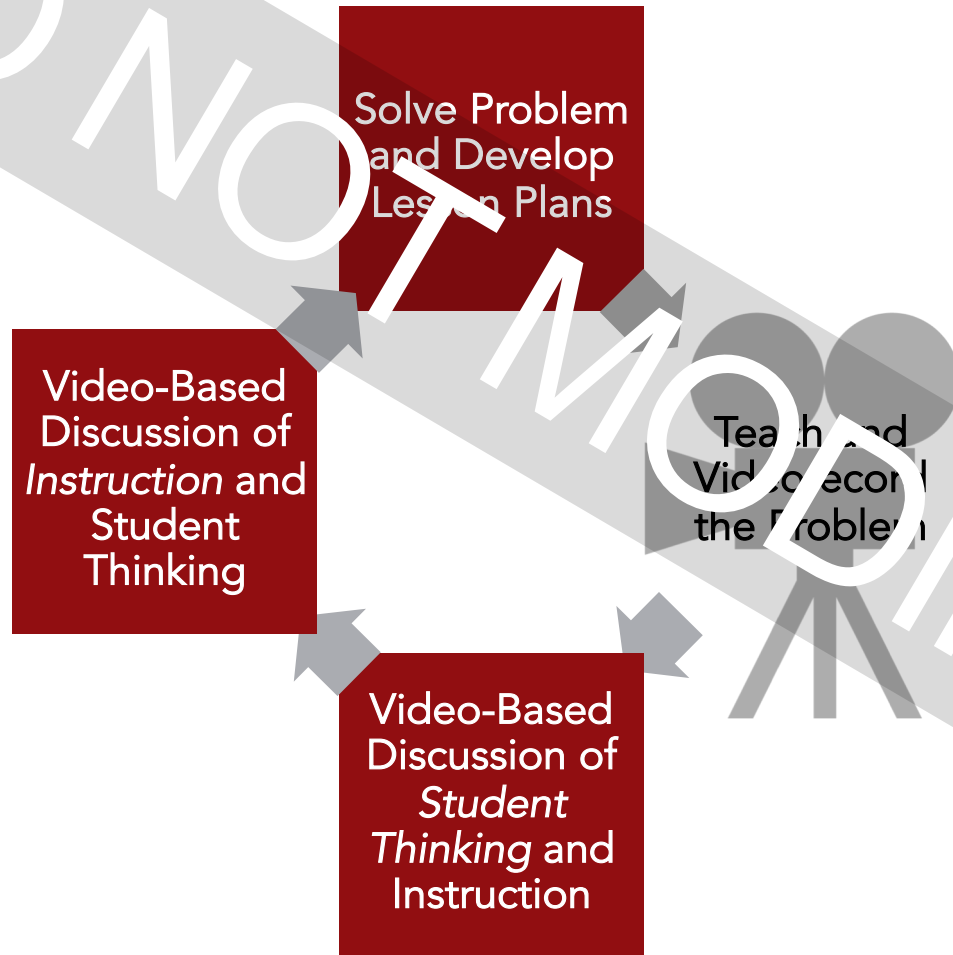
TEACHER LEADER LEARNING MODELS

DO NOT MODIFY



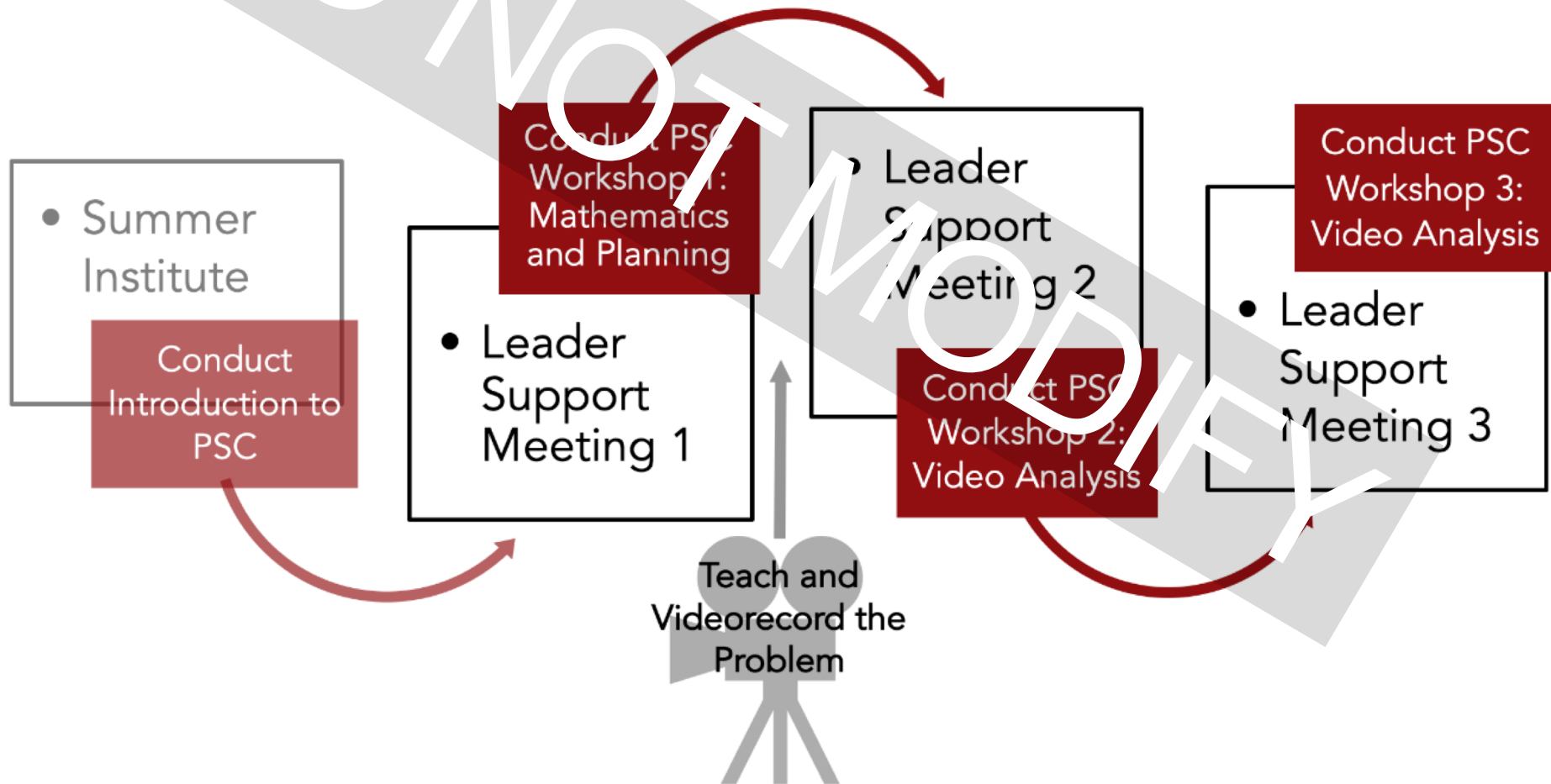
The Problem-Solving Cycle

(2x per School Year)



The Problem-Solving Cycle

Teacher Leadership Preparation Model



Learning to Lead Model

PSC Workshop

Facilitation

TLs facilitate PD at own school site

Leader Support Meeting

Modeling

TLs participate as learners

Conduct PSC Workshop 3: Video Analysis

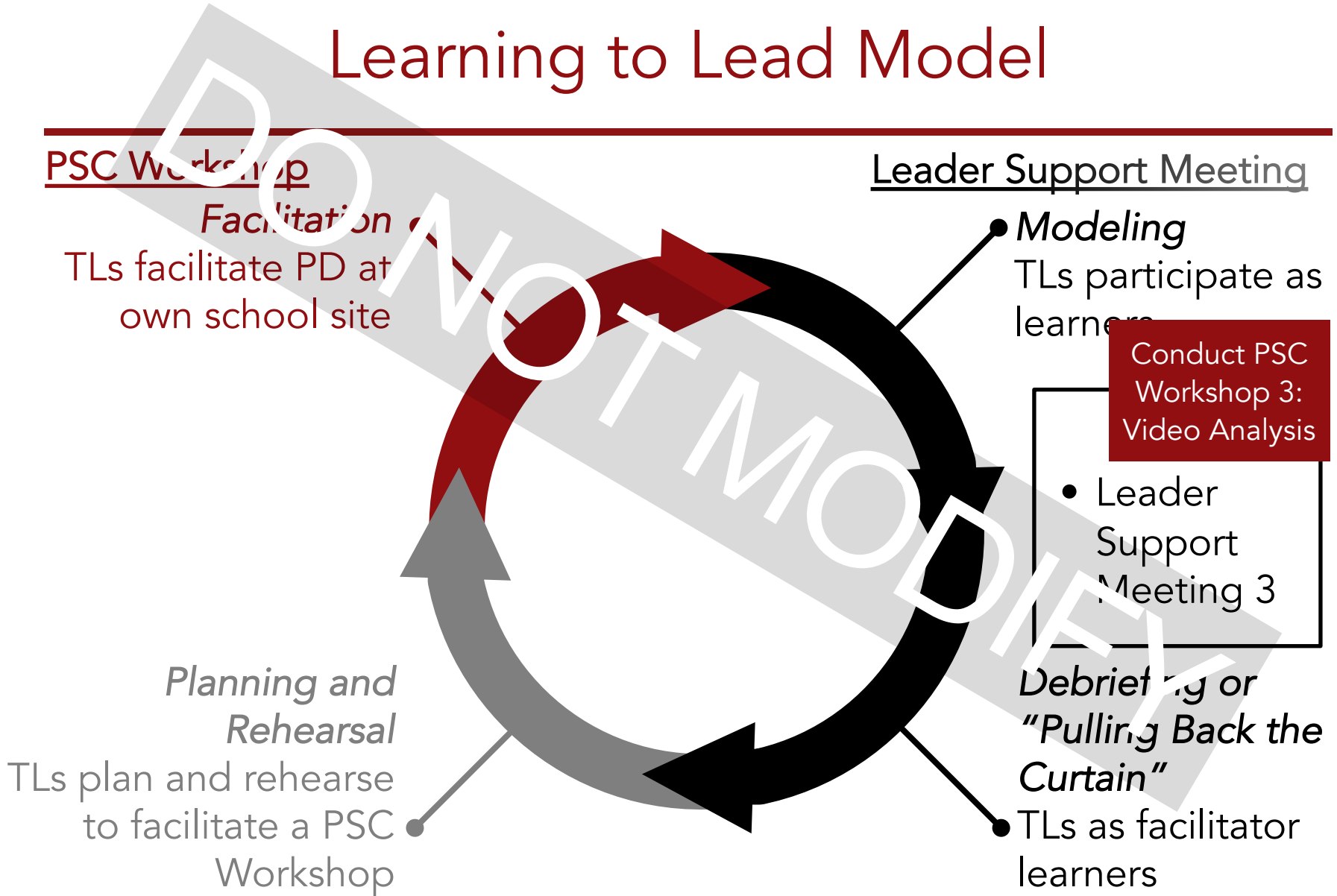
- Leader Support Meeting 3

Debriefing or "Pulling Back the Curtain"

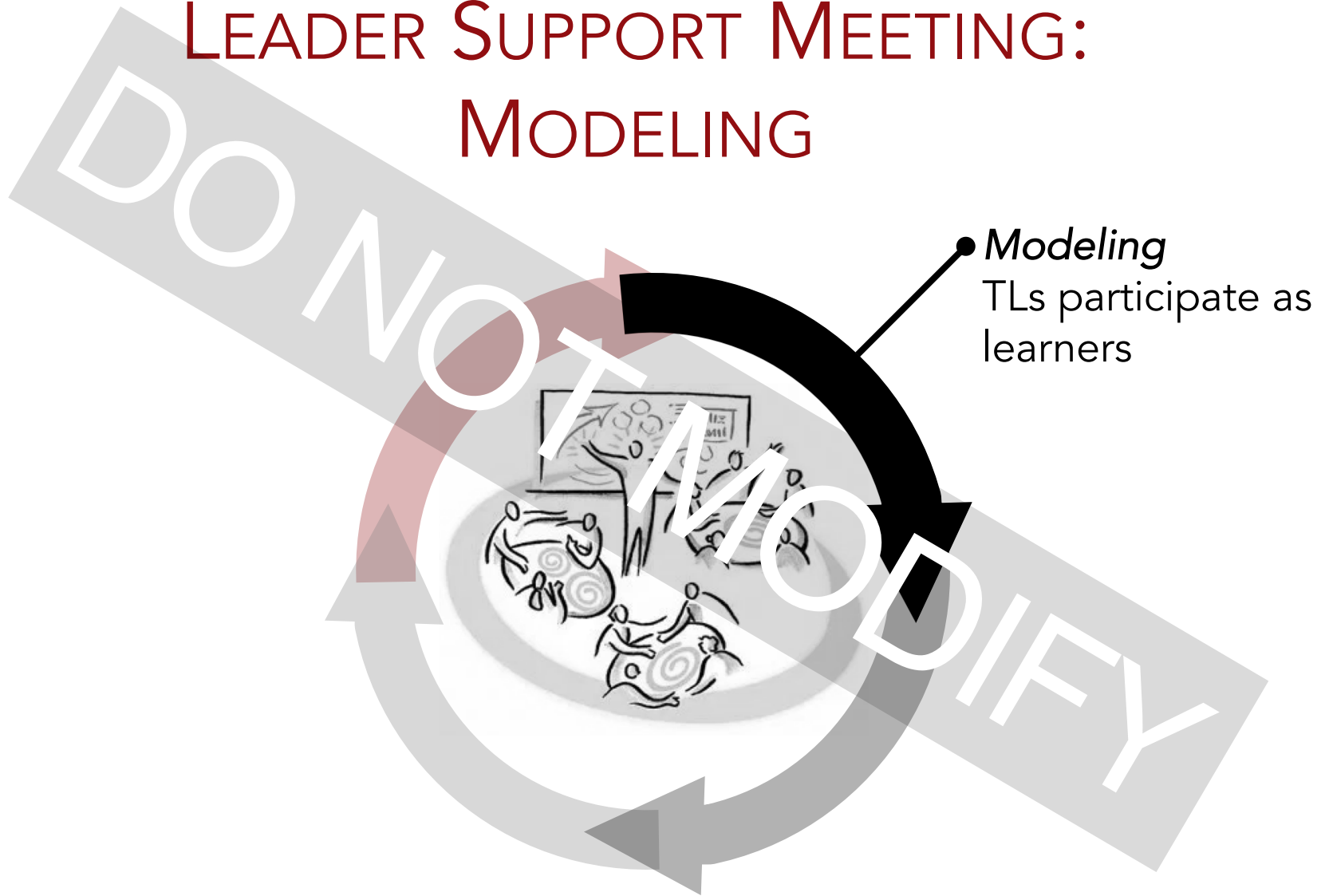
TLs as facilitator learners

Planning and Rehearsal

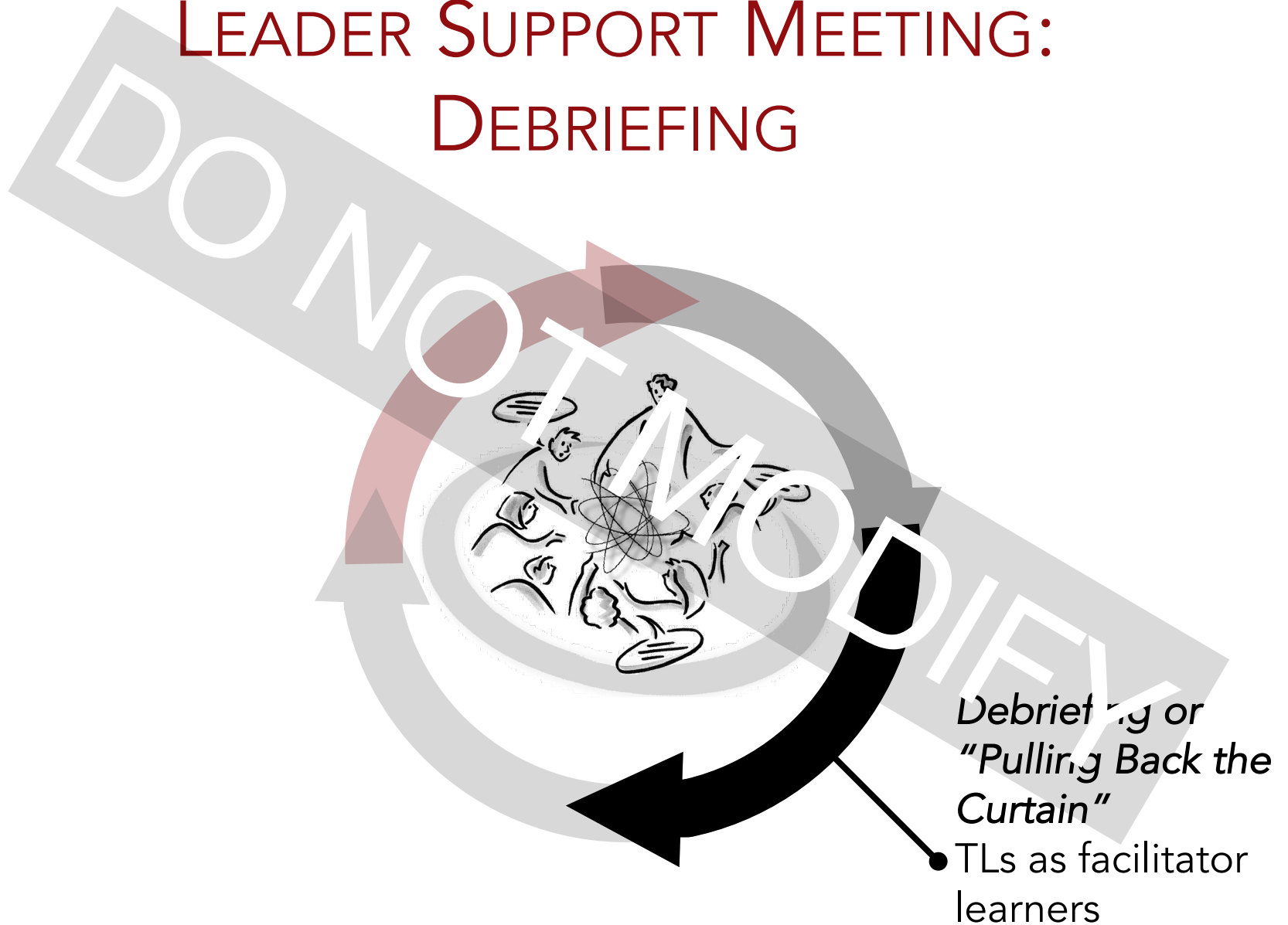
TLs plan and rehearse to facilitate a PSC Workshop



LEADER SUPPORT MEETING: MODELING



LEADER SUPPORT MEETING: DEBRIEFING



LEADER SUPPORT MEETING: REHEARSING

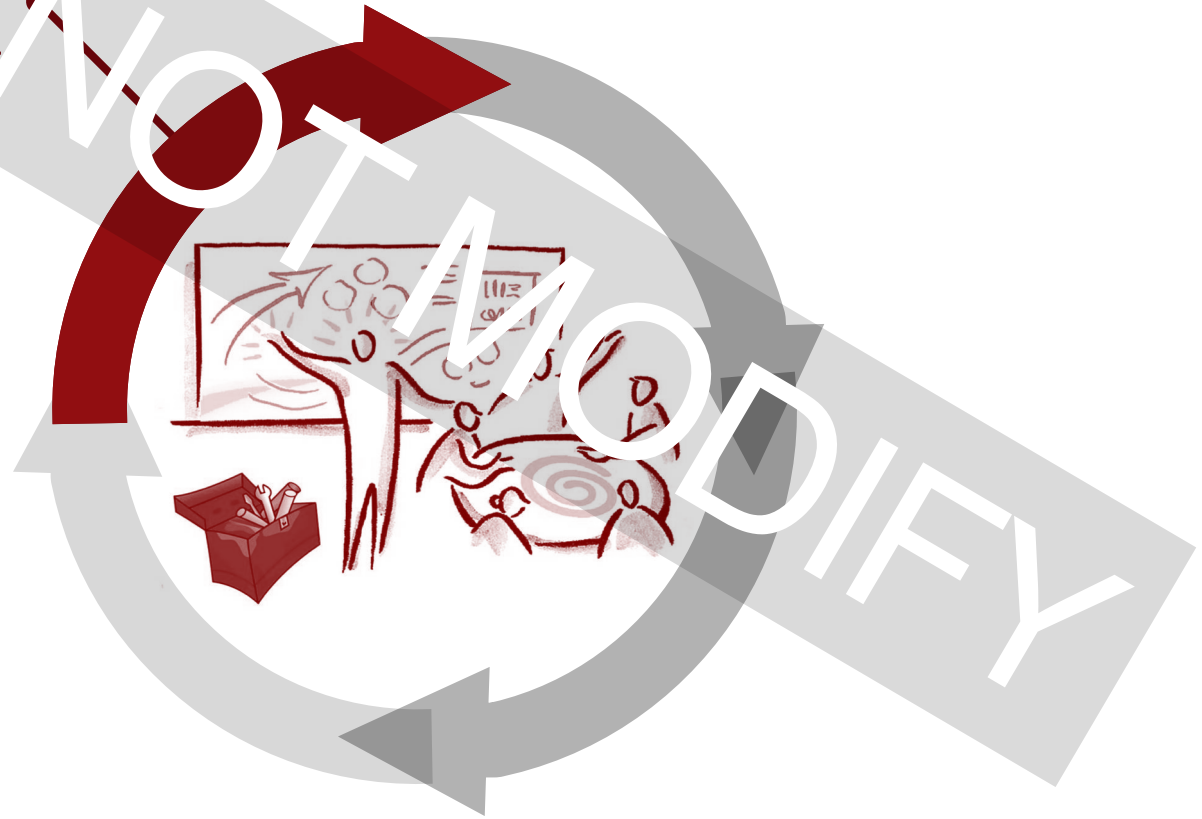
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Rehearsal and Planning

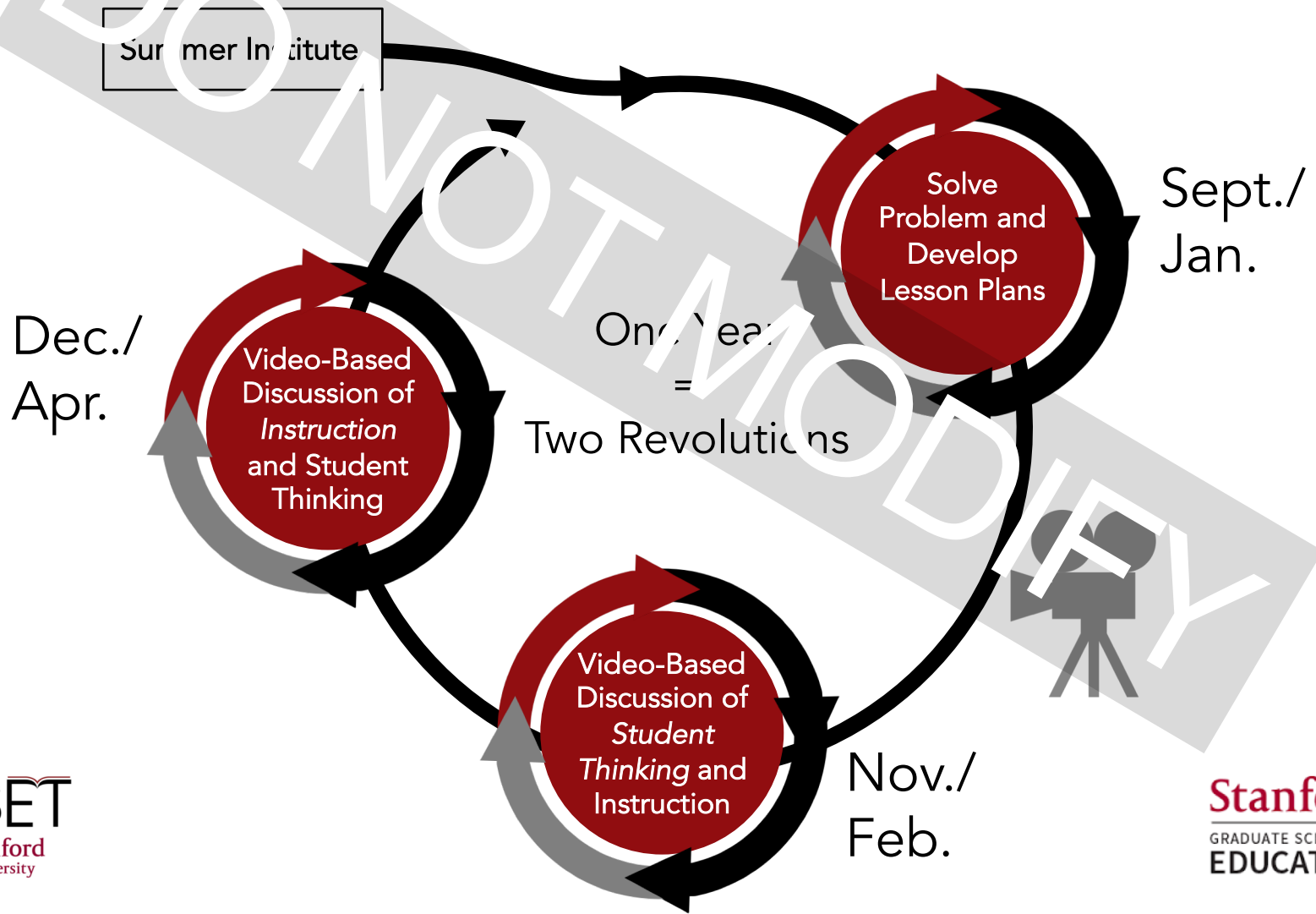
TLs plan and
rehearse facilitation

PROBLEM-SOLVING CYCLE WORKSHOPS: FACILITATION

Facilitation
TLs facilitate PD at
own school site



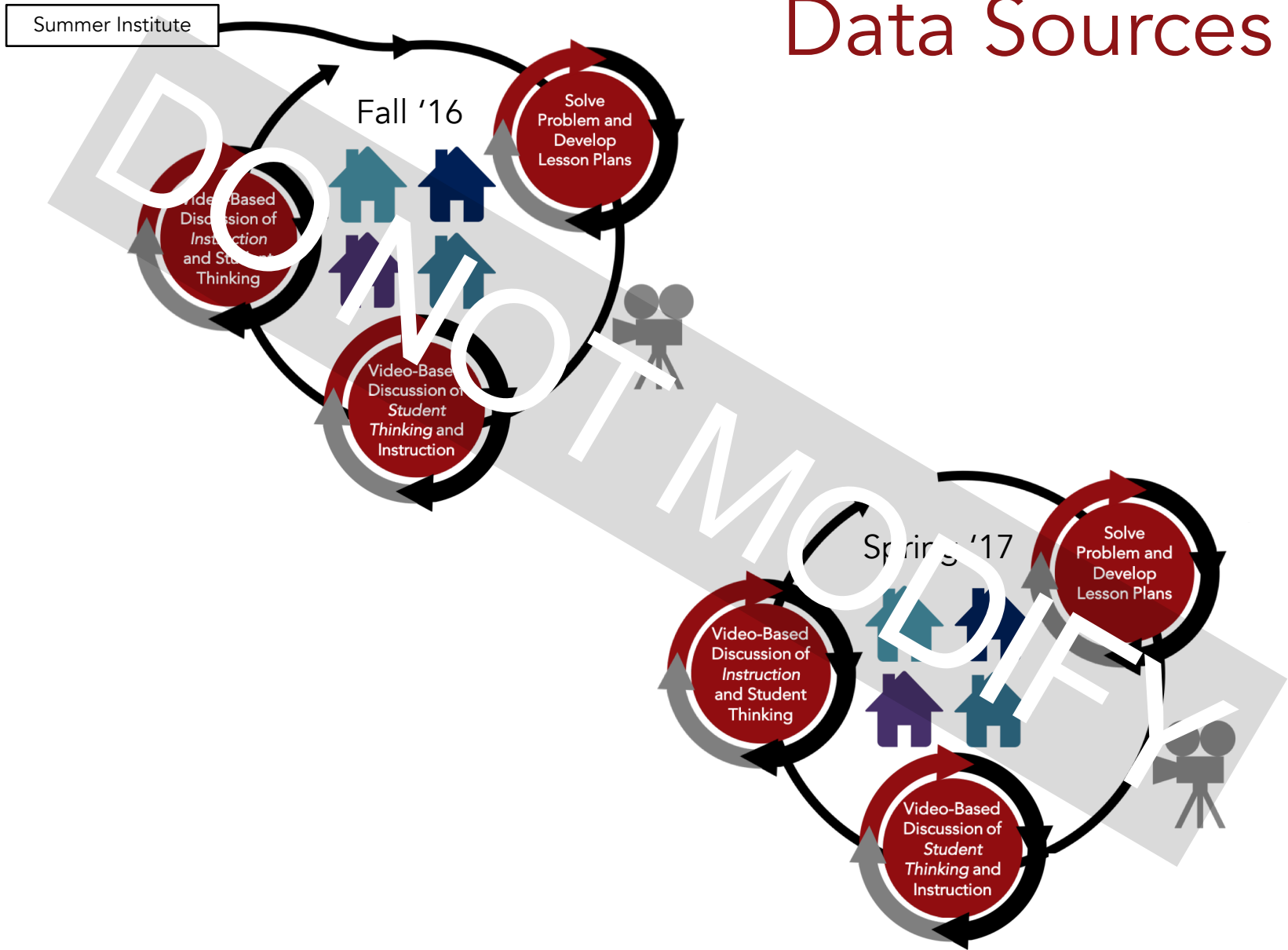
Teacher Leader Preparation Model

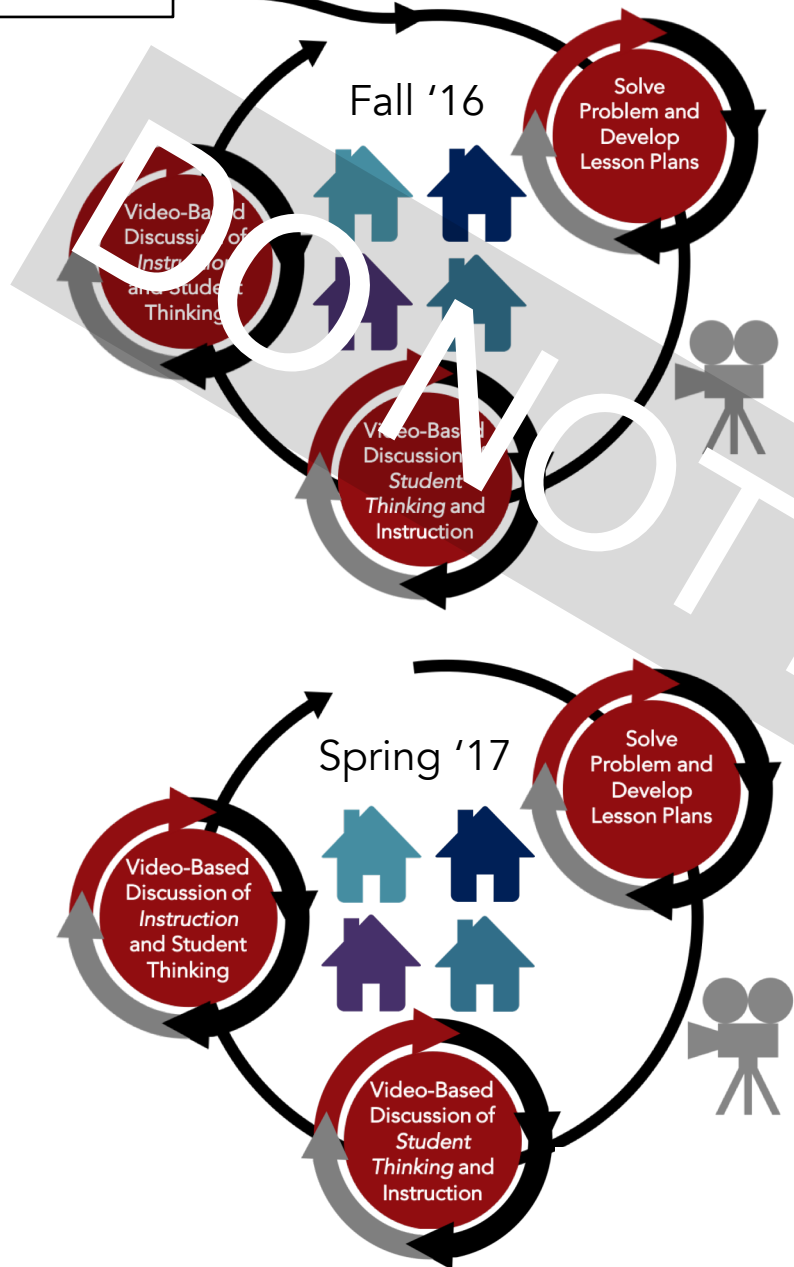


Research Questions

1. What was the nature of the activities, practices, and facilitation moves that were modeled in the TLPs?
2. How were components adopted and adapted during rehearsals and PSC workshops?

Data Sources

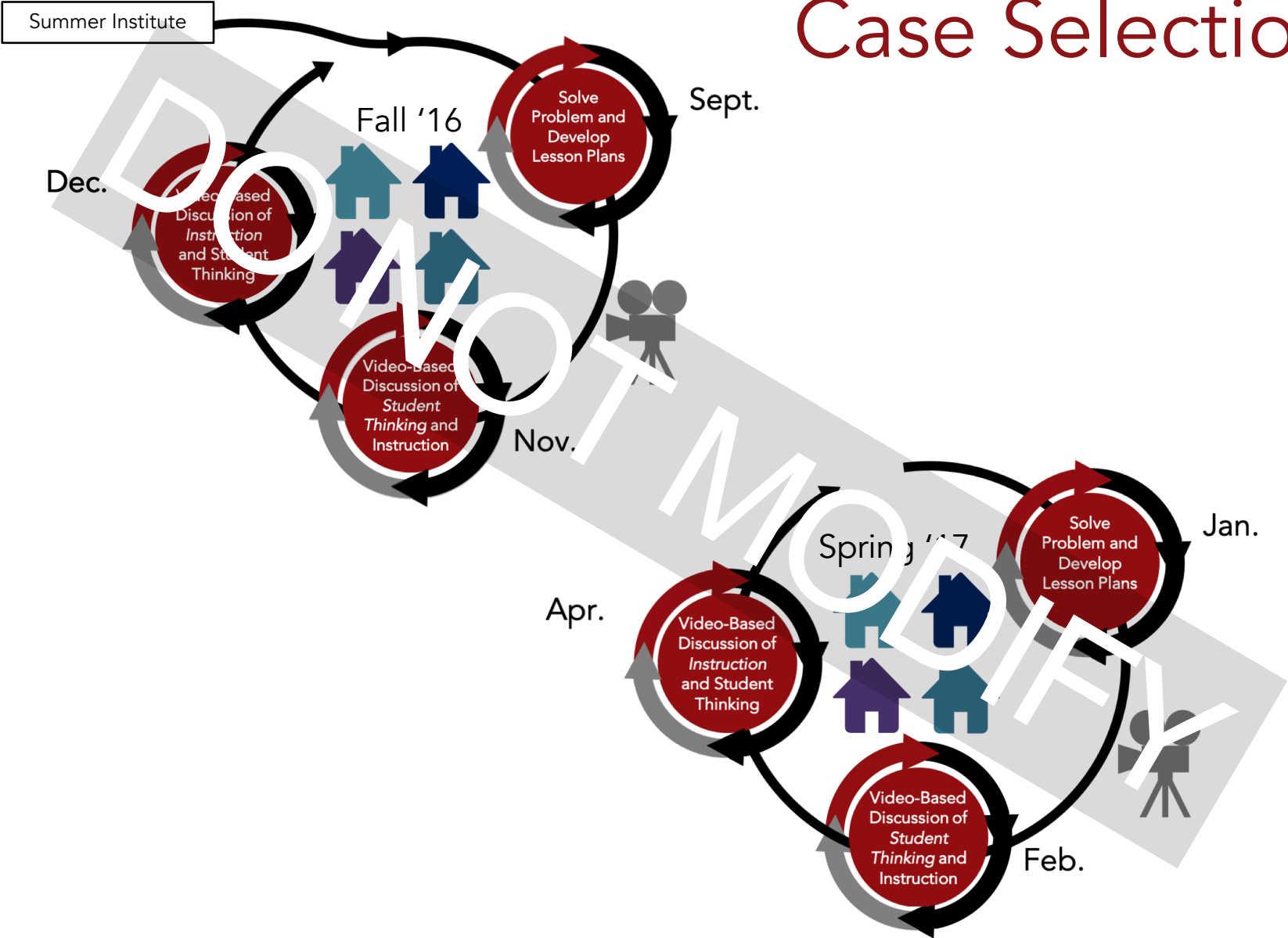




Data Analysis

- Task Selection
- Participation Structures
- Artifacts of Practice
 - Video Clip Selection
 - Student Work
 - Language
 - Focal Question(s)
 - Facilitation Moves

Case Selection



LEADER SUPPORT MEETING: MODELING

Modeling
TLs participate
as learners



Modeling

DO NOT MODIFY

LEADER SUPPORT MEETING: DEBRIEFING



**Debriefing or
“Pulling Back the
Curtain”**

• TLs as facilitator
learners

DO NOT MODIFY

Debriefing

LEADER SUPPORT MEETING: REHEARSING

DO NOT MODIFY



Rehearsal and Planning

TLs plan and
rehearse facilitation

DO NOT MODIFY

Rehearsing

PROBLEM-SOLVING WORKSHOPS: FACILITATION

Facilitation

TLs facilitate PD at
own school site



Use of Dimensions

Agency, Authority and Identity

The extent to which students have opportunities to conjecture, explain, make arguments and build on one another's ideas, in ways that contribute to their development of agency (the capacity and willingness to engage academically) and authority (having command of the content), resulting in positive identities as sense-makers, problem solvers and creators of ideas.

CSTP 1.1, 1.2, 2.6, 2.7

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- Marshal willpower and regulate their attention when encountering complex tasks and in the face of distractions
- Assume responsibility for seamless transitions between learning activities

Teachers ...

- Effectively use a wide variety of questioning techniques to encourage student-to-student discussions and to move student thinking forward
- Provide adequate time for students to engage in productive struggle and formulate responses
- Ask uniformly high quality questions that require students to cite evidence, analyze content, evaluate and synthesize information and clearly explain their thought processes using academic language
- Scan the room making note of when students not engaged and take action or monitor to the extent to which students re-engage
- Consistently use instructional techniques that facilitate equitable, active student participation, including opportunities for hands-on learning
- Encourage student independence in learning, facilitating seamless transitions from one task to the next

What opportunities do students have to take charge and make sense of their learning and to grapple with problems and construct new ideas? How can more of these opportunities be created?

DO NOT MODIFY

PSC Facilitation

Findings

- TLs took up modeled activity structures
 - Do the Math
 - Video-based discussions
- TLs used district tools from to support UUSD's vision
 - Task-Based Curriculum
 - Dimensions of Teaching and Learning

Discussion

- Leader Support Meetings appeared to support TLs in facilitating PSC workshops around problems of practice.
- CURRENT ANALYSES:
 - Expand analysis to all 9 school sites
 - Expand analysis over all four years of the project.
- FUTURE ANALYSES:
 - Identify cases to do a deeper analysis about the nature of adaptations