

Appendix E

Approved Frequently Asked Questions (FAQ)

**You Are Invited to Participate in a
Professional Development Research Study (2014-2015) –
Focusing on Teaching Fractions Based on the Common Core
Standards to Fourth Graders**

Who can participate?

Fourth grade teachers would participate in the professional development (PD) that is aimed at providing educators with effective, research-based instructional strategies for teaching fractions. If the school has a mathematics specialist or mathematics coach, she or he is welcome to attend unless she or he also works in a control school. We recommend that districts only suggest schools where all those who teach 4th grade mathematics are interested and agree to participate. Districts must have at least 4 elementary schools, with 2 or more 4th grade classes in each, interested in the study to participate.

Will all interested schools in a district receive the PD?

No. This is a rigorous research study. As in medical research, participants will be randomly assigned to the group that receives the intervention or the group that does not. That means, half of the interested schools will receive the DMI mathematics PD and half will receive the typical PD offered by their district (i.e., they will be in the control group). This setup allows us to conduct a scientifically rigorous study of the impact of this type of mathematics PD on student knowledge of fractions. (Note that teachers in both treatment and control schools will receive a small stipend for participation in the study.)

What is the PD to be evaluated and who selected it?

The PD will be comprised of one module from the Developing Mathematical Ideas (DMI) program. This module, *Making Meaning for Operations: In the Domains of Whole Numbers and Fractions*, briefly reviews the mathematical ideas that underlie the four basic operations with whole numbers so that participants can then focus extensively on understanding the array of mathematical concepts and ideas entailed in understanding fractions. This is accomplished through activities that require participants to analyze students' thinking, determine their understanding of mathematics, and identify their misconceptions. This program was selected by a task force of state department administrators and representatives from various districts and schools within the states of Georgia and South Carolina. This selection was based on an interview process held with publishers and a review of the DMI PD materials.

Why was fractions chosen and why 4th grade?

The topic of fractions is a key problem area in elementary mathematics that has been targeted for improvement by many across the US. Recent research has demonstrated that understanding fractions is essential for success in algebra. In 4th grade, students are expected to develop an in-depth understanding of important fractions concepts such as equivalence, ordering, and operations.

Is this linked to the Common Core State Standards?

Absolutely. The Common Core State Standards for mathematics stresses understanding of topics related to fractions in Grade 4. Much of this material has not been emphasized in past standards.

What is the cost of the PD?

The PD and all materials associated with it are provided at *no cost* to the school or district. The study team will share the cost of paying substitutes if sessions are scheduled during the school day and teachers are released from instruction. Teachers are compensated for participating in the research study (see page 2).

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Where and when is the PD conducted?

The PD will be conducted at your school or at a location near it within the district. We will work with each district to schedule sessions and determine a convenient location.

Who conducts the PD?

The facilitators are individuals from the Southeast region who have been trained by the Education Development Center in the Boston, Massachusetts. These individuals are considered by the developers to be experts in the DMI PD. The Instructional Research Group, located in Los Alamitos, California, under the auspices of the REL-SE, will supervise the overall operation of the study.

What is expected of teachers who participate in the PD?

During the 2014-15 school year, teachers will participate in five PD sessions. Teachers will be required to do some readings and/or small assignments to prepare for the sessions.

Teachers will have to complete two measures in the area of fractions (one at the beginning of the study and one at the end, <60 minutes each). They also have to complete a consent form, a short demographic survey, and a monthly PD log each month for 9 months, each of which takes about 12 minutes to complete.

How will teachers be compensated?

Teachers *in both experimental and control schools* will be remunerated a small stipend for meeting the study requirements. These involve taking two tests and filling out monthly logs about any mathematics PD they have received.

Teachers in the experimental schools will be paid their typical hourly rate (varies by state and district and often by seniority) for any time they spend attending PD sessions outside of their work day (i.e., on Saturdays).

Can districts participate if teachers have recently been trained in DMI?

No. To make this a rigorous or “clean” study, only districts with teachers who have not been trained in DMI over the past five years can participate.

How will districts be chosen to participant?

A lottery will be used if there are more interested districts than are needed. We anticipate that only 4-5 districts in the state will participate. These will include both rural and urban/suburban districts.

If my district agrees to participate, will all schools participate?

No. Only schools with interest in the project and with 2 or more 4th grade teachers will participate. In addition, if there are more schools interested than are needed, then a lottery will be used to select the participating schools. Of the selected schools, half will receive the PD. The process to select which schools receive the PD will be random. This is a requirement for scientifically rigorous research.

Will teachers in control group schools be asked to do anything? Will they receive the same compensation as teachers in schools that participate in DMI?

Yes. They will receive the same compensation for completing the two tests and the logs of PD in math on a monthly basis.



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For more information contact: Christopher Tran, Study Manager, at 714-826-9600 or ctran@inresg.org.