

**Interim Evaluation Report:  
CMSI/CUSP Elementary School Development, 2003-2004**

**Report A: Data, Methods & Overview**

A report to the  
Chicago Public Schools  
Office of Mathematics and Science

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*The conclusions drawn in this report reflect the viewpoint of the authors. While there are many potential viewpoints with respect to a given program, one way to facilitate improvement is through open discussions of such differing opinions within the context of data-based reporting.*

**Abstract**

**In this report, we focus on the Chicago Public Schools' Office of Mathematics and Science (OMS) Elementary School Initiative of the CMSI (Chicago Math Science Initiative).** This initiative was pursued in part with the support of the National Science Foundation and the Chicago Urban Systemic Program (CUSP). In particular we present descriptive and analytical findings from the first full year of implementation of the CMSI during the 2003-04 academic year. The findings about implementation are divided into four reports. *Report A* provides the context for the Initiative, the evaluation and the data collection. *Report B* focuses on the role of the Intensive Support School Specialist. *Report C* presents the professional development and showcases offered by OMS and TAMS. *Report D* describes early stories of CMSI implementation in several Intensive Support and Readiness case study schools.

Report A serves as the organizer for the set of reports. Report A provides the context of the development of the CPS Office of Mathematics and Science and the Chicago Math Science Initiative, of the UIC CMSI evaluation plan, and of the overarching goals, themes and conclusions in the Implementation Reports B-D as a whole. The report provides an overview of the OMS and the CMSI, providing a history of the beginnings of the Initiative and the assumptions and values it is based upon. Specific attention is paid to the CMSI elementary initiative, and an overview of the components of the plan is included. Evaluation methods are described, including sampling selection of case study schools and data collected. Report A concludes with an overview and executive summary of Reports B through D. While individual reports focus on very specific subject matter, Report A considers how these pieces tie together and what they tell us about implementation of the CMSI as a whole.

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## Introduction

This set of reports presents descriptive and analytical findings from the first full year of implementation of the CMSI during the 2003-04 school year. The findings are divided into four reports. This document, *Report A*, serves as an organizational guide for the set of reports. It begins with a description of the context for the Initiative, situating the implementation reports in time and place. The beginnings of the CMSI are briefly described, followed by a brief overview of the elementary initiative.

Following the descriptions of the CMSI are sections that describe the evaluation being undertaken by the UIC CMSI Evaluation Project. Guiding evaluation questions and the data collection are described. Also included is a description of the sampling design used to select the sample case study schools.

Report A then provides an orientation to the other three implementation reports in the set, describing the contents of each.

Finally, Report A concludes with the Implementation Report Series Executive Summary. Although each report contains an executive summary which sums up the analysis and findings of the individual report, we felt it was important to draw the set of findings together in a larger report summary as well.

### The CMSI Elementary School Plan: An Overview

Prior to September 2002, the Chicago Public Schools (CPS) supported mathematics and science through numerous projects with local schools and individual teachers independently pursuing various approaches and activities. No single CPS office coordinated mathematics and science education. In an attempt to create a coherent plan for mathematics and science teaching and learning, in September 2002, CPS created a new department—The Office of Mathematics and Science (OMS)—led by a new cabinet-level Chief Officer. The OMS began to develop and carry out a new vision for the district via, what it called, the Chicago Math Science Initiative (CMSI). This new initiative includes a number of the projects begun previously, including the Chicago Urban Systemic Program funded by the National Science Foundation.

The CMSI had three key objectives aimed to enhance student engagement, learning, and achievement:

1. High quality classroom instruction in mathematics and science will occur and will be supported by
2. increased workforce capacity and competency in mathematics and science content knowledge and pedagogy through
3. sustainable mathematics and science infrastructure (at school-level, instructional area-level, and district-level) and coherent policy directives.

### Planning of Initiative

For 3 months (November 2002 to January 2003), the staff of the newly created CPS Office of Mathematics and Science (OMS) took part in a daily “Leadership Academy.” A major goal of this Academy was to allow this cadre of CPS math and science leaders to plan the Chicago Math Science Initiative (CMSI). The CMSI elementary school plan was based on several important decisions made by OMS staff members during the Leadership Academy:

- The decision to ground elementary school reform in standards-based curriculum materials
- The decision to provide support for a small number of specific standards-based curricula in math and science to promote system coherence
- The use of a phase-in model. In an attempt to eventually reach all schools, intensive efforts would begin with a smaller number of schools while broad support would be provided for all schools with a gradual extension of the initiative to all Chicago Public elementary schools.

During the Leadership Academy, OMS staff had the opportunity to experience a wide-range of standards-based curriculum and to consider the merits and shortcomings of the standards-based approach itself. The

Academy also provided time for the OMS staff to develop the CMSI. At the end of the Academy, the CMSI had an initial design that supported the use of the standards-based approach.<sup>1</sup>

On February 18, 2003 the Chicago Public Schools officially announced the Chicago Math Science Initiative at a press conference. Prior to this on February 14, 2003, an information and application packet became available to schools about how to apply for additional resources to use for the implementation of CMSI-supported math and science materials. Schools were informed that over the first three years of the Initiative, 175 schools would “receive intensive support in the teaching of math and science.” The cover letter to the application stated that 75 schools would be identified as Intensive Math or Science schools, receiving a math or science Specialist, money for materials, and ongoing professional development to support implementation. Schools were asked to submit a letter of interest to OMS by March 4<sup>th</sup> and a full application by March 14<sup>th</sup>, 2003. The review process was to be completed and schools notified of acceptance or denial by April 1, 2003.<sup>2</sup>

#### Curricula Chosen

An inventory of elementary school math and science curriculum in Chicago conducted by OMS staff during these planning stages revealed 86 different math and 43 different science text books. During the Leadership Academy, OMS identified 4 standards-based mathematics and 5 standards-based science curricula for the elementary school level. For primary level math the staff chose Everyday Math and Math Trailblazers. For middle grade math, Connected Math and Math Thematics were chosen. The elementary science curricula were chosen to follow a “Scope and Sequence” of topics outlined by OMS. These science curricula units were drawn from FOSS (Full Option Science System), SEPUP (Science Education for Public Understanding Program), IES (Investigating Earth Systems), LETUS (Learning Technologies in Urban Schools), and STC (Science and Technology for Children).

#### Selection of Schools Receiving Intensive Support

Around these selected curricula the OMS staff constructed a phase-in model of school implementation that would allow them to gradually support the introduction of standards-based materials into an increasing number of schools and classrooms. The decision of what instructional materials a school uses rests legally with each individual school principal and Local School Council (LSC)—a group comprised of teachers, parents, and community representatives. The CMSI elementary plan is based on providing incentives to schools to choose the designated curricula. In this model, all elementary schools in the district were invited to apply to become Intensive Support schools. As we explain later, schools not accepted as Intensive Support were then designated either as Readiness or Broad Support schools.

Intensive Support schools were chosen through a selection process that attracted 207 applications. Based on reviews of these applications and site visits to 177 schools, 81 schools were chosen as Intensive Support schools, 22 in Science and 59 in Math.<sup>3</sup> Intensive Support schools were then supported with the expectation that all of their teachers would implement the chosen standards-based math or science curriculum within two years. In the first year a group of “First Wave” teachers were trained, one from each grade level. In the second year, all remaining teachers in the school were to be trained to use the materials.

The selection process for Intensive Support schools also revealed a group of schools that had partial qualifications but were lacking in one of the three criteria identified as critical to implementation of the standards-based approach: commitment, collaboration or leadership. These forty-eight schools were designated Readiness Schools and were provided with training and assistance during 2003-04 with the intention that they would use this year to prepare to become Intensive Support schools in 2004-05. Readiness School faculties also were encouraged to participate in curriculum training workshops offered in the summer of 2003.

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<sup>1</sup> For additional details on the Leadership Academy: the process, merits and shortcomings, please see Hallman, Fendt and Wenzel, 2003).

<sup>2</sup> This information was taken from the application materials which can be viewed on the OMS website: [http://www.oms.cps.k12.il.us/cmsi/k8support\\_application.html](http://www.oms.cps.k12.il.us/cmsi/k8support_application.html)

<sup>3</sup> The selection process of Intensive Support and Readiness schools is detailed in *The 2003 CMSI Intensive and Readiness School Selection Process*. A summary and application materials are available at: [http://www.oms.cps.k12.il.us/cmsi/k8support\\_application.html](http://www.oms.cps.k12.il.us/cmsi/k8support_application.html)

The remaining Chicago Public elementary schools were designated “Broad Support Schools.” These schools were to be supported in their move toward standards-based approaches by various district support structures. Teacher workshops and training were also made available to teachers from these schools.

#### District Support Structure

Intensive Support schools were given monetary, professional development and mentoring support. Intensive Support schools were given \$10,000 (\$1,000 for each of 10 classrooms) to purchase curriculum materials in 2003-2004. In addition, OMS made a two-year commitment to provide them with a funded full-time school-based math or science curriculum Specialist to assist with implementation. In the summer of 2003, seventy-seven Specialists received a two-week training session. Ongoing monthly professional development training for these Specialists in leadership and standards-based curricula were also provided. Those designated First Wave teachers, approximately one teacher per grade level, were also provided with professional development training. First Wave teachers were offered curriculum-specific training in the summer of 2003. Three to five day workshops were offered in the four math curricula and a combined science workshop was offered. Throughout the 2003-2004 school year, First Wave teachers were offered an additional one day per month of professional development. Additionally, principals at these schools were invited to a year-long series of 5 two-hour meetings with senior OMS staff. Furthermore, OMS Facilitators, who were assigned between 5 and 11 Intensive Support schools, provided outside expertise to improve implementation in these schools through visiting schools, mentoring the Specialist, providing professional development, and working with teachers.

The Office of Mathematics and Science arranged for Readiness schools to receive training from the Teachers Academy for Mathematics and Science (TAMS). Teams of 10 teachers from each Readiness school were provided 30 hours of training during the 2003-2004 school year in order to prepare them to become Intensive Support schools in 2004-05. The training was designed to familiarize teachers with the Initiative-supported curricula, to become more comfortable with standards-based materials, and to develop the leadership, human and monetary resource infrastructure for implementation.

Readiness Schools and Broad Support schools were also provided support from Area Math/Science Coaches. These Coaches were based in each of the 18 CPS Instructional Areas—geographic sub-district structures with a mission to focus on supporting the instructional practices of their schools. Through an intensive selection process, 18 elementary Coaches were hired to support both math and science instruction in their Areas. Although most elementary Coaches were hired in consultation with OMS and most participated in the three weeks of OMS sponsored professional development training in July 2003 that was designed to assist them in defining and enacting their role as full-time professional developers, the CPS structure required Coaches to report to their Area Instructional Officer. Due to the demands of their instructional Area, many Coaches did not attend the curriculum specific workshops offered in August 2003, even though OMS encouraged their attendance. During the first half of the 2003-2004 school year, OMS organized weekly meetings and professional development workshops for these Coaches.<sup>4</sup> In recent months this has tapered down to bimonthly meetings/professional development sessions.

Intensive Support, Readiness and Broad Support schools were all invited and encouraged to attend Instructional Materials Showcases and Technical Support Workshops. At these gatherings, publishers and authors of CMSI selected curricular materials provided information and demonstrations of their products. The first of these sessions were offered in winter 2003 to inform schools about the new CMSI plans and to provide an opportunity for these schools to compare these curricula side-by-side. Additional sessions were then offered in winter 2004 to educate all schools—but particularly Readiness schools aiming to move into Intensive school status—about the curricula.

### **Evaluation Methods**

This descriptive and analytical report is produced by the UIC CMSI Evaluation Project, external evaluators of this CPS initiative. This report and the continuing evaluation of school development in CMSI elementary schools represent one strand of a larger documentation and evaluation project of the development and

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<sup>4</sup> For more detail about the professional development and early work experiences of Area Coaches, see Fendt and Wenzel, 2003.

implementation of the CMSI as a whole. The larger external evaluation plan also includes ongoing documentation and analysis of university-based teacher professional development courses and the stories of OMS staff and Area Coaches including their leadership development and work.<sup>5</sup> An internal evaluation group is also investigating other CMSI activities, including summer school and after-school programs, high school course taking, as well as additional aspects on school implementation.<sup>6</sup>

The evaluation findings reported in this report are shaped by our beliefs that good evaluation should be guided by

- formative feedback to stakeholders for their use in making mid-course corrections,
- written and verbal reports to stakeholders that facilitate the use of findings,
- strategic evaluation questions that focus the inquiry,
- mixed methods of data collection and analysis, and
- ethical protection for study participants.

Accordingly, while this document is the first interim report to CMSI on elementary school implementation, the majority of these findings have already been shared with stakeholders at earlier times in other formats so to promote data-driven decision making. This report offers us another chance to reanalyze, in light of the full findings, some of the data that may have been shared at earlier periods. Therefore, we have a higher level of trust in the findings reflected here in comparison to earlier preliminary findings.

CMSI stakeholders include math and science leaders working at the district-, area-, school-, and classroom-level, and within organizations external to the school district. Some stakeholders are looking at the overarching impact of the Initiative and others at specific activities within it. Accordingly, we shape this report to first describe the specific strands of CMSI activities underway and also address the following evaluation questions:

- A. To what extent have the recommended CMSI practices been adopted and implemented in schools?
- B. How variable was the implementation across teachers and schools?
- C. By what processes did school development take place in these schools?  
What supported or impeded development?
- D. Did strong implementation schools/teachers, more so than other schools
  - improve student achievement?
  - develop essential supports?
  - produce high quality instruction?

We collected data to allow for both a rich description of the activity strands of CMSI and for analysis along the lines of the evaluation questions. Table A-1 below offers a listing of the data collected and indicates the activity strand and the evaluation questions that are currently being addressed or may be addressed in the future using this data. Note the most data collected to date is providing a baseline measure against which future changes can be compared.

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<sup>5</sup> Previous interim reports by the external evaluation team reports include those on university-based teacher professional development (Wenzel et al, 2003) the leadership academy that trained the Office of Mathematics and Science staff (Hallman et al, 2003), and the Area level leadership component of the CMSI (Fendt and Wenzel, 2003).

<sup>6</sup> Previous interim reports by the internal evaluation team reports include those on high school course taking (LaForce and Feranchak, 2003) after school programs (OMS, 2003), and the Readiness schools (LaForce, Deiger, and Feranchak, 2003).

**Table A-1:**  
**Sample of key data collected for evaluation of implementation of CMSI in elementary schools,**  
**as of August 31, 2004**

Type of data	Amount of data	Event or person	Evaluation questions addressed
Observation notes			
	4 days, summer 2003	Workshops for Intensive Support school Specialists	C
	13 days, summer 2003	Curriculum-specific workshops	C
	4 days, 2004	Workshops for Readiness school teachers	C
	6, 2003-2004	Meetings of Intensive Support school principals	C
	1, fall 2003	Meetings of Readiness principals	C
	20, 2003-2004	Workshops / meetings at Intensive Support schools	A
	6, 2003-2004	Workshops / meetings at Readiness schools	A
Shadowing notes			
	5	Intensive Support school Specialists	A
	5, 2003-2004	Area Coaches	A
	10, 2003-04	OMS Facilitators/Staff	A
Written reflections documents			
	138, summer 2003 43, spring 2004	Intensive Support school Specialists	C
	900+, summer 2003	Teachers at curriculum-specific workshops	C
	TBD	Readiness school teachers	C
Surveys			
	46, summer 2003	Intensive Support school Specialists	A B D
	470, summer 2003	Teachers at curriculum-specific workshops	A B D
	388, winter 2003	Readiness school teachers (collected by OMS)	A B D
	TBD	All district teachers (collected by CCSR)	A B D
Interviews			
	10	Intensive Support school Specialists	A C D
	10	Intensive Support school principals	A C
	3	Readiness school principals	A C
	17, fall 2003	Area Coaches	A C
	25, winter 2004	OMS staff	A C
Focus groups			
	6	Intensive Support school teachers	A C
	3	Readiness school teachers	A C
Case studies			
	11	Intensive Support schools	B C D
	4	Readiness Schools	B C D

Protocols used in this data collection are included in Attachment A-A.

The data shown in Table A-1 are used throughout these reports. As these are used, we offer the reader additional detail on the sample providing the data and the process for collecting it. For most data collected, we attempted to collect information from the full population of actors available. For example, we worked to collect reflective writing samples from all Specialists or all teachers attending a given professional development session. The exception to our collection from full populations is our sampling of case study schools. We selected a sample of 15 schools on which to focus our comparative case study analysis. Here, we describe how the selection took place and give a general description of the schools included in the sample.

The names of the schools and people involved in this study are not given due to the confidentiality promised to them as consenting participants in this evaluation research. Given this confidentiality, descriptions of the schools and people were constructed to protect the identity of schools.

Selection of the case study schools started with the following plan in mind, represented in Table A-2.

**Table A-2:** August 2003 Elementary School Case Study Selection Plan, UIC CMSI Evaluation Project

Relevant School Populations	Case Study Sample Size	Considerations
Intensive Math (N=58)	8	2 of each primary/middle school curriculum combos Include one from each of the 6 OMS Math Facilitators
Intensive Science (N=23)	3	Include one from each of the 3 OMS Science Facilitators
Readiness (N=48)	4	Selected as match comparison schools for Intensive Math schools

Given this plan, the schools were selected. First the populations were identified from OMS databases of CMSI schools that included data on the curricula to be implemented.

Intensive math schools were sorted into five groups according to the curriculum combinations to be used: (a) Everyday Math and Connected Math (N=13), (b) Everyday Math and Math Thematics (N=16), (c) Math Trailblazers and Connected Math (N=10), (d) Math Trailblazers and Math Thematics (N=7), and (e) other combinations (N=12). Two schools were selected (using random numbers) from each of the combinations a through d. These schools were then sorted according to which of the 7 OMS Facilitators would be working with the school. After the first random selection, it was discovered that there were no schools working with one OMS Facilitator. There were several OMS Facilitators working with more than one of the selected field sites. Therefore, one of the sites connected to the Facilitator with multiple sites was dropped and another from the same curriculum combination group was randomly selected until a school assigned to the final OMS Facilitator appeared in the field sample.

The Intensive science schools were sorted in groups for each of the 3 OMS Facilitator/Coaches and one school was randomly selected from each of the 3 groups.

The 9 Intensive case study schools were then examined in terms of various criteria to determine if they represented a wide variation in the characteristics that distinguish schools across CPS. Next, evaluators examined records from summer 2003 professional development workshops observed and noted which school math or science Specialists consented to participate in evaluation research. Of the 9 initially selected schools, 3 had Specialists who did not consent. For those schools, replacement schools with consenting specialists were selected from the same geographic area and with similar characteristics.

From the population of 48 readiness schools, 4 schools were selected as comparison schools to 4 of the intensive math schools where student achievement was lowest. The comparisons were made in terms of student achievement on the math ISAT in 2002, geographic area, percent low income, and ethnic composition of the students.

Geographic areas represented by the selected case study schools include sites spread to the north, south, and west of Chicago with 12 of the 18 elementary Areas represented.

The case study schools have the following characteristics in comparison to the population of Intensive Schools from which they were sampled. See Table A-3 below.

**Table A-3:** Characteristics of Case Study Schools Compared to Relevant School Populations

	Enrollment	% Low Income	Race/ Ethnicity	Composite Math ISAT 2002	Math Science Cluster School
Intensive Math Case Study	1—under 500 4—500-1000 3—over 1000  Avg =875	0—under 60% 2—60-85% 3—85- 90% 3—over 90%  Avg= 85%	3—90% + Hispanic 2—90% + Black 2—75% + Minority 1—less than 75% Minority	2—under 35% 4—35-50% 2—over 50%  Avg=47%	3 Yes 5 No  38%
Intensive Math All	Avg=718	Avg=87%	9—90% + Hispanic 18—90% + Black 22—75% + Minority 9—less than 75% Minority	Avg=41%	34%
Intensive Science Case Study	1—under 500 1—500-1000 1—over 1000  Avg=945	1 under 60% 0 60-85% 1 85- 90% 1 over 90%  Avg 70%	0 90% + Hispanic 0 90% + Black 2 75% + Minority 1 <75% Minority	0—under 35% 2—35-50% 1—over 50%  Avg=54%	0 Yes 3 No  0%
Intensive Science All	Avg=738	Avg 80%	2 90% + Hispanic 6 90% + Black 7 75% + Minority 8 <75% Minority	Avg=51%	26%
Readiness Case Study	0—under 500 4—500-1000 0—over 1000  Avg =751	0—under 60% 1—60-85% 0—85- 90% 3—over 90%  Avg =92%	1 90% + Hispanic 2 90% + Black 1 75% + Minority 0 <75% Minority	1—under 35% 3—35-50% 0 over 50%  Avg =34%	1 Yes 3 No  25%
CMSI Applicants not selected for Intensive	Avg =692	Avg =90%	21% + Hispanic 72% + Black	Avg =33%	24%

Next the case study schools were formally invited to participate. All Intensive Support and Readiness schools first received a letter from CPS encouraging them to participate if they were asked to be a case study school. Then UIC CMSI evaluators contacted the selected schools' Specialists and principals. Of those contacted, all but one consented to participate. The one that chose not to participate was then replaced by another school with the same characteristics in terms of CMSI curricula, demographic characteristics, and geographic location.

## Description of Reports B-D

Having framed the context of the Initiative and the evaluation data collected, we now present a brief description of the three implementation reports.

### Report B

Report B focuses on the role of the Intensive Support school Specialist. The creation of these positions marks an investment of resources in teacher leadership at the individual school level. A description of the role and role development considers the way in which Specialists go about their work. This report relies on written data from Specialists across CMSI schools at three time points throughout the first year of their work. This report also draws on deeper conversations with and observations of a smaller group of Specialists from our case study schools for richer descriptions of the role. Also drawn in are the experiences and viewpoints of other stakeholders, such as OMS Facilitators and Area Coaches, for their insights on their work with Specialists.

### Report C

Report C presents the professional development and showcases offered by OMS and TAMS. Data from structured observations of the training of Intensive Support First Wave teachers, Specialists, principals and Readiness teachers are analyzed to provide descriptions of the offerings of summer 2003 and the 2003-04 academic year. Observations of curriculum showcases are similarly described and analyzed. This report also draws on interview and focus group data from case study schools. The voices of teachers and principals about the training they received are woven with researcher observational data.

### Report D

Report D describes early stories of CMSI implementation in several Intensive Support and Readiness case study schools. Brief vignettes from each of the case study schools tell the story of implementation, highlighting the roles of important actors and the supports and constraints to implementation evident in the lives of the schools. Following the vignettes, Report D analyzes early indications of supports and constraints to implementation of the CMSI and assesses the depth, breadth and sustainability of the Initiative.

## Implementation Report Series Executive Summary: Playing in the Mud

When we submitted the first draft of this report to the Office of Mathematics and Science in April of 2004, it was one very large report on “school implementation,” a conglomeration of stories of role development at the district, area and school levels, programs, professional training and school development. The story was so long and complicated that it was muddy and messy. As a result, we opted to make it a “series” rather than a single report in order to promote the usability of the documents. In this respect, consideration of the role of the Specialist, analyzing the various professional development opportunities and telling the stories of implementation of math and science curriculum in Intensive Support and Readiness schools are neat “bins” in which to place the many pieces of data we have collected throughout 2003-04.

But separating the data this way does little to decrease the complexity of the overall story that is being told. While conceptualizing our data this way helps us to understand strands of the Initiative as separate entities, it does not eliminate the complexity that exists in the manner in which district and school level change occurs. The reality is that all of these pieces of development and change described in Reports B, C and D have occurred and are occurring simultaneously and that the pieces are intertwined and impossible to completely untangle.

In this, the Report Series Executive Summary, we attempt to draw together the findings across the sections of the Implementation series; we play in the mud. Here, we consider the findings from each subsection of the report alongside and in light of the others, acknowledging the complexity of the development of the Initiative and of the process of change.

Reports B through D are linked to one another in their connection to CMSI goals of creating increased workforce capacity and sustainable infrastructure in math and science to promote and produce high quality classroom instruction in math and science. The creation of the Specialist position represents a commitment to creating school-level infrastructure to support the implementation of quality math and science materials in a subset of Intensive Support schools. The logic was that high quality classroom instruction is dependent on strong materials and that the implementation of these materials may require a paradigm shift for teachers who are using them for the first time. School-level math and science Specialist roles were created to provide in-school support and accountability for teachers.

Report B describes and analyzes the development of this role, considering the perspective of Specialists on their own role and that of Area and district-level positions with whom they interact. Consideration of the selection process of the Specialist positions reveals some ambiguity in role descriptions that contributed to a wide variation in the manner in which implementation of the position occurred. At the same time, in the minds of OMS and Area staff, variation in the levels of skills of Specialists, in content knowledge, in mentoring and in leadership, were influential in the quality of support the role could offer to the Initiative at the school-level. Also supporting or impeding the Specialist role was the support of the principal in defining and providing accountability around the position.

Report B describes ways in which both the personal skills and credentials of the Specialist and school-level variables such as principal support and school goals affect the extent to which the role is a meaningful support for the Initiative. In this respect, the topics covered are inextricably linked to the professional development described in Report C. Recognizing that the Specialist position would require a wide set of skills and demands on those chosen for the role, the Office of Mathematics and Science created opportunities for Specialists to receive training in leadership, in content, in curriculum and in mentoring. This professional development, begun in the summer of 2003 and continued throughout the 2003-04 year, was to focus on these very topics, providing ongoing support and training for those in the Specialist role, in a setting where they could share their experiences and development with others in the same position.

Similarly, recognizing the paradigm shift that teachers would need to make in adopting and embracing the new materials, OMS provided ongoing teacher professional development during 2003-04. When the budget was tight and cuts had to be made in the spring of 2004, Marty Gartzman, Chief Executive Officer of OMS stated that “the top priority was to protect professional development opportunities as the key element of the Initiative.” At the same time, it was recognized by OMS staff that principals must be included in professional training; that their understanding of the materials and the Initiative was critical to its success. Thus, OMS

offered principal training to Intensive Support schools during 2003-04. Principals were introduced to OMS expectations of their role and were allowed to explore the experiences of other CMSI schools in the midst of the first year of the Initiative.

OMS staff also understood that although insuring success for Intensive Support school development was an essential aspect of the success of the Initiative, the broadening of the Initiative to touch all elementary schools was also important. Opening professional development to all teachers and schools in the district using the OMS-sponsored materials and allowing school faculties to explore materials at system Showcases provided professional training and support for teachers and schools not receiving Intensive Support resources.

Report C explores each of these professional development opportunities in a descriptive and analytical manner. It is clear that these training opportunities were designed to address the needs of the various leaders in the Initiative. For the teachers, it was to support the paradigm shift and to develop content and curriculum knowledge. For the principals, training was to provide a richer understanding of the Initiative and develop principal leadership in and commitment to the CMSI. In turn, this would support the Specialist role by providing accountability and appropriate support to her role, to teachers and to the Initiative more generally. Readiness training and Showcases were intended to expose teachers and schools, who had less information about or commitment to the CMSI approach, to the materials and philosophy of the OMS, hopefully generating more interest and knowledge.

The professional development opportunities described in Report C are impressive and rich. At the same time, the need for ongoing assessment of these training sessions and improvement remains essential to their success. Lessons learned in the report reveal that the format and timing of these sessions in the minds of participants is a critical factor. The need for training sessions to be geared toward goals that participants can identify with and engage in is essential. The need to include participants in agenda-setting and design of sessions is an important aspect of this. The ongoing and careful training of those offering these workshops is equally essential. And, developing a system to identify participant needs even as they are evolving is central in the continued success of OMS professional development.

This is much more complicated, of course, than it sounds at first hearing. It is complex because so many factors are changing at the same time. The addition of more schools, the scale-up of the Initiative, makes offering of appropriate professional development infinitely more difficult. As we see in Report C, the joining of teachers from schools earlier in implementation into professional development may create a need for the diversifying of professional training options. Training appropriate for teachers aiming at complete implementation of curriculum materials, attending an ongoing, multi-session approach may be inappropriate for teachers who are only partially using the curriculum or who attend a single session. This will become even more complicated when schools on probation are added into the CMSI training sessions. What will the needs of these teachers be and how will they be like and different from those of other teachers?

Offering all teachers who attend professional development the same training that CMSI 2003-04 Intensive Support school teachers received may be a "one size fits all" solution to a challenge that just got much more complex. At the same time, the offering of more sessions means a scale-up in the number of trainers. How can we insure the high quality of sessions with a widening of this population? What kinds of training do these professional developers need? These and other critical questions are raised in Report C.

Offering timely and relevant professional development is also complicated because roles are changing as well. Increasing the number and type of schools participating in the CMSI means changing roles for OMS Facilitators and Area Coaches. "Just as I felt I was getting the hang of my job, it is changing all over again next year," one OMS Facilitator noted. The changing of roles is necessary to support a growing Initiative. At the same time, the changing of roles causes strain on those in them.

Separating these reports into topic areas, it is possible to miss the complexity of the story being told. Report C concludes that participants need to be more involved in agenda setting to insure relevance and suggests that teachers' needs for professional development should be carefully considered because of the diversifying teacher population. These suggestions sound straight forward enough as separate entities. Yet, placing these suggestions in the context of the changing of OMS and Area roles and the broadening of the Initiative links the pieces together, giving us a greater respect for the complexity of the work being undertaken.

Evidence in Report D suggests that the factors investigated and addressed in Reports B and C are important to finding success in implementation of the CMSI. Early lessons from the first year of case study analysis suggest that CMSI implementation is supported by past experience working with curriculum materials, by professional development within and outside the school, by principal support, by teacher leadership, by trust and by the fit between school goals and those of the Initiative. These lessons suggest that continued experience with the curriculum coupled with relevant, quality professional training for principals, teachers and Specialists and working with schools to improve school culture and school goal setting and resource allocation will support implementation of the CMSI.

Report D reveals the importance of the deepening and coordination of the good structures that have already been put into place in the first year of implementation of the CMSI. Data collected points to the need for content and curriculum training for principals and Specialists, with their teachers and with one another. Those involved in the Initiative see the need for curriculum training, not just for the teachers implementing it, but for the Specialists supporting it and the principals observing it. The need for concrete tools for principal observation and evaluation of teacher implementation and for deepened understandings on the part of principals of the manner in which they can support the CMSI will need to be ongoing and varied as principals from new and different schools join the group. Extended training for Specialists, that evolves as they do, will strengthen their ability to support and relate to multiple grade levels and teachers in various stages of development.

The development of leaders, in the form of principals and Specialists, and the training of teachers in curriculum materials is an obvious path of improving and developing the CMSI. Less obvious but equally important is the need to develop clear pathways to draw upon teacher leadership in implementing schools, especially those without a Specialist. How can OMS Facilitators develop the leadership skills of implementing teachers such that these teachers can become mentors in their school? What types of training do these teachers need to become supports for their colleagues in implementation? What types of structures can be put into place to decrease the teaching commitments of these teacher leaders to allow them the realistic opportunity to be mentors? These critical questions are considered in Report D.

Report D concludes with a perspective that seems the most useful and empowering way to end this summary. The conclusions of the report refer back to a data brief provided in the spring of 2004 to OMS staff. The data brief is a compilation of OMS Facilitator and Staff perspectives on the Initiative in 2003-04—the strengths and weaknesses and their suggestions for future improvements. Lining up this document, which simply summarizes OMS staff thoughts and suggestions, next to evaluation report conclusions reveals that OMS staff had suggested solutions to many of the issues raised in our reports.

The solutions, then, exist in the minds, hearts and developing roles of the experts gathered in the many levels surrounding the CMSI. The challenge will be to take the time to listen, analyze and make decisions based on these insights. This takes time. It takes the building of feedback loops that sometimes drag when district pressures are high to make instantaneous decisions. It takes bringing together staff at the district, area and school levels and resolving role ambiguity, charting concrete and practical routes for role implementation and development. It takes reminding ourselves that taking this time was why the Initiative was unique in design. It means realizing that building infrastructure is slow, tedious work that requires constant tinkering not because structures are faulty but because they are changing constantly as the Initiative grows. It means seeing the complexity of the work being undertaken and described in these reports and moving forward in hope.

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## **The Women!**

We recognize women who have contributed much to the world with our pseudonyms. Here they are with a brief description of their contribution. They are listed in the order in which they appear in the text in Report D.

Elizabeth Cady Stanton—Suffragist

Margaret Mead—Anthropologist

Jane Goodall—Scientist

Kalpana Chawla—Indian astronaut who died on the Challenger

Dorothea Lange—Photographer during the Depression

Julia Child—Culinary Goddess

Shirin Ebadi—Winner of the 2003 Nobel Peace Prize

Miriam Makeba—S. African Musician known as “Mama Africa” and the Empress of African song

Victoria Ocampo—Argentinian intellectual who published famous magazine in Buenos Aires

Katherine Hepburn—Famous actress who died recently

Hattie Caraway—First female elected to the US senate (from Arkansas)

Christine de Pizan—Famous female author

Attachments A-E: Data Collection Protocols and Instruments

Attachment A: Principal Interview Protocol

**PRINCIPAL INTERVIEW**  
**Interview One**

**UIC CMSI Evaluation      Project Year 2, 2003 – 2004**

Follow-up Interview of CPS/CUSP Professional Development Workshop/Course Participant  
To be used one half-year after professional development workshop/course

**Interviewee name:**

**Name of Previously Taken Professional Development Workshop/Course:**

**Position:**

**School:**

**Area:**

**Date of interview:**

**Researcher's name:**

**File name:**

**Date summary completed:**

**Researcher first discusses informed consent with interviewee:**

Previously you consented to be a part of our evaluation and research about the CUSP professional development courses/workshops. You signed a consent form as part of that process. We talked about the purpose of the research and the type of data we would collect. This interview is part of that data. Since it has been some time since we first talked about the research, I want to again make sure you understand and are comfortable giving your consent to be in the study.

Remember that there are potential risks and benefits to participating in this research. For example, I may ask you a question in this interview that may make you feel uncomfortable about answering. Or you may have concern that your co-workers would be upset with something you said. While these are risks, this study is set up to minimize them. I definitely will not share your answers to my questions with anyone besides my fellow researchers. When we report findings, we will not use your name. And when I ask you questions, you can choose to not answer any questions that make you uncomfortable. There are no sure benefits from participation in the research study; however, you may find it helpful to talk with me and reflect about your work.

Participation in the research is voluntary and the information you provide for the research will be confidential. You can withdraw from the study at any time.

Let me make sure you understand the research again by asking you a couple of questions: "Do you understand the purpose of the study and the risks and benefits to you as participants and can you state them for me?" "Do you have any questions about the study and its process?" "Can you please tell me whether you think you are required to participate in this research or can you be in the Initiative and not participate in the research?"

**If consent is reaffirmed, the researcher then asks the following questions. The interviewee is encouraged to elaborate on answers.**

### **Background Information**

Ask Principal for the following documents if available:

- School staff roster
- School calendar of activities
- Professional development calendar, plan

If Principal did not fill out a background survey during earlier sessions, ask them to take a moment and fill out this survey or ask the background information from the survey. The following issues need to be addressed in the survey or in this interview:

1. Background. Most recent teaching position, grades taught, what type of classroom, experience, endorsements, professional involvement, college background, recent professional development last year and over the last 3 years, ethnicity, age, gender.
2. How they became involved in CMSI.
3. OMS summer workshops: did they attend. What workshops they attended. Attendance record.
4. Professional community related to math/science. If they didn't fill out survey, probe in following questions about their interactions with others around math and science education.

### **Questions about CMSI Implementation**

1. What can you tell me to help me understand your school as part of the Chicago Math and Science Initiative? What has being a CMSI (Intensive or Readiness) school meant in terms of how your school is operating? What resources are involved:
  - a. Human (staff positions)
  - b. School Building Capital (space)
  - c. Time
  - d. School BudgetProbe: In what ways is this year different for your school than last year in terms of math and/or science education?
2. Tell me about your personal role in terms of math and science education and the CMSI.
  - a. What is your day-to-day role?
  - b. How are you involved in math and science classrooms?
  - c. How are you involved in meetings with teachers of math and science?
  - d. How are you involved with specialists, area coaches, OMS facilitators and staff?
  - Probe: In what ways is your role this year different than last year?
3. Tell me about the work of your specialist.
  - a. Relationship with specialist
  - b. Description of role
  - c. Challenges of role
  - d. Description of work/relationships with teachers
4. Tell me about your teachers.
  - a. (Intensive) How were your first-wave teachers chosen?
  - b. (Intensive) What is the level of awareness/support from your faculty at large to school-wide implementation next year?
  - c. (Readiness) How will your school go about choosing first-wave teachers?

- d. (Readiness) What is the level of awareness/support from your faculty at large to eventual school-wide implementation?
  - e. (Readiness) How will you go about choosing your curriculum(a) materials for next year?
5. What successes has your school found this year in terms of math and science education?
6. What have been the challenges your school has faced in terms of math and science education this year?
7. How does being an Intensive (or Readiness) school fit into other school priorities (such as in other subject areas, general school organization, student development, budget, etc.)?
8. What questions do you currently have? What issues need to be further resolved in terms of your participation as a CMSI (Intensive or Readiness) school?
9. Share with me your assessment of whether and how any changes in your school's math and science education resulting from work in the CMSI are:
  - a. broad
  - b. deep
  - c. lasting
10. You participated in some meetings with other principals from CMSI intensive schools. One was the big session at the Museum of Science and Industry and another was a late September 2003 meeting at Medill.
  - a. Tell me about your interactions with the people at these meetings – the other principals and the OMS staff. Did these meetings change your relationships with them? How?
  - b. At this time as you think about your current work, how was being in the meetings about the CMSI influenced your work? Give me a specific example(s) and tell me how the meetings influenced this.
11. IF READINESS SCHOOL: Your teachers have participated in some professional development activities with TAMS (The Teachers Academy of Math and Science) to prepare you to become an intensive support school next year.
  - a. Describe these TAMS sessions.
  - b. What was positive/negative about the sessions?
  - c. What steps has your school taken to be prepared to move into the Intensive strand next year?
  - d. Probe for answers addressing: collaborative structures, increased commitments (financial, human, LSC), and leadership
12. Is your school participating in other OMS-sponsored programs such as university courses, museum partners, parent programs, etc.?
13. Is there anything else I should know about your school's CMSI implementation or your attendance at related meetings CMSI has held that would help me to understand your experiences with CMSI?

**THANK YOU VERY MUCH FOR YOUR TIME!**

**SPECIALIST INTERVIEW**  
**Interview One**

**UIC CMSI Evaluation      Project Year 2, 2003 – 2004**  
**Follow-up Focus Group of CPS/CUSP Professional Development Workshop/Course Participant**  
**To be used one half-year after professional development workshop/course**

**Name:**  
**Name of Previously Taken Professional Development Workshop/Course:**  
**Position:**  
**School:**  
**Area:**  
**Date of interview:**

**Researcher's name:**  
**File name:**  
**Date summary completed:**

**Researcher first discusses informed consent with interviewee:**

Previously you consented to be a part of our evaluation and research about the CUSP professional development courses/workshops. You signed a consent form as part of that process. We talked about the purpose of the research and the type of data we would collect. This interview is part of that data. Since it has been some time since we first talked about the research, I want to again make sure you understand and are comfortable giving your consent to be in the study.

Remember that there are potential risks and benefits to participating in this research. For example, I may ask you a question in this interview that may make you feel uncomfortable about answering. Or you may have concern that your co-workers would be upset with something you said. While these are risks, this study is set up to minimize them. I definitely will not share your answers to my questions with anyone besides my fellow researchers. When we report findings, we will not use your name. And when I ask you questions, you can choose to not answer any questions that make you uncomfortable. There are no sure benefits from participation in the research study; however, you may find it helpful to talk with me and reflect about your work.

Participation in the research is voluntary and the information you provide for the research will be confidential. You can withdraw from the study at any time.

Let me make sure you understand the research again by asking you a couple of questions: “Do you understand the purpose of the study and the risks and benefits to you as participants and can you state them for me?” “Do you have any questions about the study and its process?” “Can you please tell me whether you think you are required to participate in this research or can you be in the Initiative and not participate in the research?”

**If consent is reaffirmed, the researcher then asks the following questions. The interviewee is encouraged to elaborate on answers.**

### Background Information

If Specialist did not fill out a background survey during earlier sessions, ask them to take a moment and fill out this survey or ask the background information from the survey. The following issues need to be addressed in the survey or in this interview:

5. Background. Most recent teaching position, grades taught, what type of classroom, experience, endorsements, professional involvement, college background, recent professional development last year and over the last 3 years, ethnicity, age, gender.
6. How they became involved in CMSI.
7. OMS summer workshops: did they attend. What workshops they attended. Attendance record.
8. Professional community related to math/science. If they didn't fill out survey, probe in following questions about their interactions with others around math and science education.

### Questions about CMSI Implementation

13. What can you tell me to help me understand your school as part of the Chicago Math and Science Initiative? What has being a CMSI Intensive school meant in terms of how your school is operating?  
What resources are involved:
  - a. Human (staff positions)
  - b. School Building Capital (space)
  - c. Time
  - d. School Budget
  - Probe: In what ways is this year different for your school than last year in terms of math and/or science education?
14. Tell me about your personal role in terms of math and science education and the CMSI.
  - a. What is your day-to-day role?
  - b. How are you involved in math and science classrooms?
  - c. How are you involved in meetings with teachers of math and science?
  - d. How are you involved with area coaches, OMS facilitators and staff?
  - Probe: In what ways is your role this year different than last year?
15. Tell me about your relationship with your principal.
  - a. Relationship with principal
  - b. Communication routines
  - c. Level of trust
  - d. Challenges
16. Tell me about your teachers.
  - a. How familiar are they with CMSI curriculum?  
(For Intensive Schools note prior to this year).
  - b. (Intensive) How were your first-wave teachers chosen?
  - c. (Intensive) What is the level of awareness/support from your faculty at large to school-wide implementation next year?
17. What successes has your school had this year in terms of math and science education?
18. What have been the challenges your school has faced in terms of math and science education this year?

19. How does being an Intensive school fit into other school priorities (such as in other subject areas, general school organization, student development, budget, etc.)?
  20. What questions do you currently have/what issues need to be further resolved in terms of your participation as a CMSI Intensive school?
  21. Share with me your assessment of whether and how any changes in your school's math and science education resulting from work in the CMSI are:
    - a. broad
    - b. deep
    - c. lasting
  22. You participated in some meetings with other specialists from CMSI intensive schools. There were some sessions last summer at TAMS and some ongoing sessions at Medill this year.
    - a. Tell me about your interactions with the people at these meetings – the other specialists, the coaches and the OMS staff. Did these meetings change your relationships with them? How?
    - b. At this time as you think about your current work, how has being in the meetings about the CMSI influenced your work? Give me a specific example(s) and tell me how the meetings influenced this.
11. Is your school participating in other OMS-sponsored programs such as university courses, museum partners, parent programs, etc.?
12. Is there anything else I should know about your school's CMSI implementation or your attendance at related meetings CMSI has held that would help me to understand your experiences with CMSI?

THANK YOU VERY MUCH FOR YOUR TIME!

**TEACHER FOCUS GROUP PROTOCOL  
Focus Group One**

**UIC CMSI Evaluation      Project Year 2, 2003 – 2004  
Follow-up Focus Group of CPS/CUSP Professional Development Workshop/Course Participant  
To be used one half-year after professional development workshop/course**

**Attendees:**

**Name of Previously Taken Professional Development Workshop/Course:**

**Positions:**

**School:**

**Area:**

**Date of focus group:**

**Researcher's name:**

**File name:**

**Date summary completed:**

**Researcher first discusses informed consent with interviewees:**

Previously you consented to be a part of our evaluation and research about the CUSP professional development courses/workshops. You signed a consent form as part of that process. We talked about the purpose of the research and the type of data we would collect. This interview is part of that data. Since it has been some time since we first talked about the research, I want to again make sure you understand and are comfortable giving your consent to be in the study.

Remember that there are potential risks and benefits to participating in this research. For example, I may ask you a question in this interview that may make you feel uncomfortable about answering. Or you may have concern that your co-workers would be upset with something you said. While these are risks, this study is set up to minimize them. I definitely will not share your answers to my questions with anyone besides my fellow researchers. When we report findings, we will not use your name. And when I ask you questions, you can choose to not answer any questions that make you uncomfortable. There are no sure benefits from participation in the research study; however, you may find it helpful to talk with me and reflect about your work.

Participation in the research is voluntary and the information you provide for the research will be confidential. You can withdraw from the study at any time.

Let me make sure you understand the research again by asking you a couple of questions: “Do you understand the purpose of the study and the risks and benefits to you as participants and can you state them for me?” “Do you have any questions about the study and its process?” “Can you please tell me whether you think you are required to participate in this research or can you be in the Initiative and not participate in the research?”

If consent is reaffirmed, the researcher then asks the following questions. The interviewee is encouraged to elaborate on answers.

### Background Information

If teachers did not fill out a background survey during earlier sessions, ask them to take a moment and fill out this survey or ask the background information from the survey. The following issues need to be addressed in the survey or in this interview:

9. Background. Most recent teaching position, grades taught, what type of classroom, experience, endorsements, professional involvement, college background, recent professional development last year and over the last 3 years, ethnicity, age, gender.
10. How they became involved in CMSI.
11. OMS summer workshops: did they attend. What workshops they attended. Attendance record.
12. Professional community related to math/science. If they didn't fill out a survey, probe in the following questions about their interactions with others around math and science education.

### Questions about CMSI Implementation

23. What can you tell me to help me understand your school as part of the Chicago Math and Science Initiative? What has being a CMSI (Intensive or Readiness) school meant in terms of how your school is operating? What resources are involved:
  - a. Human (staff positions)
  - b. School Building Capital (space)
  - c. Time
  - d. School Budget
  - Probe: In what ways is this year different for your school than last year in terms of math and/or science education?
24. Tell me about your personal role in terms of math and science education and the CMSI.
  - a. What is your day-to-day role?
  - b. Tell me about your math and science classrooms?
  - c. How are you involved in meetings with teachers of math and science?
  - d. How are you involved with specialists, area coaches, your principal, OMS facilitators and staff?
  - Probe: In what ways is your role this year different than last year?
25. Tell me about the work of (your specialist if Intensive School) (the TAMS staff if Readiness School).
  - a. Relationship with specialist/TAMS
  - b. Description of role
  - c. Challenges of role
  - d. Description of work/relationships with teachers
26. FOR SCIENCE SCHOOLS ONLY: Talk about how you taught science prior to the CMSI? Did you use integration? What curricular resources did you use?
  - a. Do you feel the need to be teaching what/how others are?
  - b. How do you feel about this?
27. Tell me about your fellow teachers.
  - a. (Intensive) How were your first-wave teachers chosen?
  - b. (Intensive) What is the level of awareness/support from your faculty at large to school-wide implementation next year?
  - c. (Readiness) How will your school go about choosing first-wave teachers?

- d. (Readiness) What is the level of awareness/support from your faculty at large to eventual school-wide implementation?
  - e. (Readiness) How will you go about choosing your curriculum(a) materials for next year?
28. What successes has your school experienced this year in terms of math and science education?
29. What have been the challenges your school has faced in terms of math and science education this year?
30. How does being an Intensive (or Readiness) school fit into other school priorities (such as in other subject areas, general school organization, student development, budget, etc.)?
31. What questions do you currently have? What issues need to be further resolved in terms of your participation as a CMSI (Intensive or Readiness) school?
32. Share with me your assessment of whether and how any changes in your school's math and science education resulting from work in the CMSI are:
- a. broad
  - b. deep
  - c. lasting
33. You participated in some meetings with other teachers from CMSI intensive schools.
- a. Tell me about your interactions with the people at these meetings – the other teachers and the OMS staff. Did these meetings change your relationships with them? How?
  - b. At this time as you think about your current work, how has being in the meetings about the CMSI influenced your work? Give me a specific example(s) and tell me how the meetings influenced this.
34. IF READINESS SCHOOL: You have participated in some professional development activities with TAMS (The Teachers Academy of Math and Science) to prepare you to become an intensive support school next year.
- a. Describe these TAMS sessions.
  - b. What was positive/negative about the sessions?
35. Is your school participating in other OMS-sponsored programs such as university courses, museum partners, parent programs, etc.?
36. Is there anything else I should know about your school's CMSI implementation or your attendance at related meetings CMSI has held that would help me to understand your experiences with CMSI?

THANK YOU VERY MUCH FOR YOUR TIME!

**Attachment D: Professional Development and Meeting Observation Protocol**

Name of program: **School level PD/Meeting Observation Protocol**

Title the observation \_\_\_\_\_

Observer's name \_\_\_\_\_

Date, scheduled start time \_\_\_\_\_

Place of observation \_\_\_\_\_

***Collected and Attached***

- Agenda
- Name, title, contact information of facilitator(s)
- Lesson plan from facilitator
- Handouts
- Attendance

TIME	TOPIC/AGENDA	DESCRIPTION	TYPE GROUP

Title the observation \_\_\_\_\_

Date \_\_\_\_\_

TIME	TOPIC/AGENDA	DESCRIPTION	TYPE GROUP

Title the observation \_\_\_\_\_

Date \_\_\_\_\_

**Provide evidence as to the level the seminar fostered the following that day**

- 1) Time for reflection on practice --alone and together; written and verbal
  
- 2) Time for applying/using new ideas
  - a) During seminar
  - b) In co-teaching
  
- 3) Active participation through attendance, discussion, writing, activities
  
- 4) Discourse around challenging intellectual ideas
  - a) Ideas have relevance to participants' work
  - b) Participants movement from new ideas to constructing original solutions to problems
  - c) Participants communicate their understanding and engagement
  - d) Participants prior ideas/assumptions are challenged and reflected upon in light of new challenging ideas
  
- 5) Participants are engaged as sources of knowledge and experience
  
- 6) Participants receive constructive feedback on their work related to the Academy

Title the observation \_\_\_\_\_

Date \_\_\_\_\_

**Provide evidence as to the level the group of participants expressed that day**

- 1) A deeper understanding of the aspects of good instruction in mathematics and science
  
- 2) A stronger sense of belonging to a learning community with other participants
  
- 3) An emergent view of what good mathematics and science instruction in Chicago can be--fostered by the new CPS Mathematics and Science Initiative that they are planning
  
- 4) A more detailed understanding of the processes by which good instruction can be promoted in Chicago
  
- 5) A more clear sense of their personal role in promoting good instruction in Chicago
  
- 6) Enhanced ability to successfully carry out the new CPS Mathematics and Science Initiative

Attachment E: Specialist Shadowing Protocol

**SCHOOL-BASED SPECIALIST OBSERVATION &  
DEBRIEFING PROTOCOL**

**UIC CMSI Evaluation      Project Year 2, 2003 – 2004**

Name of Specialist: \_\_\_\_\_

Name of school: \_\_\_\_\_

Title of observation file \_\_\_\_\_

Observer's name \_\_\_\_\_

Date, scheduled start time \_\_\_\_\_

Place of observation \_\_\_\_\_

TIME	TOPIC/AGENDA	DESCRIPTION	LOCATION

Title of observation file \_\_\_\_\_

Date \_\_\_\_\_

**Debriefing questions: To be used with specialists after shadowing**

- 1) Has this been a typical day in your role? In what respects is it typical? What unusual events occurred today?
  
- 2) Talk about your role
  - i. Set schedule or “on the fly”?
  - ii. Clearly defined or ambiguous?
  - iii. Your understanding of your role versus those of other school actors (principal, teachers)?
  - iv. Your role in relation with OMS Facilitator, Area Coach
  - v. Concerns/questions about your role.
  
- 3) Talk to me about implementation of the CMSI in your school.
  - i. What is the depth in classrooms? Probe for examples.
  - ii. How many classrooms/teachers are participating? Describe the participation of your teachers.
  - iii. Significant changes in the implementation of CMSI since we last spoke in the fall? Examples.
  
- 4) Describe to me your relationships with those you work with and how they have developed since we talked in the fall:
  - i. Teachers
  - ii. Principal
  - iii. Area Coaches
  - iv. OMS Facilitators
  
- 5) What do you feel have been your successes in your role so far? What have been your biggest challenges in your role so far?

- 6) Is there anything else you would like to tell us about the implementation of the CMSI so far in your school?

Title of observation file \_\_\_\_\_

Date \_\_\_\_\_

**Researcher written reflections on specialist shadowing.**

7) What was most striking/notable to you in your observation/interview with the specialist today?

8) Describe any developments you observe in the following areas since the specialist was interviewed in the fall:

a) The role of the specialist

(i) Organization of his/her schedule

(ii) Priorities

(iii) Work style

b) Her/His relationships with

(i) Teachers

(ii) Principal

(iii) Area Coaches

(iv) OMS Facilitators

c) The implementation of the CMSI

(i) Breadth

(ii) Depth

(iii) Style