



LEARNING WITH COLLEAGUES THROUGH PUBLIC LESSONS

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[Outline of the presentation]

- Background of the study
- Findings of the study
- Implications of the study

[Background of the study I]

- Research site and participants
 - an ordinary elementary school in a large city of China
 - four first-grade mathematics teachers:

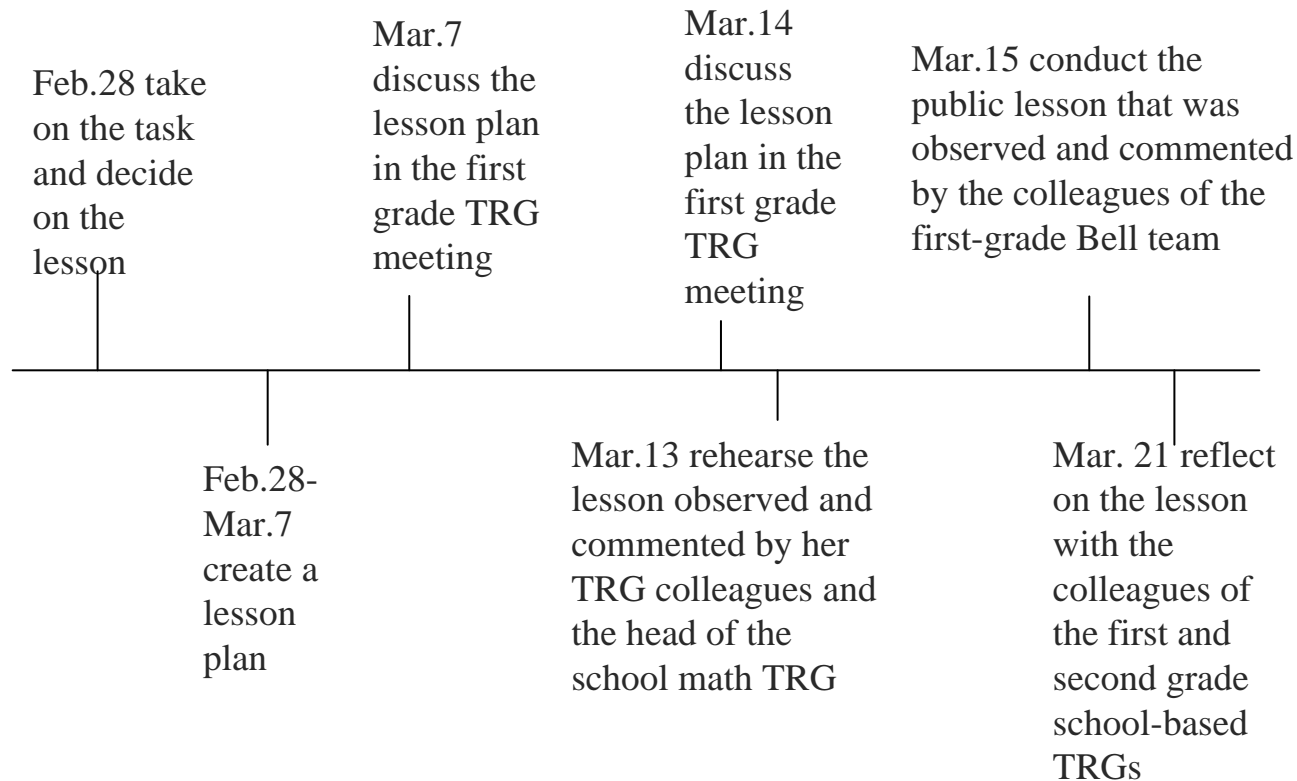
Ms. Wu, Ms. Pu, Ms. Li, and Ms. Zhang and other colleagues who were involved in the public lessons

[Background of the study II]

- Theoretical framework
 - situated activities
 - key concepts: joint work; tools; a regime of competence
- Data collection and analysis
 - The fieldwork was conducted in the spring of 2006.
 - The data of two public lessons was collected.

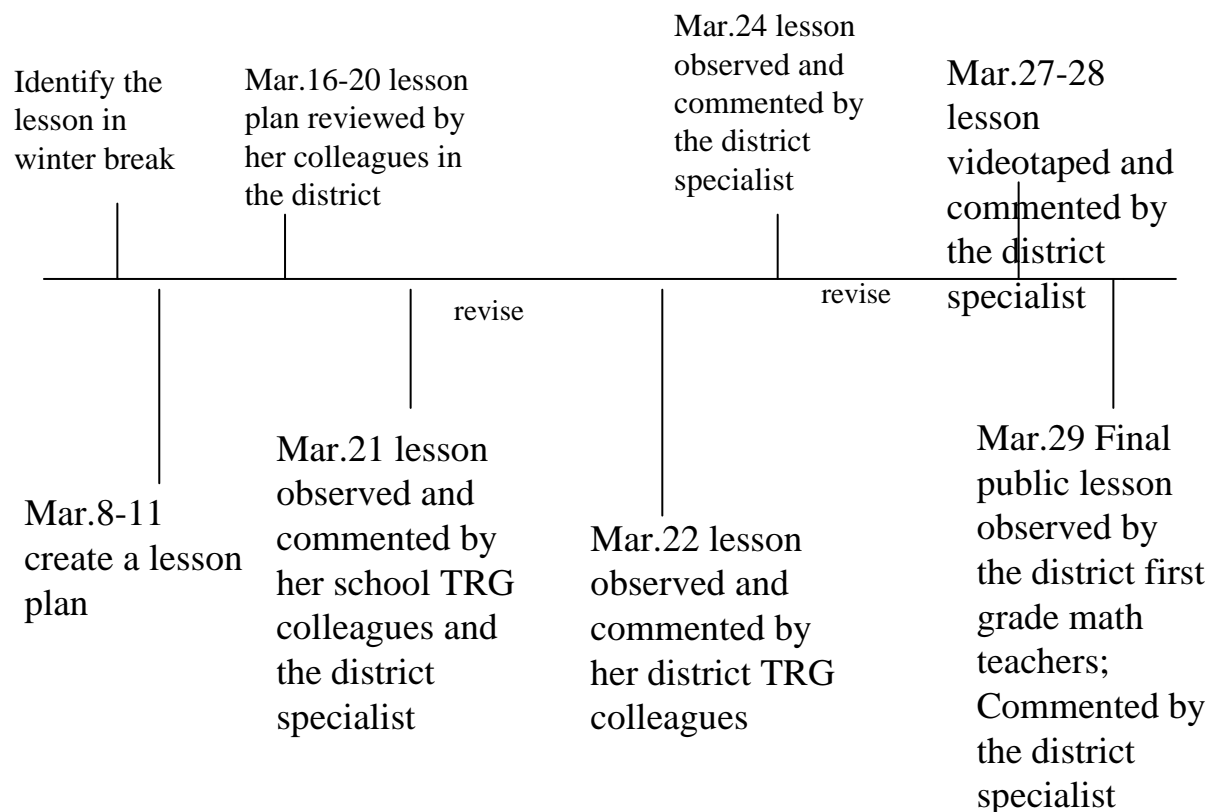
Background of the study III

■ Timeline of Ms. Pu's public lessons



Background of the study IV

■ Timeline of Ms. Wu's public lesson



[Findings of the study]

- The joint work of preparing public lessons contributed to teacher learning and instructional improvement through
 - enhancing teacher knowledge;
 - using tools to enable learning;
 - becoming aware of their teaching weaknesses.

Finding 1. Generating and sharing knowledge for teaching elementary mathematics I

- Enhance the teachers' mathematical knowledge for teaching

Example--discussions around the numbers in the sample problem:

- *Originally proposed numbers 27, 2, 38, 5, 9 were changed to 27, 2, 34, 6, 9
- *Estimate the value of $27+38$
- * $27+6$ or $69+4$? Which works better for having students come up with multiple solution methods

Generating and sharing knowledge for teaching elementary mathematics II

- Using mathematical language to communicate mathematical ideas clearly, accurately and concisely:

whether to allow students to use informal language, where to introduce formal math terms, when to require students to use formal math terms, and how to ask questions that do not confuse students

Generating and sharing knowledge for teaching elementary mathematics III

- Enriched the teachers' knowledge of instruction.
 - helping students unpack the mathematical ideas through demonstration, explanation and comparison;
 - using manipulatives appropriately to facilitate student learning;
 - and designing good practice problems to consolidate and apply new knowledge

Finding 2. Using tools as learning resources to improve instruction

- Working with symbolic tools: key and difficult points; some reform ideas on teaching and learning mathematics
- Working with material tools: the lesson plan drafts

[Finding 3. Knowing their own weaknesses in practice]

- A math teacher's language should be concise, accurate, and mathematically appropriate
- Responding to situations effectively that emerged in class

[Implications of the study]

- Conducting public lessons was an effective way for teachers to grow and improve instruction.

“In addition, inviting your colleagues to observe your class is an important way of improvement. In my first cycle of the reform, every teacher in the group conducted a public lesson each month. As you know, it is tiring to do a public lesson. Meanwhile, sometimes we were required to conduct public lessons in the district. During the preparation process, you revised your lesson plans, had other teachers observe and comment on your lessons. Then you knew how to conduct this kind of lesson”
(Interview, 03/02/ 2006)

Lesson study and Public lesson

- Commonalities and differences?

Different purposes

different focus

different contexts—institutional
contexts