

**Appendix D**  
District/School Memorandum of Understanding (MOU)

This letter will be modified slightly to serve as the school MOU as well.

<Enter Date>

Dr. <Insert Last Name Here>,  
Title  
School or District  
Address

Re: Memorandum of Understanding for Participation in 4<sup>th</sup> Grade Fractions PD study.

Dear Dr. <Insert Last Name Here>,

We are excited about working with <Name of District> to offer teachers a professional development (PD) opportunity focused on *math fractions* called *Developing Mathematical Ideas (DMI)* at no monetary cost to the district. The *DMI* program is designed to develop teachers' knowledge of the formal mathematics that underlies fractions, improve their teaching practice, and increase their students' mathematics achievement in fractions. We believe *DMI* would be a valuable addition to the PD opportunities available to teachers in <Name of District >. In this time of financial constraints and increased accountability, the Fractions PD study offers a no-cost opportunity for districts to provide teachers with greater mathematics knowledge with the goal of improving mathematics instruction and hopefully student achievement.

The study will be conducted by Dr. Russell Gersten, a renowned educational researcher, Professor Emeritus of Educational Research at the University of Oregon, and Director of Instructional Research Group in Los Alamitos, California.

This document outlines an agreement of the roles and responsibilities between Instructional Research Group and \_\_\_\_\_ School District regarding the evaluation of the Developing Mathematical Ideas (DMI) professional development in Fractions. The study is being carried out under a contract between the United States Department of Education, Institute of Education Sciences and REL Southeast at Florida State University (FSU). Instructional Research Group (IRG) is a subcontractor to FSU. The district is also acting as a full partner in this research. Details of the study not elaborated upon here are provided in a separate Frequently Asked Questions (FAQ) document.

The following sections list the roles and responsibilities of the research team and the district. It is intended to facilitate communication throughout the study by establishing clear expectations for both partners in advance.

#### **General Administration**

- \_\_\_\_\_ We will communicate with district leaders and school board, as requested to explain the study.
- \_\_\_\_\_ We will help district leadership communicate the study opportunity to school leaders and their teachers.
- \_\_\_\_\_ We will meet with principals and teachers as requested to explain the study and their role, and to obtain their consent.
- \_\_\_\_\_ We will assign one person as your contact for this study.

## About the Professional Development

- \_\_\_\_\_ The Developing Mathematical Ideas program unit focused on fractions is a concentrated professional development effort designed to develop teachers' knowledge of the formal mathematics that underlies fractions, improve their teaching practice, and increase their students' mathematics achievement, specifically in fractions.
- \_\_\_\_\_ The Developing Mathematical Ideas (DMI) program is outlined in the book, *Making meaning for operations in the domains of whole numbers and fractions: Facilitator's guide* (DMI; Schifter, Bastable, & Russell, 2010).
- \_\_\_\_\_ All participating fourth grade teachers, who work in schools assigned to the DMI program, will attend 24 hours of professional development over a 6-month period of the school year (typically beginning in September and ending in February), at the school or a location near it within the district. Teachers will also complete assignments in preparation for each session (such as reading PD materials), totaling approximately 8 hours of assignments over the course of the PD program.
- \_\_\_\_\_ All participating teachers (DMI and control) will be expected to complete two fractions measures (a pre-test and a post-test) and monthly PD logs. They must allow study staff into their classrooms to test their students in the spring.

## Your Role

- \_\_\_\_\_ Facilitate the enrollment of schools and teachers into the study.
- \_\_\_\_\_ **Understand that school assignment to the DMI and control conditions must be completed at random.**
- \_\_\_\_\_ Facilitate the scheduling of DMI sessions.
- \_\_\_\_\_ Facilitate the scheduling of student assessments in the spring.
- \_\_\_\_\_ Facilitate our data request for student demographics and prior year assessment scores.
- \_\_\_\_\_ Allow our field coordinators to contact schools and teachers as needed for successful implementation.
- \_\_\_\_\_ Understand that no findings from the study can be released immediately. All analyses and the final report must be approved for public release by the Institute for Education Sciences to ensure it meets the highest standards. This process can take 1-2 years after the completion of data collection.

## Implementing the Study

- \_\_\_\_\_ After school leaders have signed their MOU and teachers have signed their consent forms, participating schools will be randomly assigned to the Experimental condition (4<sup>th</sup> grade teachers participate in DMI) and the control condition (4<sup>th</sup> grade teachers participate only in regular PD).
- \_\_\_\_\_ We will schedule testing/sessions/training to fit school and district schedules.
- \_\_\_\_\_ All teachers will complete two fractions measures (a pre-test and a post-test).
- \_\_\_\_\_ All teachers will complete brief monthly PD logs.
- \_\_\_\_\_ Developing Mathematical Ideas professional development sessions will be tape-recorded to help the research team determine fidelity of implementation.
- \_\_\_\_\_ Each participating school should use the same core mathematics program.
- \_\_\_\_\_ Schools will distribute parent permission forms to all students of participating 4<sup>th</sup> grade classrooms. All students whose parent or guardian has given permission for the student to participate in the study, will be administered a mathematics assessment in the spring. The research team will administer these assessments.

- \_\_\_\_\_ Teachers may get credit for this professional development if the district determines that DMI qualifies.
- \_\_\_\_\_ We will need class rosters and possibly a letter of support for communicating with parents.
- \_\_\_\_\_ School and participating student demographic data will be collected from the school/district database (e.g., free/reduced lunch; ELL status; ethnicity).
- \_\_\_\_\_ Schools/school districts will assist in obtaining parental permission for fourth grade students from participating schools.

**Our Commitment**

- \_\_\_\_\_ We will pay all control and DMI teachers \$150 for their participation in the study.
- \_\_\_\_\_ Teachers in experimental schools will receive the professional development materials provided by the developers of the Developing Mathematical Ideas program.
- \_\_\_\_\_ Data will only be used for the purposes of this study. Results will not be added to student or teacher files.
- \_\_\_\_\_ Information collected for this study comes under the confidentiality and data protection requirements of the Institute of Education Sciences (The Education Sciences Reform Act of 2002, Title I, Part E, Section 183). Responses to this data collection will be used only for statistical purposes. The reports prepared for the study will summarize findings across the sample and will not associate responses with a specific district, school, or individual. We will not provide information that identifies you, your district or your school to anyone outside the study team, except as required by law.

I understand that I can contact my study representative or the Principal Investigator to seek further assistance if questions arise.

\_\_\_\_\_ Date  
District Representative

\_\_\_\_\_ Date  
IRG Representative

We appreciate your participation in this important research study. Please contact our study manager, Christopher Tran, at [ctran@inresg.org](mailto:ctran@inresg.org) or (714) 826-9600 if you would like more information.

Sincerely,

Russell Gersten, Ph.D.  
Principal Investigator  
Director, Instructional Research Group  
& Professor Emeritus, University of Oregon