The Implementation and Scale-Up of LDC and MDC Tools

Executive Summary

Research for Action • September 2012
The Bill and Melinda Gates Foundation has invested in the development and dissemination of high-quality instructional and formative assessment tools to support teachers’ incorporation of the Core Common State Standards (CCSS) into their classroom instruction. Literacy experts have developed a framework and a set of templates that teachers can use to develop content area modules focused on high quality writing tasks closely tied to subject area texts. Math experts have developed Formative Assessment Lessons that teachers can incorporate throughout the year’s curriculum. These tools were introduced and revised in multiple settings throughout the 2010-2011 co-development year. The initiative continued during the 2011-2012 pilot year, with expansion in some sites and the addition of new sites.¹

For the past two years, Research for Action (RFA) has been studying the early adoption of these tools, focusing particularly on teachers’ response to and use of the tools in 2010-2011, and expanding to include an analysis of the scale up of the initiative in 2011-2012.

RFA’s research included:

- Eight site visits (four literacy and four math)
- Nine observations of professional development
- Interviews with 120 teachers, 20 district administrators, 26 school administrators, 15 state-level policymakers and partners, 6 tool developers (LDC & MDC), and 4 professional development providers
- 65 classroom observations
- Surveys of 336 teachers, 65 principals and 75 district-level staff in all participating sites in spring 2012

¹ Some sites also did not continue Initiative participation in Year Two.
This executive summary provides an overview of the research that is described in greater detail in four Research Briefs:

**Brief One:** LDC and MDC: Theory of Action and the Landscape of Implementation  
**Brief Two:** Robust Implementation of LDC: Teacher Perceptions of Tool Use and Outcomes  
**Brief Three:** Robust Implementation of MDC: Teacher Perceptions of Tool Use and Outcomes  
**Brief Four:** Conditions for Scale and Sustainability

**Theory of Action**
The Theory of Action depicts the underlying assumptions and conditions on which the LDC and MDC initiatives are based, and is grounded in the goals of the LDC/MDC initiatives, our own research, and existing research on similar initiatives. Findings from two years of interviews, observations, and surveys with various LDC/MDC stakeholders helped to inform the construction of the following Theory of Action. We employed both *method triangulation* and *data triangulation* to include various types of research strategies as well as varied stakeholder sources within our research. Our goal was to capture multiple viewpoints and portray these with a single illustration. The Theory of Action is presented below in Figure 1. Each element of the figure is then described briefly.
Figure 1. Theory of Action
Elements of the Theory of Action

Context
Although individual teachers use the tools in a classroom setting, contextual factors influence their use. The Theory of Action identifies broad categories of such contextual factors, including students, schools, districts, networks, regions, states, support organizations, and curriculum.

Indicators of Robust Implementation
The set of six Indicators of Robust Implementation represent the anticipated changes in teacher practice and student behavior as the tools are successfully implemented in the classroom. Robust implementation is manifested in two main arenas: Teacher Beliefs and Knowledge, and Classroom Changes.

Conditions
The three Conditions that support Robust Implementation—Alignment with local and state standards and curricula, Effective Leadership at multiple levels, and meaningful and on-going Professional Learning Opportunities—represent the web of organizational, policy, and professional learning supports necessary for implementing, sustaining, and growing the use of the tools. These conditions were first described in RFA’s 2011 reports on tool implementation, and have been revised to include the broader array of leadership necessary for more intensive initiative scale-up.²

Intermediate Outcomes
When robust implementation of the tools occurs, we would expect to see two major, measurable outcomes emerge as precursors to the ultimate goal of graduating students who are college and career ready: Broad and Deep Instructional change, and Increased Student Learning.

Long Term Impact: College and Career Readiness
As students progress through schools that effectively utilize the LDC and MDC tools, their learning will become increasingly aligned with the Common Core State Standards. As a result, they will graduate from high school fully ready for college and career.

²The September 2011 RFA reports entitled Establishing a Strong Foundation (LDC and MDC), included four conditions: 1) robust district, regional, school network leadership; 2) strong school leadership; 3) meaningful professional learning opportunities; and, 4) alignment with the CCSS, curricula and assessment.
The Landscape of Implementation

The MDC and LDC Initiatives are growing. The following maps indicate the status of training that has occurred in multiple states and districts over the course of the 2010-11 and 2011-12 school years, excluding teachers who were trained in 2010-11 and did not continue to receive training in 2011-12. In total, 2,706 teachers received LDC training, while 1,504 teachers received MDC training.

Figure 2. LDC Tools

Figure 3. MDC Tools

Robust Implementation of LDC and MDC: Teacher Perceptions of Tool Use and Outcomes

In the following section, we present our findings from Briefs Two and Three, organized by Indicators of Robust Implementation. Percentages represent LDC and MDC teacher survey responses. Survey responses are provided when findings derive from survey data.
**Teacher Beliefs and Knowledge**

**LDC and MDC teachers believe in the underlying principles of the tools.**

Most LDC teachers agreed that:
- Content area teachers should help students improve their literacy skills (98%)
- Writing assignments can help students develop deeper understanding of important concepts (96%)

Most MDC teachers agreed that:
- Asking students guiding questions (100%) and collaborative group work (99%) are effective ways to strengthen students’ mathematical understanding
- Assuming the role of instructional “facilitator” or “coach” is an effective way to teach mathematics (98%)

**LDC and MDC teachers exhibit high levels of buy-in to the initiative, and this is especially true for experienced teachers.**

Most LDC and MDC teachers reported that:
- The tools were an important part of their instructional practice (LDC: 75%; MDC: 71%)
- They intend to make improvements in how they use the tools next year (LDC: 94%; MDC: 99%)
- The initiative was worth the time and effort (LDC: 75%; MDC: 87%)

**LDC and MDC teachers know how to use the tools, but challenges remain.**

A strong majority of LDC teachers:
- Know the skills and assignments students need in order to complete the template task (this was especially true of experienced teachers)

Most MDC teachers reported:
- a common understanding of their role as an instructional “facilitator”

Experienced MDC teachers reported:
- Being more knowledgeable about when to use the Lessons in their curriculum (96% vs. 77%)
Teachers who developed modules or had access to those with such expertise reported:

- Higher levels of knowledge about module implementation
- Feeling more prepared to use modules

A third of MDC teachers:

- Were unsure of how to respond to their students’ mathematical mistakes on the formative assessment lessons (33%)

**Classroom Changes**

**LDC and MDC teachers reported strong progress in using the tools effectively.**

**Most LDC teachers reported using the tools to:**

- Teach both literacy skills (73%) and content (66%)
- Learn about students’ literacy strengths and weaknesses (66%)
- Include more formative assessment in their instruction (75%)
- Raise their expectations for student writing (82%)
- Increase the rigor of reading and writing assignments (80%)
- Implement the CCSS (79%)

**We found that:**

- Experienced teachers were even more likely than new teachers to report these tool uses
- Teachers of social studies and science reported more concerns

**Most LDC teachers reported that:**

- *Differentiated instruction and finding time* are the greatest challenges

**Most MDC teachers reported using the tools to:**

- Teach content (78%)
- Learn about their students’ mathematical strengths and weaknesses (76%)
- Include more formative assessments in their instruction (76%)
- Provide detailed feedback to students (71%)
- Implement the CCSS (77%)

**Most MDC teachers reported that:**

- Using the Lessons helped establish a classroom culture that promotes mathematical discourse (80%)
- *Differentiated instruction and finding time* are the greatest challenges
Teachers observe high levels of student engagement during tool use – with the strongest engagement reported by MDC teachers.

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<th>Most LDC teachers reported:</th>
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<tr>
<td>• Student engagement during LDC instruction to be equal to or better than during non-module instruction. (33% reported greater student engagement)</td>
<td>• Students were more engaged when using the Lessons compared to teachers’ regular instruction (62% reported greater engagement)</td>
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<td>• Experienced LDC teachers were more likely to report strong student engagement during module instruction (37% vs. 27%)</td>
<td>About three-quarters of MDC teachers reported:</td>
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<td>About half of LDC teachers reported:</td>
<td>• Lessons helped engage specific student groups (e.g. special education students and English language learners)</td>
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<td>• Modules help engage specific student groups (e.g., special education students and English language learners)</td>
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LDC and MDC teachers perceived improvement in student learning.

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<th>Most LDC teachers:</th>
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<td>• Observed academic benefits for students, including:</td>
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<td>▪ Improved student writing (80%)</td>
<td>▪ New ways of thinking mathematically (97%)</td>
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<td>▪ More sophisticated interaction with text, and</td>
<td>▪ Increased content knowledge (92%)</td>
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<td>▪ Increased student content knowledge</td>
<td>• Experienced MDC teachers perceived greater improvement</td>
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<td>• Experienced LDC teachers perceived greater improvement</td>
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Intermediate Outcome: Broad and Deep Change in Instructional Practices

Most LDC and MDC teachers reported broad and deep changes in instructional practices

LDC and MDC teachers reported that they were:
- Sharing modules and lesson with teachers not formally participating in the initiative (LDC and MDC 42%)
- Using tool-related instructional strategies during non-tool instruction time (LDC: 70%; MDC: 73%)
  - Experienced teachers were particularly likely to report these practices

Experienced LDC and MDC teachers reported that they were:
- Using tools more often this year (68% of experienced LDC teachers; 92% of experienced MDC teachers)

But, many LDC and MDC teachers reported:
- Concerns about competing initiatives and insufficient professional learning opportunities

Overall, experienced LDC/MDC teachers exhibited more signs of robust implementation than did teachers new to the initiative.

This finding could be due to the comfort and expertise gained from using the tools for a longer period of time; but it could also be due to differences between teachers who began using the tools in Year One and those who adopted in Year Two.

Conditions for Scale and Sustainability

As outlined in Brief Four, successful Scale-Up of the MDC/LDC initiative would feature the following:

- **Breadth of Adoption.** Expansion of the number of teachers, schools, districts and networks that are using the MDC and LDC tools
- **Depth of Adoption.** Deeply embedding the reform within a school and district.

**Sustainability** requires maintenance of the reform over time in the original and subsequent schools.

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3 Tool usage by LDC teachers is often determined by site guidelines, making comparisons misleading.
Status of Scale Up and Sustainability

There has been an expansion in the breadth of tool use. As illustrated in Figures 2 and 3, the number of teachers and schools utilizing the tools has increased both nationally and across our eight study sites; tool use in the MDC study sites has expanded to a more modest degree.

The depth of scale-up has increased as teachers and administrators have become more experienced with the tools. Teachers have indicated their belief in the utility of the tools; 75% of LDC teachers and 87% of MDC teachers noted that the initiatives were worth the time/effort involved. Teachers also see the centrality of the LDC/MDC tools to their instruction; 75%, of LDC teachers and 71% of MDC teachers saw the tools as important to their instructional practice. Further, school administrators have indicated their commitment to the ongoing use of the tools, with 96% of LDC principals and 78% of MDC principals reporting that the district has the commitment to sustain the initiatives. Similarly, 94% of LDC district administrators and 97% of MDC district administrators reported that the district is committed to sustain the initiatives.

Conditions that Support Scale Up and Sustainability

The status of the three Conditions that support Robust Implementation and scale-up and sustainability of the tools—Alignment with local and state standards and curricula, Effective Leadership at multiple levels, and meaningful and on-going Professional Learning Opportunities— are summarized below.

Condition 1. Alignment with local and state standards and curricula

Signs of Progress

- The tools are generally perceived as aligned with the content of the CCSS and local curricula by teachers (LDC: 80%; MDC: 81%), principals (LDC: 88%; MDC: 77%) and district administrators (LDC: 88%; MDC: 88%).
- LDC teachers that perceive strong alignment between the tools and local and state standards and curricular also report robust implementation of the tools.
  - MDC teachers report a much weaker relationship between alignment and robust implementation of the tools. Explanations for the weak relationship largely relate to the scope of the MDC initiative in our study sites and beyond:
    - The level of implementation across sites varies greatly. Widespread implementation was observed in only 1 of our study sites last year.
    - A full complement of Lessons was not available to teachers. Formative Assessment Lessons have continued to be developed and rolled out over the course of the initiative.
    - Teachers do not create their own instruments, which could explain a relative lack of investment and ownership.
    - Lessons are shorter and more targeted than LDC modules. As a result, they may not require as large a shift in instructional practice.
Teachers reported competition between the MDC tools and other curricula.
  - Given the nature of the MDC initiative and its relative youth, it is premature to compare MDC tools to LDC tools.

**Potential Threats:**
- Common Core implementation timelines may impact the priority given to tool implementation.
- Some competition between tool use and other aspects of the curriculum remains.
- Alignment with local curricula is seen as weaker than alignment with the CCSS.
- Emerging teacher evaluation systems may create disincentives for tool use.

**Condition 2. Effective Leadership at multiple levels**

**Signs of Progress:**
- Principals have become more involved with the LDC and MDC initiatives, with 75% of principals observing tool implementation.
- Experienced teachers are emerging as leaders, providing strong support for tool use.
- Over 80% of teachers reported that district leaders support and encourage use of the tools across both LDC and MDC.
- State and regional leaders played an important role in supporting the work of expanding and deepening tool use.
- LDC teachers that perceive strong leadership also report robust implementation of the tools.
  - As stated above, MDC’s design and early implementation provide a likely explanation for the weak relationship between leadership and robust implementation.

**Potential Threats:**
- The locus of state and network leadership for the initiative varies across the study sites.
- With limited capacity at the state level, stakeholders will need to think creatively to find the resources needed to support tool use.
Condition 3. Professional Learning Opportunities to support and sustain teachers’ use of the tools

Signs of Progress:

- A variety of professional learning opportunities are available to teachers, principals, and district staff affiliated with the LDC/MDC Initiatives.
- Many surveyed teachers reported participating in professional development during both years of the LDC/MDC initiatives (LDC: 23%; MDC: 53%).
- LDC and MDC teachers generally perceived most professional learning opportunities to be effective. LDC teachers found developing modules and teaching tasks, working in small groups and reviewing sample modules to be most effective. MDC teachers found professional development specific to the work of implementing the Formative Assessment Lessons (i.e., lesson study, and Formative Assessment Lesson simulation) to be most effective.
- When teachers engage in professional learning opportunities, they tend to also report the existence of Robust Indicators of implementation. This is more evident among LDC teacher survey respondents.
  - Again, as stated above, MDC’s design and early implementation provide a likely explanation for the weak relationship between professional learning opportunities and Robust Implementation.

Potential Threats:

- Some professional learning opportunities are perceived as more effective than others.
- Webinars were identified as a less effective form of professional development by new LDC teachers and by both new and experienced MDC teachers. Teacher collaboration, a strongly regarded approach to supporting tool use, is limited.
Recommendations
As the implementation of the MDC and LDC initiatives continue to broaden and deepen, we offer the following set of recommendations to support the scale-up and sustainability of the reform.

Increase alignment between the Initiative and state/local curricula, standards and assessment.
- Encourage CCSS-aligned instruction in classrooms.
- Align messaging (i.e., tool use expectations) across educational governance levels.
- Address alignment between LDC and MDC tools and state accountability systems.
- Coordinate tool implementation and scale-up with existing curricula.

Improve and bolster leadership at the school, district, network and state levels.
- Assess existing state, regional and district capacity and utilize available human capital resources to coordinate LDC/MDC initiative efforts consistently across schools and districts.
- Look for opportunities to increase state and regional capacity.
- Ensure a strong district and/or network staffing and coordination strategy for scale-up.
- Include principals and other school-based leaders in the work of scaling the tools.
- Utilize the experiences of teachers involved in piloting the tools.

Better support teachers with effective and sustained professional learning opportunities.
- Coordinate messaging and training processes among tool developers and training providers.
- Include all educators using the tools and supporting tool use in professional learning opportunities.
- Provide a level of training that reflects the depth of pedagogical change required by the tools.
- Customize professional development to address the varying needs of teachers (new vs. experienced, content area, student type).
- Ensure ongoing opportunities for collaboration with peers.

Next Steps for the Research
Future research will focus on the scale-up and sustainability of the Initiatives, with the aim of providing key stakeholders with the information necessary to make decisions that best support educators in guiding students in their preparation for college and careers beyond high school. Additionally, RFA will continue to work with UCLA/CRESST to both support their investigation of the relationship between the LDC and MDC initiatives and student outcomes, and to develop systems to be used by teachers and administrators in observing and evaluating LDC and MDC tool implementation.