

Interim Evaluation Report: CMSI/CUSP Leadership Academy

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

August 29, 2003

By the
UIC CMSI Evaluation Project
University of Illinois at Chicago

Sara Ray Hallman
Carol R. Fendt
Stacy A. Wenzel

For further information,
contact Stacy Wenzel at swenzel@uic.edu.

Abstract

In this report, we focus on the Chicago Public Schools' Office of Math and Science (OMS) CMSI/CUSP Leadership Academy, an intensive professional development opportunity that marked the initiation of the Chicago Mathematics and Science Initiative (CMSI). This initiative was pursued as a part of the National Science Foundation funded Chicago Urban Systemic Program (CUSP). In particular we present descriptive and analytical findings from the three-month Academy, reflecting on the accomplishments and shortcomings of the professional development and tracing its influences into the ongoing work of the CMSI. Taking place between November 2002 and January 2003, the Leadership Academy engaged participants in an intensive professional development experience. This interim evaluation finds that the content of the Leadership Academy sessions was chosen with ambitious goals to expose participants to a range of standards-based curriculum in math and science, to build a sense of community and leadership and to provide time for concrete planning of the CMSI. Findings suggest that the Leadership Academy, to a great extent, modeled aspects of high quality professional development. Data analysis reveals the difficulty of the community building process. The co-teaching component of the Academy had a great influence on those who participated, but had mixed success in terms of achieving goals. Also considered is evidence of the influence of the Academy beyond the end of the workshops in January. In conclusion, we suggest that ongoing attention must be paid to community building, the creation of ongoing professional development processes, strategic planning and uses of critical feedback.

Introduction

Beginning September 2000, the Chicago Public Schools (CPS) district was awarded an \$11.8 million Urban Systemic Program grant with the proposed goal “to increase significantly K-12 student achievement in mathematics and science by noticeably improving the level of performance of the current science and mathematics teachers.” To meet this goal, four initiatives were devised: “(1) the K-4 Specialization in Mathematics and Science; (2) the Grades 5-8 Mathematics and Science Endorsement Program; (3) the Grades 9-12 High School Science and Mathematics Certification Courses; and (4) the Professional Development Networks” (NSF Award Abstract, 2003).

In response to a mid-point review by National Science Foundation (NSF) in the Spring of 2002 significant changes were made in the Chicago Urban Systemic Program (CUSP). Three new CUSP initiatives emerged: (1) sequences of university-based teacher professional development courses that could lead to either a K-5 specialization in mathematics and science or to a grades 6-8 mathematics and science endorsement; (2) a “leadership academy” to serve as professional development for the new staff of OMS; and (3) the planning and implementation of a new CPS Chicago Math and Science Initiative (CMSI).

At the same time, CPS changed its leadership structure for mathematics and science education. Prior to September 2002, the district 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 included the revised CUSP initiatives. 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.

In this report, we focus on one component of the initiative that has been pursued since September 2002: the Leadership Academy for CPS OMS staff. The Leadership Academy was designed as a key part of the revised CUSP initiative and a major strategy to address the CMSI objectives of developing workforce capacity and of building leadership that would set coherent policies.

Looking back on the Leadership Academy in the context of so many changes, one of the OMS leaders reflected: “So that was one of the challenges. To do something, to create, to help consolidate the department...all things math and science”

In the Leadership Academy, new OMS staff spent their first three months together being exposed to standards-based curriculum, in activities aimed at building a sense of community, and in the planning of the CMSI. Additionally, approximately half of the participants in the Leadership Academy spent mornings engaged in co-teaching with a CPS teacher experienced in using a standards-based mathematics curriculum.

This report provides a descriptive overview of the Leadership Academy experience, from the perspective of planners of the Academy, participants in it, and from researchers external to the process. Data that provides the basis for this report includes weekly observations of the Leadership Academy, written reflections by participants periodically throughout the three months, analysis of the calendar and agendas, and interviews with approximately 20 of the participants and planners.

Evaluation Methods

This descriptive and analytical report on the Leadership Academy is a portion of a larger documentation and evaluation project of the development and implementation of the CMSI as a whole. The larger external evaluation plan also includes documentation and analysis of university-based teacher professional development courses, the hiring and support of math and science area Coaches and school Specialists, and the implementation of standards-based curricula in selected elementary schools.

Data collected included participants' surveys and written reflections, researchers' observation field notes during Academy sessions, and interviews with Academy participants. Interviewed participants were asked questions about their experiences in the Academy. Those who were involved in planning the Academy were asked questions both about their perceptions of the Academy as well as their understanding of and participation in the planning process. Observations and written reflections were collected November 2002 through January 2003 during Academy sessions. Interviews of planners and participants took place in spring 2003. The following describes the amount and types of data collected and considered for this report.

Responses from

Number of
Leadership
Academy
Participants

15	"Background" surveys
22	"Providing Professional Development"—Written reflections November 4, 2002
31	"Hopes and Concerns"—Written reflections November 4, 2002
22	"On Math and Science Initiative"—Written reflections November 5, 2002
24	"Teachers Improving Classroom"—Written reflections November 6, 2002
22	"Reflections on the Leadership Academy"—Written reflections November 19, 2002
20	"Reflections on the Leadership Academy"—Written reflections November 26, 2002
21	"Reflections on the Leadership Academy"—Written reflections December 4, 2002
24	"Reflections on the Leadership Academy"—Written reflections January 17, 2003
13	"Last Day" - Written reflections January 31, 2003
18	Interviews

Observations field notes were collected from fourteen Leadership Academy sessions: November 4, 5, 6, 12, 19, 26, December 4, 17, January 6, 7, 17, 24, 28, 31.

Protocols used in this data collection are attached as Attachments A and B.

This report also relies, to a limited extent, on ten observations of the training of OMS Area Coaches and four observations of the training of OMS School-based Specialists which occurred in the summer of 2003.

The data collection and analysis for the study of the various components of this initiative clustered around a set of research questions developed by researchers from the evaluation team with the assistance of members of the staff of the Office of Math and Science. The study and evaluation of the Leadership Academy focused on five research questions:

- Describe the content covered during the Leadership Academy (L.A.) and how it contributed to the vision and implementation of the CMSI?
- Did L.A. sessions model a high quality professional development process?
- Did L.A. participants gain knowledge on standards-based curriculum, etc. that prepared them to improve instruction in Chicago through the CMSI?
- Did L.A. participants build a professional community that helped them to improve service to schools and instruction in Chicago through the CMSI?
- How were new OMS employees inducted into the department and work of the CMSI?

These research questions provide the foundation for the study and evaluation of the Leadership Academy, and this report is organized around them. This report begins with some basic descriptive facts about the Leadership Academy. The next section of the report is structured around the research questions. Each question is considered in turn, drawing on data from observations, interviews, and OMS/CMSI materials. Following the research questions is a description and analysis of the co-teaching component of the Leadership Academy. In the final section of the report, the descriptive material from the first two sections is summarized and considered analytically, drawing out the identified strengths and weaknesses of the Leadership Academy approach. This final section also takes a look at the Leadership Academy process in hindsight, pointing to long-term effects that can be seen in the ongoing work of OMS staff and considering lessons that can be useful for external audiences, such as other school districts considering the CMSI approach.

Findings: Basic Characteristics of the Leadership Academy

The hiring of the new Chief Officer of the CPS Office of Mathematics and Science, Martin (Marty) Gartzman in September 2002, marked the beginning of the Office of Math and Science. Gartzman began to build the Office staff, first drawing on the existing departments and actors involved in math and science work in the district. The OMS was built on a belief that this diverse group of actors, from a variety of approaches and programs, could be drawn together to create and embrace a new vision of math and science instruction in Chicago as the core members of a new department. One planner of the Academy talked about the process of bringing all of the math and science staff together:

In a way, it was somewhat fragmented. You had CUSP, which was in the Department of Math, Science, Health and Technology. In Curriculum and Instruction, there were math and science people doing what they were doing up there, whether it be restructuring curriculum or Science Fair, whatever... So in September 2002, everyone who was involved in any way at all with Math or Science became directly involved with OMS, the Office of Math and Science.

Because of the diversity of the work experiences and philosophies that these existing actors brought with them, Gartzman knew that intensive professional development was needed over an extended period of time to allow the staff to create the vision, rally around it, and learn to work together in a new way. Additionally, new staff would be hired as the department began to form and this professional development process would allow new staff to be integrated into the OMS. And, this intensive professional development process would mark the beginning of an ongoing training process for the staff.

Between September and November, the idea of a Leadership Academy was developed after a number of brainstorming sessions and research into professional development approaches and programs. At some of these sessions, new OMS staff members, CPS teachers, university professors, school district employees, and others came together to brainstorm what the Leadership Academy and CMSI might look like. One person involved in these early meetings described this gathering of stakeholders:

This meeting was held at UIC and Marty had a whole team of people. There were university people. There were teachers involved. There were some administrative people from schools... The focus was, "we're going to brainstorm with as many minds as we can so that... we've got in as many opinions as we can... The co-teaching--what did that mean? And how could that be possible?... It was... a time to bring people together to get a focus for where this was going because... it was going to be a big change from what was here before...

In addition to brainstorming sessions with a diverse set of actors, the design and planning of the Leadership Academy also came from research of outside programs. For example, OMS staff traveled to White Plains, New York to see first hand the models being used by the Educational Development Center.

In the end, the Leadership Academy engaged participants in an intensive professional development experience over a 3-month period (November 4, 2002 to January 31, 2003) for 56 meeting days with approximately 252 contact hours (about 4.5 hours a day). Approximately 30 participants regularly attended these afternoon workshops. Additionally, approximately 50% of these participants also engaged in co-

teaching with a CPS teacher who was using a standards-based math curriculum. This occurred from November 18th until January 30th. For these participants, this was approximately an additional 125 contact hours (about 3.5 hours per day).

In addition to those staff moved or newly hired into the Office of Math and Science, those planning the Leadership Academy intended to have participation from two other groups: the teachers who were engaged in co-teaching with OMS staff and the pre-existing High School Area Math and Science Coaches. The majority of interviewed planners saw the involvement of these participants external to the OMS staff as being only somewhat successful. One Leadership Academy planner talked about wanting to involve the teachers who were doing co-teaching with OMS staff as a way to make the relationship more of a two-way street where co-teachers could participate together in “all of these great leadership activities”. One OMS staff member involved in the planning of the Academy explained how the attendance of the High School Math and Science Coaches was much less regular than they had hoped. In addition, this planner stated: “I still don’t think they actually still felt inclusive. They’re still on the fringes”.

According to survey data, most Academy participants had many years of experience as elementary teachers. Half of those completing surveys had 15 or more years of elementary teaching. All Academy participants had at least a Masters degree. The typical educational background of Academy participants was Masters +45 (9 of 15 surveyed).

The average number of participants at the observed sessions ranged between 25 to 30 people. A core group of OMS staff members participated in nearly every session. Attendance of the OMS staff planning the Academy was more varied. They came to some sessions but were absent for others. Attendance was not tracked for the sessions. According to a July 24, 2003 OMS organizational chart, there were 32 filled positions outside of the administrative support staff. A number of these 32 were hired after the end of the January Academy sessions.

Based on several in-depth October 2003 discussions of the Leadership Academy plans with Marty Gartzman, the evaluation project distilled the following goals as central. These were later checked with Gartzman and OMS staff and used to frame the external evaluation data collection protocols and analysis.

Leadership Academy Goals

- *To build the capacity of key CPS math and science leaders to have*
 - *A deeper understanding of the aspects of good instruction in mathematics and science*
 - *A stronger sense of belonging to a learning community with other Leadership Academy participants*
 - *An emergent view of what good mathematics and science instruction in Chicago can be*
 - *A more detailed understanding of the processes by which good instruction can be promoted in Chicago*
 - *A clearer sense of their personal role in promoting good instruction in Chicago*
 - *An enhanced ability to successfully carry out the new CPS Mathematics and Science Initiative*
- *To model excellent professional development where*
 - *Participants reflect on their practice*
 - *Participants apply new ideas*
 - *Participants are actively involved*
 - *Participants discuss challenging intellectual ideas*
 - *Participants are engaged as sources of expertise*
 - *Participants receive feedback*
- *To model strong evaluation and formative feedback.*

The stated goals in interviews with participants showed that a number of the above goals were widely understood by everyone involved in the process. In addition, these goals were consistent across a range of participants and throughout the time period of the Academy. When asked about the goals of the Leadership

Academy, respondents primarily talked about four areas: building leadership, exposure to standards-based math and science materials, building an understanding of good teaching, and building community.

On building leadership, one planner spoke of “grooming the people that are here...to bring up their level of...esteem, to say you are a leader in Chicago”. In terms of the goal of exposing staff to standards-based curriculum, another planner stated that it was a goal for Academy participants to “see the value of these research programs, especially in terms of how enriched the materials are in developing mathematical concepts and how this could improve teachers’ content knowledge...” In terms of developing a shared understanding of quality teaching, one planner talked about the “idea of developing a common vision for teaching math and science”. On building community another planner explained “I think the idea was we felt that the department was just forming and people had different views on how they felt math and science should go. And one of the goals was to try to form more of a cohesive kind of family feeling, simply because people came from different departments, that was one reason.”

One respondent summed up these central goals very succinctly: “Build community; build this idea of leadership. Make sure that people knew what good materials looked and felt like and the vision of math and science teaching in the same way.”

Findings: Addressing Research Questions

Research Question #1: Describe the content covered during the Leadership Academy and how it contributed to the vision and implementation of CMSI?

An analysis of the agenda calendar created by the Office of Math and Science provides an overview of the manner in which time was spent in the Leadership Academy afternoon professional development sessions. The Leadership Academy experience included time spent on the following:

48% (27 days)	Presentation and discussion of standards-based curriculum
25% (14 days)	Community, the CPS context and leadership
18% (10 days)	Planning of the Math Science Initiative
5% (3 days)	Discussion of co-teaching experience
4% (2 days)	No agenda

Standards-based curriculum. As can be seen from the inventory above, a little less than half of the time in the afternoon professional development sessions was spent in presentation and discussions about standards-based curriculum. In these sessions, curriculum vendors, Specialists and experts gave presentations, engaged participants in discussions, or provided opportunities for participants to utilize new skills or materials. In approximately 25-30% of observed presentations, curriculum vendors gave a relatively “canned” presentation, providing an overview of materials and engaging participants around them in a limited and formal manner. In 70-75% of observed curriculum presentations, presentations were more interactive and incorporated information or discussions about the Chicago context.

Of these days devoted to the presentation of curricula, a little more than half were devoted to the consideration of standards-based math programs and approximately thirty-seven percent was devoted to science. In total, about a dozen standards-based mathematics and science curricula were presented at the Leadership Academy. Fewer science programs were presented. According to OMS leadership, this was due to time constraints caused by a longer amount of time needed to set up materials for the science lab sessions, and to a greater focus by Academy planners on mathematics.

Comments from participants and observations of the evaluators reflect openness to new learning, concern about time allotment, and general praise of the sessions. In general, comments about curricula presentations were very positive. For some, standards-based approaches were completely new. One participant noted “I had never used any of the curricula so it was all new to me. I am a textbook person. I’m changing! So when you don’t have any base to go from, everything is new. It was great!”

Nearly universally, participants reported that they gained a tremendous amount of knowledge from being exposed to the standards-based curricula. Participants reported that as Specialists in math, they were happy to spend time engaging in science activities while Specialists in science were thankful for exposure to math. One science Specialist described this new learning as “opening my eyes to how much fun math could be for the students.” Half of the interviewed participants reported that they wished there had been more emphasis on science, and this comment appeared in written reflections as well. One participant succinctly stated, “There seemed to be a heavy emphasis on math. I would have liked to have more science” while another participant developed this more fully.

So it was a very good experience, learning about the curriculum...But we didn't have quite enough of the science I felt...I am hoping that at some point we have to learn about the science aspect, the different science curriculum. Because I think a lot of the math people are really not aware of what the science is like.

All of those interviewed who were not planners of the Leadership Academy stated that they were uncertain as to how the decisions were made about the length of time devoted to each curriculum. “One would be two weeks and then another one would be given two days... If it's going to be three days, let's have three days for everybody, you know.” Similarly, another participant wondered how the specific curriculum had been chosen, suggesting that if the focus was on NSF supported curriculum, that the Leadership Academy should have included exposure to all of these curricula in equal time allotments:

If you're going to do NSF funded curricula then we should have them all in. We had...Math in Context, fantastic! I loved it! But he only had an hour! That's an NSF program so why didn't he get three afternoons? It seemed as though some programs were pre-recommended before we even had a chance to look through them...I know you can't have everybody because we have to limit, but maybe there is another good one that we didn't get to see...So if you are going to do the curricula, you need to do all of them, and equally.

There were also comments, in hindsight, about the scheduling of the presentations. In retrospect, a planner of the Leadership Academy suggested:

There should have been breaks in between the days for the groups to properly collaborate and talk about what they had experienced with each of the [curricula] In other words if we had an Everyday Math program for three days and on the fourth day there would have been some...time...with structured activities to drive reflection of a Specialist about what did you gain? Do you want to pursue this more? What else about this program do you need to study to find more information about? And what doubts do you have about it? I would like to have had more time for that. Instead we just scheduled programs day after day, week after week.

Another planner noted that even though the three-month time period was extremely generous, it gave time for only an overview of the presented curriculum and “it would be really great to be able to observe...the lessons over a longer period of time.”

Evaluation team observations of the curricula presentations reveal a variation in the extent to which these sessions were tailored to the Chicago context. Likewise, these presentations varied in how well they incorporated opportunities for participants to reflect on the particular curricula within the context of possible CPS implementation and to engage in discussion about the new ideas presented. The evaluation team was not alone in observing these variations. The majority of interviewed participants perceived this and suggested that presenters could have been more prepared to tailor their presentations to CPS and OMS needs. The same participants noted that the sessions that were led by teachers were more useful to them than those directed primarily by vendors:

When the teachers came in to share what they were doing in teaching the curriculum was much more valuable for me than to have the general salesperson come in because it added a layer of understanding... For example, [a teacher presenter] came in...and she talked about things such as classroom management...And we saw a video and she talked about what she thought the students

were thinking. And that's totally different...from going to a workshop and getting a worksheet that teachers give to the kids...And for me it was not as rich...as when teachers talked about the things that they saw going on in the classroom. The specifics of the activities...really doesn't matter, you know? What matters is, what is that teacher thinking about her kids and what they're doing, what they're learning. Totally different way of thinking.

Researcher observations indicate that presentations that took place later in the Academy appeared to better allow for richer contextual discussion. It is difficult to determine whether this was because of a more specified description of need on the part of OMS staff to vendors, or whether participants were simply more empowered to ask questions regardless of vendor intentions.

Community, the CPS context and leadership. Approximately one-quarter of the afternoon professional development sessions were devoted to team building for the OMS staff, exploration of the CPS context, and leadership training.

These sessions varied. For example, in an early session, professional development experts guided Leadership Academy participants through small group activities that engaged them in conversation and reflection on their notions of positive professional development and the characteristics of good teachers. At other sessions, members of the OMS staff provided workshops on diversity and equity issues. In addition, The Office of Professional Development worked with the OMS staff to develop a shared understanding of what a high performing team is and how it can be developed in the Office of Math and Science.

Participants had very strong responses to these sessions, both positive and negative. For example, after one of the presentations and discussions on diversity, eight participants wrote positive evaluations. One participant wrote: “[I found most positive] the discussion on the exclusion of minority children and the lack of cultural relevance in CPS” (Leadership Academy, Written Reflections, 11/26/02). Yet, four other participants pointed to this same discussion as the least useful/most negative. One participant wrote “I am concerned about focusing too much on equity issues and losing the big picture in terms of student learning and curriculum. I feel very concerned and dedicated to this—being a minority myself—but I don't want this to overshadow our focus on the real problems with CPS which span race and economics” (Leadership Academy, Written Reflections, 11/26/02).

Similarly, written reflections on community building reveal some very positive and very negative responses. On the positive side, about half of the participants talked about the value of “getting to know my new colleagues and learning to work together as a team.” On the negative side, about twenty-five percent of those participating in the reflections expressed a lack of understanding of the need for community building. One participant stated: “I have known and worked with these people forever. Why do we need team building?” (Leadership Academy, Written Reflections, 12/4/02)

Nearly without exception, the leadership development training elicited strong positive comments, both in written reflections and in interviews. Specifically, the sessions conducted by Chief Officer Al Bertani and other Office of Teacher Professional Development staff were seen as extremely positive and beneficial.

[I]n leadership I have learned a lot. Because we are taking these workshops with Al Bertani. And he is a master staff developer and...it is not only the content, but how he does it. It is just a great opportunity to observe him, and he gave us leadership training. And we will continue with the Coaches also. That is very, very valuable to me.

Another staff member talked about how these leadership development sessions changed the way she approached her work as a professional developer:

Yesterday we had a...meeting [with a group of] teachers. And...there was one teacher who appeared to have constant, consistent negativity but I learned...how to use that to have them think about it. For example, she said that she didn't see why we chose [to teach certain concepts at certain grade levels], when her kids need just the opposite. And I was allowed to ask her, well how do we know that? And rethink that as opposed to what I would have done before...I would

have...had a different reaction. [I would have thought] “Ok, I just want her to shut up”. But I didn’t want her to shut up. I wanted her to continue the dialogue because I saw what has been before. Before the Leadership Academy, I don’t think I would have thought that way.

Planning the Math Science Initiative. Roughly eighteen percent of the Leadership Academy was spent planning the Chicago Math Science Initiative, the CMSI. Early planning sessions, in November, were spent bringing together all the various components that had to be considered in the development of the initiative. In a planning session on November 26th, 2002, for example, the Chief Officer of the Office of Math and Science, Marty Gartzman, led the OMS staff through an outline of some of the components of the Initiative, such as timetables, organizational context, the need for alignment with standards, the role of instructional materials, and the need for professional development. In workgroups, the staff filled in some ideas of how each of these components might look, questions they had about the work involved and potential concerns or problems with the work around the strand. Later planning sessions were focused more specifically on the implementation plan itself. On January 28th, 2003, for example, the planning session consisted of brainstorming on the process of the selection of the first set of schools that would implement standards-based curriculum (known as “intensive support schools”), the development of a timeline around the various strands of work and creating work groups and roles to get the work accomplished.

The majority of the interviewed planners and participants of the Leadership Academy stated that more time should have been spent on the planning of the Initiative itself. One planner stated:

I would have put more time in planning the things. It was almost as though we’re going to take this time, three months to really give everyone leadership...new kinds of knowledge and everything. By the time we finished we had not put in enough time prior to be able to develop and push math/science...Now it seems as though everything’s hurry up and get done because [the implementation of CMSI] is coming.

Similarly, a participant commented:

I thought maybe we should have spent more time on, at least one day a week, we should have been planning. I thought this planning was kept too much to the end. We could have been doing bits and pieces of it all along and changing it as we knew more, as we learned more. So that’s the only thing, I think when it came time to really get out there I think we felt we should have been doing this all along.

Observations of planning sessions revealed participants who were highly engaged in discussion and working hard to think through the creation and implementation of the CMSI. Planning sessions were complicated, however, by two factors discussed in other sections of this report. In the first place, participant interviews reveal some question about how much input they really had in the development of the Initiative. Approximately half of participants interviewed wondered aloud how much of the approach was already decided before they got on board. Three planners, too, reflected on the difficulty of providing enough guidance on the vision to keep the process moving while still allowing for the inclusion of ideas from other staff. This is discussed to a greater extent in Research Question # 4 on the building of community. In the second place, there was some confusion and anxiety about what roles staff members would assume under the new initiative that affected discussions on planning the CMSI. This is explored more fully in Research Question #2 below, and in the final analysis section.

Research Question #2: Did Leadership Academy sessions model a high quality professional development process?

A key goal of the Leadership Academy was to model a high quality professional development process. Research suggests that high quality professional development encourages reflection on practice, provides the opportunity to apply new ideas, actively involves participants, promotes discussion of challenging intellectual ideas, engages participants as sources of expertise, and presents participants with feedback on their practice (Smylie et al, 2001). This understanding of high quality professional development is built into the data collection for this project. The observation protocol aimed to tap the extent to which the sessions

exhibited evidence of high quality professional development. In addition, at several time points during the Academy we asked participants to analyze the strengths and weaknesses of the sessions. We also encouraged participant reflections on the sessions in individual interviews. In this section, we examine our defined characteristics of high quality professional development and analyze relevant data from observations, participant written reflections and interviews to get a sense of the extent to which these traits were evident.

Reflection on practice. Scholars have stressed the importance of making time for reflection for school leaders and professionals and the shortage of reflective dialogue among public school actors (Sebring et al, 1995; Cohen and Hill, 2001). In 10 of 14 observed sessions, we saw participants engaged in reflective writing and discussion: individually, in pairs, and in small groups. Participants wrote about and discussed their understanding of "good teaching," their vision of quality math and science instruction in Chicago, their learning from co-teaching experiences, their beliefs about equity and diversity, and their perceptions of the future of their work as the OMS.

The inclusion of activities that promoted reflection on practice was built into the Leadership Academy from different sources. Presenters of curriculum incorporated reflection on applications of the curricula into their workshops. Representatives from the CPS Office of Professional Development led participants through reflection about their role and practice. Evaluation team members provided written reflection activities on the Leadership Academy experience. The extent to which observations and participant interviews reveal that reflection was deep and meaningful varied. Observations of Office of Professional Development sessions show large proportions of time (generally 70% or more) spent in reflection. Curriculum presentations varied from 0% to as much as 50% of observed time spent in reflection. The 10 observed sessions where there was time for reflection had sustained activities geared toward reflection. In the other 4 observed sessions, there was virtually no time for reflection.

In terms of the timeliness and usefulness of reflection, there is evidence of two critical weaknesses. In the case of the co-teaching experience, earlier or ongoing dialogue about the purpose and goals of the activity may have resulted in an increase in its effectiveness as a professional development experience. This is further described in the description of co-teaching, below. Secondly, interviews reveal that most participants and planners do not recall feedback from the external evaluation team or in general. Sixty percent of those interviewed stated that they either did not recall evaluator presentations or that the presentations were not directly beneficial to their work. This is discussed further in the final analysis section of this report.

Application of new ideas. Scholars also suggest that professional development is most effective when it is instructionally focused, site-specific, and when participants have time and space to apply new ideas in a safe setting (Cohen, Raudenbush and Ball, 2000). In 8 of the 14 observed sessions, participants engaged in student activities during presentations of math and science curricula. In addition, participants involved in co-teaching took some of these new methods and used them in their co-teaching classrooms. In this way, participants were able to consider math and science teaching from the perspective of the student and then apply them as teachers in actual CPS classroom settings. Through the process of designing the Math Science Initiative for Chicago Public Schools, participants synthesized and applied what they were learning in the Leadership Academy. This synthesis and application of learning involved exploring standards-based curricula, reflecting on experiences teaching in Chicago classrooms, brainstorming of new ideas, and increasing their understanding of the leadership and talents within their group.

The application of new ideas was both impressive and uneven. Four co-teachers in the interview sample talked about using skills and ideas gained in Leadership Academy workshops in the classroom. These co-teachers talked about the immense benefit of the interaction between learning in the classroom and in the workshop setting, one stating that she "explored the content of the presentations in the classroom." She noted that this interaction between the theoretical and applied learning of the morning and afternoon sessions of the Leadership Academy "changed many, many mindsets about teaching and learning that I have held for a long, long time." At the same time, some co-teachers did not teach, but rather observed and were not able to have the same level of application of new ideas. Similarly, some curricula presenters gave time and space for the application of new ideas in the workshop setting leading to deep reflection on

student activities and implementation in Chicago. Other presenters, however, did not, making this opportunity to apply new ideas uneven as well.

Active involvement. Research on effective professional development approaches stress the need for active engagement in hands-on activities and the presentation of topics relevant to the immediate concerns in the classroom. (Lieberman, 1995). In 8 of 14 observed sessions, presentations by math and science program vendors engaged participants in student activities and experiments. In this respect, the participants were able to consider the math and science programs from the students' perspective as they actively participated in lessons. The vast majority (portions of 12 of 14 observed sessions) of Leadership Academy activities involved active discussion and hands-on activities that kept participants actively moving, thinking and participating. Presenters actively involved the participants; the participants willingly engaged.

As in the case of reflection on practice, observed sessions tended to either have large proportions of time spent in active involvement (the 8 sessions in which this trait is evident averaged 50% of time spent in active application of new ideas) or effectively no time spent on the application of new ideas (the remaining 6 observed sessions had no time spent on active involvement). Nearly half of those interviewed made reference to the difference between sessions in which they were actively involved and those that led to more passive participation. Observations and interviews reveal some unevenness of the scope of planned levels of involvement of participants in sessions.

Discussion of challenging intellectual ideas. The building of a professional learning community is understood by scholars to be an important aspect of building the capacity for sustained learning in a school. (Newmann et al, 1996; Elmore & Burney, 1997) Central to this professional community is the critical evaluation of personal assumptions about teaching and learning (Sebring et al, 1995). In 10 of 14 observed sessions, participants actively debated ideas. An air of healthy disagreement and an openness to productively working through differences of opinion breathed within the walls of the Academy.

Spirited discussion centered around the positives and negatives of implementing standards-based math and science curricula in the context of Chicago Public Schools, the difficulties of negotiating the co-teaching experience, the complexities inherent in implementation of CMSI, the best approach to reform math and science instruction in Chicago, and the appropriate role of the Office of Math and Science staff in this endeavor. These discussions were marked by an honest search for solutions and openness to understanding differences of opinion.

The nature and extent of discussion of challenging intellectual ideas was influenced by the context of the sessions and the style of presentation. Five participants talked about the varying level of openness of presenters to participant challenges and concerns. One participant stated the following:

Some of the presentations were on and on and on and on...the questions asked were being taken personal in some cases. So I said, I'm trying to learn this, explain it to me better. A lot of them...were not prepared for that. They knew their material...[but] they had not had any experience... That's my only concern with this... Maybe to provide some kind of pre-training for whoever is going to present.

Evaluator observations of Academy sessions concurred with the assessment that presenters were uneven in their openness to discussions that asked critical questions.

Sources of expertise. High quality professional development supports growth and development while still drawing on the strengths of the participants (Lieberman, 1995). In 12 of 14 observed sessions, participants were engaged as sources of expertise. In these sessions, participants were asked to give their insights on the challenges and benefits of curriculum activities to students and teachers. At other times, they were asked to evaluate the co-teaching experience in terms of the benefits versus the cost in time. This was accomplished through brainstorming activities, writing, discussion and small group work. Their insights were used to evaluate the Leadership Academy, evaluate curricula, and to create the vision for the CMSI as it moved forward.

The extent to which participants in the Leadership Academy felt like their expertise was being utilized in the sessions varied. Three participants stated that they had the chance to share and celebrate their competencies and expertise in Academy sessions. One participant stated that she felt that her expertise was not totally understood by the rest of her colleagues in the Academy. Another participant noted that because roles were uncertain during the Academy, it was difficult to know what expertise might be relevant to bring to discussions. The majority of planners interviewed commented that the Academy should have relied more upon and recognized more explicitly the talents and expertise of staff members in workshop sessions.

Feedback on practice. Another aspect of professional community is a commitment to the critical consideration of practice. Professionals collaborate to consider their work and role, providing feedback to one another on how to improve practice (Sebring et al, 1995). In 6 of 14 observed sessions, participants received summaries of their evaluations of Leadership Academy organization from the evaluation team. In five sessions, participants were given constructive feedback on their work as co-teachers or on their role in and ideas about CMSI planning.

There is evidence that the planners of the Leadership Academy exhibited learning in this element of professional development during the course of the Academy. Participant written and verbal reflections revealed high levels of anxiety about the uncertainty of their roles in the CMSI. In interviews, OMS Leadership Team members talked about developing an understanding that this role ambiguity was negative for participants. Moving into their work post-Leadership Academy, they aimed to relieve stress of staff members about this role ambiguity by talking with them about the role they wanted to play. At the end of the Leadership Academy, as the OMS transitioned into the implementation phase of the CMSI, Leadership Team members Marty Gartzman (Chief Officer), Michael Lach (Science Manager), Regeta Slaughter (Director of Mathematics) and Chandra James (Science Manager) met with OMS staff to talk with each individually about what role they would play in the Initiative. Additionally, they applied what they had learned about the difficulty of not knowing one's role to the hiring and training process of the Coaches and Specialists. This is described in the final section of this report.

Two additional indicators of high quality professional development

In addition to the six aspects of high quality professional development that framed our data collection, two other related themes emerged from our data. First, participants valued open dialogue with district and national leaders. In some respects, this is related to engaging participants as sources of expertise in that having the opportunity to participate in discussion with important leaders recognizes and respects participants as professionals and values their work as essential to the system. Additionally, it is linked to the goal of engaging participants around challenging intellectual ideas, as observations and interviews reflect divergent opinions of experts on important issues in math and science.

Secondly, participants incorporated lessons learned about how to conduct professional development sessions from observing presenters in Leadership Academy sessions. This second theme is related to two of the identified aspects of high quality professional development, reflection on practice and application of new ideas. These two emergent themes, touching on a subset of the six indicators used to design the data collection, were identified as important to a large percent of the Leadership Academy participants. What follows is a brief description of these two themes.

Dialogue with district and national leaders. Leadership Academy participant interviews revealed a universal appreciation for the opportunity to meet with important Chicago Public Schools leaders like CEO Arne Duncan and Chief Education Officer Barbara Eason-Watkins. These interactions, as well as a commitment of resources, made OMS staff feel that their undertaking was important to the system. One planner reflected that participants suddenly began to see "themselves as part of a bigger piece" and that they began "to believe that they were really at the center of something". Participants were encouraged and energized "...when all these people came to say 'You guys are important to the whole CPS school system.'" A participant was impressed that such important and busy leaders would take time out of their schedules to meet with the Academy.

Similarly, Leadership Academy participants were thankful for the opportunity to listen to and engage in

dialogue with, respected scholars in math and science. One participant put this best when he said the following:

To be able to be in an intimate setting with the professors, renowned people like that. That was great. It was like, gee, you're paid to come in and sit in a session with them. And the humor and the candidness with the way they talked about math [especially] given the many publications they've done. Certainly down-to-earth people. Not arrogant, not talking from an Ivory Tower type of mentality...I told people, 'This is just amazing.' I couldn't wish for anything better. 51 days of this and I never got tired; it never got boring. Never. One day was better than the next. I'll treasure it, really. It was a great, great experience. I don't really have too many criticisms...

Another participant talked about the value of hearing respected scholars disagree about certain issues in the field:

I thought it was fabulous that really important thinkers were brought in...They are all passionate, and all very sure of their thinking. But it was wonderful, then, to hear them having divergent views about certain things. So...we got a chance to look at the issues from different sides and different perspectives...And usually we go to conferences; we go to other places...To be able to have them just come here in this...just meet here and have everybody come and give us their best thoughts, not hold back. And be very free with everything that they've learned.

Modeling of quality professional development in the presentations. Perhaps the best indication that a model of high quality professional development was used in the Leadership Academy comes from the fact that participants talked about learning about professional development in general from taking part in the sessions. Participants noted that in being exposed to presenters who were modeling high quality professional development, they learned techniques of their own. When asked about her learning in the Leadership Academy, one participant noted that she learned the most not from the material of one of the presentations, but from the manner in which it was presented. Similarly, another participant stated that the Leadership Academy confirmed presentation styles he had used in the past and provided new techniques to make professional development and presentations even stronger.

I was always big on using Power Point and...interactive presentations. Always had activity based on...hands-on stuff. I refuse to let myself go out and stand and preach to people. And the Academy has kind of encouraged that same type of a style. So [I learned] new tricks in grouping methods. New interactive things to work with people and get them involved."

Research Question #3: Did Leadership Academy participants gain knowledge on standards-based curricula, etc. that prepared them to improve instruction in Chicago through the CMSI?

A key goal of the Leadership Academy was to expose the new Office of Math and Science staff to standards-based curriculum. As noted in the general description of Academy content above, nearly half of the workshop time was devoted to learning about standards-based curriculum. The mixed quality of these presentations in terms of the devotion of presenters to high quality professional development techniques, their focus on the Chicago context, and their openness to interaction with participants were noted earlier in this report. Here the focus is on knowledge and perspectives gained and how these helped shape the CMSI.

We find evidence as to how participants gained the following types of knowledge and feelings: (a) the philosophy behind and commonalities among standard-based curricula, (b) the differences among these curricula and sense of which ones would best fit the needs of CPS, (c) increased willingness to use standards-based curriculum in Chicago, and (d) a better understanding how to implement the new curriculum.

Written reflections and interviews revealed that participants benefited from general exposure to what "standards-based" really means. Six participants (approximately one-third) made statements in interviews about gaining knowledge about standards-based curriculum. In written reflections collected in November, one participant wrote:

For a long time, I have heard the words “standards-based” and never really knew what it meant. Now I am starting to understand what this is all about. It is still developing and vague, but clearer than three weeks ago when we started. (Leadership Academy, Written Reflections, 11/19/02)

Another challenging task was understanding the differences among curricula and deciding which might be best for CPS students and teachers. During Leadership Academy sessions participants learned about specific curriculum but then pushed the discussion toward their consideration of the comparative merits of different curriculum in the CPS context. In 6 of the 14 observed sessions, participants raised these issues. In a November session one participant started a discussion like this by stating:

I am starting to understand what standards-based math is all about, but I cannot tell what is different between the different curriculums. They seem a lot the same. We have looked at this more than any principal or teacher will, and I can't say I feel confident choosing between them. How do we know what to choose?

The curriculum presenter for that session focused the issue on choosing based on the context in Chicago.

The philosophy behind all of these is the same. They are all problem-based. You need to ask, “What is best for *our* kids? What is best for *our* schools?” The basic problem-based philosophy is the same in Everyday Math, Trailblazers, etc.

In another session in November, participants discussed the positives and negatives of introducing standards-based curriculum into the Chicago context. In this conversation, one participant raised the issue that some people think that standards-based curriculum are suitable for other kids but not for students in Chicago:

Let's confront this argument head on. This kind of teaching, this kind of program, [many people think it] may be good for gifted kids or suburb[an] kids but isn't good for kids in the city who need structure. This is the view of a fair number of people in our district. A lot of people think this. Do we think our children are not capable of this level of inquiry?

Another person responded that she was not suggesting that Chicago children could not benefit from standards-based curriculum, but that teachers would need support and skills in understanding and identifying student needs to make it effective:

I don't think that our children are not capable. I think it comes from the teachers, and their ability to pay attention to the way their kids learn; they have different learning styles. Our kids can do just as well as any other children.

Another participant responded that the diverse learning styles were actually an argument for using standards-based approaches:

I think that is an argument for standards-based math. It is student-based, and everyone's way of solving a problem is considered. Using this type of curriculum may be a way of addressing the bigger issue of different cultures and learning styles.

A participant responded that despite the fact that standards-based approaches were designed to be effective in settings like Chicago, it *was* important to consider teachers' skills and the support they would need to implement standards-based curricula:

But we need to look at the math people we have. Whatever it is we are doing, we need to make sure there is enough support for teachers and students to experience success with this. I think about myself. Would I be willing to try something new? And I have been at this a lot of years. We need to address what's here in our district now. I want to be able to do that for all kids, no matter what teacher [stands in front of the room]. (Leadership Academy Observation, 11/19/02)

There is evidence in about half of the participant interviews that increased knowledge of the curricula influenced their belief in and willingness to support the implementation of the standards-based curriculum. One person explained, “I think there’s a greater willingness to see those [standards-based curricula] used, and to use them, and to be—to support people in using them. That, they did get convinced of over time.”

However, though the majority of those interviewed stated they believed in the standards-based approach, according to planners of the Academy, there remained a group who continued to show resistance to it. This resistance was especially troublesome to some of the OMS staff as they considered how their vision for standards-based reform could be pushed forward if not all staff was pushing in the same direction.

I didn’t realize that we would have strong resisters within the department... We’re moving towards high quality mathematics instruction as well as science, and they didn’t buy into it. It’s like, “It’s not what I agreed to do.” That was very surprising... I felt that if you were citywide leaders, and you want to really put high quality out there, you would consider this at least and not be stuck in your own mindset as a citywide leader. That was very startling to me—to find out if we can’t move the leaders from the top then how are we going to affect the people at the local levels to change? And that still bothers me to this day. With some of our own colleagues, how will the conversation and the support go if they are not there yet with these programs?

Finally, we found that the process of implementing these curricula was discussed deeply during the Academy and participants found some useful information about how to shape the implementation in Chicago. Leadership Academy participants tended to be especially thankful for the opportunity to hear about the implementation of standards-based curriculum in real schools. Knowing that actual school systems were working with these curricula and willing to openly share their stories of success and failure seemed to help make these curricula more palatable. One planner described learning about what’s working in Pittsburgh with Everyday Math and Math Assessment and also hearing about how the research-based materials being used in Texas were producing mixed results for schools.

The Academy gave participants a chance to raise the issues that they needed to anticipate would arise when these curricula were implemented in Chicago. For example in one session, a participant called for the group to consider:

How can we implement this into upper grades without having used it in the lower grades? How can children learn this new way of thinking if it is implemented [only in some grade levels or in some schools]? [This means] some kids are not getting it from ground up?

Research Question #4: Did Leadership Academy participants build a professional community that helped them to improve service to schools and instruction in Chicago through the CMSI?

Data collected by the evaluation team points to the challenge of building community and the extent to which it is an ongoing process that simply takes time. Participants and planners alike commented that the community building that took place during the Academy was its greatest accomplishment; at the same time, it is clear that this is a work in progress. Building relationships, adjusting to others’ working styles, and learning new roles is, arguably, the most difficult aspect of what the OMS staff and planners had to do and this is an ongoing challenge as the CMSI unfolds.

The planners of the Leadership Academy clearly understood the challenges of building a community. One planner explained the need to overcome the distance that separated the participants from each other and the need to build a sense of leadership in the OMS:

We were looking at a whole bunch of different people from a whole bunch of different offices [who weren’t] communicating and who didn’t see themselves as math and science leaders for the third largest school district in the country... There wasn’t a community, and in addition to building a community, we had to build new roles as part of that.

Most of those interviewed, whether participant or planner, talked about divisions in the staff that had shifted over time but still existed. The ongoing hiring of new staff, the defining of roles, spatial separations, and the gradual growth process of OMS fueled the divisions. For example, one planner realized “that there were some divisions within OMS, the old guard and the new guard... And...I knew also that people felt unsure about where they were headed with OMS because of the whole nature of the jobs changing. So I felt it was...a kind of political mine-field or...certainly a human resource director/personnel manager’s challenge.” Another planner described how the ambiguity and uncertainty of roles and the perception of an in-group and out-group continued to cause divisions in the group even after the Academy had successfully begun to tear the walls down.

Trying to build those networks...within our own staff is challenging. Any organization’s communications is always such a thing. I think we’ve gone through this period where...there was before this division within our group, of people who were upstairs or downstairs...I think the Academy went a long way to breaking down those divisions, but I think we’re struggling now that there’s a perception...that now there’s this division between people who are sort of in/out...And we don’t, obviously,...want that to happen, and we’re trying to make the process completely transparent. I think the challenge...is that there are people who are in different roles, and...there are still some people whose roles aren’t clearly defined yet. We need to work at that. And there are some people who are more comfortable working in ambiguity. And there are people who really want things very tight. And that’s personality. And I understand that. But, so, trying to breakdown those processes as well as those divisions, whether real or apparent, doesn’t really matter because there’s a perception of them...so that’s an ongoing challenge.

Part of this challenge of building community stemmed from a difficult balance that planners had to strike between providing leadership and momentum for the Academy and the Initiative while still leaving room for input from the OMS staff. Despite these challenges, it was evident that the community building aspect of the Leadership Academy was one of its big successes. The building of an organization is extremely difficult work that requires ongoing commitment and attention. The Leadership Academy was the first step in that process. According to one planner, a lack of belonging together as a department, a fear of the unknown, and a lack of clarity about one’s stake in things prevailed prior to the Academy. Afterwards, this planner stated, participants began to understand. Additionally, the Leadership Academy gave OMS staff the amazing experience of learning deeply about one another’s personal history and working styles prior to beginning together the Chicago Math and Science Initiative. Eighty percent of interviewed respondents reported positive improvements in the level of community at OMS because of the Leadership Academy experience. The following is one participant’s thoughts on the effect of the Academy on building a sense of community:

Yeah, that had a tremendous impact. I knew a lot of the people in science. I didn’t know any of the people in math, but getting to be with everybody everyday was great camaraderie. I think everybody got along really good. We had a common goal. During the course of the 51 days, team building was brought up...Now that we were actually doing work...it really did build a team. I mean, it’s amazing how everybody just jumps in and works together. Nobody says that’s not my job; it’s really a team. So, I think I wasn’t realizing it at the time...but...it really did bring everybody together as a team and the two units--math or science—I mean it’s almost interchangeable in terms of duties, responsibilities, cooperation...

One particular incident in the Leadership Academy stood out as providing the group with the opportunity to build community. The co-teaching component of the Leadership Academy was perhaps the most innovative and risky aspect of the professional development experience. While we describe this aspect of the Academy in more detail later, here we note how some struggles with it provided the group with a turning point in terms of their common understanding. Gaining that common understanding helped to draw the group together.

One of the participants, who was involved in planning the Academy described the dialogue around the value and process of co-teaching. There was a general sense, by both planners and participants in co-teaching, that it was not proceeding smoothly. Planners wanted higher levels of involvement in teaching

practice and participants didn't understand the purpose of the activity and how it was linked to the larger goals of the Leadership Academy. One planner described how those co-teaching were asking "Why are we doing this?" The group doing the planning of the Academy met and thought about how to respond.

We were meeting over the Christmas break to do some planning ... We gave it a lot of thought about whether to pull the plug on co-teaching or not. It was supposed to go another couple of weeks. And...we went through a dilemma as the Leadership Team...

The group considered different responses—first they discussed discontinuing the co-teaching. They could tell those co-teaching "Okay, you're unhappy. We won't do [the co-teaching] even though we think this is a real important piece." But they were concerned that that would be a "bad message to give people". They did not want the Academy participants to think activities thought to be important could be stopped without strong reasons.

The group also considered insisting the co-teaching continue. But that would be unresponsive to the participants concerns and would have "undermined our credibility with the staff".

A third alternative was chosen. The planning group expressed openness to the potential cancellation of the co-teaching but first called for dialogue on the issue. The planners started by explaining the original reasons why the co-teaching was started. Then they acknowledged the participants' concerns and explained there was too much work to be done and that if the co-teaching was not useful, it needed to end. At that point, as one person explained it "The whole thing kind of turned around. And it was like light bulbs went on." The larger group had not understood all of the goals behind doing the co-teaching. With a better understanding of that, they wanted to continue with the co-teaching.

The participant interviews, nearly without exception, included some reference to this discussion about co-teaching. Many talked about how this conversation led them to finally understand the mission and vision of OMS and CMSI. Several talked about the empowerment that came from being involved in an important decision. All talked about how it moved the level of community to the next level.

Research Question #5: How were new OMS employees inducted into the department and work of CMSI?

Because the creation of the new Office of Math and Science was concurrent with the Leadership Academy, the whole Academy experience could be thought of as an induction experience. However, here we note some of the successes and challenges of the Academy and OMS in working particularly with staff who were more "new" than others to the department. The "new" staff we focus on here are those who were hired into OMS from positions outside of the several district-level departments that contained the core working group of OMS. These staff generally had worked previously at the school level or in programs grounded in standards-based curriculum. Some of these staff were hired before or during the Academy from November through January and a few were hired later in 2003 and did not experience the Academy sessions or the co-teaching.

In interviews, staff hired during or after the Leadership Academy expressed a different view on the skills they felt they needed and how these were addressed by the Leadership Academy or by professional development after the Academy. While many attending the Academy expressed their appreciation for their exposure to standards-based curricula, the newer staff members were sometimes already well versed in the standards-based approach. In fact, some of these newer staff were hired *because* they were already experts in using these curricula. As a result, the newer staff members talked about benefiting most from leadership and professional development training, both during the Leadership Academy and continuing in sessions with Chief Officer Al Bertani and other staff from the Office of Professional Development in the summer of 2003.

For example, when asked about what she had learned about standards-based materials, one newer staff member stated that she really hadn't learned anything new in that respect, but that what she did learn was "the leadership kinds of things." She noted also that it was very important that OMS was continuing with

training in these areas into the summer 2003 because as her role in CMSI became more clear it gave her new perspectives on how to use some of the leadership training. Similarly, another new staff member also noted her strong foundation in standards-based curriculum and that her new learning came from Chief Officer of Teacher Professional Development Al Bertani's leadership sessions. She noted, "It is not only the content, but how he does it. It is just a great opportunity to observe him, and he gave us leadership training, and we will continue with the Coaches also. That is very, very valuable to me."

In hindsight, planners of the Academy recognized that those who had not attended the Leadership Academy simply did not have the same set of experiences. One planner expressed a wish that videotaping had been used in order for new employees to share in some level of this organizational learning. In addition, there was an understanding that those who had not attended the Leadership Academy simply could not participate in the conversations about that experience, or relate to the shared understandings that participants had, simply, because they had not been a part of it.

Planners seemed to understand this and tried to think of ways to share this organizational learning to future members of the staff. One planner talked about how this organizational learning is passed on informally between the old and new staff. However, he noted too how this learning needs to be built into the process so that new employees understand the norms and are brought "up to speed as they come in." Three other planners of the Leadership Academy noted planning needs to be a continued focus to create a professional development process. Some attempts were made on the part of OMS leadership to expose new staff to the Leadership Academy experience that they missed by providing them with CDs of training handouts, presentation notes and session information. These CDs were provided to OMS staff who were hired after the Academy as well as to the Area Coaches and school-level Specialists who were trained in the summer of 2003.

The induction of new staff marks an important goal of the OMS Leadership Team. Those who planned the Leadership Academy understood that they wanted to create a self-sustaining and ongoing professional development process for new and continuing staff beginning in the Academy and being incorporated into day-to-day life of the OMS. This vision has been gradually developed as the OMS leadership has grown throughout and since the Academy. During the Leadership Academy, there was not a sense of the goal of ongoing professional development in the OMS staff as a whole. The planners had notions and ideas of what this would look like, but the ideas were not concrete and the staff at large did not clearly understand the notion. This has since developed and is evidence of learning. It can be seen in ongoing professional development being offered to OMS staff during the summer and fall of 2003, described in the final analysis section of this report. Additionally, evidence of this learning can be seen in the selection process for Coaches and Specialists, also described in the final section of this report.

Findings: The Co-Teaching Experience

For thirteen of the OMS staff members, the Leadership Academy afternoon workshops were only a portion of their professional development experience. From November 18 to January 30, these participants spent mornings engaged in co-teaching with a CPS teacher experienced in a standards-based mathematics curriculum. The goal of the co-teaching experience was two-fold: to expose participants to standards-based curricula and to allow them to engage in professional dialogue with teachers around this curriculum. The experience was to provide a closer look at the implementation of standards-based curricula in real classrooms. One planner explained it as follows:

[W]e wanted our staff to become—to have hands-on experience with the implementation of reform-based curriculum. And it was thought that the best way to accomplish that would be to actually go into a classroom where the curriculum was being used. We did not want our staff members to go in and just be observers; we wanted them to become intimately involved with the instructional climate.

The organization of this experience involved identifying teachers experienced in standards-based math curricula and negotiating relationships with teachers and their principals. OMS staff recommended strong teachers from their previous work in CPS. In addition, OMS staff solicited names of CPS teachers from

University partners as well. “For example, a couple of professors from the University of Chicago who have been involved in the professional training for the use of Everyday Math, recommended some people...we tried to get input from a variety of different sources.” The commitment garnered from schools participating in co-teaching was significant. Schools often reorganized the school schedule for math to be taught in the morning since this was the only time OMS staff had available and in some cases substitute teachers were made available so co-teachers would have time to debrief with OMS staff.

Through evidence gathered in Leadership Academy afternoon sessions dialogue and in interviews, we found that those co-teaching gained useful experience through teaching the standards-based curriculum and debriefing with teachers. After we discuss some of this evidence we then consider the overall assessment of the success and challenges of the co-teaching experience.

Exposure to curricula. Discussions about the co-teaching occurred at six of the fourteen observed sessions of the Leadership Academy. Within these dialogues, participants struggled with the new experience and with their understanding and acceptance of standards-based curriculum. In the following discussion in December 2002, OMS staff compared their co-teaching experiences. Participant One was dismayed about her class:

There has been no arithmetic done whatsoever in this class! They are filling in charts but using calculators. Their numbers were not in notation. Units of analysis weren't there; it was sloppy work.

Participant Two then described her experience where the class was going well:

I am in an eighth grade class...Students were working with graphs and tables. They did so well with going from the problem to what needed to be used to find the information, to units of analysis, etc.

After this positive experience with the new curriculum, Participant Two suggested that perhaps Participant One's experience was “not a problem with the program, but with the way the teacher is using it.”

In response, a third participant continued to express concern about the new curriculum and argued that poorly implemented, poorly supported standards-based curriculum is more dangerous than textbooks, despite what presenters had suggested:

It isn't just about the materials. After 1991, everything changed in textbooks. There are good texts out there. That woman at DePaul trounced textbooks. I really think we should look at one or two of them to get a sense of what is there. The sense I get by looking at our teachers is that we are in big trouble if we throw a standards-based curriculum into a school without support and a tight framework. This can be done very poorly.

In their interviews, participants described what they learned about standards-based curriculum during co-teaching. One participant talked about learning valuable teaching techniques and being reminded of the need for high expectations of children:

I think one of the things I really picked up on in here and in the co-teaching is to be much more of a facilitator in the classroom. Allow the children to explain their answers instead of providing them with an answer. So when I did a few of the lessons in the co-teaching, I told my co-teacher, I said “We're going to have to be very careful...to give [the children] plenty of lead time. Let them answer because, traditionally, I have a habit of just providing the answer or giving too many clues.” So that was one of the things I think I gained from the co-teaching experience...not that I didn't have high expectations for students, but I mean what they're asked to do in [the curriculum at the grade level I observed] is really very challenging.

Another participant talked about how the co-teaching experience allowed him to step beyond vendors' portrayals of the standards-based curricula to actually using it with a teacher and seeing first hand how

“long it takes to go through.” Another participant got a “good flavor” for the program by being paired with a teacher who was deeply “immersed” in the standards-based math curriculum. In addition, this participant had the experience of implementing this curriculum with a socioeconomic and age group that was different from past teaching experiences.

Dialogue with teachers. Those who participated in co-teaching talked about the process of negotiating both their role as co-teacher and their relationship with the classroom teacher as the starting point of their work. One participant talked about an initial fear of being a co-teacher that eventually led to a clear understanding of the importance of “being a second support in the classroom” as a “co-teacher.” Two participants described the development of their relationship with their co-teacher and the process of gradually increasing their role in the classroom after establishing a comfort level between themselves and the co-teacher. One participant stated:

When I first came in, I kind of sat there for about a week...and observed. And...afterward we talked...And it was actually a period of adjustment while we—the teacher—decided, you know, how dangerous am I. And...once that was decided, that I wasn’t dangerous, fine. “Okay, anytime you want to jump in, jump in...”

The nature of these co-teaching experiences varied among participants. In some cases, co-teachers reported that they mostly observed the teacher. In others the participant taught some lessons. In a portion, the OMS staff member and the teacher simultaneously taught together. Variation also occurred in the amount of time that participants had to plan, discuss, and debrief lessons with the teacher. This ranged from absolutely no planning time to planning time everyday, even before and after every class session. One participant described his situation as “good” and noted that the teacher had “switched her math class to the first part of the day.” He explained, “I was able to come in early, and she sat down and we discussed stuff before class. And then she had a little ten-minute break thing right after that. So, we even got to, you know, discuss right after. You know, while she was lining up kids to move them to the next activity and stuff; so, there was a lot of interaction.”

Assessing the co-teaching experience. In the estimation of one of the OMS staff who had planned the Leadership Academy, the first goal of co-teaching, exposure to standards-based curriculum, had been achieved. He stated that the second goal of the co-teaching, the fostering of dialogue with teachers, however, was not attained in the co-teaching. With frustration he noted, “This stuff is going to be at the heart of what our Coaches and Specialists are going to be doing and the nine people that are on our staff and go out to schools. They’re going to have to engage people in professional dialogue...” Part of this lack of engagement in professional dialogue in the co-teaching process seemed to stem from a lack of understanding of how co-teaching fit into the bigger picture of OMS and CMSI.

As we discussed in the earlier section on community building there was an initial lack of clarity as to the purpose of co-teaching experience. Seven of the ten interviewed participants expressed their confusion at not knowing the “big picture ahead of time”, and four of the planners stated that in hindsight, more could have been done to have ongoing discussions about the goals and purpose of the components of the Academy. In addition to a lack of the big picture on the part of the participants, one planner stated that she would re-design the co-teaching experience “...so that there is more...supervision and accountability built in because some people treated the co-teaching very differently than others. I also think...I would encourage more regular de-briefing so that the co-teachers were really talking about their experience in a regular way, and I don’t think that happened...”

In one December Leadership Academy session the uncertainty about the goals of the co-teaching was evident. One of the OMS staff who was co-teaching raised the issue: “I have no training [in the math curriculum], no experience in standards-based math. I am following the book. What is the point of this? Shouldn’t there be more training?” To this, the session facilitator explained “The point is for you and your co-teacher to plan and work on lessons together.” The participant expressed concern and fear that teachers would be thrown into this curriculum with no training. This then led another person to explain that she was “serving as a tutor in the room I am in. Is this against the theory of what we are trying to do?” The previous participant then echoed “I don’t think I understand the objective of this.” When the facilitator

noted that the objective was to “get a sense and feel for teaching this” another participant chimed in that “I think I can get a sense of this just by observing and being there” (Leadership Academy Observation, 12/17/02). This dialogue, and others like it, reveal the confusion over the purpose of the co-teaching.

Also important was the fact that only about half of the Leadership Academy participants were able to participate in co-teaching. This was an unfortunate loss of an experience for those who could not participate and also fueled some feelings of resentment from those who did as this sent mixed messages on the importance of co-teaching.

At first, in the beginning, everybody was to co-teach. And then this person didn't have to, this person didn't have to...I thought this was a priority, to co-teach! So we ended up with 12 maybe 15 of us... And I think all of us enjoyed it, who did it. But again, it's either everybody or just say, “If you would like to do this, sign up.” It's not mandated kind of thing. But otherwise you think, “Gee I have to do this”...And then after you are into it...you find out well this person isn't doing it...

Nine out of ten interviewed participants in co-teaching thought it was a worthwhile experience. Seven thought that the amount of time spent in co-teaching was about right, although four noted that the transition in and out of the classroom should have been better coordinated. Four participants commented that the experience gave them a better appreciation of the work involved in teaching the curricula, a better understanding of the challenges facing them in their own role as professional developer, and a realization that even with the intensive Leadership Academy/co-teaching experience and training, they had a long way to go to feel like an “expert” in this curricula.

Discussion of the Leadership Academy Experience

Analyzing the Leadership Academy experience, its successes and shortcomings, is complex. In a three-month period, a tremendous amount was accomplished. A new department was created. Its staff learned about standards-based curriculum. New staff roles were designed, articulated, and assigned. The Chicago Math Science Initiative was planned and the beginning stages of implementation were in place.

A clearer understanding of what was accomplished by the Leadership Academy will be found as the CMSI continues with its implementation and we continue to examine how the Academy fostered the foundation for the implementation. Therefore, this report is an interim look at the Academy—but a crucial one given the importance of learning and adjusting at this early stage of CMSI. Here we review briefly a selection of accomplishments and challenges raised when we consider the research questions that framed our findings. Then we discuss a few instances of post-January 2003 CMSI activities that were influenced significantly by the Academy. Finally we raise issues that, based on our reflection on the Leadership Academy, merit further discussion as the CMSI continues with its ambitious plans.

Accomplishments and challenges

The Leadership Academy was designed with ambitious goals of exposing participants to standards-based curriculum, building community in the OMS, increasing the confidence and competency of OMS staff as leaders, and providing the foundation for the design of the Chicago Math Science Initiative. An impressive amount of content and activities were covered in the three-month period of the Academy. Although participants made some comments that the balance of the content covered and the way that it was presented could have been improved in various ways, the content was all appropriate and geared toward Leadership Academy goals.

The different suggestions participants made about how to alter the content of the Academy are likely related partially to the diverse backgrounds of those attending. Some of the long time colleagues who moved to OMS from other CPS departments (i.e., Curriculum and Instruction and Office of Math, Science, Health, and Technology) felt that they did not need as much community building or information about CPS context as the Academy provided. However they were extremely grateful for the opportunities to learn about the standards-based curricula. In contrast, some of the new OMS staff members who had not worked

in CPS district-wide capacities were particularly thankful for the leadership training. However, they noted that they did not need as much exposure to standards-based curriculum.

Modeling high quality professional development process. Leadership Academy planners aimed to create a process built on the tenets of research on high quality professional development. The Leadership Academy was designed to promote reflection on practice, allow for exploration and utilization of new ideas, encourage active involvement in learning, create the discussion of challenging attendees as a source of expertise, and provide time and structure for critical feedback on practice. All of these facets of high quality professional development were seen in the Academy, but there were also some shortcomings as well.

Participants were asked to reflect on their past and future work practices in a large portion of the sessions. This reflection time occurred individually, in pairs, in small groups, and large group discussions—depending on the style of the person facilitating each session. In the case of reflection on the co-teaching experience, participants noted the value of the discussion they had in early January about the experiences but wished they had done that reflection earlier. Additionally, although evaluators and OMS planners attempted to provide participants with a chance to critically reflect on the process of the Leadership Academy, the feedback of their reflections by evaluators was not found to be memorable or useful by attendees.

The exploration of curricula through student activities provided all participants with an opportunity to apply new ideas in sessions. Additionally some of the participants were able to apply the new ideas learned in Academy afternoon sessions to the K-8 classrooms where they co-taught during the mornings. The incidence of application of new ideas was impressive but uneven due to variations in curriculum presentations and co-teaching arrangements.

Similarly, the goals of active involvement and discussion of challenging intellectual ideas were dependent on the style and manner of presentations. Sessions observed with active involvement and lively discussion tended to rely on this style throughout the various portions of the presentation while other sessions had no active involvement or discussion at all. Still, more than half of observed sessions showed high levels of involvement and discussion, and these workshops impressively exhibited deep consideration of concepts and ideas.

The Leadership Academy engaged participants as experts by providing opportunities for them to talk about what it was like to learn using the new curricula that were presented to them and to talk about their previous experiences as teachers and educators. Perhaps most importantly, participants were asked to use their expertise to create a vision and the detailed plan for the CMSI. The extent to which OMS staff felt that their expertise was utilized, however, varied. Some participants, including those involved in planning the Academy, thought that they should have drawn upon and celebrated staff expertise more directly.

Providing feedback to participants about their practice was not as prevalent during the Academy as were the other tenets of good professional development. In some ways this may have exacerbated the anxiety some participants felt because they were uncertain about the roles they were playing and would play in the new OMS. However, the leaders of the OMS worked to try to remedy this after the Academy when they had individual conversations with staff members about their work during the Academy and the role they would play in the future CMSI.

Perhaps the greatest evidence that the Leadership Academy modeled high quality professional development comes from two additional themes that we found in our data. Through dialogue with district and national leaders, Academy members gained confidence, explored difficult issues and felt a sense that their work was important. In addition, professional development presentations became a model for the OMS staff in their own work.

Knowledge on standards-based curricula. Nearly half of the Leadership Academy sessions were focused on exposing participants to standards-based curriculum. In addition, one of the primary goals of the co-teaching experience was to provide an opportunity for participants to experience the standards-based

approach live in a real classroom. We find evidence that participants gained knowledge about the commonalities among and the philosophy behind standards-based curricula and that they gained some insights into the differences among these curricula and how they might fit the needs of CPS. In addition, there is some evidence of an increased willingness to use standards-based curriculum in Chicago, and a better understanding of how this might be done. As the Academy was ending, there was still a sense among OMS leadership of resistance to the standards-based approach among some staff. Staff continued to ask critical questions about implementation, such as how to successfully launch the standards-based approach in upper grade levels when the children had no previous experience with the curriculum. Co-teachers felt they learned an immense amount from time in the classroom but also came away with a sense of apprehension about how much was still to be learned.

Building a professional community. Pulling together the staff of the new OMS and integrating “new” staff members, and institutionalizing roles and department responsibilities was arguably the most difficult aspect of what the leaders and designers of the OMS hoped to accomplish. Both planners and participants identified the progress made on this goal during the Leadership Academy as their greatest accomplishment. Data collected through observations of Academy sessions and through interviews reveal openness on the part of the OMS staff to discuss and disagree. This openness is essential to the construction of a professional community. OMS leadership took risks in opening doors to discussions like the January conversation about the continuation of co-teaching. What this discussion represents, in terms of openness of OMS leadership to staff input and expertise, was far more important than the subject discussed. Although it is true that co-teachers left with a better understanding of the goals of the co-teaching activity and the CMSI as a whole, they also left empowered that their opinions and concerns really did matter. In the end, co-teaching continued because they decided it should. In this exchange, OMS leadership and the staff learned and grew a great deal. Additionally, the realization on the part of leadership of the OMS of difficulties with role ambiguity and their resulting attention to individually exploring role options with staff members added another layer toward building community.

Inducting new staff members. Analyzing the level of success of the induction of new staff is difficult given that the OMS was new to all staff in September of 2002 and that additional staff members were hired throughout and in the time immediately following the Leadership Academy. For the most part, those hired in the later portions of the Academy into the implementation phase of the CMSI were already well versed in the standards-based approach. In this respect, they benefited most from the leadership training exposure. Missing some or all of the Leadership Academy may have been a disadvantage for individuals in terms of the content covered and the relationships developed during this time. One OMS leader talked about wishing videotaping had been used so that new staff members could have been exposed to the Leadership Academy after the fact.

The co-teaching experience. The co-teaching aspect of the Leadership Academy was arguably the most innovative and daring. The co-teaching experience created a deeper understanding of standards-based curriculum for those who participated. Participants talked about the benefit of applying ideas from the workshops in the classroom, about gains in knowledge on the standards-based approach, and about lessons learned from observing and participating in implementation at the classroom level. Participants longed for a deeper understanding of the goals and purpose of the activity at the time. In hindsight, planners wished they had added more structure and accountability in the co-teaching process. While successful in the first goal of encouraging further understanding of the standards-based approach, the critical component of reflective dialogue with teachers was not fully accomplished. Hampered by inflexible school schedules and a lack of understanding of the expectations for the activity, co-teachers understood too late why they were co-teaching. Resentment arose when a portion of the OMS staff did not participate in the co-teaching with no formal explanation from OMS leadership.

That being said, the effect of the co-teaching experience to deepen participants’ thinking about standards-based approaches, about barriers to implementation, and about teacher roles should not be underestimated. The reflections of co-teachers reveal a remarkable depth in their thinking about standards-based material and implementation. Importantly, these professional developers from the OMS were reminded of what it was like to be in the classroom—fostering empathy and understanding for the role of teachers. This experience led some to be deeply reflective about their own expectations of children and about the task of

teaching and learning in general. Thus, the effects were rich for those who participated. Planners intimated that the effects could have been richer still.

Evidence of influence post-January 2003

As we noted earlier, it is important in the evaluation of the Leadership Academy to also consider evidence of its influence on the continuing work of the OMS as the Chicago Math Science Initiative unfolds. In the early period of CMSI implementation between February and August 2003, we find evidence of ongoing influence from the Leadership Academy in the following: enhanced relations between OMS and others, the hiring and training of OMS Coaches and Specialists, and the ongoing professional development of OMS Leadership Academy participants.

OMS relationships with other stakeholders. The Academy led to stronger relations not just within the OMS but also between the OMS and other Chicago Public Schools' leaders. Earlier in this report, we talk about the benefits to participants of bringing in national and district leaders to Academy sessions. Here, we consider this from another perspective. By their presence at the Leadership Academy, these important leaders were also exposed to the staff and thinking of the OMS.

Over the course of the Leadership Academy, the real role and importance of CMSI within CPS really increased... We took on a much larger role. We are now heavily involved in many of the assessments, the standards-based initiative work that's going on. We're some of the lead people on those teams now. People began to see within CPS that we were serious about this [and] that there are a lot of good people here who are leading [math and science] in this direction. And so they became familiar with who we were. A lot of us were new to the system. So that was very important--for people in CPS to know who we were.

In-depth conversations with the leaders who came to present led to an increased knowledge on the part of the presenters of the goals, vision and skill of the OMS staff. Relationships were built between the OMS staff and district leaders. OMS leaders noted that these relationships could be drawn on again and that leadership of OMS staff in other district initiatives would continue to increase the visibility of and respect for the CMSI.

The Coach and Specialist hiring and training process. Planners and participants in the Leadership Academy talked about the difficulty they experienced because their roles were initially ill-defined and the vision of OMS was not clear to all involved. This issue was present in virtually every interview we had with OMS staff, senior or junior, new or experienced. OMS staff took what they had learned regarding role ambiguity and professional development techniques and applied these to the selection and training process of the next tier of OMS leadership: the Area Coaches and school-level Specialists.¹

We've learned some things from folks during this Leadership Academy that really influenced our ideas of how to select our schools, how we are selecting and hiring our Coaches and Specialists, and how we are thinking about professional development for those folks this summer, as well. So, not only did I think it helped us to create a learning community, it brought out weaknesses of the areas to pay attention to as we plan this for the other groups that are going to be involved in the Initiative.

Specifically, the interview and selection process used to hire the Coaches and Specialists provided candidates a glimpse of what their role would be if they were selected, and it provided information to OMS staff to make reliable decisions about whom to select. In the first round of the interview process, candidates

¹ The implementation of the CMSI is based on leadership at the Area and school level. The CPS school district is divided into Areas; Area Coaches in math and science at the elementary and high school level were designated to support the implementation of the CMSI in schools in their Area. School-level Specialists were created to support implementation of math and science curriculum in schools designated as "intensive support" schools. Further descriptions of these roles, the hiring process and how they fit into the CMSI can be found in OMS documentation and forthcoming evaluation reports)

for the Coach positions came to OMS in groups of ten. This group was divided in half. In groups of five, candidates watched a video of a lesson in the classroom and were asked to provide written feedback about what they saw—the kind of critical feedback they would provide to the teacher. They then watched a video of a coaching session and discussed it in small groups.

Planners attribute the development of this innovative process to both what they learned from expert professional developers and what they learned from the experiences of their own staff in the Leadership Academy:

And it came up a lot in the Leadership Academy. A lot of the comments from people were, “Well, we’re not really sure how we fit in. We are not sure how this is going to play out. We don’t really see the ideas.” So we said... Let’s start from the very first contact we have with these people to begin building their expectation of what their roles are going to be. We still have a lot of work to figure out some of the details of that, certainly, but we have a beginning. So I think there were lessons learned about that. About how we are going to bring these folks in, and there will be more extensive professional development this summer based a lot on what we learned in the Leadership Academy.

Perhaps the greatest indicator of successful leadership building came from observations of the OMS staff engaging in the training of CPS Coaches and Specialists. In this process, leadership of these new staff members emerged. OMS staff members, some who were new to CPS during and after the Leadership Academy, led the new Coaches through team building and leadership activities in the Coach training. One Coach, in a written reflection given during the Coach training noted, “The OMS staff is simply outstanding. The presenters are so knowledgeable, confident, and sure of the direction we are going. Yet, still, so personable” (OMS Coach Training, Written Reflections, 7/2/03).

Ongoing professional development for OMS staff. Another success of the Leadership Academy approach is that it provided a foundation for ongoing professional development for the OMS staff. This will become increasingly important as the implementation of the CMSI moves forward. OMS leaders note in interviews that they understood the Academy as the first step in ongoing professional development for their staff. They aimed to create an ongoing process that will help to alleviate the strains of staff turnover. The vision of how this ongoing professional training was to look was vague at the beginning of the Leadership Academy and has evolved throughout the first year of the OMS as the staff has grown and learned. The ongoing nature of the professional development has gradually been shared with staff as a focus and a goal. By the summer of 2003, OMS leadership had a concrete vision of the flavor of the ongoing professional development.

The CPS Office of Professional Development conducted five additional day-long training sessions with OMS staff during the summer of 2003. OMS staff talked about these as a continuation of their learning from the Leadership Academy and a setting in which ideas first presented during the Academy began to make more sense. One staff member noted that the two additional sessions with the Chief Officer of The Office of Teacher Professional Development, Al Bertani, during the summer helped make “fresh in my mind, something that seemed very disconnected then.” Additionally, a two-day retreat for the staff is scheduled for early fall, 2003. These ongoing opportunities for professional development focused on the Leadership Academy components of increasing knowledge of curriculum and teaching practice, building community, and developing leadership and strategic planning, will be key to addressing goal number three of the CMSI-- the creation of a sustainable infrastructure for math and science.

Issues to consider during next steps

Community building. Attention to building community must be ongoing. Opportunities for open dialogue about differences of position, opinion, and approach will foster the ongoing development of professional community initiated in the Leadership Academy.

Creating an ongoing professional development process. The goal of creating a sustainable infrastructure and cohesive policy directives relies on the creation and institutionalization of professional training. This is crucial in the continued development of existing staff and the induction of new staff as the CMSI moves

forward. The process of building this began in the early stages of the design of the Leadership Academy. This has been developed and initiated as the CMSI has moved into the implementation phase. Continued development of these sessions is crucial, as is the ongoing building of awareness of OMS staff about the vision and purpose for the training.

Strategic planning. The building of professional community and development is dependent on the support of structures and time for strategic planning. Without time to plan, implementation can suffer. For example, the time crunches encountered in the early phases of implementation led to the uneven distribution of the workload leading some people to feel like they weren't given a chance while others felt overworked. One planner explained that they had "enabled" some to not work. He wished instead that they had given these people key roles earlier because when they eventually did these people did a good job.

Planners recognized the need for strategic planning.

I believe it is extremely important for us to develop a strategic plan that will clearly identify the major goals, steps, activities, [and] responsibilities... Now clearly, it is work in progress. You're going to make mid-course reviews and modifications as things change but at least you have taken the time to sit down and develop the scope.

In a fast paced initiative with frequent deadlines and an ambitious scope of work devoting the time and focus to strategic planning will be challenging. Yet this is essential to the continued success of the CMSI implementation.

The role of evaluation and feedback. Participants reported that they did not receive enough useful feedback during the Leadership Academy. Many could not recall evaluator presentations. In the work of the evaluation team going forward, evaluators and OMS leadership need to work together to find ways for evaluation to provide more useful and more "memorable" feedback.

Attachments

Attachment A: Leadership Academy Observation Protocol

CPS/CUSP Leadership Academy

Guidelines for Observation Fieldnotes of Daily Afternoon Seminar

- A) On all notes and documents collected identify using the following information
 - 1) Observers name
 - 2) Date, time
 - 3) Place of observation
 - 4) Name of program: CPS/CUSP Leadership Academy afternoon seminar
 - 5) Title the observation—you make up a title depending on what takes place
 - 6) File all notes and documents in folder labeled by day and archive

- B) Collect the following for the day:
 - 1) Agenda
 - 2) Name, title, contact information of facilitator(s)
 - 3) Lesson plan from facilitator
 - 4) Handouts
 - 5) Attendance

- C) Following the agenda,
 - 1) Track time spent on various components of the planned day
 - 2) Note activities not listed on agenda

- D) Take descriptive fieldnotes on seminar dialogue and activities

- E) Address the following specific points:
 - 1) Total time observed
 - 2) Time participants spent in various types of environments
 - a) Full group
 - b) Large groups of more than 8 and less than full group
 - c) Small groups of 8 or fewer
 - d) Individual work
 - e) Other

- F) 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

- G) 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 Leadership Academy 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

Name of program: **CPS/CUSP Leadership Academy afternoon seminar**

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 Leadership Academy 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 B: Leadership Academy Participant Interview Protocol

Interview of CPS/CUSP Leadership Academy Participant

Name of Interviewee:

Name of Researcher/Interviewer:

Date:

Researcher first discusses informed consent with interviewee:

Remember previously you consented to be a part of our evaluation and research about the Leadership Academy. 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. Now 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 tell me something that, if I told your co-workers you said it, they would be upset with you. 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 chose 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 understanding the research again by asking you a couple questions: “Would you please explain the purpose of the study back to me along with your understanding of the risks and benefits to you as participants?” “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 Academy 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.

1. Did you, and if so, what new things have you learned about mathematics and science curriculum and instruction because of the Academy? Give me a specific example and tell me how the Academy supported this.
2. You participated in this Academy with about 30 other people. What has that been like? Tell me about your interactions with this group of people and how the Academy did or did not change your relationships with them.
3. How has being in this Academy influenced your work in the future? Give me a specific example(s) and tell me how the Academy influenced this.
 - a. In what ways do you think the Leadership Academy has changed the way you think about your work style?
 - b. Can you give an example of what skills you have gained or what new learnings might be reflected in your future work as a result of your participation in the Academy?
4. Tell me about your experience co-teaching as part of the Academy. What was the most positive outcome of that? Any negative experiences? Will it, and if so, how will it influence how you do or will carry out your work in the future? Give me a specific example and tell me how the co-teaching influenced this.
5. Is there anything else I should know about your experiences in the Academy that would help me tell the story of the Academy's successes and failures?

The researcher thanks the interviewee.

Bibliography

- Cohen, D.K. and Hill, H.C. (2001). *Learning policy: When state education reform works*. New Haven: Yale University Press.
- Cohen, D.K., Raudenbush, S.W. and Ball, D.L. (2000). *Resources, instruction, and research*. University of Washington: Center for the Study of Teaching and Policy.
- Darling-Hammond, L. and McLaughlin, M. (1995). Policies that support professional development in an era of reform. *Phi Delta Kappan*, 76, 8: 597-604.
- Elmore, R. and Burney, D. (1997). *Investing in teacher learning: Staff development and instructional improvement in Community School District #2, New York City*. National Commission on Teaching and America's Future and Consortium for Policy Research in Education: New York, NY.
- Lieberman, A. (1995). Practices that support teacher development. *Phi Delta Kappan*, 76, 8: 591-596.
- Sebring, P., Bryk, A., Easton, J., Luppescu, S., Thum, Y., Lopez, W., and Smith, B. (1995). *Charting reform: Chicago teachers take stock*. Chicago: Consortium on Chicago School Research.
- Smylie, M.A., Allensworth, E., Greenberg, R.C., Harris, R. and S. Luppescu. (April 2001). *Teacher professional development in Chicago*. Chicago: Consortium on Chicago School Research.