

**Cluster 4 Middle Grades Project at Year 4:
Progress, Sustainability, and Lessons Learned**

A Comprehensive Final Evaluation Report

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Authors are listed alphabetically and produced this report collaboratively. They share responsibility for its contents equally. The conclusions drawn in this report reflect the viewpoints of the authors. While there are many potential viewpoints, these reflect a systematic analysis of data by the authors. The hope is that these findings can facilitate improvement of this and related programs through open discussion and consideration of data-driven understandings.

This report is based upon work supported by the Chicago Community Trust, McDougal Family Foundation, and Chicago Public Schools Office of Math and Science and Department of Data Program Management. It incorporates and builds on previous external evaluation studies by the PRAIRIE Group of both the Chicago Math and Science Initiative (CMSI) and the Cluster 4 Middle Grades Project (C4MGP) and the internal evaluation studies by the CPS Department of Program Evaluation and Department of Data Program Management.

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Executive Summary

This report is the final report in a series of internal and external evaluation studies from 2006-2010 completed by both the PRAIRIE Group at the University of Illinois at Chicago (UIC) and the Department of Program Evaluation/Department of Data Program Management at the Chicago Public Schools (CPS) on the Cluster 4 Middle Grades Project (C4MGP) and funded by the Chicago Community Trust and McDougal Family Foundation. The 2009-10 evaluation is grounded in multi-year case studies of 12 C4MGP schools and includes multi-year data from Area personnel, C4MGP program leaders, various C4MGP stakeholders, and program activities and components.

This four year project spanned multiple district challenges as key program and district leadership changed and the program gained and lost areas of focus. In the beginning of the project the focus was very clearly on improving students' math knowledge and skills (specifically algebra readiness) through improving teachers' content knowledge and pedagogy via university courses and in-school math coaching. Over the years it shifted to a program focused more broadly on middle school structures and activities (e.g.: departmentalization, advisory, exploratory courses, teaming), and concepts of middle grades leadership.

This report documents the impact and interaction of changes within a number of aspects of the C4MGP (vision, staffing, activities, logic model) and discusses the implications of these changes on the overall project. In addition, this report looks at the goals articulated by stakeholders in Year 3 of the project and presents data on the extent to which schools made progress towards meeting these expectations, with a focus on the key project activities or aids which supported their movement.

All 12 schools in our study moved closer to meeting some aspect of these expectations for middle grades. All schools became departmentalized, had the majority of math and science classes taught by an endorsed teacher, utilized the CMSI materials for math and science, and most schools offered Algebra 1 to qualified 8th graders with instruction by an Algebra qualified teacher. Most schools had schedules that included 300 minutes or more of core content per week. Most schools had schedules that included some time for Advisory. Only a handful of schools seemed to have adopted a schedule that incorporated exploratory classes in the manner of 4-5 week courses. Key levers of these changes were teachers' access to free university courses for endorsements in math and science and credentialing for Algebra 1, C4MGP Leadership professional development when it was focused on middle school structures, and University Coaches who not only helped teachers with various aspects of CMSI implementation but who also were links between project resources (university courses, CMSI professional development, CMSI materials).

There are many lessons to draw from the C4MGP. We focus this report on lessons we think are important relative to program implementation and management, and planning for similar programs.

Introduction

The programmatic context for this report is the implementation of two district initiatives with overlapping areas of impact and overlapping goals: the 2006-initiated Cluster 4 Middle Grades Project (C4MGP), which focuses on improving instruction in grades 6-8 and preparing students for high school, and the 2003-initiated Chicago Math and Science Initiative (CMSI), which focuses on improving math and science education in grades K-8.

The CMSI included support to CPS schools implementing CMSI materials via professional development in the use of materials (CMSI PD), school level implementation assistance via Area Math/Science Coaches, OMS Facilitators, and/or OMS City-wide Specialists. In addition, teachers throughout CPS were encouraged to take courses for endorsement from University Partners. Like the CMSI, the C4MGP was first envisioned by the original officer for the Office of Mathematics and Science (OMS) as a way of improving middle grades math instruction and preparing students for Algebra. A key mechanism of this was improving teacher content knowledge by helping teachers become endorsed in middle grades math and/or CPS Algebra-Qualified through partnerships with local universities. This vision built on the CMSI vision that through improved systemic connections and coherent policy directives teacher capacity and competency in math and science content and pedagogy would improve. These improvements in teachers' capacity were expected to improve classroom instruction in math and science, which it was predicted would lead to improved student achievement. In essence the C4MGP was developed as an extension of the CMSI in a concentrated subsection of CPS schools (Cluster 4) and was funded by the Chicago Community Trust and the McDougal Family Foundation. The C4MGP built on these CMSI supports by subsidizing the tuition for endorsement courses in math and science for C4MGP teachers, providing C4MGP schools with University Math and Science Coaches who worked with middle grades math and science teachers on their implementation of CMSI materials, and by providing C4MGP Leadership Professional Development (PD) to Cluster 4 principals and eventually school leadership teams/middle grades teachers.

As a core part of the C4MGP program, the Chicago Community Trust (CCT) funded an extensive 4-year formative and summative evaluation. The evaluation was coordinated by program evaluators in the CPS Department of Program Evaluation.¹ The evaluations each year were crafted to answer key questions about program implementation. The current document represents the final program report and is based largely on a re-analysis of prior data in conjunction with data collected in the project's final year. The goal of this report is to clarify the lessons learned from the C4MGP project, specifically around the key drivers of middle grades reform in this project.

The 2009-2010 evaluation was framed around 12 major sets of evaluation questions which are organized into five sections.

Section A addresses the following evaluation question:

- How did the program change over time?

In this section, we discuss how the C4MGP logic model, program plan, and enactment changed over the course of the four years. We include in this discussion what the project highlighted or

¹ In year 4 the evaluation was overseen by a different department but the same staff member, since during the reorganization of CPS by the new administration the Department of Program Evaluation was dissolved.

sought to focus on, programmatic assumptions, areas of the model that lacked clarity, CPS contextual factors that influenced the project, and the implications of these on program enactment. This section helps show how the program was modified and evolved across time and how these modifications reflect different stakeholders' visions.

Section B focuses on district, project, and partner personnel and structures that affected the context of C4MGP. This section address the following evaluation questions:

- How well did the program enact their vision for middle grades reform?
- What successes or challenges were there with regards to developing, maintaining, and enacting a theory of change?
- How did the program deal with this?

Section C focuses on developments in the format of meetings, the clarification of expectations and the use of data amid distinct visions.

- To what extent did the program stakeholders have a shared vision?
- In what ways was the project impacted by external forces which influenced their vision, and how did they respond to this in order to maintain the integrity of the program?

Section D looks at progress by Year 4 to understand the following evaluation questions:

- To what extent have C4 schools been able to meet the various project expectations? What are the key drivers of change?
- What is the unique value added of C4MGP?
- What is the potential for sustainability beyond the final year of project support?
- To what extent have students' outcomes in 6th – 8th grade improved as a result of C4MGP?

In particular Section D focuses on how schools met (or not) the expectations developed by the project management team, what aspects of the project supported the progress schools made in meeting expectations, and how schools anticipate sustaining the progress they made. This section also includes summative analyses of changes in student outcomes in the project schools.

We **conclude** this report with a discussion of lessons learned focusing on the following evaluation questions:

- What lessons have been learned about how the program could be improved?
- What can similar projects learn from the experiences of C4MGP?

This section details some of the major lessons learned from this project that may help to inform further work of this kind, and in particular the work of similar projects currently being funded by the Chicago Community Trust in connection with partners at DePaul University, Loyola University, and UIC.

Data and Methodology

The 2009-10 evaluation of the C4MGP was grounded in case studies of 12 schools. Each was a C4MGP participant: 4 schools had participated for 3 years and 8 schools for 4 years. Schools were chosen to be in our sample based on their ranking on implementation measures relative to the C4MGP goals which were developed and assessed by project stakeholders

(managers/leadership coaches, university coaches, Area teams). Schools were ranked based on the points they received which reflected how well they met project expectations. The sample was constructed by dividing schools into quartiles and selecting 3 schools from each of 4 groups. The sample included as evenly as possible a mix of C4MGP coaching and Area configurations (i.e., 5 schools from Area 10 and 7 schools from Area 13). In addition, care was given to choose schools that PRAIRIE Group had multiple years of data for from prior C4MGP or CMSI evaluations.

Data used in the 2009-10 evaluation were collected from various sources over the course of the C4MGP. In 2009-10, data were collected by evaluators from the PRAIRIE Group across stakeholder groups both at the school and programmatic level. In 2009-10, evaluators interviewed principals and conducted at least one focus group with middle grades teachers in each of the 12 case study schools. In prior years, evaluators had collected data on 9 of these schools. These data included information on schools' level of implementation of the CMSI materials and middle school configurations as reported by Area Coaches, University Coaches, and principals in all four years of the project, as well as case school data for the years 2007-08 and 2008-09. Case school data in Years 2 and 3 of C4MGP included interviews with principals, observations of middle grades math and science classes, observations of AVID lessons, observations of teacher meetings, observations of advisory classes, and/or interviews/focus groups with teachers. There were 3 schools for which evaluators did not have such extensive multiple years of data. All data from case schools was systematically analyzed with reference to C4MGP expectations to assess changes over time within schools and to determine if there were patterns across schools and time.

In addition to the comparative case study, the 2009-10 evaluation included interviews with key stakeholders:

- 8 C4MGP Math and Science University-based Coaches
- 5 project leaders (current or former)
- representatives from each of the two foundations supporting this work
- 4 university partners working with the district on some aspect of this project
- 2 CPS Area staff

These data were analyzed in conjunction with interviews from prior years with Area staff and university-based coaches, management meeting notes and documents, four years of CPS proposals to foundations, four years of CPS reports, three years of PRAIRIE evaluation reports, and four years of evaluation work scopes to ascertain how the project's logic model developed and changed over time, how various stakeholders understood the C4MGP goals, and how project activities helped them fulfill its expectations..

Data used for the summative student and teacher outcomes analysis were drawn from district data systems and are described in detail in the document entitled "Gauging the effects of the Cluster 4 Middle Grades Project" (Gnedko & Price, July 2010).

Findings

A. C4MGP History, Project Logic Models, and Stakeholder Views

Yearly logic models.

In this section we discuss logic models of the C4MGP between the years of 2005 and 2010. The logic models were constructed by external evaluators for this report based on programmatic documents, and are designed to provide an overview of what project leaders proposed to occur in a given year. Comparing the models across years provides a sense of how the project changed, both in terms of specific elements and overall vision.

All models are color coded so that original elements and elements that were added in each year appear in a different color. The colors of original and new elements for each year are as follows:

- 2005-2006, First proposal submitted to funders → Black
- 2006-2007, Year 1 implementation → Red
- 2007-2008, Year 2 implementation → Blue
- 2008-2009, Year 3 implementation → Green
- 2009-2010, Year 4 implementation → Purple

In 2005-06, the original officer for OMS proposed a project to funders focusing on Algebra (the logic model in black). By summer 2006, changes were made to the initial proposal (the additions in red) and the project became known as the C4MGP. The original model is presented first as the 05-06 model. The year 1 model of the C4MGP program is contrasted to this first model. In the Year 1-3 models, elements which were removed from the project are left in the representation of the model but are crossed out in order to graphically display these deletions. However, in the Year 4 model, all previously removed elements are completely deleted (see further description below). The models for all years are presented in order, with descriptions of differences and changes summarized afterwards.

In examining these models, it is important to keep the following in mind:

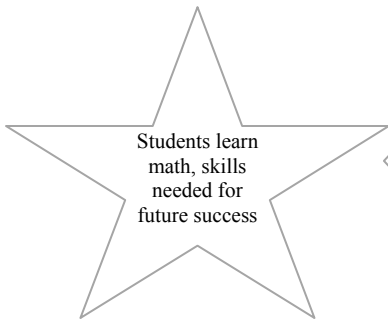
- 1) Language used in the models is taken from CPS yearly grant proposals, as well as CPS and PRAIRIE meeting notes (where appropriate) at the onset of each year. Thus:
 - The models reflect the perspective of this report's authors based solely on written artifacts and may not encompass the level of detail known by those closely involved with the project. They are meant as general representations of what was proposed to occur, rather than as detailed depictions of what may have actually been implemented.
 - Project changes that occurred during a given grant period and which took effect after the original grant proposal are excluded. These changes are reflected in the following year's model, where appropriate.
 - For example, in the Year 1 proposal and planning documents no mention is made of Leadership Coaching, even though the activity did take place during

Year 1. Leadership Coaching is included in the Year 2 model because it is clearly articulated in the Year 2 proposal and planning documents.

- 2) Phrasing in the models is derived from explicit statements found in these documents.
 - For example, in some cases planning documents used words like “school commits to...” In such instances, the model reflects the school action of “commitment” as opposed to an action that reflects active implementation of a commitment.
- 3) Expectations for schools are described as only the occurrence of the activity, without reference to the qualities of the activity which were also expected to occur.
 - When documents include references to the specific “qualities” of activities these are excluded. For example, in Year 4, planners articulated what effective advisories are supposed to look like (e.g., is internalized by stakeholders, etc.). The model includes only the activity—“Advisory.”
- 4) The models are meant to be used as the basis for conversation and inquiry rather than as representations of the project as implemented.
 - Deviations from the model which occurred during actual implementation are not reflected in the models here. These models are a representation of what planners proposed would occur, and not necessarily what actually occurred during implementation. It is expected that to some extent these models do not exactly represent what happened in the field during these years.

LONG TERM GOALS FOR C4MGP
SCHOOLS AND DISTRICT

ORIGINAL MODEL - 2005-2006



MG Students are prepared for high school math

All middle grade students have access to high quality math courses including algebra

Improved math instruction within middle grades

C4MGP
INPUTS

INDIVIDUAL SCHOOL, TEACHER &
PRINCIPAL ACTIONS

OUTCOMES FOR ALL
C4MGP SCHOOLS

\$ For University course tuition for:

- Middle Grades Endorsement
- 8th Grade Algebra Certification

Partial reimbursement for CMSI curriculum materials

\$ for stipends and substitutes for teachers to attend CMSI PD

Ongoing PD supports for CMSI curriculum implementation

Establish schedule that facilitates:

- Collaboration among middle grades math teachers
- Efficient use of project staff providing in-school PD

Designate up to 3 teachers to become 8th grade algebra certified

Allocate \$ to pay for CMSI curricula purchase not covered by C4MGP and implement CMSI math curricula in grades 6-8

Departmentalize math in grades 6-8

Allocate 60 minutes per day of math instruction

Require that all grade 6-8 math teachers are endorsed or working toward endorsements

Principals attend all CMSI math PD

Teachers attend all appropriate CMSI math PD

Schools are departmentalized in grades 6-8 and provide 60 minutes of instruction per day

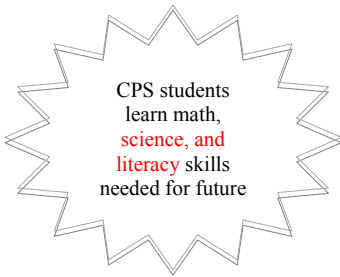
Middle grade math is taught by endorsed teachers or those working toward endorsement

School-wide implementation of CMSI curricula

Schools offer 8th grade algebra to all qualifying students

LONG TERM GOALS FOR C4MGP
SCHOOLS AND DISTRICT

YEAR 1 - 2006-2007



MG Students are prepared for high school math, science, and literacy

All middle grades students have access to high quality math, science, and literacy courses including algebra

Improved math, science, and literacy instruction within middle grades

INDIVIDUAL SCHOOL, TEACHER, &
PRINCIPAL ACTIONS

OUTCOMES FOR ALL
C4MGP SCHOOLS

C4MGP INPUTS

\$ For University course tuition for:

- Middle Grades Endorsement
- 8th Grade Algebra Certification

Partial reimbursement for CMSI curriculum materials

\$ for stipends and substitutes for teachers to attend CMSI PD

Ongoing PD supports for CMSI curriculum implementation provided by university coaches

\$ for AVID training sessions

Establish schedule that facilitates:

- Weekly planning time among middle grades teachers
- Efficient use of project staff providing in-school PD

Commit to implementing a plan to offer 8th grade algebra by 08/09

Allocate \$ to purchase research-based curricula in grades 6-8 not already funded by C4MGP

Create a plan to departmentalize in grades 6-8

Allocate 60 minutes per day of math instruction and/or 250 minutes per week of science

Require that all grade 6-8 teachers are endorsed or working toward endorsements

Principals attend all CMSI math PD designed for administrators

Teachers attend all appropriate CMSI math PD for:

- Instructional materials
- AVID

Teachers implement CMSI math and/or science curricula in classrooms

Teachers commit to acquiring math or science middle grades endorsements (including at least one teacher getting the 8th grade algebra certification); sign corresponding contract with district

Create dedicated team of middle grades math and/or science teachers

Purchase materials for, fund teacher PD, and implement AVID

Schools are departmentalized in grades 6-8 and provide appropriate time for each subject

Middle grade subjects are taught by endorsed teachers or those working toward endorsement

School-wide implementation of research-based curricula

Schools offer 8th grade algebra to all qualifying students

Schools implement the AVID program

LEADERSHIP STRAND

Leadership PD for:

- C4MGP principals
- 17 AIOs and their math/science and literacy coaches

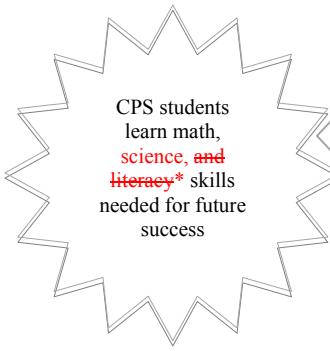
Principals attend Leadership PD

CPS AIOs and Area coaches attend Leadership PD

District leaders and teachers work together to change school and Area structures and cultures as schools departmentalize

LONG TERM GOALS FOR C4MGP
SCHOOLS AND DISTRICT

YEAR 2 - 2007-2008



MG Students are prepared for high school math and science

All MG students have access to high quality math, science, and literacy courses including algebra

High quality math, science, and literacy instruction in MG

The unique needs of adolescent students are supported

INDIVIDUAL SCHOOL, TEACHER, & PRINCIPAL ACTIONS

↑
OUTCOMES FOR ALL C4MGP SCHOOLS

C4MGP INPUTS

\$ For University course tuition for:

- Middle Grades Endorsement
- 8th Grade Algebra Certification

Partial reimbursement for CMSI AND algebra curriculum materials

\$ for stipends and substitutes for teachers to attend CMSI PD

Ongoing PD supports for CMSI curriculum implementation provided by university coaches

\$ for AVID training sessions

Establish schedule that facilitates:

- Weekly planning time among middle grades teachers
- Efficient use of project staff providing in-school PD

Commit to implementing a plan to offer 8th grade algebra by 08/09

\$ to purchase math, science, and/or algebra materials in grades 6-8 not already funded by C4MGP

Create a plan to departmentalize in grades 6-8

Allocate 60 minutes per day of math instruction AND 250 minutes per week of science

Require that all grade 6-8 teachers are endorsed or working toward endorsements

Principals attend all CMSI math PD designed for administrators

Teachers attend all appropriate CMSI math PD for:

- Instructional materials CMSI math and science
- AVID

Teachers implement CMSI math AND science curricula in classrooms

Teachers commit to acquiring math or science middle grades endorsements (including at least one teacher getting the 8th grade algebra certification); sign corresponding contract with district

Create dedicated team of middle grades math and/or science teachers

Purchase materials for, fund teacher PD, and implement AVID

Schools are departmentalized in grades 6-8 and provide appropriate time for each subject

Middle grade subjects math and science is taught by endorsed teachers or those working toward endorsement

School-wide MG implementation of research-based CMSI math and science curricula

Schools offer 8th grade algebra to all qualifying students

Schools implement the AVID program

LEADERSHIP STRAND

Leadership PD for:

- C4MGP principals
- 17 AIOs and their math/science and literacy coaches

Leadership coaching for C4 principals

Principals attend Leadership PD

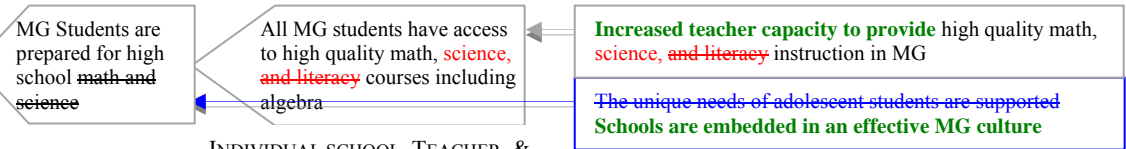
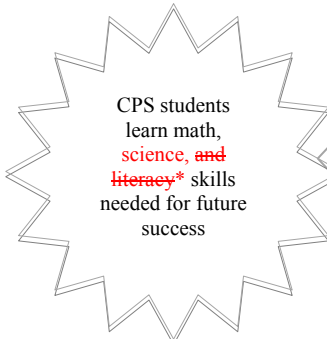
CPS AIOs and Area coaches attend Leadership PD

Principals work with coaches on school organization

District leaders and teachers work together to change school and Area structures and cultures as schools departmentalize

LONG TERM GOALS FOR C4MGP
SCHOOLS AND DISTRICT

YEAR 3 - 2008-2009



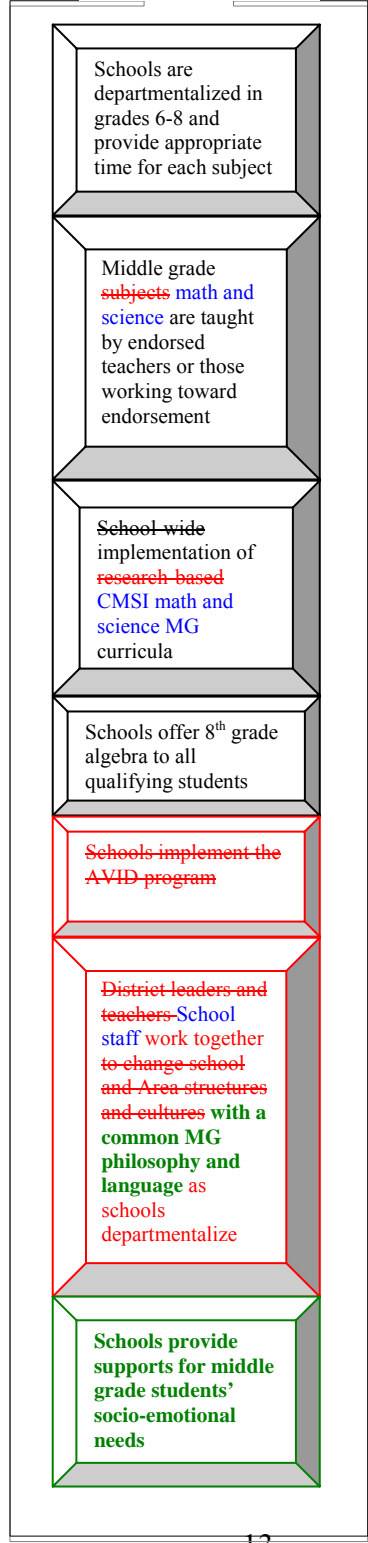
INDIVIDUAL SCHOOL, TEACHER, &
PRINCIPAL ACTIONS

OUTCOMES FOR ALL
C4MGP SCHOOLS

- C4MGP INPUTS**
- \$ For University course tuition for:
 - Middle Grades Endorsement
 - 8th Grade Algebra Certification
 - Support for recruiting for and retaining university course participants**
 - Partial reimbursement for **ONLY science and algebra** materials
 - \$ for stipends and substitutes for teachers to attend CMSI PD
 - Ongoing PD supports for CMSI curriculum **and algebra** implementation provided by university coaches
 - \$ for AVID training sessions
 - Leadership PD for:
 - C4MGP principals
 - 17 AIOs and their math/science coaches
 - C4MGP school leadership teams
 - Leadership coaching for C4MGP principals and Lead Teams
 - Cadre subs for team planning time
 - Support Area work with HS articulation

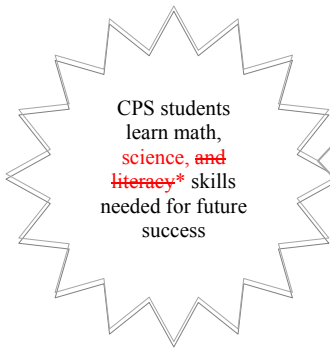
- RECOMMIT** to establish schedule that facilitates:
 - Weekly planning time among middle grades teachers
 - Efficient use of project staff providing in-school PD
- RECOMMIT** to implementing a plan to offer 8th grade algebra by 08/09
- RECOMMIT** to math, science, and/or algebra materials in grades 6-8 not already funded by C4MGP
- RECOMMIT** to departmentalize in grades 6-8
- RECOMMIT** to 60 minutes per day of math instruction and/or AND 250 minutes per week of science
- Require that **RECOMMIT** that all grade 6-8 teachers are endorsed or working toward endorsements
- Purchase materials for, fund teacher PD, and implement AVID
- Create dedicated **LEADERSHIP** team of middle grades math and/or science teachers and Principal/AP that:
 - Attends Leadership PD
 - Establish a common MG philosophy and language
- Principals attend all CMSI math PD designed for administrators
- Teachers attend all appropriate CMSI math PD for:
 - Instructional materials CMSI math and science
 - AVID
- Teachers implement CMSI curricula in their classrooms
- Teachers **RECOMMIT** to acquiring math or science middle grades endorsements (including at least one teacher getting the 8th grade algebra certification); sign corresponding contract with district
- School provides "transition to HS" supports such as advisory and/or exploratories

- All CPS AIOs and Area coaches attend Leadership PD
- Principals work with coaches on school organization



LONG TERM GOALS FOR C4MGP
SCHOOLS AND DISTRICT

YEAR 4 - 2009-2010

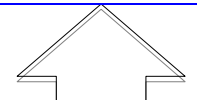


MG Students are prepared for high school math and science

All MG students have access to high quality math, science, and literacy courses including algebra

Increased teacher capacity to provide high quality math, science, and literacy instruction in MG
The unique needs of adolescent students are supported
Schools are embedded in an effective MG culture

INDIVIDUAL SCHOOL, TEACHER, & PRINCIPAL ACTIONS



OUTCOMES FOR ALL C4MGP SCHOOLS

C4MGP INPUTS

- \$ For University course tuition for:
 - Middle Grades Endorsement
 - 8th Grade Algebra Certification
- \$ for stipends and substitutes for teachers to attend CMSI PD
- Ongoing PD supports for CMSI curriculum and algebra implementation provided by university coaches
- Leadership PD for:
 - C4MGP principals
 - C4MGP school leadership teams
- Leadership coaching for C4MGP principals and Lead Teams
- Cadre subs for team planning time
- Support Area work with HS articulation
- \$ for school staff to attend conferences
- Provide best-practice models for schools for advisory, exploratory, teaming, scheduling, looping
- Support for applying to "Schools to Watch"
- Facilitate BRIM training
- MG best practices Showcases
- Middle grade transformation toolkit
- Facilitate visits to "schools to watch"

- RECOMMIT to implementing a plan to offers 8th grade algebra by 08/09 to qualifying students
- RECOMMIT to math, science, and/or algebra materials in grades 6-8 not already funded by C4MGP
- RECOMMIT to departmentalize in grades 6-8
- RECOMMIT to 60 minutes per day of math instruction and/or AND 250 minutes per week of science
- Require that RECOMMIT that all grade 6-8 teachers are endorsed or working toward endorsements in the subjects they teach
- Create dedicated LEADERSHIP team of middle grades math and/or science teachers and Principal/AP that:
 - Attends Leadership PD
 - Shares Leadership PD learning with colleagues
 - Establish a common MG philosophy and language
- Principals attend all CMSI math PD designed for administrators
- Teachers attend all appropriate CMSI math PD for:
 - Instructional materials CMSI math, science and algebra
- Teachers implement CMSI curricula in their classrooms
- Principals work with coaches on school organization
- School provides "transition to HS" supports such as including:
 - Advisory
 - Exploratories
 - School-specific curriculum for social, emotional, and academic needs of adolescents
- Appropriate staff members attend MG conferences and share learning with school colleagues
- In addition to the Leadership Team, the following collaborations occur regularly (where appropriate):
 - Planning time among teachers who work with the same students
 - Grade level meetings
 - Content-area teams

- Schools are department-alized in grades 6-8 and provide appropriate time for each subject
- Middle grade subjects math and science are taught by endorsed teachers or those working toward endorsement
- School-wide implementation of research-based CMSI math and science MG curricula
- Schools offer 8th grade algebra to all qualifying students
- District leaders and teachers-School staff work together to change school and Area structures and cultures with a common MG philosophy and language as schools departmentalize
- Schools provide supports for middle grade students' socio-emotional needs

Model highlights.

The following are highlights from each logic model. Highlights include major focal points and elements that were added or deleted from previous models.

2005-2006 (Original model).

- The original proposal was entitled, *Preparing Students for Algebra: A Comprehensive School-Based Program to Enhance Middle Grades Mathematics Instruction*.
 - There was a strong emphasis on algebra as a gateway to student success.
- The entirety of the proposal focused on mathematics instruction and learning.
- The CMSI model of research-based curriculum adoption and corresponding professional development served as a major building block for the model.²

2006-2007 (Year 1 model of C4MGP).

- In addition to mathematics the revised project encompassed science and literacy.
 - Schools were encouraged to opt into CMSI science implementation (to be supported by university coaches, university courses, CMSI PD).
 - Literacy did not support a set curriculum.³
- The proposal clarifies that in school support for math and science implementation would be delivered by university coaches (this was not specified in the 2005-2006 model).
- The AVID program was incorporated as a required part of C4MGP.
- A “Leadership” strand was added that required district-level leaders and their teams from across all CPS Areas, along with C4MGP principals, to engage in professional development covering three content areas: literacy, mathematics, and educational leadership.
- School, teacher, and principal actions were specified in more detail.

2007-2008 (Year 2 model).

- References to Literacy were removed from the project.
- All project schools were expected to begin or continue to implement CMSI science curricula

² For comprehensive information on CMSI see *Scale Up: Systemic reform of math and science education in Chicago* on line at <http://luc.edu/scaleup/index.php> or http://www.luc.edu/cse/programs/PDFs/White_Paper_MASTER_012609.pdf

³ At the time, the CPS Office of Literacy did not have any district supported curricula.

- The Leadership strand expanded by providing consulting to C4MGP principals around project implementation via Leadership Coaches.
- The logic of the project was articulated in terms of its impact on both:
 - Instruction and learning of math and science
 - Supporting the unique needs of adolescent students

2008-2009 (Year 3 model).

- The Leadership strand was no longer a separate strand of activities and encompassed programming aimed at C4MGP teachers and principals.
- Schools were asked to recommit to the activities they agreed to in previous years.
- School “leadership teams” of middle grades teachers took on an important role in the logic of the project.
- School support for students’ socio-emotional needs became an explicitly stated outcome.
- Schools were expected to support students’ transition to high school through specific activities.

2009-2010 (Year 4 model).

- Some elements had been removed entirely from the model, including:
 - AVID inputs, activities, and outcomes
 - AIO and Area coach Leadership PD inputs and outcomes
 - Support for recruiting and retaining university course participants
 - Reimbursement for purchasing curriculum materials
- Many project inputs were added in Year 4. Many of these were support services, tools, and learning opportunities for teachers.
- Additional school, teacher, and principal actions for this project year emphasized collaborative processes and teacher leadership.

[Analysis of program logic.](#)

The following is an analysis of logic model components and assumptions over the years of the project. Within each subsection we discuss issues regarding the logic of the program and how it did or did not change over the course of the project.

Many elements were added—few were removed or revised.

As shown in the logic models, the C4MGP maintained the original elements proposed in 2005 and continued to work toward most of its core objectives. As the project progressed over the years, numerous inputs, activities, and outcomes were added while very few were removed or

revised. This can be seen clearly by the additions made in each year of the color-coded logic models. By way of example, some elements that were added to the original model included:

- Offering the program to a growing number of schools (the project was originally proposed to be delivered to five schools in one Area)
- Introduction of additional subjects and programs including
 - Science
 - Literacy
 - AVID
- Providing additional professional development including
 - AVID PD and AVID Coaches
 - Leadership PD and Leadership Coaches
- New administrative players
 - CPS Office of Literacy
 - AVID administrators
 - All Area Instructional Officers (AIOs) and all Area math/science and literacy coaches
- Expectations for implementation of in-school activities
 - Advisory
 - Exploratories

Some key elements which were then subsequently removed from the model included literacy components and the AVID program and its supports. During the process of creating the yearly evaluations for the project, it was unclear to evaluators how either literacy or AVID was intended to integrate into the project and support the overall project goals. Early discussions about the inclusion of the literacy component generally focused on ideas of building whole-school capacity, or the fact that departmentalization would affect not just math and science but also literacy teachers. However, unlike the strong partnerships around math and science endorsements between CPS and the universities, as well as the district supported curricula resources provided through CMSI, literacy had neither of these support structures in place.⁴

Similarly, discussions around AVID tended to focus on the idea that this would provide students with study skills needed for high school, and would provide teachers with ways of helping their students learn to organize information. However, the role of AVID in C4MGP was unclear. In fact, there appeared to be confusion over whether AVID was supposed to be used as a curriculum for advisory periods, used as a curriculum for a separate AVID class, or be integrated into the content areas (for more detailed findings related to AVID, see Department of Program Evaluation, September, 2008; PRAIRIE Group, June, 2007; PRAIRIE Group, January 2008)

⁴ In later years the Office of Literacy adopted a similar model to the CMSI with district-supported curricula through the Supported Core Reading Materials Adoption initiative. However, this was not in place while literacy was a part of C4MGP.

The Leadership strand was not clearly integrated into the original model.

In Year 1 of the project a specific group of inputs and activities was conceptualized as a distinct “leadership”⁵ strand. In fact, some planning documents suggest that there was to be a separate grant to fund these leadership activities.⁶ As the years progressed, and particularly after the C4MGP began providing leadership PD to teachers as well as administrators, leadership programming became less focused on the content areas (math, literacy, leadership) and more focused on middle grades structures and activities to support middle school students (scheduling, advisory, Breaking Ranks in the Middle (BRIM) training). Below is a brief description of what content areas were covered under the leadership umbrella, who presented the content, and who the target audience was.

- In Year 1, the Leadership PD was required of all 24 C4MGP Principals, all CPS AIOs, and all Literacy and Math/Science Coaches. Content was presented primarily in 3 content strands (math, literacy, and leadership). OMS staff presented the math, Donna Ogle from National-Louis University presented the literacy, and James Spillane from Northwestern University presented the leadership.
- Year 2 started out the same way with the addition of science and social studies presented by CPS staff. By mid-year, however, Leadership Coaches/Project Managers began to move the content towards “middle school” topics and brought in Deborah Kasak from the National Forum to Accelerate Middle-Grades Reform, among others.
- Year 3 Leadership PD was offered only to principals and leadership teams/middle grades teachers within the C4MGP. Most if not all of the topics were related to middle school themes. Leadership Coaches/Project Managers gave the presentations, sometimes in conjunction with consultants.
- Year 4 Leadership PD was again offered to C4MGP principals and their leadership/middle grades teams. The topics were from the Breaking Ranks in the Middle (BRIM) curriculum and were presented in part by school teams who were trained in BRIM the previous summer.

At the onset, project leaders never clearly articulated how leadership inputs and activities would work with the other core inputs and activities and how they would work toward long-term goals. In the last two years, the focus on middle school issues with the middle school team seemed to bring coherence to this strand.

Supporting the needs of the adolescent was added as a long-term goal later in the project.

In Year 2 of the project a new long-term goal emerged. Specifically, project documentation asserts that supporting the unique needs of adolescent students was expected to further the project’s progress toward the goal of helping students attain necessary math and science skills. However, in later years, when project planners were asked to discuss the C4MGP’s logic starting from its inception, support for adolescent needs was retrospectively mentioned as an original goal.

The addition of this new goal had substantive impacts in later years, as the focus of the project increasingly turned towards the needs of adolescents and away from math and science

⁵ We put *leadership* in quotes to attune the reader to the fact that the use of the word did not necessarily always reflect the materials presented in the PD, as content area PD was included as part of the leadership PD (e.g., math, science).

⁶ Conversations with program planners and managers indicate that a separate grant proposal was never written.

instruction. In essence, the addition of a new overarching goal to the project changed its theory of action. Furthermore, the project proposals contain no clear articulation of

- How the original inputs and activities would work in the service of the new long-term goal around adolescent needs
- How new inputs and activities around adolescent needs would work toward the original goals of improved instruction and learning in math and science
- How original inputs and activities focused on improving instruction and learning in math and science would work in concert with new inputs and activities around adolescent needs toward the ultimate project goals.

In time, two groups of inputs and activities emerged: Content-specific and non content-specific. As shown in the original 2005 model, the C4MGP was conceptualized as a mathematics content and instruction initiative. By the fourth year of the project, many non content-specific elements had entered into the model. At least one element, leadership PD, morphed from focusing on content related topics to focusing on structures, pedagogical methodologies, and the needs of adolescent students. School data also bear out this observation in terms of how teachers and principals discussed the project. The following lists provide examples of inputs and activities falling within the two groups:

- Content-specific
 - CMSI PD
 - University courses
 - University coaches
 - Cadre subs
- Non content-specific
 - Leadership PD
 - Leadership coaches
 - Advisory
 - Exploratories

Cadre subs were a unique addition to C4MGP and while these substitute teachers were content experts, they were called into schools for both content-specific and non content-specific purposes. Cadre subs were endorsed math and science teachers steeped in the CMSI curricula. Their position developed out of a need for coaches to have time to discuss teachers' practice more deeply with them while also meeting teachers' needs to ensure that their students would not fall behind in the curriculum when teachers were out of the classroom. These substitutes could be requested by university coaches, area coaches and leadership coaches based on project needs so that teachers could be released from their classes to work with a university coach, observe an expert teacher, or engage in team planning.

B. District, Project, and Partner Staffing and Structures

In this section we discuss the people and structures that affected the context of the C4MGP, as well as the partnerships that helped shape the project. We begin by presenting a summary of key staffing and structures within the district, project, and partnerships. This is followed by a discussion of some of the implications of staffing and structures.

Summary and timeline of key staffing and structures.

Over the course of the C4MGP, the school district changed in many ways that had implications for the project. Below we begin by discussing the administrative and structural systems of CPS at the time of the original grant proposal in 2005, which served as basis for the context of the proposed project. The table following this text displays changes to these structures as the project progressed.

In the spring of 2006, just prior to Year 1 implementation, district and partner structures pertinent to C4MGP included

- Arne Duncan – Chief Executive Officer
- Barbara Eason-Watkins – Chief Education Officer
 - Marty Gartzman – Chief Officer, OMS
 - Mike Lach – Director of Science
 - Chandra James – Elementary Science Manager
 - Mary Jo Tavormina – Elementary Mathematics Manager
 - Bret Feranchak – Senior Research Analyst, OMS
 - Diane Zendejas – Area 10 Area Instructional Officer
 - Analila Chico – Area 12 Area Instructional Officer
 - Yvonne Womac – Area 13 Area Instructional Officer
- Loyola University and University of Illinois at Chicago – provide coaches and personnel to support teachers’ implementation of CMSI
- DePaul University, Loyola University, University of Illinois at Chicago, and University of Chicago – provide partnership around and courses for the Algebra Initiative
- Chicago Community Trust and McDougal Family Foundation – provide funding for project

As shown in the table below, personnel changed drastically over the years between 2006 and 2010. By extension the types and levels of support, as well as individuals’ and offices’ ability to support CMSI and C4MGP, also changed. We characterize “high” level of support in those instances where ideas, resources, and/or public discourse were supporting the C4MGP.

Table 1. C4MGP changes in CPS staffing, structures, and support over time

Year	C4MGP Management	Key district staffing changes	Key district structure changes	Levels of support of CMSI and C4MGP
2006-2007	<ul style="list-style-type: none"> • Gartzman and Lach as PIs • Lach hires Marietta Beverly as a Leadership Coach (part time) • Beverly hires Gina Grant as project manager (full time) 	<ul style="list-style-type: none"> • Gartzman leaves CPS • Lach becomes head of OMS • Evaluation moves from inside OMS to new department within CPS • AIO Womac transitions Epps as replacement in Area 13 	<ul style="list-style-type: none"> • Feranchak becomes head of new centralized Department of Evaluation within CPS 	<ul style="list-style-type: none"> • High level of support for the CMSI model and C4MGP from the district level
2007-2008	<ul style="list-style-type: none"> • James as PI • Beverly and Grant hire Rosa Ramirez as a Leadership Coach (part time) 	<ul style="list-style-type: none"> • OMS no longer responsible for high school math and science • Lach becomes head of High School Math and Science • James becomes head of OMS (elementary math and science) • Carolyn Epps becomes AIO of Area 13 • Isabel Mesa-Collins becomes AIO of Area 10 	<ul style="list-style-type: none"> • District splits content responsibilities into elementary and high school units; previous content units responsible for K-8, while previous high school unit takes over content 9-12 	<ul style="list-style-type: none"> • High level of support for the CMSI model and C4MGP from the district level • Xavier Botana, officer for newly formed Office of Instructional Design and Assessment, becomes active in C4MGP management
2008-2009	<ul style="list-style-type: none"> • Grant, (full time) • Beverly, Ramirez (part time C4MGP, part time Specialization Policy work for Botana) 	<ul style="list-style-type: none"> • Duncan leaves CPS to become Secretary of Education • Ron Huberman appointed by Mayor Daley as CEO of CPS • AIO Chico retires from Area 12 • AIO Epps is replaced by Smith in Area 13 	<ul style="list-style-type: none"> • OMS is split into separate offices of science and mathematics • Huberman institutes reforms based on performance management • Area 12 is subsumed by Areas 10 and 13 	<ul style="list-style-type: none"> • District structural and financial support for CMSI and C4MGP diminishes as changes are made at the central office under the new CEO
2009-2010	<ul style="list-style-type: none"> • Grant, moved to new Office of Program Management within CPS (full 	<ul style="list-style-type: none"> • Botana leaves CPS • Lach leaves CPS • Feranchak leaves CPS 	<ul style="list-style-type: none"> • Decentralization policies of new CEO lead to massive loss of staff and 	<ul style="list-style-type: none"> • CAOs are granted high levels of control over math and science funding allocation - one CAO supported

Year	C4MGP Management	Key district staffing changes	Key district structure changes	Levels of support of CMSI and C4MGP
	time) <ul style="list-style-type: none"> Beverly, Ramirez (part time C4MGP) 	<ul style="list-style-type: none"> James leaves OMS for Area Office Tavormina leaves CPS for UIC Barbara Eason-Watkins leaves CPS 	resources in Offices of Math and Science <ul style="list-style-type: none"> Management position for C4MGP moved out of Office of Math AIOs roles reconceptualized away from focus on instruction; now titled Chief Area Officers (CAO) Department of Program Evaluation is dissolved 	C4MGP with Area resources, one did not. <ul style="list-style-type: none"> Focus of new administration is decentralization of educational decisions, causing district leaders to question the centralized support structures of C4MGP and CMSI, weakening these structures. CPS staff supporting C4MGP are reorganized several times, leading to lack of prioritization of C4MGP or capacity for planners to support.

Implications.

Overall district infrastructure of support.

Given the structure and commitment levels of the CPS administrative setup early in 2006, the design for the project assumed specific personnel would remain in place or that their replacements or the infrastructure would continue to sustain the program. These included:

- District-level support of CMSI mission and model (e.g., Duncan and Eason-Watkins)
- Office-level direction (e.g., Gartzman)
- Mid-level content direction (e.g., Lach and James)
- Project-specific management (e.g., Grant and Tavormina)
- Internal evaluation integrated into project (e.g., Feranchak)
- Buy-in from AIOs (e.g., Womac, Zendejas, Chico)

By 2010, the above structures and staffing were almost entirely different. Many of the support structures which had been in place were gone, and the district had adopted a different philosophy of how to improve education which was at odds with the model used by C4MGP. While a few staff remained, their roles in the organization had changed. Although the evaluation did not specifically gather data focused on the implications of these changes, the following patterns can be gleaned from the summary provided above.

[Key district staffing changes.](#)

Given that C4MGP was building upon the foundation of and buy-in for the CMSI, the original proposal for the project grant assumed certain levels of support for this type of model. Part of this buy-in was a function of key decision makers within the district. In particular, Duncan and Eason-Watkins had committed to supporting the mission of the CMSI and its model from the inception of the initiative. As shown in the table, as the roles within the district changed, so did the levels of support for both CMSI and C4MGP.

When Huberman became CEO of schools in January of 2009, he introduced major shifts in the priorities and structures of the district. He instituted a program of performance management (PM) in which all district offices were asked to present data to his board regarding their performance and the effectiveness of the services they offered. For most of the 2009 calendar year, decisions regarding district structures and goals were largely put on hold while the new CEO conducted PM sessions with many CPS offices.

The shift in CEO dovetailed with a major budget shortfall in CPS. This resulted in substantial layoffs in late 2009 and into early 2010 which significantly affected staff who were overseeing and involved in the project. During the middle to late part of 2009 many CPS senior staff found that their vision of education diverged from that of Huberman and they either departed the district or were laid off. This resulted in significant instability in all district offices, including the now reconfigured Office of Mathematics and Office of Science, both of which were being overseen by interim directors by early 2010. Huberman enacted structural and resource allocation changes which were designed to decentralize all decision-making, and remove district offices from providing most direct services (e.g., PD, curriculum support, coaching, etc.). This largely removed the support structures at the district level which were major pillars of C4MGP. The changes in CPS had major implications for the management and enactment of the C4MGP during its 4th year.

[Key district structure changes.](#)

One central development in 2006-2007 was the movement of all internal evaluation activities within CPS to a centralized department within the Office of Research, Evaluation, and Accountability. Feranchak, who had been the internal evaluation director for OMS since before the initial implementation of the CMSI no longer met as regularly with OMS administrators and C4MGP project staff. This change had implications for the ways in which formative internal and external evaluation functioned for the C4MGP and the district at large.

Specifically, Feranchak's involvement between 2002 and 2006 in regular meetings and decision-making processes within OMS allowed formative evaluation findings to enter into discussions ad-hoc. The paradigm shift to a centralized evaluation office, although approximating the former office-centered system by the assignment of evaluation portfolios to researchers (to Price in the case of the C4MGP), naturally introduced distance between evaluation and project management. This also meant that OMS did not have evaluators who were wholly focused on their needs. In later years C4MGP management expressed frustrations at a perceived lack of utility of both internal and external evaluation. Ultimately, the Department of Program Evaluation was dissolved after Huberman became CEO. Although evaluation responsibilities for the project were able to be transitioned with Price when she moved into another CPS office, the dissolution of roles for program evaluation strongly indicated that the district was no longer supportive of this kind of in-depth evaluation work.

Splitting of OMS into two offices.

The split of OMS into separate offices for mathematics and for science ushered in a period of instability within the math and science community of CPS. In particular, this splitting of the department into two distinct offices undermined the foundational work begun at the onset of OMS and the CMSI and the eight years of work integrating math and science programs (see Hallman, Fendt, Wenzel at http://www.prairiegroup.org/images/Urban_System_Program_-_Leadership_Academy_Oct_03.pdf). One implication of this split was the insecurity it presented – both from the perspective of staff who were at odds with the new CEO’s vision and for school staff who no longer “knew who to call” regarding math and science issues. By the end of 2009, it became unclear whether there would be continued support for the implementation of CMSI materials or whether CMSI itself still existed.

Support for CMSI and C4MGP.

As shown above, major changes and shifts occurred within the CPS administrative structure at the onset of Year 1 (2006-20) of C4MGP implementation. While strong support for the CMSI remained, with Gartzman’s exit as Chief Officer of OMS the original visionary behind the CMSI project was now gone. Both Lach and James strongly supported and championed the original vision of CMSI. For a time, the C4MGP vision was in line with the CMSI vision—a vision of high quality math and science curricula coupled with teachers endorsed in their subject area and steeped in the use of CMSI materials. The administrative shifts in CPS were challenging for the project and its alignment to CMSI. Ultimately, the changing district vision affected the levels of support for the CMSI and the C4MGP.

In early years of the C4MGP, support for its mission and model came from the centralized decision maker in the district who established district-wide priorities and at least some Area level spending allocations. For this reason, planners and funders of the C4MGP originally decided to implement the project in a single cluster of three instructional areas, Cluster 4. The cluster was chosen partially due to the level of buy-in of the AIOs of the three areas. With the shift in priority-setting and financial decision-making duties from centralized content offices to individual CAOs, support for the project within the two remaining Areas of Cluster 4 diverged. As Areas attempted to develop their own priorities and strategies, one Area made the project a low priority during its last year.

C4MGP management.

With Gartzman’s exit in 2006-2007, Lach took over as the head of OMS. During this year Lach hired Beverly, a former middle school principal, to help manage the C4MGP. Beverly’s position was a half-time position, but it quickly became clear that the work involved in developing and managing the project was more than a half-time position could handle. Lach invited Beverly to interview and hire Grant. A year later as Lach moved to the high school position and Grant was given more aspects of the C4MGP to manage, Ramirez, a former middle school principal within C4MGP, was hired as a second half-time position within C4MGP. As the PI position shifted to James, Botana became a hands-on manager of the C4MGP managers and OMS leadership. In time, Botana became less involved, but he hired Beverly and Ramirez to work part time on

helping principals to understand the new Specialization Policy⁷, thereby splitting their time between C4MGP and the Specialization Policy work.

Beverly, Ramirez, and Grant spent most of their time in day-to-day management of the project. With the almost yearly changes of PI on the project and OMS's lack of a strategic planner or inside evaluator, the project managers were left to direct the C4MGP without the assistance of someone within OMS making sure their activities were aligned to the full OMS vision for CMSI support. At one point in time, C4MGP managers asked internal and external evaluators to assist them with logic modeling, strategic planning, and developing measurement tools and rubrics for the project; however, this aspect was never included as part of the evaluators' work scope.

University partners and funders.

When Gartzman and Lach planned the C4MGP, they continued their established practice of bringing together Chicago stakeholders from both foundations and universities. In the early years of the CMSI, Gartzman had made clear his vision of improving math and science education by improving teachers' content knowledge and pedagogy. C4MGP built on this by calling again on University Partners to continue to work with CPS by offering a series of math and science courses to CPS teachers such that they could become endorsed/credentialed in middle grades mathematics, science, and Algebra 1. Loyola University and UIC provided math and science coaches to support to teachers in schools. DePaul University, University of Chicago, and UIC continued to work together with CPS on the Algebra Initiative by providing classes for Algebra 1 certification. The McDougal Family Foundation and the Chicago Community Trust supported this endeavor by providing the funds to subsidize these courses for Cluster 4 teachers. These external partners remained committed to the goals of increasing students' understanding of math and science by providing university courses and direct support via a university coach to middle grades teachers within Cluster 4.

While other relationships seemed to disintegrate, these partnerships remained strong and stable throughout the project. The partnerships were not a focus of the evaluation, so it is not clear exactly what factors allowed the partnerships to be sustained while so much changed around them, but it is clear that each partner remained committed to a similar vision and found a benefit in working towards that goal together. Many of these same partners continue to work together on similar projects within CPS (CCT is supporting work in Area 10 with Loyola and in Areas 1 & 6 with DePaul in 2010-11, the Algebra Initiative continues with DePaul, UIC, University of Chicago, & CPS, and DePaul, Loyola, UIC, UC, CPS and CCT wrote a grant for federal support of joint programs and research.⁸

⁷ CPS Specialization Policy was developed under the Chief Education Officer to ensure that all students were taught by a qualified teacher. This policy states that teachers must be endorsed in all content areas that they teach.

⁸ For further information on the uniqueness of the external partnerships in CPS see *Scale Up: Systemic reform of math and science education in Chicago* on line at <http://luc.edu/scaleup/index.php> or http://www.luc.edu/cse/programs/PDFs/White_Paper_MASTER_012609.pdf

C. Developments in the Format of Meetings, the Clarification of Expectations, and the Use of Data Amid Distinct Visions

In this section we discuss the processes and products of the group charged with managing and administering the C4MGP. This group, which met regularly in management meetings consisted of various players over the course of the project, including CPS administrators both within and external to OMS, C4MGP project staff, university partners, and evaluators. We include in this a discussion of stakeholders' visions and attempts to develop joint understanding of expectations and roles.

Project meetings and the use of data.

As discussed in part B, at the start of C4MGP the OMS not only had internal evaluators to help with project development, it also had a liaison to work with university partners on disseminating university course materials and assisting teachers with the enrollment process. In addition, OMS had an internal data manager who recorded, analyzed, and reported on data collected by the project such as university enrollment per course and attendance by CPS/C4MGP teachers and teachers' attendance at CMSI professional development.

In the first two years of the project, C4MGP management meetings focused on disseminating the latest data to various stakeholders. These data included teacher level data on:

- attendance for various professional development workshops
- enrollment in university courses
- endorsement status

The management meetings typically focused on the data and any issues that had surfaced for stakeholders. AIOs and coaches would review the data in the meeting, and make determinations about which principals and teachers they needed to follow-up with regarding their progress towards endorsement or their attendance at PD. By providing these data at regular intervals, the project managers created a feedback loop which allowed the program participants to monitor the project's progress and to encourage teachers in the C4MGP schools to attend the development opportunities. It also provided a management mechanism to discuss with principals issues of their staff not regularly attending PD, and to troubleshoot issues (such as principal reticence to have multiple teachers out at one time).

This use of data was unique in CPS at the time—OMS was one of the few offices to track PD attendance since a central infrastructure was lacking, and they had also built a relationship with the universities to carefully track endorsement course taking. This use of data is an excellent example of how program monitoring data can be used to further the goals of the program—based on discussions in the meetings and the program's success in getting teachers to attend the various development opportunities these data were a key lever which enabled the project leaders to drive schools towards the expected outcomes.

At the start of Year 3 the project managers began to use a new meeting format, and although the information continued to be provided to the AIOs it was not discussed at the meetings. Instead, management meetings focused on the development of roles and expectations.

Another source of data came from the internal and external evaluation of the project. The evaluation team generally held quarterly evaluation meetings to discuss with the extended

project group (including project leaders, AIOs and coaches) the results of the evaluation. However, feedback from the project leaders suggested that they struggled to figure out how to use the information from the evaluation reports. In response to this the evaluation team tried various modifications to the evaluation plans and the reporting to make the information more usable to the project planners, but problems persisted. One particularly sticky issue was that the project managers only had program monitoring in place for a limited number of the project expectations—specifically those around PD attendance, endorsement course-taking, and (to some extent) endorsement status. They expressed constant frustration that the evaluation team did not provide information on every school that could help in project management (e.g., departmentalization status, implementation status, etc).

In retrospect, it would have been important for the evaluation team to help the program planners set up a robust monitoring system based on key program metrics to assess the extent to which schools were progressing towards project goals. The project managers lacked the technological expertise to develop a monitoring system on their own, and the evaluation team resisted this role because of limited capacity and a desire to see evaluation resources focus on more program-level issues. But the lack of this infrastructure created significant frustrations for the project team and ultimately made it more difficult to assess program outcomes because some critical year-by-year change data was never collected.

It appeared that the ready availability of data around PD and endorsement course attendance was at least partially responsible for the success the project had in these areas. Given this, future projects should take seriously the development of program monitoring systems based on key metrics, and regular review of the data with stakeholders to determine next steps. One caveat to this, however, at one point late in the program the project managers began considering how they could measure progress towards expectations. Their planned data collection was incredibly large and included extensive document review of everything from team agendas to lesson plans. Although the planned data collection very thoroughly covered many aspects of the program's expectations (particularly with regards to content and quality), it was both too complex and labor intensive for both schools and program staff to collect and analyze data in a meaningful way and was never instituted. As will be discussed in a forthcoming section on lessons learned, examining the use of data in C4MGP illustrates the notion that monitoring systems should start out by focusing on key indicators, and build in (or remove) metrics as it becomes necessary throughout the program's lifecycle.

[Setting the expectations.](#)

When C4MGP began, the project was conceptualized around a series of general goals and the activities that were expected to accomplish these goals (as shown in the logic models). However, during the first two years of the project there was relatively little detail provided to participants about exactly what the project leadership expected participants to accomplish in order for them to be deemed "successful." Some objectives were clearer than others. The clearest objectives tended to be those which were more structural or procedural in nature, such as: develop departmentalized schedules, hire endorsed teachers, encourage non-endorsed teachers to attend university endorsement courses, or have teachers implement CMSI curricula. Other objectives, such as those around teaming or advisory were more loosely defined.

This lack of clarity around how "success" was defined by the project proved a challenge for the evaluation, as it was somewhat unclear how a successful C4MGP school would look different from an "unsuccessful" C4MGP school on many measures. This also created challenges for many

stakeholders and the project managers/leadership coaches to assess progress towards goals, since there were no clear goal posts, nor were there expectations about the timeline on which schools should see the expected changes in their buildings.

In Year 3 the funders pushed for the project to more clearly define where they wanted schools to go—to set more specific goal posts that schools could drive towards, and to provide a way for the project to monitor and measure its progress towards its ultimate goals. During Year 3, the project planners decided to create two documents. The “Expectations” document broke down the project’s goals into strands and defined at a more granular level what was expected. General time lines were established around each of the strands, generally corresponding to the end of a school year. The expectations were originally divided into three categories—high, medium, and low support—so that schools could be rated against each expectation and a profile could be developed of the level of support a school needed in each area. High support schools were not meeting the expectation well and needed more extensive project support, whereas low support schools were considered to be meeting the expectation well and needed minimal support around that strand.

The “Roles” document laid out the responsibility of each major group involved in the project, and what each group should be doing to ensure that schools met each of the goals in the expectations document. Unlike the Expectations document, the Roles document was still in draft form when distributed to C4MGP principals in spring 2009. It is unclear to evaluators whether this document was ever developed further and how this document was used.

Diverging visions

As noted earlier, staffing within the C4MGP changed greatly over the years of the project. From the onset, the project emphasized math instruction and content knowledge. As the original project designers left, the project managers/leadership coaches began to have a larger role in setting the focus of the project. They began to shift the focus of C4MGP to concepts surrounding a middle grades model and the needs of the adolescent student. C4MGP managers became more focused on addressing the needs of the middle school student by creating school structures and providing school level professional development that centered on the needs of the adolescent student. Much of managers’ thinking appeared to evaluators to be modeled on their own experiences as middle school administrators, as well as tools and resources from other sources such as Breaking Ranks in the Middle (BRIM) developed by the National Association of Secondary School Principals (NASSP), the Schools to Watch program from the National Forum to Accelerate Middle-Grades Reform and the Association of Illinois Middle-Level Schools, and Turning Points 2000 from Carnegie and the Center for Collaborative Education. Project managers/leadership coaches developed these partnerships with the clear aim of centering the C4MGP into the mainstream of middle school thought and with the intention of putting the “middle grades” into C4MGP. In contrast, university partners and funders stayed focused on increasing students’ math and science knowledge by increasing teachers’ math and science content and pedagogical knowledge via the avenues of professional development (university courses, CMSI PD, Algebra Initiative, and university coaches).

Given that the focus of the project began to shift away from classroom instruction, it is interesting to note that data from Year 3 (08-09) indicated that many schools were still struggling with implementation of math and science instruction. Coach ratings suggest that in many schools implementation was only partially evident in terms of full coverage of materials

and pacing.⁹ In science, coaches noted that in most schools the science teachers did not have common time to meet and plan, and that grade-level meetings were not being used to discuss lesson plans and student work. In math, coaches indicated that at most schools the math teachers did use their common time for these tasks. Since instruction was at the core of this project, it is useful to reflect on whether findings that schools were still struggling around instruction should have influenced the project's decision to focus the final years of the C4MGP more on adolescent needs, or whether it may have been more useful to redirect efforts towards creating a solid grounding of high quality instruction for these schools.

The answer to this question largely rests on the project's theory of action. If the project conceptualized meeting the needs of adolescent learners as a necessary condition of improved outcomes, then it may make sense to pursue this goal even though actual classroom instruction had not reached the level of implementation expected. Conversely, if the project believed that providing good quality instruction was more important than attending to the philosophy around a middle grades student, then it would have been prudent to refocus their attention on instruction. To some extent the project attempted to do both. A focus on instruction continued through coaching, CMSI PD around the curricula, and endorsements courses which were provided to teachers in all years of the project. However, the focus of PD for leadership teams in Year 3 and 4 of the project came to include content largely related to structures and philosophy of the "middle school," rather than having a sharp focus on improved instruction.

Thus, although the project managers, university partners, and funders remained virtually the same across all years of the project, their perspectives on the vision of the project were in part distinctly different. University partners and funders stayed closely focused on the notion of mathematics and science content and pedagogy. For example, in interviews in 2010 these partners were far less likely to mention concepts or components of school culture or middle school structures when asked about what they saw as the broad goal or vision of the project. Managers saw the goal of the project as helping school teams develop a middle school philosophy such that they would be successful in educating the adolescent by creating a school environment conducive to adolescent needs. While this difference between partners' views may reflect an understandable difference in expertise, it may also suggest a disconnection, lack of communication, or disagreement between the priorities of project managers and external partners.

[Process of creating expectations.](#)

The creation of the Expectations and Roles documents occurred in Year 3 of the project. The project planners (project managers/leadership coaches and OMS staff) chose to use a collaborative process during the monthly management meetings, in which the various project partners all participated in the development and drafting of the documents. The goal seemed to be threefold.

1. This process would help develop a common understanding among all participants about what was expected of each stakeholder group.
2. Each participant would be clear about what the expectations were for the project.
3. Each would be accountable.

⁹This data was taken from C4MGP documents which provided ratings of schools on their math and science implementation as compared to various areas of expectation (C4MGP school analysis, 2009).

The development of these two documents had the benefit of helping stakeholders understand their roles in relation to the C4MGP expectations, as well as setting clear expectations for schools and project participants. However, drafting the document in these sessions left little time for other conversation about the project. Management meetings only took place once a month for approximately two hours, and the entire process of creating the Expectations document ended up spanning the majority of Year 3 management meetings and a few additional meeting times.

The issue of not setting clear visions or processes for project participants is one that had several implications for this project. Some of the clearer expectations which existed from the start were around processes or structures which were well defined—such as use of CMSI curricula, departmentalization, endorsed teachers, and teachers attending PD. What were not clearly defined from the beginning of the C4MGP were the expectations related to the quality of the socioemotional elements of the project, transition to high school support, or instruction related elements like teacher teaming. C4MGP managers/leadership coaches did not provide schools with clear expectations about what good grade level meetings should include, what would constitute effective vertical teaming, what meaningful advisory would look like, what elementary schools should do to ensure that students would be ready to transition to high school, etc. This came up numerous times during the evaluators' discussions with the project planners, since it was challenging to assess the project's progress towards its goals when the final goals were not clearly articulated in some areas. Particularly as the focus of the project shifted away from process and structure, measurement of the C4MGP's progress towards creating a climate focused on the needs of adolescent learning became difficult because of the undefined nature of the construct.

In the July 2009 wrap-up evaluation meeting for Year 3 of the project, an interesting conversation occurred between project planners, funders, coaches, and university partners that provided a view of the challenge the project faced in terms of integrating with CMSI and in setting clear expectations. As part of the discussion the evaluation team raised the question of what high quality instruction looked like from the perspective of C4MGP. The planners argued that this was not a decision that they could make, but rather had to be determined by the Office of Mathematics and Science as part of their CMSI initiative. It turned out that OMS had recently been working on such a document, but it had not been ready when C4MGP had begun and was still not quite ready to be pushed out to the field as a finished product. The dilemma was that the C4MGP managers/leadership coaches felt that developing such a vision was outside of the scope of the project and needed to be done by OMS, that OMS had not developed such a document, yet a core piece of the C4MGP was that the schools implement high quality math and science instruction. In such a case, how does a project set clear expectations when it's relying on another entity to set the vision first, and that second entity isn't working on the project's timeline?

A similar scenario had taken place earlier when project managers/leadership coaches wanted to develop a middle grades "toolkit" to provide schools with a bank of ideas and resources that they could draw from in developing their middle grades program. At that time, the Office of Instructional Design and Assessment (IDA) indicated to C4MGP managers/leadership coaches that IDA was taking the lead on developing a handbook for middle schools that would contain such resources. In time IDA did produce a middle school handbook¹⁰ but this handbook fell far short of what was originally suggested by C4MGP stakeholders.

¹⁰ See the document entitled "Strengthening the Middle Grades: A Guide for Instructional Leadership," created by the Office of Instructional Design and Assessment in CPS.

This issue of clearly defining goals, visions, and processes was a key one for the C4MGP project. It created challenges for communicating to the schools what they were expected to do. It hampered measurement of the project's progress because in the absence of clear expectations there was uncertainty about what progress would look like. Most importantly, it created challenges in assessing whether the project's activities were clearly aligned with what the C4MGP wanted to achieve. In the absence of clearly defined visions and processes, it is difficult to assess whether project activities helped move schools where they need to go.

D. C4MGP Outcomes: Progress Toward Expectations, Plans for Sustainability, and Evidence of Value-added

In this section we present a comprehensive table which is structured around the Roles and the Expectations documents developed in Year 3. This table draws on four years of school-level and teacher-level data about the extent to which these expectations appeared to be met by schools. The Expectations framework is used to organize the data. The table is organized so that:

- **Column 1** of the table displays expectations as worded in the C4MGP expectations document.
- **Column 2** summarizes the movement of schools toward these expectations over the years of the project based on internal and external evaluation data. Numbers direct readers to the original reports these findings come from. Data not linked to a prior report comes from the 2009-10 analysis of data.
- **Column 3** summarizes findings about the “value-added” by the C4MGP project in terms of how project supports helped move schools and teachers toward the expectations, above and beyond the amount of movement seen in non-C4MGP schools, as well as incorporating what school staff perceived as key levers supporting the changes at their school.
- **Column 4** provides information on how schools plan to sustain the expectation in years to come.

Blank cells indicate a lack of data from that collected during the evaluation. Following the table, we discuss progress in each expectation area, what aspects of the project were (or were not) levers of change, and the feasibility of sustaining progress in future years.

Table 2. Schools’ Progress on C4MGP Expectations

Expectation	What Happened in C4MGP schools	Evidence of value-added by C4MGP	Considerations related to sustainability
<p>Teachers are endorsed in subject area</p> <p>All middle grades (6-8) students receive mathematics and science instruction from teachers who are endorsed in those subjects.</p> <p>Teachers are recognized by ISBE as Middle Grade Content Area Specialists are teaching all core content areas (Language Arts, Mathematics, Science, and Social Studies) in 6th through 8th grades, starting in the year 2009-10; or schools must demonstrate progress in teachers becoming endorsed.¹¹</p>	<p><u>Departmentalization</u></p> <ul style="list-style-type: none"> • In 2006-07, about half of schools were departmentalized in some aspect of their middle grades.¹ • By 2007-08, about 85% of schools were departmentalized.² • In 2009-10, all but 1 case school was departmentalized. In 2 case schools one or more teachers were not endorsed in the content they were teaching. <p><u>Endorsement</u></p> <ul style="list-style-type: none"> • In math, C4 schools increased the percent of teachers endorsed slightly faster than other schools during the project years, and had a higher overall rate of endorsed teachers. A similar pattern occurred in science with even larger increases.⁹ • By 09-10, the percent of the total C4 workforce endorsed in math and science was higher at C4 schools than control schools or the district as a whole. • According to case school interviewees in 2009-10, all C4MGP teachers of math and science were either certified or finishing up certification. At least one teacher from each school participated in endorsement courses over the course of the project. 	<p><u>Departmentalization</u></p> <ul style="list-style-type: none"> • In 2006-07, C4MGP provided “model schedules”. • In 2009-10 some teachers and principals surveyed noted that model schedules were beneficial to helping them develop a middle grades schedule. • In 2008-09, some leadership team participants surveyed noted large impact of C4MGP on their school schedule.³ <p><u>Endorsement</u></p> <ul style="list-style-type: none"> • C4 participation was related to greater gains in endorsements for C4 schools. By 2009-2010, an average 10.6% of teachers at C4 schools had a math endorsement, and 12.8% had a science endorsement. In math this is 3.3% higher than the control group, and in science it is 5.5% higher than the control group.⁹ • The effects of endorsement gains in math and science were particularly pronounced for teachers who stayed in the project schools for the full 3 or 4 years. They showed substantially faster gains in endorsements than the comparison groups.⁹ • In a June 2008 survey, some teachers noted that they saw school-level change 	<ul style="list-style-type: none"> • Schedules are in place but due to CPS budget deficit issues schools will likely have to adjust schedules in light of how many teachers are allocated per school building. Many fear having split classes and the impact of that on instruction. • Most C4MGP principals interviewed in 2009-10 explained that they hoped to be able to keep their endorsed teachers or replace them as needed with endorsed teachers in 2010-11. • Specialization Policy remains in place and schools seem likely to enact the policy.

¹¹ The District’s Specialization Policy was enacted after C4MGP’s project expectation that all middle grades math and science teachers should be endorsed.

Expectation	What Happened in C4MGP schools	Evidence of value-added by C4MGP	Considerations related to sustainability
		<p>in number of teachers endorsed, and 14% of teachers (n=10) opted to mention this as one of the positive effects of participation in the C4MGP.⁴</p> <ul style="list-style-type: none"> In 2009-10, principals and teachers rated university courses as one of the top 3 supports of C4MGP. 	
Implementation			
<p>All 6-8 math and science classrooms have access to CMSI instructional materials</p>	<ul style="list-style-type: none"> In 2006-07, university science coaches spoke of about half of the schools ordering/receiving materials late in the fall term and teachers struggling with implementation in the first year of implementation. In 2008-09, 82% of middle grade respondents reported they had access to all needed CMSI materials.⁵ 	<ul style="list-style-type: none"> Presence of university science coaches seemed to influence schools to get CMSI science materials and/or science coaches helped schools order these. 	<ul style="list-style-type: none"> In 2009-10, a handful of interviewees explained that they were committed to CMSI and had and/or planned to continue to upgrade their materials to new editions. Others did not mention their level of commitment.
<p>All 6-8 math and science classrooms are implementing CMSI instructional materials</p>	<ul style="list-style-type: none"> In 2007-08, middle grades were observed implementing CMSI materials at various levels of implementation.⁸ In 2008-09, middle grades were observed implementing CMSI materials, and 100% of case schools were using science and math materials.² In 2008-09, 74% of leadership PD attendees reported a <i>moderate</i> or <i>great</i> increase in curriculum use since C4MGP involvement.⁴ In 2008-09, the project rated the majority of schools as <i>mostly meeting</i> the expectations for implementing CMSI materials. In 2009-10 evaluators heard from interviewees that about half of the case schools had either weak enactment/non-rigorous instruction, spotty implementation, &/or outright lack of use of CMSI materials in the middle grades. 	<ul style="list-style-type: none"> In 2008-09, C4MGP case schools were more likely to be using science materials than non-project comparison schools (100% vs. 25%), whereas 100% of both types of schools were using CMSI math materials.² In 2009-10, staff in all but 1 school (n=11) spoke of university coaches and described them as instrumental in helping teachers to implement CMSI materials. 	<ul style="list-style-type: none"> With the physical separation of OMS and with changes in personnel and visions across the district, it is not clear what aspects of the CMSI will be enacted at the school, area, or district levels. Area 10 schools will continue to be supported to use CMSI materials from the Area 10 Instructional Team and in partnership with Loyola University through a number of professional development opportunities including university courses and/or science instructional

Expectation	What Happened in C4MGP schools	Evidence of value-added by C4MGP	Considerations related to sustainability
			<p>support via a University Science Coach. About half of the C4MGP principals in Area 12 seem poised to continue to implement CMSI regardless of Area support.</p>
<p>All 6-8 math and science classrooms are implementing CMSI instructional materials in accordance with OMS GPSA and Science Pacing documents</p>	<ul style="list-style-type: none"> • In 2008-09, the project ranked the majority of schools as <i>mostly meeting</i> the expectations for pacing according to CMSI pacing guidelines. • In 2009-10, 5 of 7 principals within one instructional area spoke about how their middle grades pacing was not on track. Two principals specifically said their school was no longer following CMSI pacing guides but instead was following area directives for pacing that are based on the ISAT. Principals from the other instructional area did not discuss pacing. 	<ul style="list-style-type: none"> • According to interviewees in 2009-10, University Coaches were levers for keeping teachers on pace throughout the C4MGP project years. 	<ul style="list-style-type: none"> • With the decline of OMS and the sense of uncertainty around CMSI, central support around curricula is now lacking. Schools in one area seemed poised to begin enacting pacing guides developed by their CAO. It is likely that the other area which seems more committed to CMSI principles will continue to follow the OMS developed pacing guides.
<p>Vertical teams are establishing expectations for instructional rigor at all grade levels (in mathematics and science).</p>	<ul style="list-style-type: none"> • Various types of team meetings were observed by evaluators in 2007-08 and in 2008-09, few focused specifically on instruction.^{1, 2, 6} • 2008-2009 data indicated that all but one of the C4MGP schools were holding vertical meetings.² • In July of 2009, 30% of respondents to the teacher survey indicated their school did not have vertical teaming.⁵ • Evaluators lack data on what activities, guidance, or supports were specifically provided by the C4MGP to schools to develop teams and teaming structures. 	<ul style="list-style-type: none"> • Over the course of C4MGP, evaluators did not observe nor did interviewees explain how “teaming” helped improve instructional rigor. However, in 2009-10 some interviewees explained that C4MGP Leadership PD provided them with an opportunity to plan together (on such topics as, schedules, middle school structures, and students’ socio- emotional needs). • In 2008-09, the majority of teachers reported that they found vertical and grade level meetings to be very or moderately useful.⁵ • The most significant challenge that 	<ul style="list-style-type: none"> • As part of the teacher contract, teachers are expected to have three preparation periods per week to plan lessons or engage in professional meetings. At least one of these is to be directed by the principal.

Expectation	What Happened in C4MGP schools	Evidence of value-added by C4MGP	Considerations related to sustainability
		teachers mentioned with respect to teaming was that there was no time to discuss instruction. ⁵	
Professional Development			
Teachers implementing CMSI instructional materials and principals in these schools attend CMSI PD	<ul style="list-style-type: none"> Data gathered by project managers/leadership coaches but not shared with evaluators. 	<ul style="list-style-type: none"> In 2009-10, staff from all case schools spoke of teachers attending PD over the course of their implementation of CMSI and finding this helpful to their implementation. A few principals complained about either the timing of PD or the cost, while a few mentioned that PD helped them to understand what to look for in a math/science classroom. 	<ul style="list-style-type: none"> A few principals/teachers in 2009-10 worried that the district was abandoning this resource and worried about how they would continue to deepen their use and/or how new teachers would be trained in the use of CMSI. In 2010-11, an Area 10 Partnership with Loyola University and an Area 1 & 6 Partnership with DePaul University are mandating principals attend at least one CMSI PD and CMSI teachers attend user PD according to their experience level.
Principal &/or AP and middle grade teachers attend C4MGP-recommended conferences and share information with school colleagues	<ul style="list-style-type: none"> In 2009-10, teachers &/or principals in all but 1 case school spoke of the benefit of teachers going to conferences (e.g.: teachers came back refreshed and with new ideas for middle grades structures, teachers learned strategies for advisory, professionally enriching). Two schools mentioned particular issues at the school that prevented their attendance in 2009-10. 	<ul style="list-style-type: none"> Prior to C4MGP most schools did not include attendance at conferences in their school budgets and most middle grades teams had never attended such conferences alone or together as a team. 	<ul style="list-style-type: none"> Some principals said they would put aside money for teachers to attend conferences in 2010-11. Other principals said they could not foresee setting aside money for teacher PD over money for students' instruction (e.g., they would use available money to hire another teacher to prevent split classes over using money for

Expectation	What Happened in C4MGP schools	Evidence of value-added by C4MGP	Considerations related to sustainability
<p>Leadership teams participate in C4MGP Leadership PD, which can include monthly C4MGP Leadership Team PD</p>	<ul style="list-style-type: none"> In 2008-09, 26% of the respondents from the leadership team list indicated they had never attended leadership PD.³ In half of the C4MGP case schools in 2009-10, only a fraction of the expected full middle grades team participated in C4MGP PD on a consistent basis; 5 schools either sent alternating staff or only 1 or 2 representatives. Middle grades teachers at one school didn't know C4MGP PD had continued past October 2009. 	<ul style="list-style-type: none"> In 2009-10, teachers and principals ranked Leadership PD as one of the top 3 aspects of C4MGP and the reason for their improvements in middle grades structures. 	<p>conferences).</p> <p>Some interviewees explained that they would contact colleagues from across C4MGP schools for their support in particular areas of middle grades structures in the absence of C4MGP PD.</p>
<p>Leadership teams share information from PD with stakeholders (e.g., teachers, staff, parents) so that expectations for middle grade students are understood and supported.</p>	<ul style="list-style-type: none"> In 2008-09, respondents were asked to describe structures or processes the middle grades Leadership team used to share information from the Leadership PD with others at their schools. Some schools appeared to have formal processes in place at which they shared this type of information (e.g., time specifically set aside at grade level meetings), while other schools appeared to rely on more informal methods. Some respondents said no process was in place.⁵ In 2009-10, a few middle grades teams explained that they shared what they had learned with colleagues. 		

Expectation	What Happened in C4MGP schools	Evidence of value-added by C4MGP	Considerations related to sustainability
<p>Designated individuals from selected schools participate in the Train-the Trainer training for NASSP BRIM.</p>	<ul style="list-style-type: none"> 10 schools participated in BRIM training in summer 2009. 	<ul style="list-style-type: none"> While some interviewees thought BRIM was useful training and appreciated teachers presenting at C4MGP PD, they also thought that providing PD based on BRIM this year was redundant to prior C4MGP PD and should have happened in year 2 or 3 of the project. 	
<p>Algebra</p>			
<p>School offers a CPS approved High School Algebra 1 for Middle Grade Students course for all well-prepared middle grade students.</p>	<ul style="list-style-type: none"> In 2007-08, 39% of C4MGP schools offered Algebra.⁶ In 2008-09, 59% of C4MGP schools offered algebra.² In 2009-10, 58% (7 of 12) of case study schools offered algebra. 	<ul style="list-style-type: none"> In 2009, 6% of middle grades teachers identified the algebra initiative as the key change C4MGP has made at their school.² In 2009-10, principals from case schools rated Algebra as one of the top 3 aspects of the C4MGP in their schools. 	<ul style="list-style-type: none"> C4MGP Schools providing algebra in 8th grade are committed to keeping it as long as they can retain a qualified teacher. While the district still requires a credential for Algebra teachers, it is unclear how courses will be funded. Early grades algebra was a focus of OMS and previous CPS administration; it is unclear whether this will be a priority for the new administration
<p>School registers all middle-grade students who are enrolled in the algebra course for the End-of-Year Algebra Exam.</p>			

Expectation	What Happened in C4MGP schools	Evidence of value-added by C4MGP	Considerations related to sustainability
<p>School has at least one CPS algebra-qualified teacher on staff to provide algebra instruction; recommended 2.</p>	<ul style="list-style-type: none"> In 2008-09, two of the five case schools offering 8th grade Algebra were being taught by non-credentialed teachers.² In 2009-10, 7 case schools had a qualified Algebra teacher teaching Algebra; 3 case schools had not gotten a teacher credentialed to teach Algebra, and 2 schools had lost their qualified teacher and didn't have a second teacher lined up to teach the course. 	<ul style="list-style-type: none"> C4 schools had twice the rate of algebra credentialed teachers in their workforce compared to other schools in the district (2.6% vs. 1.3%)⁹ 	<p>While the district still requires a credential for Algebra teachers, it is unclear how courses will be funded in the future.</p>
<p>Scheduling, teaming, and exploratory</p>			
<p>Schedule reflects:</p> <ul style="list-style-type: none"> Weekly common planning time for teams that share the same students 300 min/core content area/week <p>Advisory</p>	<p><u>Common Planning time</u></p> <ul style="list-style-type: none"> In 2009-10, 10 (83%) case schools had common planning time weekly; 2 schools explained their schedule did not provide common time to plan and they lacked the funds to make this happen after school. <p><u>300 minutes of core content</u></p> <ul style="list-style-type: none"> In 2007-08, 62% of case schools met 300 minute requirement.² In 2009-10, 10 (83%) case schools had at least 300 minutes of core content per week. 2 schools had only 250 minutes. <p><u>Advisory</u></p> <ul style="list-style-type: none"> In 2007-08 less than ½ of case schools offered advisory.² In 2009-10, 75% of case schools offered advisory. Not all schools reported the amount of time for advisory; however, the range for those that did was 15-40 minutes per day. 	<p><u>Common Planning time</u></p> <ul style="list-style-type: none"> In 2008-09, 87% of case schools and 75% of comparison schools had vertical meetings.² <p><u>Advisory</u></p> <ul style="list-style-type: none"> In 2008-09, 100% of case schools offered advisory, but only one comparison school did, and Year 3 schools offered advisory in a more regularly scheduled way and for more minutes than Year 2 schools.² 	<ul style="list-style-type: none"> Principals anticipate making changes to schedules as context changes.

Expectation	What Happened in C4MGP schools	Evidence of value-added by C4MGP	Considerations related to sustainability
<p>Teaming activities</p> <ul style="list-style-type: none"> • prepare for transitions (5th to 6th; 8th to high school) by meeting within and across team “boundaries.” • focus on instructional best practices • Ongoing and sustainable team meetings on content and learning (sharing content of conferences, reflective practice). 	<ul style="list-style-type: none"> • In 2008-09, about half of leadership team members indicated that their team met at least once a week; the other half indicated they met every few weeks or less.³ In addition, 86% of case schools held vertical meetings.² • In 2009-10, 9 case schools specifically spoke of team meetings where they developed schedules, applied for the Schools to Watch program, planned advisory, or engaged in book study on a middle grades topic. Few schools reported working with “boundary” colleagues to develop transition plans for students into or out of middle school. 	<ul style="list-style-type: none"> • In 2007-08, 17% of participants mentioned teacher collaboration as the most positive aspect of the project; 16% of teachers reported that C4MGP had increased the middle grades focus in their schools.⁴ • In 2007-08, 64% of teachers believed collaboration between teachers across grade levels had increased by a moderate or great extent.⁴ • In 2008-09, some leadership team participants felt that C4MGP had a large impact on their teaming.³ • In 2008-09, 62% of case schools reported discussing MG issues or advisory during teaming as contrasted with 25% of comparison schools.² 	
<p>Exploratory classes with syllabus and minimum 3 week time frame</p> <p>Students make choices for exploratory classes</p>	<ul style="list-style-type: none"> • In 2008-09, all case schools claimed to have exploratory, although only 1 seemed to meet most aspects of the criteria established by the project.² • In 2009-10, at least 4 case schools began to implement an exploratory model where the course met multiple times within the week. No schools spoke of or shared syllabi for these courses and no school spoke of students choosing their exploratory classes 	<ul style="list-style-type: none"> • In 2008-09 comparison schools did not share the C4MGP vision of exploratory classes.² 	<ul style="list-style-type: none"> • Schools are only able to offer exploratory courses as they have teachers to teach these. By the end of 2009-10, principals and teachers had significant concerns about class size and numbers of teachers who would be available in the middle grades in 2010-11.
Advisory and Advocacy			
<p>Every student has at least 1 adult at the school who acts as the student’s advocate</p>			
<p>School specific curriculum to meet the social, emotional, and academic needs of adolescents has been created/developed by stakeholders using school data</p>	<ul style="list-style-type: none"> • In 2008-09, 63% case schools showed evidence of advisory lesson plans³ 80% with lesson plans seemed to take into account students’ specific needs.² • Leadership teams seem to often have an 	<ul style="list-style-type: none"> • In 07-08 teachers tended to be unsure of topics to cover in advisory.² • By 2009-10 78% of teachers implementing an advisory class had a planned curriculum to rely on. 	

Expectation	What Happened in C4MGP schools	Evidence of value-added by C4MGP	Considerations related to sustainability
	<p>active role in developing the advisory curriculum.³</p> <ul style="list-style-type: none"> In 2009-10, 75% of case schools offered a regularly scheduled advisory and 56% of these had developed a planned curriculum, 23% used a purchased program and 23% seemed to have no curriculum in place. 		
Advisory is embedded across disciplines			
Advisory is internalized by all stakeholders (evident by activities/procedures & involvement)	<ul style="list-style-type: none"> In 2009-10, a few teachers spoke of their awareness of students' socio-emotional needs and their willingness to allow students to seek help from school staff as needed. 	<ul style="list-style-type: none"> In 2008-09, although school Leadership teams consistently indicated that they struggled with advisory and felt less well served by the PD around this topic, those who attended the leadership PD reported advisory as the most valuable thing they learned.⁷ 16% of teachers indicated that implementation of advisory was the major way C4MGP changed their school.⁵ 19% of teachers cited advisory as being the structure their school has to help prepare students to make the transition to high school.⁵ 	
Well-articulated and implemented transitions: Intermediate to middle grades and middle grades to high school	<ul style="list-style-type: none"> 87% of middle grades teachers said that their school had implemented structures to help prepare students to transition to high school and nearly as many said that their students were <i>moderately</i> to <i>very well</i> prepared to transition to high school.⁵ In 2009-10, schools did not have clear processes for transitioning students to 6th 	<ul style="list-style-type: none"> In 2008-09, transitions are one of the areas in which the leadership teams felt they were less well served by the C4MGP PD.⁷ In July 2009, 10 surveyed teachers mentioned algebra as a way that their school helped students prepare for the transition into high school, and 5 	

Expectation	What Happened in C4MGP schools	Evidence of value-added by C4MGP	Considerations related to sustainability
	<p>grade or to particular high schools, but 3 schools provided examples of helping students apply to non-neighborhood high schools and 2 schools spoke of how their middle grades structure in particular provided students with a taste of what high school would be like.</p>	<p>teachers chose it as an example to show the change C4MGP had made in their school.⁷</p>	
<p>Mentors actively involved and connected to students</p>			
<p>Established community service projects</p>	<ul style="list-style-type: none"> • 8 C4MGP schools were awarded grants to develop service learning projects from the CPS office for Service Learning 		

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Student Achievement: Outcomes

In order to assess the effect of the C4 program on student achievement, a rigorous quantitative analysis was conducted to assess changes in student ISAT scores. The full report is entitled “Gauging the Effects of the Cluster 4 Middle Grades Project” (Gnedko and Price, 2010) and contains detailed information on the analysis. A synopsis of some pertinent findings is presented here. These analyses describe the effects of program participation in the 19 schools that joined the program in its first year.

Multiple methods of analysis were used to assess changes in students’ ISAT scores. Both multivariate and longitudinal regression analyses were used to control for differences in student characteristics. Multivariate analyses allowed us to capitalize on all the students in the school at a given time period. These analyses were used to explore the effects of C4 on math and science achievement. Longitudinal analyses, used to explore the effects of the program on math achievement only, allowed us to assess the impact of the program on students who stayed in the school for at least 2 years while in grades 6-8 and were therefore exposed to more of the program.

Interrupted time series (ITS) was used to analyze science results longitudinally. ITS allows to control for the level of achievement prior to the introduction of C4, thus enabling comparisons before and after the program. The ITS approach was implemented instead of a longitudinal regression, because science ISAT is only administered in the 7th grade, making it impossible to build the same type of longitudinal model used for assessing changes in math ISAT.

For most analyses of student outcomes, two separate types of comparison groups were used. One comparison group was formed using all elementary schools that never participated in the C4 program. The second group was a matched comparison group of 19 schools (a one-to-one match). This group was formed using propensity scores. Tests of the differences between participating schools and the matched comparison group indicated the two groups did not differ from each other on any of the variables in the year prior to the beginning of C4. The matched comparison group can thus serve as a comparison of “like-to-like” schools.

To what extent are the middle grades improving in C4 schools when we control for factors other than the program?

A multivariate regression was used to compare participants’ ISAT scores to those of the comparison groups (matched comparison and district) while controlling for demographic differences between them (e.g., schools’ racial makeup, percent of students receiving free or reduced lunch). The regression provides an estimate of the effect of program participation on ISAT scaled scores.

The regression results suggest that

- In math, program participants slightly but consistently underperformed relative to the matched comparison group and relative to the district, even after controlling for demographic features. The gap between the matched comparison group and the program group increased each year.

These findings suggest that in C4 schools, students’ math ability did not improve over and above improvements shown by students in matched schools or the district. After controlling for

demographics, the absolute differences between the program schools and the matched schools or the district were small in practical terms, differing by only 2 and 4.7 points respectively.

- In science, students from C4 schools also underperformed relative to the matched comparison group and the district. The pattern of estimates is somewhat more positive, but very small in practical terms. There is a very small trend of improvement across the years 05-06 through 07-08 for participants compared to both comparison groups. In the year 08-09, however, the estimates decrease. The average estimated difference between C4 students and matched comparison group students was only 1 point, and 2.8 points between C4 students and the district

The results in science are somewhat more positive than those in math, though absolute differences are very small.

What is the rate of improvement in math for students who stay in the C4 schools for at least two years?

The longitudinal model was based on only students who remained in the same school for two years. Two years was utilized since high mobility results in smaller numbers of students staying in the same schools for 3 years. Students who transferred out during the two years, repeated a grade, or skipped a grade were excluded. Prior performance was accounted for by including the students' ISAT score from the previous year into the model.

We were only able to use the longitudinal model for ISAT math, as this subject is administered in each year, which allowed us to track student growth between two adjacent years. Our analyses go up to the year 08-09, the last year for which ISAT scores are currently available.

An examination of the performance estimates suggests that:

- In math, C4 students performed very similarly to the matched comparison group, regardless of the years of exposure. For example, an examination of math results for the students who were exposed to the program shows that the difference between the participants and the matched comparison group was less than 1 point each year. When compared to the district, the gap in growth was slightly larger in some instances.

Although there were a few findings which attained statistical significance (generally with the C4 students growing slightly slower), no overall pattern was discernable across grades or years.

Is there a relationship between the level of program implementation and student learning in middle grades when we control for school and student characteristics?

In order to determine the level of program implementation, participating schools were rated in two categories: Turning Points 2000 and Middle Grade Vision. Each school received scores for each category and a combined score. The combined score was used to explore whether the level of program implementation had a differential effect on student learning.

A simple way of determining whether the level of implementation had an effect on student outcomes is to compare participating schools to each other. Thus all analyses described below were based on the 19 participating schools only. To assess whether the level of program

implementation had an effect on student learning in middle grades, a multivariate regression was used.

- In both math and science, the level of program implementation was not significantly related to the ISAT scores. An examination of the estimates across time also did not show either a definitive positive or negative trend.

After controlling for the differences in school characteristics, the multivariate regression results do not support the idea that the level of program implementation has had an impact on student learning.

[Endorsement in math or science.](#)

One of the goals of C4 was to increase the number of teachers in C4 schools who have middle grades endorsements in math and science. Over the four years of the project, teachers in schools participating in the C4MGP gained endorsements in math and science at a greater rate than teachers in non-participating schools. Even though C4MGP schools started in 06-07 with a lower percentage of their workforce endorsed in math and science, by 08-09 the C4MGP schools had outpaced comparison schools and caught up with the district as a whole. By 09-10 C4MGP schools had outpaced the district in the percent of their workforce endorsed in math and science.

So how can we tell if this was due to the C4MGP or to some other factor? The increased rate of growth in math and science endorsements corresponds well with implementation of the project, though there is some lag as the rate increases a little bit across time. This was expected since teachers need some time from beginning the program to finish their coursework and apply for their endorsements. To control for other factors which may influence endorsement attainment across the district, we also assessed gains in literacy endorsements. These endorsements were not part of the C4MGP, and, therefore, we would not expect to see a direct impact on these endorsements in C4MGP schools. However, trends seen in literacy would provide a sense of general tendencies in teacher credentialing that are unrelated to the program. Literacy endorsements did not show the differential growth which was seen in math and science endorsements, but instead mirrored the general (and small) growth in the district as a whole. Additionally, endorsement gains in C4MGP schools were compared not only to the district, but also to a matched comparison group of schools. The district and comparison group showed the same trends, whereas differential growth was seen in the C4MGP schools.

Overall, the pattern of endorsements and the content of the endorsements where growth occurred strongly suggest that the C4MGP project caused the increase in math and science endorsements in these schools. The levers of this change are likely to be funding for endorsement courses, the communication from C4MGP stakeholders about these courses, and the clear expectation that middle grades math and science teachers needed to be endorsed. The availability of the courses was probably also a key factor, as a district without such ready access to the courses might struggle to meet such an expectation.

What do C4 schools look like in terms of endorsements?

To examine school-level state of endorsements, the percent of endorsed teachers in each group (19 participating schools, a matched control group, and non-participating schools) was compared for the years '05-'06 until '09-'10.

An examination of endorsements for the three groups suggests that

- In both math and science, participating schools, a matched control group, and non-participating schools employed a similar percent of endorsed teachers in '05-'06. All three groups showed an increase in the percent of endorsed teachers over time. However, while the pattern of increase remained similar between the non-participating schools and the control group, C4 participants showed a faster rate of increase. For example, in math the difference between the participants and the control group was 1.3% in '05-'06. By '09-'10, this difference increased to 3.3%. In science, participating schools and the control group employed essentially the same percent of endorsed teachers in '05-'06. In '09-'10, participating schools employed 5.5% more of endorsed teachers than the control group.
- In literacy, all three school groupings showed an increase in the percent of endorsed teachers over time. The pattern of the increase remained the same for all groups.

Over the course of the program, C4 schools have increased the number of teachers endorsed in math and science. The rate of the increase in C4 schools was faster compared to the control group and compared to the district as whole.

What do endorsements look like for the teachers who remained teaching at the same C4 schools?

For this analysis, we considered endorsement status of the teachers who remained teaching at the same school since '05-'06. There were 239 teachers in C4 schools who remained teaching at the same school. For the control group, this number was 213. For the schools that never participated in the program, the number was 7,763.

An examination of teachers' endorsement status shows that

- In both math and science, teachers who remained teaching at C4 schools earned endorsements at an accelerated rate compared to the teachers from the control group and from non-participating schools. For example, in math the percent of endorsed teachers who remained teaching at C4 schools was 1.7% in '05-'06, which was below the control group by half a percentage point. By '09-'10, the percent of endorsed C4 teachers went up to 10.9%, which was 7% higher compared to the control group. In science, teachers from the control group and from all non-participating schools showed essentially no endorsement gains with the exception of '09-'10, while teachers from C4 schools showed gains each year.
- In literacy, the pattern of change in endorsements for the teachers who remained teaching at the same school since '05-'06 stayed nearly identical for all three groups.

It appears that participation in C4 had a positive effect on the endorsement status of teachers who were continuously exposed to the program. These teachers earned math and science endorsements at a notably faster rate compared to the teachers who were never exposed to the program.

[University courses.](#)

Many teachers and principals spoke of the university courses as a benefit of C4MGP that allowed teachers to enroll in endorsement courses for little if any cost to the teacher. Some teachers in C4MGP schools wished this benefit would have been extended to subjects beyond math and science. According to interviewees at case schools, at least one teacher in each case school had participated in the endorsement program. Most described the benefit in terms of

their own understanding of content and pedagogy, feeling more prepared to teach the CMSI curricula, and/or in terms of increasing their own job security by adding to their endorsements. One teacher who got endorsed in science explained the benefit of the university courses as follows:

When you start to take these classes and you get to the meat of it, you can kind of understand—"Oh, that's how that..." "That's why that..."—so it starts to answer some of your own personal questions...So the classes were good. I took a class...and it was environmental science...and by the time I left the class I had a binder full of lessons, full of material, full of content, full of vocabulary, so that if I needed additional resources for ecology, I could go to it. So the university classes allowed the teacher to have a wealth of knowledge beyond the book that you can go and use to help your students to solidify their understanding and kind of make it a whole instead of you giving it to them piece by piece and then you trying to find the next piece. So I enjoyed the classes because it built my content. It gave it to me more on an adult level where I can understand it, but it also gave it to me on a kid level where I could bring that back and break it down to the important part so that the student can understand it.

A few teachers seemed to not be aware of the opportunity to take the university courses and have their tuition subsidized by C4MGP. For example, one science teacher who had enrolled in IIT to get his endorsement and masters degree in science didn't know he could have enrolled at Loyola and had tuition subsidized by the project.

Principals and teachers were pleased with the opportunity teachers had to obtain endorsements in math and science. Since the majority of math and science teachers in C4MGP case schools had gained their endorsements, principals were confident that they would be able to continue to have teachers endorsed in these subject areas at their school. However, a few principals worried about the projected increases in class size expected in 2010-11 in CPS and wondered if they would be able to keep all of their endorsed middle grades teachers. At the same time, principals believed the Specialization Policy would help them to keep qualified teachers and help them to hire only those who were endorsed for middle grades.

In 2009-10, teachers and principals rated university courses as one of the most beneficial levers of change for themselves and for instruction at their schools.

[Algebra in the middle grades: Teacher credentialing and course availability.](#)

A change in CPS policy¹² in August of 2008 which took effect for the 2008-2009 school year required that all middle grades algebra classes be approved by CPS central office and that the teacher have a Type 09 certificate with a senior high school math endorsement, or hold a Type 03 certificate with a middle grades math endorsement and pass the district approved Algebra Qualifying Exam.¹³ Although many schools had offered middle grades algebra for years prior, this provided CPS with its first opportunity to track which schools were offering the course. This policy had been engineered by OMS and the Office of High School Programs and was designed to support the teaching of rigorous algebra at the middle grades level. This was part of a wider district push, which was reflected in the C4MGP goal to ensure that C4 schools had at

¹² CPS board policy 08-0827-PO7, available here: <http://policy.cps.k12.il.us/documents/605.5.pdf>

¹³ Some teachers received waivers to take the exam but not the accompanying algebra credentialing courses; however, this was the exception rather than the rule.

least one algebra-qualified teacher on staff. At the time of this brief, the data on algebra credentialing was available through the summer of 2009. Any qualification exams that took place at a later time are not reflected in the analyses described below.

Do C4 schools employ at least one algebra-qualified teacher?

In '09-'10, eighteen of the original nineteen C4 schools remained open. A review of the distribution of algebra-qualified teachers in these schools showed that:

- The majority of C4 schools (61%; n=11) employed one or two algebra-qualified teachers in '09-'10.

In our case schools in 2009-10, half were offering Algebra by teachers who were endorsed through subsidies provided by the C4MGP. An additional 2 schools had offered Algebra by teachers who were endorsed through participation in C4MGP, but who were no longer at their C4MGP school. C4MGP schools offered Algebra 1 to 8th graders at a greater rate than CPS schools at large. The majority of C4MGP case schools took advantage of getting at least one teacher credentialed to teach Algebra 1. Four schools made no movement towards getting a teacher credentialed to teach Algebra. However, project planners had noted that some schools would not necessarily be expected to offer algebra before they strengthened their core math programs, since students needed to have the appropriate grounding in mathematics before they would be ready to take algebra in the middle grades.

One teacher who got credentialed for 8th grade algebra through C4MGP told us that without the project *"I never would have taken that—to get endorsed in teaching algebra—never!"* Clearly one value added of C4MGP was the push to get at least one teacher per school credentialed and the offering of credentialing courses to teachers. Schools that offered Algebra saw this as a benefit for their students and said they would try to sustain this in the future by keeping an Algebra qualified teacher on staff. Those who lost a qualified teacher were consciously looking for ways to secure a qualified teacher for the upcoming year so that they would again be able to offer Algebra 1 to 8th graders.

Although the majority of C4 schools employed at least one teacher qualified to teach an algebra course, a large percent of C4 schools did not have a staff member who could offer algebra instruction to middle grade students. In fact, approximately one third of case schools did not make an attempt to get a teacher credentialed. One principal explained his thinking on this as follows:

We don't have algebra. Again, the math content that we're using—Connected Math—already has lots of algebra in it. I'm not a fan or of a belief that algebra is the be-all and end-all of high school achievement, I think that that's like, I don't know, I want to say maybe, I don't know how many years ago but not too long ago it was biology, if people don't pass biology they won't graduate from high schools—well we know you have to have biology credit. That's kind of the gatekeeper for high school. It shifted at some point in time to algebra and they've been pushing and pushing and pushing on algebra. My question is why are we taking curriculums that take very interested, hands on connected learning, like Connected Math, of which algebra is a huge part. It's not left out by any means, but it's not the only part. It's very applicable. It's getting kids to think deeper about mathematical concepts in a range of ways. Why then are we going back to a textbook driven program early on in your educational career? I'm not sure what that was. And I do believe, I know you have to have algebra credits to be [able] to graduate, but why would we sift it down to this and then push really hard on it, and put a lot of funding and a lot of money behind it? It doesn't seem to be to be

particularly pertinent. Nor, how is that connected? Because algebra the way it's usually taught is a very textbook learning. It's learning to manipulate the formulas and the variables and you just kind of methodically go through the process. I like it. I think it's fun. But ... but what's the point?

And then you go to the other issue of, well you can only put kids in it who are algebra ready. So again you're going down the, taking kids who are high test scores supposedly, and we only have one grade level group here per grade, so we would only have one 7th grade group, one 8th grade group. If you're using their criteria you're going to get a very small group of kids. Plus again, we're not staffed. We don't have people, there's no one here with the credentials, and then too, when's the time in the school day to do that? We can't take a separate group of kids and give them algebra because we only have one math teacher. So we can't do it. So it's just a non-doable. Of which again my question is why are we doing that in first place if we have a curriculum which I find very engaging and very targeted at diverse learning and taking concepts and working them in real-life problem-solving, which is what people say they want kids to do, and then we're saying no, go to the textbook of algebra and we'll plow through it. Again, I think that's it's playing the old game. But, again, I don't want to deny kids that opportunity but we have not been able to ...so people have said, get a high school teacher to come over here, but you have to mobilize and spend your energy and time trying to do all these things.

What do algebra credentials of C4 teachers look like compared to other teachers?

To compare algebra credentials of C4 teachers to other teachers, we computed the percent of algebra-qualified teachers in each group. The results show that:

- The percent of algebra-qualified teachers was higher among C4 teachers compared to teachers from other schools. Approximately 2.6% of C4 teachers were qualified in algebra in '09-'10, compared to 0.6% of teachers in the control group and 1.3% of teachers in non-participating schools.

More teachers from C4 schools were qualified to teach algebra compared to teachers from other schools. The majority of C4MGP principals believed that the Algebra Initiative and the support provided to getting teachers credentialed to teach Algebra was one of the top 3 benefits of the C4MGP. The Algebra Initiative and its accompanying supports were the lever that helped most schools to begin to provide Algebra in 8th grade.

[Departmentalization and scheduling.](#)

Departmentalization was one of the key facets of C4MGP, and it was communicated clearly and consistently from the beginning of the project. Prior to C4MGP, only half of case schools were departmentalized. By 2009-10 all but one C4MGP case schools had a departmentalized structure, and most, if not all, teachers taught the content they were endorsed in. In one departmentalized case school, it was unclear whether the math teacher was endorsed as the principal explained she had yet to see the paper work; however, with the current situation at the district level with the Specialization Policy and the likely loss of teaching positions due to budget constraints, the principal explained that *"he won't be teaching math in September if I don't have it [official endorsement confirmation from ISBE]."* Most case school schedules reflected 300 minutes/week for math and science.

Most teachers and principals interviewed spoke of the Specialization Policy and a departmentalized schedule as being sustained moving forward. One teacher explained that the departmentalization, the content areas, the Specialization Policy were “*here to stay. There’s no back paddling to having 6th-8th graders staying in one classroom.*”

The majority of case schools in 2009-10 had schedules that reflected 300 minutes of core content areas per week and had regularly scheduled common planning time for teachers. In addition, about 75% of case schools offered advisory. However, only a handful of case schools seemed to have changed their schedules to include an exploratory type model to their “special” classes (i.e.: offer physical education multiple times in a week for a set period of weeks such that it meets as a “regular” class). Only a few schools reported engaging in conversations with teachers below or above middle grades to develop a plan to transition students into or out of middle grades.

Beyond having a few of the professional development sessions focused on providing model schedules for schools to adapt and providing some ideas of what advisory and teaming might look like, it is unclear to evaluators the depth and consistency of support provided to schools to meet the C4MGP expectations for scheduling, teaming and exploratory. One principal explained,

[the leadership coaches] were spread so thin I just wished they could have visited more, but they had other levels of people coming out—the university help was just excellent like I told you—so they did what they could do.

[What kind of things would you ask them to do if they would come out?]

Let’s look at my advisory and what do you think about it? Look at departmental. Look at the schedule...just kind of give me some feedback on it. Some of the things that I’ve put in place.

In terms of sustainability of schedules, team meetings, and advisory, a number of teachers and principals at C4MGP schools explained that they have a schedule in place and believe that barring any real upheavals in staffing, they should be able to keep these in place or make minor adjustments. Schools not offering core content for 300 minutes per week do not seem likely to change their schedules to accommodate this requirement. The CPS teacher contract makes clear stipulations that teachers are required to engage in team meetings but it is not clear how these are enforced at the local level. Only a few schools were able to develop a schedule that provided exploratory classes as a course. Beyond exposure to this at professional development, it is not clear how these schools made this change or how other schools might make this change in the years to come without additional supports.

CMSI implementation.

At the start of C4MGP, most schools had already begun to implement a CMSI supported math curriculum; however, a number of schools were just beginning to implement the CMSI science curricula. Throughout the C4MGP, various teachers have struggled with implementing these materials and university coaches seemed to be able to assist in the transition to implementation. In addition, university coaches have been instrumental in reminding teachers to attend CMSI PD, getting teachers to enroll in endorsement courses, assisting teachers in monitoring and adjusting their pace of instruction, and pushing teachers to implement more fully. Still, teachers’ levels of implementation remain varied. As noted above, C4MGP ranked most schools as “mostly meeting” the expectation for implementation and pacing. However,

what this exactly means is likely to vary between schools and even between teachers within schools.¹⁴

While all case schools had CMSI materials and were using these materials, in Year 4 a handful of schools seemed to be backing away from the original OMS vision utilizing instead an Area directed pacing guide. Principals at these schools also explained that implementation was not up to par in some of their classrooms. About half of these principals had plans to address this issue with teachers; the other principals seemed to lack a concrete plan to address this concern.

The majority of schools, even those with issues regarding pacing and use of materials, spoke of the role of university coaches in helping them to implement the CMSI. Principals and teachers alike spoke of the coaches as instrumental in providing support to teachers such as with pacing, with registering for the appropriate CMSI PD, with advice and support in teaching using CMSI curricula, with preparation for ISAT extended response and with pacing for ISAT. Below are excerpts from a principal, a school level coach, and a teacher respectively

My math coach is really good at keeping me on pace; keeping the teachers on pace; making sure I'm keeping with the framework in time for ISAT. My science coach purely she can be a lot of help—she emails me with all kinds of info: here's the website—here's this, you might want to go to this PD—it's free and this is how our emails look: "here, do this and get your sub" I don't have to think it through. "Forward this and say this is what you need" I'm really pleased with my coaches.

[Our coach] goes into the classroom, observes, helps, meets with teachers during their planning time, discusses if there is any problem with the pacing or materials we need. She emails me about when PD is, just making sure I keep teachers in my department informed about things. If new curricula is to be added, a new website, etc.

She was very helpful. I worked with her a lot, especially when we were writing our outcomes assessments. She was very supportive, and she gave me a lot of good feedback, and she came and observed me in the classroom, and she gave me the feedback that I needed and so – that was very helpful...That and even ordering my supplies this year. Like, I want to change this, I want to do the 6th grade curriculum that just came out, and she's like "Well, I suggest you do it this way." And I was like that makes sense. It's a good idea. So instead of ordering all the kits, order the book. And then order one kit at a time. And eventually I'll have all the kits. But when you look at the big costs, a school can't afford that. That's not going to happen. So kind of breaking it down."

Professional development.

The C4MGP project encouraged participation in four major types of professional development (PD). Teachers and principals were encouraged to attend CMSI PD sponsored by OMS. In addition, schools were required to send principals and then eventually leadership teams to C4MGP Leadership PD. By Year 2 schools were also offered the opportunity to participate in professional conferences either related to middle schools or their content areas with C4MGP

¹⁴ For a more thorough discussion of CMSI implementation see Fendt, C., Hurtig, J., Lent, J., & Mosak, E. (October, 2008). Changes in teachers' instructional use of and beliefs about the CMSI curricula. PRAIRIE Group: Chicago. Available at http://www.prairiegroup.org/images/Teachers_Use_of_CMSI_Curricula_Oct._08.pdf. See also Fendt, C. R. (2010). Teacher sensemaking and the implementation of a district-wide curricular and instructional reform.

funds. In the summer before Year 4, ten schools participated in BRIM training with the expectation that these school teams would present C4MGP Leadership PD in year 4.

CMSI professional development.

In terms of CMSI PD, data indicate that at least someone from each case school attended at some time and found the CMSI PD to be useful for their implementation of CMSI materials. Without attendance data, we cannot note how many teachers, principals, or assistant principals were involved in this in recent years.

One teacher explained the importance of CMSI PD as follows:

With my PD, they teach it as though they are teaching it to the students so I can take that and bring it back to the classroom. So it's really helpful because there are the teachers that really affect students, and we are actually going through the labs ourselves because we don't get time to do that on our own, so it's a chance to actually go through the labs and gives us opportunities for example to see what can go wrong or go right before doing it with our own kids.

At two case schools, principals noted that they were opposed to sending teachers out during the school day to professional development, although both conceded that the experience seemed to be helpful to their teachers. Staff from two schools explained how distressed they were that by the 2009-10 school year CPS looked to no longer be supporting CMSI PD. One principal explained the importance of PD and her uncertainties for sustainability as follows:

PD is very valuable; it's so valuable. I remember looking at videos and having a math person say, "It's all kind of ways to come up with an answer. Don't shut a kid down doing little things like, 'Yeah, that's right.'" So when I would go in to do an observation I had kind of a base. I kind of figured out, "Oh, yeah, I saw that video." and it's like a check list of what we were going to see in those classrooms—what we need to see—and so they helped me on a lot of avenues. We had a math observation guideline so that kind of put that in my head so when I'm making an observation...And then the district is getting away from PD, but I think that is so important. I think they think you are supposed to learn everything in college and you can't. College is one thing but the world is changing constantly and PD helps you meet these changes, so I hope that we don't abandon that piece so because it's so valuable.

It is not clear from our data what the value added of C4MGP was in relation to CMSI PD except that (as noted earlier), the university coaches seemed to be a catalyst for getting teachers to attend CMSI PD. Earlier we noted that in first two years of management meetings, stakeholders were given enrollment and attendance data. At the that time, evaluators often heard how area teams and university coaches were using these data to push teachers and principals to attend CMSI professional development The sustainability of CMSI PD is unknown at present; however, if CMSI PD continues it is clear that new projects at DePaul and Loyola universities intend to continue to push teachers and principals to attend.

C4MGP leadership professional development.

Beyond requesting schools to participate in CMSI PD and Algebra PD as appropriate, the C4MGP focused on providing “Leadership PD.” The terminology for this PD could have been more illustrative of what it entailed. *C4MGP Leadership PD* changed throughout each of the years of the project.

- In Year 1 it was for all Area Instructional Teams and the principals of C4MGP schools. At that time it focused on content areas of Math, Literacy, and Leadership that were taught by content area specialists (most based at the university level).
- In Year 2, it was offered to C4MGP principals and their middle grades/leadership team and included the above content areas and science and social studies with a few sessions on middle school structures (such as discussions of model schedules). Content specialists continued to provide the instruction.
- In Year 3, C4MGP Leadership PD was focused on middle grades issues solely, and, for the most part, Leadership Coaches did the presentations.
- In Year 4, C4MGP followed the BRIM training manual and information was presented by various school teams. Project managers spent a great deal of their time developing these workshops.

Attendance data for C4MGP PD over the course of the four years was not collected by the evaluators, but according to CPS survey data in 2008-09 about a quarter of leadership team members did not attend C4MGP Leadership PD. External evaluators observed low turnout for various school teams over the course of observed PD sessions in 2009-10 (though by this time there had been declining support for the project in the district and schools were being pulled in other directions).

Overall, principals and teachers in the case schools in 2009-10 described Leadership PD as useful to their enactment of a middle school model. They explained that the sessions provided them with:

- a chance to hear what others are doing
- a voice to speak and plan as a team (principals and teachers together)
- expectations of a middle school model
- ideas about how to make departmental schedules, develop advisory programs, etc.
- the insight to consider the developing child and to change the mindset of staff
- tools to work with

Some leadership teams had formal structures in place for sharing information, while others had informal structures. It is not clear how many teams shared what was presented at C4MGP PD with their colleagues nor the content of that sharing. It did not seem that C4MGP explicitly guided schools in developing processes for sharing this information. With the end of C4MGP, teachers and principals talked about contacting staff at other C4MGP schools who seemed to have some expertise to help them with areas they wanted to improve. For example, some principals talked of calling colleagues at Evergreen or Ross for help with scheduling since some principals felt that these schools had a good scheduling system for students.

Professional conferences (funded by C4MGP).

For many C4MGP teams, participation at C4MGP-recommended conferences was the first time teams had attended a middle school conference; some schools chose content specific conferences instead. For most, the benefits of attendance seemed to spill into changes teams then began to make to their middle school structure. At one focus group, teachers shared that they had attended the middle school conference for three years in a row. One explained it was

...very rewarding. You come back very refreshed. It's the interaction with other teachers and the process of where they are all on the same pathway that we are and just to hear a lot of them saying the same things. Also, when we went to Houston the first year I enjoyed it because I got a chance to go into a school to see a school being ran by the students brought tears to my eyes. We came back here and we raved about it, and we were so energized, and we were trying to get our children to be on that same pathway, where they would be able to—like when you come into the building—you wouldn't have to speak to us about middle school, you can sit and talk to the children and hear from them because then you'd know that the middle school grant is working and its helping our children to become the citizens in which they are trying to become. When we went to the school it was like walking into a building and talking to little adults because they were just so diligent and you can tell it was not scripted or rehearsed. You can tell that they truly take pride in their school, and that was just wonderful.

At another school a teacher in a focus group explained the benefit of attending the middle school conference as follows:

The middle grades conference was really useful. Kind of a reinforcement of what I already knew. But you use that strategy, or you use an activity, or you do something, and then you put it on the back burner and you don't use it again, and that was, some of it was reviewing, and it was, like, "Oh, that's right! I forgot! I could be doing that in my classroom right now. I did it last year but I put it on the side." Because there are so many new things and you want to keep trying the new things, but then you forget that you have some good old things that you should continue using. So that was one of the things that I found. And then there were some new things I learned that I could readily apply in my classroom. So like for science, I started using the flip books and making my science journals more interactive, as opposed to just a place to take notes. But I think [the other teacher who went] felt the same way. When we came back we were all motivated. "Yes, we're going to do this!" We were all excited about it.

A handful of principals explained that they did not think it was likely that they would be able to sustain this aspect of C4MGP on their own as some said clearly that they would not spend money for teacher professional development when they would rather spend their money to ensure a smaller class size. However, a few principals thought they might be able to provide some financial support for teachers to attend conferences with teachers paying another portion of the fees. For these principals, the benefits of conference attendance were worth their setting aside funds for this purpose.

BRIM training

About half of the case schools sent teams to BRIM training. Most school staff said this training was helpful to shaping their understanding of middle schools; however, when pushed to be specific, most could not explain clearly the value added of this project. In one focus group teachers who said they had been “BRIM trained” (but whom evaluators think were speaking of C4MGP Leadership PD provided by BRIM trained teachers) explained the following about their training:

Teacher 1: I went to one at the beginning of this year, where it was more like jig sawing the book [BRIM Book] and looking at them and putting them in order based on importance, so, the big ideas, and then organizing them based on importance, but I don't know that we did...

Teacher 2: I did one where we went and we talked about being those mice that get the cheese that...

Teacher 1: Oh, that's right. We went to that one together.

Teacher 2: That was BRIM. And it was, the idea of going, okay, this is what we want, we don't just ... I don't remember what the cheese thing was now, but it was...

Teacher 1: It was, so the ones that get to the cheese are the ones that keep moving. So are you the cheese or are you the one that kind of sits back and waits a little bit?

Teacher 2: Or that says “no, no, no, that's not a good idea.”

Teacher 1: Right. That was the idea. So like, where do you see yourself?

Teacher 2: And I think the whole idea was, we say this is what we want for education; let's go out and do it.

At another school, a BRIM trained teacher explained that the training and subsequent presentations by trainers should have happened in the earlier years of C4MGP.

I'm a BRIM trainer and also I just got asked to be on their team that is going to do the walk throughs next week so I'm on one of their review teams. So I was pretty involved in it. So from what I understand they are trying to look at how to build middle school capacity especially in urban schools and schools that have historically not had high quality best practice middle schools...I mean I understand the philosophy behind the BRIM training to kind of make us—but it felt sorta shallow this year. I ran one of the BRIM trainings already, and I'm going to run one in a couple weeks on service learning. It just kind of felt like—we know we are supposed to empower leadership with it, but I kind of felt like when we were running our session people had heard a lot of this stuff a lot so we are try to motivate people who have heard this for a long time, so I think the timing could have been used more effectively or BRIM training could have come earlier. BRIM training would have made sense if we were new to the project.

As for sustainability of this aspect of the project, schools were given a set of BRIM books for their school, and it seems likely that these books will serve as a resource for some of these schools in the years to come.

Teaming

C4MGP managers promoted three main types of teacher meetings: grade level, vertical, and articulation between middle grades and high schools. In 2007-08 when evaluators began collecting data on teacher meetings, all case schools reported that middle grades teachers had regularly scheduled meetings; however, we heard conflicting stories as to how regularly those meetings schedules were adhered to. By 2008-09 our data suggested that middle grades/grade level meetings were taking place at least weekly for at least 30-60 minutes for most of the case schools. In addition most case schools also were engaging in vertical team meetings at least quarterly. Articulation meetings between middle school teachers and high school teachers were not happening in the majority of C4MGP case schools in 2009-10.

In 2009-10, evaluators did not collect data on topics discussed at the regular grade level/middle grades meeting; however, our data from 2008-09 suggested that at least half of the C4MGP case schools discussed the following topics: curriculum and instruction (particularly literacy), collaboration across grades, advisory/AVID, transition to high school, ISAT, school events (e.g.: science fair, graduation), and materials.

Our data do not suggest that there were significant changes in either regularity or the type/depth of conversations over the course of the project. Beyond making recommendations about “teaming” and providing some time at C4MGP Leadership PD for teams to meet, it is not clear to evaluators what activities or supports the project put in place to develop an understanding of “teaming” and its enactment in schools.

Advisory/Advocacy

The C4MGP had six expectations within the advisory/advocacy expectation. Evaluators lacked data on many of these aspects. It is not clear to us that many of the expectations around advisory were explicitly address through program activities – i.e., each student in C4MGP schools had a particular staff member advocating on the student’s behalf, that advisory was embedded across disciplines, that advisory was internalized, and that mentors were actively involved and connected to students. We do know that in 2009-10 75% of schools offered a regularly scheduled advisory and that over half of the schools had developed their own curriculum, one-fourth had purchased curricula, and one-fourth seemed to have no concrete curricula. From what we heard from teachers and principals, developing a plan for what to do for advisory has taken time to research and experiment with. Some told us of getting ideas for advisory from the middle school conferences. Some got ideas from the C4MGP Leadership PD. It is not clear to us how schools that developed advisory did this beyond their exposure to ideas presented at C4MGP Leadership PD and the middle school conferences they attended. It is also not clear to us how schools that didn’t incorporate an advisory will do so now that the project has ended. It seems that those who have developed some type of an advisory program will continue to “tweak” it to make it work for them.

One principal explained the progression of advisory at her school as follows:

Now this year what we have is advisory for 15 minutes for all grades every day... What they do is that the person they have now—I know that with budget cuts, it may not work totally—but the person they have for advisory, they will have until they leave the building. Our classrooms are 30, or 27, 28...it’s like around 18-20 for advisory. It’s still too big, but four days a week we have a program we call Positive Action so they are doing a lot of the PA activities. The teachers come up with...if the

kids have a question that they want to bring in or pose, they tell the teacher ahead of time. They [teachers] get to know the kids and what their issues are. I used to have it at the end of the day, but I stopped it because I found that there were some teachers not understanding that I meant it to be an advisory period not to get your books ready and get dismissed so to combat that I also moved it...talked to my leadership team...that's the one thing about middle school people—you got to talk about this. It's not going to be just my decision because again, it's not going to be bought into if it's my idea. It was a lot of the "Fish" philosophy activities; I kind of leave it to those teachers to do themselves because the whole purpose of it is to try to get to know the kids so if something happens and you've got one of your advisory kids brother just got shot, this may be something that you may need to discuss this with the kids a little bit. So you've got to feel out the kids. You use those advisory books and there are activities—Chicken Soup for the Soul cards and things like that they can use, but we cut all of the periods by 7 minutes so there's one advisory period where they are doing one activity across the board in the building. One team building type activity—this week it has to do with yellow and green yarn. They are all in their own room and the goal of that is so that later they can say later that their group did this or that and share it out. The goal is...next year will be 3rd year, so there will be 3 different advisory books now. So next year the 6th grade will all be doing one thing, the 7th grade will all be doing one thing and then the 8th grade will be doing one thing but again that's just the one advisory period a week.

Conclusions and Lessons Learned

Based on pattern we see in the evaluation findings, we can discern some lessons. The C4MGP project was clearly and positively successful in establishing at most participating schools:

- Endorsed middle grades math and science teachers offering these subjects
- Algebra I qualified teachers and the offering of Algebra I to prepared students
- Improved course scheduling allowing departmentalized math and science, advisory periods and shared times for teachers to meet during the school day

The results were more mixed in terms of how successful teachers and principals in participating C4MGP schools were able to:

- Attend professional development on CMSI curricular materials and use these materials
- Utilize shared teacher meeting times for teaming around instructional strategies
- Articulate and implement plans for using advisory periods and other strategies to better prepare students for high school

The pattern in these findings seems to be the following:

Clearly implemented outcomes were structural and formal in nature. Teacher credentialing was a structural change that required university graduate courses and applications through CPS or State of Illinois channels. The changes seen in endorsed teachers may also be related to a 2008 Chicago Board of Education policy requiring endorsements and may be related to teachers' enrolling in courses to better ensure their job security. Further, the structural changes required decisions at the school level that could be

programmed in for the year and were fairly hard to change once schedules were set. These changes were also the ‘easiest’ to implement in the sense that they were clear and measurable, and whether they were accomplished or not was easy for all to discern. Successful outcomes were more related to changes in structure and ‘what’ happened than in changes in quality or practice – the ‘how’ it happens.

The mixed outcomes could be characterized as more informal and process-oriented. Whereas the project was able to facilitate that time be set aside for teacher meetings, advisory and that resources be used to offer professional development and buy curricular materials, how these times and resources were used was more variable. The “how” of implementation was dependent on how individuals and groups carried their work out on a daily basis. For example, teachers and principals had to talk together to determine if a substitute teacher could cover the classroom so a teacher could attend professional development workshops. The teacher each day had to decide how to use their curricular materials in order to cover the materials they felt their students needed to focus on. The principals each had to decide how often they would monitor classroom practices and what priorities they would stress to their teachers.

We juxtapose these outcomes with the C4MGP model and with the major ways the model and structures and staffing changed over time and draw two major conclusions.

Regular urban public schools can strengthen their middle grade math and science workforce and course offerings. This is possible with the support of district leaders and policies in conjunction with steady partnerships with universities and with a systemic focusing of resources on the education of practicing teachers. “Starting from scratch” with a school and with new teachers is not required.

Changing teachers’ classroom practices and instructional teaming efforts takes longer than structural changes. These types of deep changes benefit from focused and steady long-term support that is often rare given political dynamics of urban public schools. While the structural changes may be set up in a couple years, changing practices in individual classrooms and teacher meetings take longer.

In addition, when we examine how the Cluster 4 Middle Grades Project unfolded with both successes and with challenges, several project, strategic planning, and management lessons come to light. These relate to how future projects deal with setting forth their theory of action and then planning for inevitable structure and staffing changes.

Lessons on the Theory of Action

- 1. At the start of the project, articulate a detailed theory of action with clear and measurable expectations and with details on the activities and resources needed to attain the outcomes.**

From the start and throughout the four years of the C4MGP, a few goals were clearly articulated to stakeholders and resources were provided to help schools meet the expectations. This is seen clearly in the example of endorsements and credentialing for 8th grade algebra. Where clear goals existed, these components tended to be implemented by schools.

However, some aspects of the project, such as exploratory and advisory, were not well articulated until the last year of the project. These project components tended to lack resources or supportive activities. Activities which lacked clear articulation tended to be those which

were related to quality – the ‘how’ things should be done – and are not surprisingly the more difficult to achieve. Having clear guideposts and expectations is critical to helping schools know they are moving in a successful direction (as determined by the project), and for measuring their success.

2. Formally articulating multiple strands of work may be useful for improving cohesiveness and an understanding of how various activities fit together to support the attainment of outcomes.

When a portion of a project begins as a separate strand (e.g., Leadership), or emerges implicitly as a separate strand (e.g., content-specific and non content-specific) it is important to articulate how the strands will work together. If separate strands then become integrated into one, how does the theory of action change? How should inputs and activities be shaped?

The nature of much of the discourse on the middle grades by the end of the C4MGP seemed to reflect the notion that the C4MGP consisted of three different “strands” that were not always integrated:

- structural strand (departmentalization & scheduling),
- the content strand (core instruction, endorsements, 8th grade algebra), and
- the socio-emotional strand.

Future projects like C4MGP, which aim to target content along with other middle grades supports, might consider deliberately articulating multiple strands of programming, and clearly articulate how these strands might fit together in service of the long-term goals.

In the case of C4MGP, meeting the needs of adolescent students was added as a long term goal later in the project. Was there research to support the linking of this goal to the original goals? In particular, was there reason to believe that math and science knowledge and skill acquisition will be specifically aided by supports for supporting adolescent needs? It is important for projects to examine the assumptions underlying their activities to ensure that program activities are supporting one another in coherent ways and driving towards the same goals.

3. Project scope should consider resources.

C4MGP saw some interesting shifts of scope throughout its 4 years, mostly around what content areas were included in the project, how they were included, and who was targeted with leadership development opportunities. The broadening of scope and addition of new players added new elements of complexity to the project’s mission, implementation, and communication among constituents. While adding activities and inputs can serve to broaden a project’s reach, it also runs the risk of diluting project efforts and shared understanding of the project’s main objectives and goals.

One example of this is the movement of literacy and social science in and out of the leadership professional development which was being offered in the early years of the project. Another example of this was the shift in project focus from instruction to socioemotional needs of adolescent learners. It may be perfectly reasonable for a program to plan to shift focus from one element to another, but if the first set of goals has not yet been accomplished, then the question arises as to whether the focus of resources on other goals should be undertaken quite yet.

When a project adds elements and does not remove or revise others, the scope potentially becomes too large to be effectively managed. Were some of the earlier goals and activities

already met/completed before new ones were added? Did project managers see a benefit in addressing multiple expectations at the same time? Future projects might benefit from continuously re-visiting which goals and activities are ongoing and which are time-sensitive. Evaluation could be used more fruitfully to examine the implementation of goals.

4. Stable partnerships are a key component of successful parts of projects.

Partnerships among the C4MGP, university partners, and funders remained strong and stable throughout the project. This can be viewed as a major success of the project, and was one which seemed key to the project continuing through massive district-level changes. How can future projects emulate these partnerships, particularly in other districts where such relationships are not as deeply entrenched?

5. It is important for program planners to articulate how in-school collaboration is to work and how it will positively impact goals.

In the case of C4MGP, external evaluation revealed that many school level collaborative meetings were used for purposes other than discussing content and instruction. This was one area in which the expectations for the ‘how’ of the collaborative process was never clearly outlined for schools – what was collaboration supposed to look like? How were the collaborative processes expected to impact the overall goals of the project? Although research has shown that collaboration can be a powerful tool for change and development of shared understandings, the simple existence of structures in which collaboration is supposed to occur is unlikely to be sufficient to truly drive instructional change. Future evaluations of programs which include a collaborative component might want to examine the theory of change associated with collaboration, and how collaboration is expected to help the project achieve its goals.

6. Focusing on the quality in addition to the structures will produce a stronger program model.

As has been said several times in this report, C4MGP seemed very successful in creating structural change in schools in terms of departmentalization, endorsed teachers, schedules supporting math and science instruction, teaming, and time for advisory. What was less clear was whether what happened within these structures was of high quality. Although for some of these structures the measure of quality is simple present vs. absent (endorsements), in areas such as teaming or advisory it may be important for the project to make explicit some guidelines around what a “high quality” session would look like. The project planners resisted this in many instances, saying that it was up to schools to determine what was best for their students. Though it is true that many programs want to provide participants with flexibility, there is a fine line between allowing autonomy and not providing any guidance. When pressed by evaluators, the project planners were able to describe what they felt made a good grade level team meeting, or how effective vertical teaming would look. However, these frameworks for quality interaction were never made concrete or shared with schools as an expectation. Projects need to walk a fine line between too much scripting and too little guidance. Where the presence of the structure alone is unlikely to guarantee quality, it may be particularly useful for project planners to provide at least some general guidance to help schools improve their practice, and to provide clear standards against which participants’ progress could then be assessed.

7. Thoughtful, well-planned data collection and use will strengthen program models.

One interesting component of C4MGP compared to many other projects in CPS was its focus on using data to ensure that schools were progressing towards expectations. This was prior to any of the performance management data which was enacted by the new CEO. The C4MGP planners provided the AIOs and coaches with copious amounts of data about which teachers were attending PD, how often, and which were enrolled in endorsement courses. This was an invaluable lever for pushing schools to meet project expectations around these facets of the C4MGP, since they were clearly transparent, constantly discussed with the leadership, and followed up on by project staff with principals and teachers.

Lessons on the Inevitability of Change

8. Programs must plan for inevitable staffing changes.

CPS went through major structural and staffing changes between 2006 and 2010. While this might be an extreme example of district-level upheaval given the change of CEO which led to a mass exodus of senior and content staff, it serves as an important illustration of the effects of systemic changes on a program. Given that this is a potential reality for any district, and in particular a large urban district, how can program planners and funders create structures that will help create support for a project as personnel and structures change?

Teacher mobility was also an issue in C4MGP schools. Some schools were able to get teachers endorsed in math or science or credentialed to teach Algebra but then lost the teacher due to teacher mobility. How do projects of this scale plan for such losses? C4MGP tried to plan for this by asking principals to get more than 1 teacher credentialed to teach 8th grade. The time needed to credential teachers made it difficult for some schools to do this. This issue is particularly pertinent for projects which are relying on teacher training to improve the student experience – once the trained teacher leaves, what structures are in place to ensure that another is trained?

In one example, one of the original C4MGP AIO's made time to train her replacement by having her attend the C4MGP meetings for a number of months before transitioning out. This practice was not followed by other AIOs who left their positions. Can projects such as C4MGP work with districts to think about these kinds of inevitable transitions prior to their taking place and/or put structures in place to ease this transition?

What did the project learn about choosing district-level partners? In the case when these are handpicked, what process is put in place to build stability/sustainability beyond the individual person? (i.e., if all eggs are put in the basket of a particular AIO, what happens when s/he leaves? How is stability/sustainability built?) When schools are chosen because of their need and not because of the buy-in of administrators such as an AIO, how are relationships formed to build sustainability at the Area level? Given the inevitability of change and mobility, project partners would benefit from considering up front how they will deal with issues of transition/succession. Projects should also consider discussing issues of sustainability from the beginning, and considering how the project successes can be sustained in the face of transition.

9. In the midst of district changes, strong partnerships can help maintain progress toward project goals.

As personnel and structures such as the joint Office of Math and Science changed at CPS, university partners and funders remained committed and focused on math and science instruction. Without these partners committed to a shared vision, it would have been difficult for the C4MGP to continue and difficult for schools to have made the gains they did in math and science endorsements, in offering Algebra I to 8th graders, and to implementing the CMSI curricula. Future projects would be well advised to nurture strong relationship with their critical partners.

10. Strategic management and planning is crucial for a project to stay on message and grow the vision in a timely, coherent manner.

Within the context of ongoing changes in the C4MGP project in combination with a lack of a strategic manager to ensure that all components of the program were aligned, C4MGP developed multiple and sometimes competing visions. While stakeholders from the University and for the most part Foundation groups saw the vision of C4MGP as focused on improving student knowledge through improved teacher content knowledge and pedagogy, C4MGP managers saw the purpose of the project as addressing the particular needs of middle school students via improving school staff understanding of the middle grades student. What systems for checks and balances can projects put in place to be sure that 1) the original vision (presumably based on a need) is followed through on, 2) that changes to the original vision are based on formative evaluation and/or changing needs, and 3) that changes to the vision are discussed and communicated amongst all stakeholders? It might be useful for projects to review their theory of action and strategic plans each year with their Foundation partners to ensure that the strategic plan is still appropriate, and that the operational plan for the year aligns with the strategic one.

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