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THE IMPLEMENTATION AND EFFECTS OF THE LITERACY DESIGN COLLABORATIVE (LDC): EARLY FINDINGS IN SIXTH-GRADE ADVANCED READING COURSES

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Abstract

The Bill and Melinda Gates Foundation invested in the Literacy Design Collaborative (LDC) as one strategy to support teachers' and students' transition to the Common Core State Standards (CCSS) in English language arts. This report provides an early look at the implementation of LDC in sixth-grade Advanced Reading classes in a large Florida district, and the effectiveness of the intervention in this setting. The study found that teachers understood LDC and implemented it with fidelity and that curriculum modules were well crafted. Teachers also generally reported positive attitudes about the effectiveness of LDC and its usefulness as a tool for teaching CCSS skills. Although implementation results were highly positive, quasi-experimental analyses employing matched control group and regression discontinuity designs found no evidence of an impact of LDC on student performance on state reading or district writing assessments. Furthermore, students generally performed at basic levels on assessments designed to align with the intervention, suggesting the challenge of meeting CCSS expectations. Exploratory analyses suggest that LDC may have been most effective for higher achieving students. However understandable, the findings thus suggest that, in the absence of additional scaffolding and supports for low-achieving students, LDC may be gap enhancing.

Chapter 1: Introduction

The Common Core State Standards (CCSS) in English language arts (ELA) bring rigorous, new demands for student learning to ensure that students will have the literacy knowledge and skills they need to be prepared for success in college and careers. For most schools, these new English language arts standards dramatically increase expectations for students' ability to read literary and informational texts closely, analyze evidence, communicate orally and in writing for a variety of audiences and purposes, and conduct research.

The new standards bring new challenges for teachers and students alike. Teachers must adapt their existing curriculum and instruction to align with the new standards and adopt new pedagogical approaches to support their students' success. Recognizing these needs, the Bill and Melinda Gates Foundation invested in the Literacy Design Collaborative (LDC) as one strategy to support teachers' and students' transition to these new, more rigorous expectations. Although LDC is at a relatively early stage of implementation, the Foundation was interested in getting an

early read on program effectiveness and contracted with the National Center for Research on Evaluation, Standards, and Student Testing (CRESST) to conduct two quasi-experimental studies of LDC's implementation and learning impact. The study reported here examines LDC as it was implemented in sixth-grade Advanced Reading courses in a major urban school district in Florida during the 2012–2013 school year. The second study, examining LDC implementation in eighth-grade history/social studies and science classes during the 2012–2013 school year in selected Kentucky and Pennsylvania school districts is reported in a separate companion report (Herman et al., 2015).

This chapter presents background on the study, including a brief description of the LDC intervention and the evaluation questions that guide the Florida study. In the following chapters, we summarize study methodology, present implementation and outcome results, and examine the implications of our findings.

Literacy Design Collaborative Overview

LDC supports the transition to the Common Core State Standards in English language arts by providing flexible module templates that enable middle and high school teachers and schools to integrate reading, research, and writing standards into instruction. End-of-module, extended writing tasks provide the heart of the approach. Teachers use fill-in-the-blank templates to design a culminating content-focused writing task, which then is used to organize a module of instruction. The module is designed to address relevant content in literature, history/social studies, or science as well as relevant reading and writing demands aligned with the CCSS. For example, the following templates structure end-of-module tasks for students' argumentative and expository writing respectively:

> TASK 1 TEMPLATE (Argumentative/Analysis L1, L2, L3): After researching _____ (informational texts) on _____ (content), write an _____ (essay or substitute) that argues your position, pro or con, on _____ (content). Support your position with evidence from your research. L2. Be sure to acknowledge competing views. L3. Give examples from past or current events or issues to illustrate, clarify, and support your position. *(Appropriate for: social studies, science)*

> TASK 11 TEMPLATE (Informational or Explanatory/Definition L1, L2): After researching _____ (informational texts) on _____ (content), write a _____ (report or substitute) that defines and explains _____ (content). Support your discussion with evidence from your research. L2. What implications can you draw? *(Appropriate for: ELA, social studies, science*)

After deciding on the end-of-module writing task, teachers then use an LDC-specified framework (or *instructional ladder*) to design instructional activities to support students in

developing the content and requisite literacy skills to successfully complete the culminating task. The steps of the ladder include core activities, such as note-taking, identifying evidence to support claims, and evaluating contrasting positions, that scaffold student learning and provide ongoing opportunities for formative assessment. The final product—instructional ladder plus template task—is referred to as an LDC module.

The Foundation has been exploring a variety of approaches and partners to support LDC implementation. The approaches vary in the extent of professional development and coaching support that teachers and schools receive and in their focus on individual teachers or districtwide and/or schoolwide implementation. The Florida study focuses on a centralized, districtwide LDC implementation.

The Florida District Context

Among the 10 largest districts in the country, the study site provides an interesting case for examining how LDC fares in a highly diverse student population. As described for the study year by district records, student demographics were approximately as follows:

- Ethnicity: African American, 22%; Hispanic, 31%; White, 39%; Other, 9%
- Socioeconomic status: 59% qualify for free or reduced price lunch
- Language status: 12% English language learners
- Achievement level: 63% of sixth-graders at or above proficient in reading

Relative to the rest of the state, the study district is more diverse in ethnicity and proportion of English language learners and slightly lower in socioeconomic status and in student achievement than the state average. Students placed in Advanced Reading, the subject of this study, were on average higher performing than the mean student in the state based on prior year reading scores.

This Florida district took a unique, centralized approach to LDC implementation in sixth-grade Advanced Reading courses. District literacy leaders in collaboration with the on-site reading coaches from 10 pilot schools initially developed four LDC modules to make up the core of the sixth-grade Advanced Reading curriculum. The modules were piloted in 2010–2011 at the 10 schools and revised in collaboration with teachers during summer professional development sessions. In the following year, an introductory module was added to the suite and implementation was expanded districtwide to all 46 district middle schools. Teachers were expected to implement the five modules according to a districtwide pacing schedule and were provided detailed plans for the instructional activities and culminating performances for each of the five modules:

- Introduction to LDC, which provides an orientation;
- Personal Change Creates Community, in which students produce an informational essay that focuses on how and why young people make a difference in their communities;
- Savage Harvest, in which students write an article for a children's magazine that defines child labor, explains child labor practices and how children around the world are impacted, and considers consumer issues;
- Communication in a Cybernation, in which students write an editorial that defines our digital footprints and explains their perspective on digital privacy; and
- Fit for Life, in which students write a public service announcement that explains the long-term benefits of regular physical activity.

Each module includes step-by-step guidance for teaching the module, including (a) an overview of the module goals and the standards it addresses; (b) a pacing guide that summarizes the content of each lesson and a grading matrix indicating what parts of each lesson may be graded for participation/classwork, writing, assessment, or other; (c) exit slips to be used with specified lessons; (d) lesson plans for each lesson, including a task analysis of lesson goals and timing of specific activities that can be used to achieve the goals, with instruction notes, assessment activities, and needed handouts; (e) culminating teaching and assessment tasks for the module; (f) possible read alouds; and (g) tie-ins to Florida Comprehensive Achievement Test (FCAT) objectives.

Evaluation Questions

At the time of the study, sixth-grade Advanced Reading teachers in the pilot schools had two years of prior experience in implementing LDC, while the vast majority of study teachers in the remaining 36 middle schools had only one prior year of experience. At this early phase of LDC development, the study addresses a comprehensive set of evaluation questions:

- How do teachers implement LDC?
- What is the impact of LDC on student learning?
- What conditions and contexts, including quality of implementation, influence LDC effectiveness?

In addressing these questions, the study implemented a quasi-experimental design and developed and validated new measures of implementation and learning impact, as described in the next chapter.

Chapter 2: Study Methodology

The study focused on sixth-grade teachers and students in Advanced Reading during the 2012–2013 school year. Study methodology featured strong quasi-experimental designs (QED) to examine LDC's effects on students' state assessment performance and local district measures, as well as implementation and outcome measures that were specially developed to align well with LDC goals. The implementation measures included teacher logs, an end-of-year survey, and analysis of module quality. Below we provide more detail on these elements of study methodology.

Study Sample

Population. The study population included all sixth-grade Advanced Reading teachers and their students in the district during the 2012–2013 school year who had at least one year of prior experience using LDC. This population included teachers from 41 schools including eight of the 10 Phase 1 schools (not all of the 46 Phase 1 and Phase 2 schools had teachers eligible for the study). All sixth-grade Advanced Reading teachers were required to implement the five LDC modules according to the same sequence, and as mentioned, these modules constituted the bulk of the yearlong curriculum.

Sample for quasi-experimental analyses. As LDC was implemented districtwide in the study district, LDC treatment for the quasi-experimental analyses was based on school identifiers. For reasons described further in Chapter 4, certain analyses excluded Phase 1 schools (the earliest implementers). The matched control group analysis used longitudinal student and teacher data from Florida's state database. Drawing on sixth-grade students in similar courses across the state, we used propensity matching techniques to create a comparison sample of students who were equivalent to the LDC group in demographics and prior academic performance. The regression discontinuity design compared students close to the cut-point for entry into Advanced Reading who were selected and not selected into the course. These techniques and the resulting samples are described further in Chapter 4 in the context of the QED results.

Table 1 shows the demographic and entering achievement characteristics of the full population of LDC students in the study, based on district records. These data indicate that the study's LDC student population was ethnically diverse, and more than half the students qualified for free or reduced price lunch. Proportions of students classified as English language learners or special education were small and lower than district means (not shown), which is not surprising given that the study population is composed of students in Advanced Reading classes.

Table 1

Demographic Characteristics of LDC Student Population: All Sixth-Grade Advanced Reading Students (n = *6926)*

Student characteristics	Value
Ethnicity	
Hispanic (%)	26.1
White (%)	47.8
African American (%)	14.7
Asian (%)	4.7
Other (%)	6.6
Qualify for free or reduced price lunch (%)	51.4
English language learner (%)	1.3
Gender: Female (%)	52.3
Special education (%)	4.2
Mean prior FCAT reading performance	233.7

Sample recruitment and completion rates for LDC-only measures. District leadership and LDC leaders and coordinators fully supported study recruitment, but teacher participation in the special measures was voluntary. The effective study sample size thus varied with the various instruments used in the study. Table 2 displays the number of study-eligible teachers who were invited to participate in the study, those who agreed to participate, and the completion rates for each of the study measures. Because no special agreement was needed to include teachers in the analysis of available state and local assessment and demographic data, all teachers in the study population were included in the QED study sample.

Nearly 60% of the eligible Advanced Reading teachers agreed to participate in the study and half or more completed the major research activities, including logging about modules, completing the end-of-year survey, and administering the specially developed student learning measure, the Integrated Learning Assessment (ILA).

Table 2

LDC Study Completion Rates by Instrument

Sixth-grade Advanced Reading teachers	*n*	% relative to all eligible LDC teachers	% relative to consented teachers
Teachers eligible for CRESST study	101	--	--
Teachers consenting to CRESST study	59	58	--
Completed logs	52	51	88
Administered ILA measure	53	52	90
Completed survey	56	55	--

Based on students who took the ILA, Table 3 indicates that the students represented in the special measures sample are very similar in student characteristics and entering achievement to the full Advanced Reading student population (as shown in Table 1).

Table 3

Demographic Characteristics of LDC Student Sample: Advanced Reading Students Completing Special Measures (n = *877)*

Student characteristics	Value
Ethnicity	
Hispanic (%)	29.4
White (%)	44.9
African American (%)	14.4
Asian (%)	4.9
Other (%)	6.2
Qualify for free or reduced price lunch (%)	55.7
English language learner (%)	3.7
Gender: Female (%)	52.3
Special education (%)	1.3
Mean prior FCAT reading performance	233.1

Implementation Measures

Our implementation measures draw on research on instruction and instructional change, given that the ultimate goal of the LDC intervention is to align teachers' instruction to Common Core State Standards. Classroom practice is notoriously impervious to reform (Cuban, 1984;

Lortie, 1975), however, an emerging body of research has documented the relationship between student achievement and specific instructional practices that create opportunities to learn (see Bryk, Sebring, Allenworth, Luppescu, & Easton, 2010; Rowan & Correnti, 2009; Winters & Herman, 2011). Our implementation measures thus focus on classroom instruction, while recognizing that multiple factors influence and inhibit teacher innovation and instructional change. Study measures include web-based teacher logs, collected twice weekly during LDC module implementation, and an end-of-year teacher survey. For both measures, teachers who taught multiple sections of sixth-grade Advanced Reading were asked to focus on the same, randomly selected focal class.

Web-based teacher log. Study teachers were asked to complete a log twice weekly during their implementation for each of two LDC modules: Module 3, Savage Harvest (which focuses on international child labor practices), and Module 4, Communication in a Cybernation. The Savage Harvest and Communication in a Cybernation modules were typically completed between November and January and between January and April respectively. The logs focused on (a) the degree to which instruction generally aligned with the structure of the LDC intervention, (b) the degree to which instruction explicitly specified and addressed the discrete literacy skills required to complete the summative writing task, and (c) the quality and extent of formative assessment practices incorporated into LDC instruction. Each log was designed to capture classroom instruction on the particular day the log was completed and focused on only one of the teacher's classes—the same class for all logs.

The log included opening (gateway) items that asked teachers to specify which component of the LDC module they addressed on that particular day (i.e., Preparing for the Task, Reading Process, Transition to Writing, Writing Process) and then branched to back-end items for the identified component(s), where teachers answered additional questions about component instructional objectives and strategies. For example, the Reading Process section asked teachers to check all the specific reading skills that were addressed in the day's instruction. Follow-up items asked teachers to identify how they assessed student understanding and/or reading skills during the period and how they responded if a student had difficulty with the reading assignment. The emphasis on formative assessment aligns with LDC intent, which views the steps in the instructional ladder as opportunities for the teacher to track student progress and intervene appropriately to support student learning. Logs were analyzed at the teacher level.

On average, participating teachers submitted 12 logs for Savage Harvest and 11 for Cybernation, for a total of 23 logs per teacher. Log data were summarized across logs for each teacher by module. The computations included teachers' responses only to those items that were associated with the LDC component(s) that the teacher specified for each log. For example, log

reading component mean scores were based only on responses to logs for which teachers reported implementing the reading component of the module. (See Exhibit A1 in Appendix A for a copy of the log.) Group means were then computed across teachers and modules. Implementation analyses also considered various composite measures, as described further in implementation results below. Data were analyzed for each module separately, but because few consistent differences were found, the report summarizes results across the two modules.

Teacher surveys. CRESST collaborated with Research for Action (RFA) on the design of a 2013 implementation and scale-up survey for teachers. The survey included a section on module implementation with items designed to mirror the intent of the log items. These survey items queried

- relative time spent on the various module components;
- relative emphasis given to specific reading and writing skills;
- use of formative assessment and strategies for providing feedback; and
- perceptions of LDC impact.

Further, we drew on RFA survey variables as context and possible moderators of LDC implementation and impact—for example, experience using LDC, attitudes regarding literacy instruction, extent of professional development, leadership support, and collaboration. Descriptive statistics were computed at the teacher level. (See Exhibit A2 in Appendix A for copy of the LDC teacher survey.)

Analysis of LDC modules. District notebooks, providing guidance and student activities for each module, were analyzed using the specially developed CRESST Assignment Measure rubric. The rubric addresses nine dimensions of quality, which focus on the quality of the central writing task, the quality of the instructional ladder, and the overall coherence and quality of the module, and attend to both literacy and content demands:

- Dimension 1: Effective Writing Task
- Dimension 2: Alignment to the CCSS and Local and State Literacy and Content Standards
- Dimension 3: Text Alignment
- Dimension 4: Text Appropriateness
- Dimension 5: Text Rigor
- Dimension 6: Fidelity to LDC Module Instruction
- Dimension 7: Quality Instructional Strategies
- Dimension 8: Coherence and Clarity of Module

- Dimension 9: Overall Impression

Each dimension was scored on a 1–5 scale, where a score of 1 indicated that the quality was absent and/or there was not apparent attention to the dimension, a score of 3 indicated the quality was moderately realized, and a score of 5 indicated that the quality of the dimension was fully realized. (See Exhibit A3 in Appendix A for the scoring rubric.) Detailed rubrics describe each dimension and the criteria defining each score value.

A companion study examined the use of the rubric in analyzing LDC units in eighth-grade history/social studies and science. This study examines the measurement quality of module scores through generalizability, factor analysis, and decision study methodology and is reported as a separate paper. (See Reisman, Herman, Luskin, & Epstein, 2013, in Appendix B, which describes the measures, including development, piloting, scoring, generalizability and dependability studies, and results.) Raters generally found the scoring dimensions intuitive and well aligned with the available artifact data. Both the social studies and science analyses revealed low rater variance and high teacher (or teacher by module) variation. Moreover, the factor analyses indicated that all dimensions load on a single factor, making the case that the CRESST Assignment Measure effectively measures a coherent trait that might be understood to be LDC implementation, or perhaps more generally, instructional quality in the integration of literacy and content.

For this study, both a study researcher involved in rubric development and a middle school social studies teacher specially trained to apply the rubric rated each of the four modules. Any score discrepancies were addressed through consultation and consensus.

Student Outcome Measures

Student outcome measures for the study include state assessment data, local district data, and CRESST-developed Integrated Literacy Assessments (ILAs). Student demographic information also was secured with the available state assessment data.

State assessment data. The study used developmental scale scores from the Florida Comprehensive Achievement Test (FCAT 2.0) to measure students' 2012–2013 performance in English language arts, specifically reading. The FCAT 2.0 reading development scale scores are vertically aligned to track student longitudinal progress from year to year, from Grades 3 to 10. The sixth-grade FCAT 2.0 Reading Test is composed of 50–55 multiple choice items. According to test specifications (see http://www.fldoe.org/core/fileparse.php/5682/urlt/0077907-fl10spisg68rwtr3gfinal.pdf), the items on the sixth-grade reading test are allocated proportionally into the following categories:

- Vocabulary: 20%

- Reading application: 30%
- Literary analysis, fiction/non-fiction: 30%
- Informational text: 20%

Note that the allocation gives only 20% of the item to analysis of informational text, which tends to be an emphasis in LDC modules.

Individual-level longitudinal data were obtained for all students statewide from 2008–2009 to 2012–2013. However, an important limitation of these data is that FCAT moved to Version 2.0 for the 2010–2011 school year, coinciding with the Phase 1 pilot of LDC. The change in tests was accompanied by a differential drop in performance for students in the study district's Advanced Reading courses, relative to those in the rest of the state. Because Phase 2 schools that had not yet begun implementation of LDC also experienced the drop, we questioned the comparability of FCAT 1.0 and 2.0 for study purposes. Unable to disentangle LDC effects from the effects of the change in the test and lacking a comparable baseline measure for Phase 1 schools, we made the decision to limit our matched control group analyses to the 30 Phase 2 schools. For Phase 2 schools, FCAT 2.0 data were available from prior to LDC implementation through the study year. (We provide additional information on our rationale and approach in the chapter providing QED results.)

District assessment data. CRESST additionally received data for students in the study district on the district's writing assessment.

The district's writing test mirrors the Florida Writes assessment (which is part of the state assessment system for Grades 4, 8, and 10) for grades not assessed by the state and is administered at both the beginning and end of the year. In contrast to the writing-from-reading emphasis of LDC, the district and state writing assessments ask students to respond to a prompt that can be answered based solely on students' prior knowledge. The prompts call on narrative, expository, or persuasive writing. For example, recent prompts for 2013–2014 Florida Writes for Grades 4 and 8 were:

> Grade 4: Suppose you won something special.
>
> Think about winning something special.
>
> Now write a story about what happened when you won something special.
>
> Grade 8: Suppose you could convince a famous person to visit your town.
>
> Think about why this person should visit your town.
>
> Now write to convince this person to visit your town.

Beginning- and end-of-year sixth-grade district writing scores were provided for 2009–2010 to 2012–2013. In 2010–2011 and 2011–2012, the district writing assessment used a six-point holistic rubric to score student essays, based on the rubric used for the state writing test in Grades 4, 8, and 10. The rubric integrated four elements in quality writing: focus, organization, support, and conventions. In 2012–2013, the district began using the LDC rubric to score students on its writing assessment. The LDC rubric is scored on a four-point scale from 1 to 4, and incorporates the following score elements: focus, controlling idea, reading/research, development, organization, conventions, and content understanding.

Integrated Literacy Assessment (ILA). The CRESST ILAs are designed to measure both students' literacy development relative to the CCSS in English language arts and the depth of students' content understanding in literature, social studies/history, or science. Across content areas, the two-day ILAs feature a consistent structure that roughly mirrors components of LDC: On Day 1, students read several texts that typify those encountered in the discipline and address an important content principle or theme and respond to selected and constructed response reading comprehension and analysis questions about each text. The questions are aligned with the CCSS in ELA. On Day 2, students respond to an essay prompt that, consistent with the CCSS, asks them to synthesize what they know with what they have read to produce an evidence-based, extended explanation or argument responding to a content-related problem.

ILA content foci. The ILA design seeks to respond to the challenge of disentangling the background information that students bring to the assessment from the knowledge that they gather from reading the actual texts in the assessment (Klein, 1983). Assessment designers and evaluators must take care to not unfairly privilege students whose teachers spent considerable time on a topic over those whose teachers' coverage was more cursory. We addressed this potential confound in the ILAs in two ways. First, we selected topics that students should have covered in their recent curriculum, or that were closely related to topics they had covered. Second, we included relevant background knowledge in the actual exam so that even students with virtually no familiarity in the topic could orient themselves to the substance of the texts and write meaningfully about them (Baker, 1994).

To ensure that students had an opportunity to learn the content topic, the ILA for the study drew on the content of one of the LDC modules, child labor. The assessment also includes background information in the form of three related texts. Each of the three documents in the assessment includes a headnote with key background information about the author and the context. The ILA was designed specifically to align with the Savage Harvest module, the second of the four required modules for sixth-grade Advanced Reading, which focuses on contemporary international child labor. The intent was for students to use both their existing knowledge of the

topic and new information garnered from the readings in the ILA to successfully complete the final writing task. A copy of the Child Labor ILA can be found in Exhibit A4 in Appendix A.

ILA administration and scoring. As described earlier, CRESST's ILAs are divided into a reading component, in which the student reads and responds to a variety of texts through multiple choice and short extended response questions, and a final, extended writing task. The ILAs were scored using rubrics developed by the CRESST ILA development team. As outlined in Table 4, the writing task was scored on five dimensions: content understanding, rhetorical structure/quality, organization, reference support with text, and grammar and conventions. Each of these dimensions was rated on a four-point scale, with a 4 representing advanced performance, 3 representing proficiency, 2 representing a basic level of performance, and 1 below basic. Table 5 presents an example of a scoring rubric for one of the four dimensions: rhetorical structure/quality. Scores on the five dimensions were summed to arrive at an overall score for the essay. Copies of the writing and short answer rubrics for the Child Labor ILA can be found in Exhibit A5 in Appendix A.

Table 4

Scoring Rubric for ILA Final Writing Tasks

Dimension	Name	Description
A	Content understanding	This is a measure of overall how well the student has demonstrated that they understand the materials and the topic in their essay.
B	Rhetorical structure/quality	Argument: establishes a claim, acknowledging alternate or opposing claims, and supports it consistently with relevant evidence and logical reasons. Explanation: establishes a thesis; previews the main points; and thoroughly develops the topic with well-chosen information, examples, and analysis.
C	Organization	Consistent focus, logical progression of ideas, and structure appropriate for the task.
D	Reference/support with text	This is a measure of how well statements in the essay are supported by references to text details. A text detail is a quotation, paraphrase, or any other reference to information and ideas in the texts provided.
E	Grammar and conventions	The essay is written with a command of standard English conventions: proper English usage and control of grammar, appropriate tone, paragraph, and sentence structure.

Table 5

Scoring Dimension Example for Rhetorical Structure/Quality

Description	Score
Important elements of the argument are clearly and thoroughly described and articulated.	4
Elements of the argument are clearly described.	3
There is an attempt to describe some elements of the argument.	2
Elements of the argument are not described, or the descriptions are unclear.	1

CRESST recruited a small group of classroom teachers to score the essays, most of whom had participated in scoring for an earlier validation study. The group met for two 6-hour training sessions. During training, raters practiced applying the five-dimension essay rubric until they achieved 80% reliability with criterion papers prescored by CRESST staff. Essays were divided evenly among the qualifying raters, with 20% of the essays assigned to two raters. In addition, about 10 of the essays interspersed throughout the scoring process were designated check papers and scored by all raters. Check papers were distributed so that raters would score them in the same order. CRESST staff monitored the scoring daily to ensure that raters were progressing and that check papers were being scored consistently. If a rater's scores were inconsistent with check papers, their double-scored papers would be checked and feedback and additional training provided as needed. After scoring, interrater reliability was determined from the double-scored essays. One teacher was found not to have sufficient reliability and that rater's scores were dropped. Essays scored by that rater were divided between the two most reliable remaining raters and rescored.

Short answer items were scored on either a 0–1 or 0–2 point scale, with partial credit possible on the three-point scale. Rubrics were prepared for each item. The rubrics were based on those used in an earlier assessment validation study.

Table 6 and Table 7 document rater agreement on the essay scores, including items that were double-scored and check papers scored by all three raters. The data show substantial rater agreement, with percentage of exact agreement obviously higher in the case of two raters relative to agreement among the three. In virtually all cases, there is 100% agreement plus or minus one score point.

Table 6

Interrater Reliability for Double-Scored Child Labor ILA Essays (n = *104)*

Dimension	% exact agreement	% agreement within 1 point
Content understanding	73	98
Rhetorical structure/quality	68	100
Organization	76	99
Reference/support with text	75	99
Grammar and conventions	71	100

Table 7

Interrater Reliability for Triple-Scored Child Labor ILA Essays (n = *16)*

Dimension	% exact agreement	% agreement within 1 point
Content understanding	63	100
Rhetorical structure/quality	56	100
Organization	94	100
Reference/support with text	69	94
Grammar and conventions	81	100

Table 8 presents the reliability of the reading and writing components of the Child Labor ILA. Cronbach's alpha reliability statistic for the 13 items in the reading component of the assessment is .414, while the internal consistency of the five dimension scores for the writing component is .860. Note that these statistics should not be directly compared, as the writing dimension scores assess the same task and are not independent. The reading reliability is lower than expected and indicates substantial error in the scores.

Table 8

Reliability of Child Labor Integrated Learning Assessment

Component	Number of items/dimensions	Cronbach's alpha (reliability)
Reading	13	.414
Writing	5	.860

Chapter 3: LDC Implementation

All sixth-grade Advanced Reading teachers in the study district were required to implement an introductory module, followed by four complete modules over the course of the school year: Personal Change Creates Community, Savage Harvest, Communication in a Cybernation, and Fit for Life, which collectively represented the bulk of the Advanced Reading curriculum for the year. In this chapter we review results that bear on how these modules were implemented, drawing on teacher logs and surveys, and an analysis of the modules themselves. In reviewing these findings, it is important to keep in mind the relatively small sample sizes and that while log, survey, and module samples overlap, they are not fully the same. For example, some teachers completed the survey but not the log and vice versa.

Teacher Background

Teachers' background, prior experience, and attitudes about literacy instruction, gleaned from teacher survey responses, provide important context for the implementation findings. Teachers participating in LDC varied greatly in teaching experience, with both novice and seasoned veteran teachers in the sample. On average, teachers reported having been in the profession for almost 14 years, with the majority of teachers' experience within the study district, and just under half in their current schools. Almost all teachers reported teaching students who were reading and/or writing below grade level as well as those who had advanced literacy skills, and the great majority were also teaching classes with English language learners and special education students (see Tables C1 and C2 in Appendix C).

The vast majority of survey respondents reported that their participation in LDC was required (rather than voluntary), consistent with the district mandate to use the modules for sixth-grade Advanced Reading classes. Teachers reported teaching an average of 3.6 modules in 2011–2012 and 4.3 modules in 2012–2013, a finding that confirms that the teachers we targeted for the study were experienced in implementing LDC. Not surprisingly, given that modules in the district were developed centrally, few teachers reported being involved with module development. Teachers generally agreed with a central LDC and CCSS premise that literacy instruction should be integrated into content area teaching, and that reading and writing are essential supports for students' content area learning (see Tables C3, C4, and C5).

Log Findings

As noted earlier, teachers completed twice-weekly logs for the Savage Harvest and Communication in a Cybernation modules, focusing on one randomly selected Advanced Reading classroom. These data provide information on the forms of activities in which students were engaged during module implementation, the specific reading and/or writing activities in

which students participated, and teachers' use of formative assessment. Note, however, that teachers' responses showed wide variation, so reported means must be interpreted with caution.

Teachers reported spending approximately 30 to 40 minutes a day on LDC instruction and, as Table D1 in Appendix D shows, this time included a wide range of activities. The data suggest substantial variation across teachers, but in general, teachers most frequently engaged students in independent reading or writing, which made up approximately one third of classroom time. Small group work constituted the second most frequent activity, at 13% to 14% of class time for the average teacher, and explicit strategy instruction and whole-class discussion constituted roughly 10% of classroom activity time. The remainder of class time was spread over a variety of different activity types. The time typically spent in explicit strategy instruction may be of special note, because it indicates that students received relatively little direct instruction in the skills they need to develop their reading and writing skills. Explicit strategy instruction, however, also is one of the only areas that appeared to show a substantial increase from Savage Harvest to Cybernation.

Examining how the separate components of LDC were implemented, Table D2 shows how teachers transitioned to the LDC module and introduced the module tasks. Most commonly, teachers reviewed the content of the module and connected that content to what students had previously learned. Less frequently were students provided an advance organizer for the writing task they would be asked to complete or provided success criteria.

To prepare for the module, students primarily listened to the teacher and sometimes were engaged with graphic organizers, discussed applicable strategies, made predictions about the topic or readings, or generated questions (see Table D3).

During the LDC reading process component, students most frequently were engaged in independent reading, summarizing the main points of the reading, and to a lesser extent drawing conclusions from the evidence and note-taking. While other aspects of critical reading and analysis generally received less attention, there appeared to be an increase in the emphasis on these skills from Savage Harvest to Cybernation—for example, in distinguishing fact from opinion, evaluating the strength and weaknesses of evidence, comparing arguments, and examining the author's perspective (see Table D4).

To check students' understanding and progress, teachers most typically circulated as students were working independently, listened as students discussed text with peers, and collected and reviewed student work. To a lesser extent, teachers reported asking students to respond to oral questions, leading whole-class discussions, or listening to students' questions (see Table D5). Providing one-on-one feedback, asking a peer to help, and offering a hint or

suggestion were the most frequent strategies teachers used when they discovered misunderstandings about reading (see Table D6).

Moving to the writing process component, the data suggest that teachers' emphases moved from general to more specific aspects of writing from Savage Harvest to Cybernation. While the skills related to the basic structure of writing were emphasized across both modules, the specifics of effective writing got greater attention during Cybernation, for example, formulating a thesis statement and/or counterargument; writing an introduction, body paragraph, and conclusion; and incorporating relevant quotes and evidence from texts. The data suggest attention to a progression of student skills and are consistent with the relative demands of the writing tasks in the two modules (see Table D7).

As with the reading process component, logs suggest that teachers used a variety of strategies to solicit evidence of student understanding and most commonly did so by observing and/or collecting and then reviewing student work—be it writing exercises, rough drafts, or other assignments. There was also evidence of teachers using peer interactions and feedback as a source of information on student understanding. Teachers were most likely to provide feedback via one-on-one conferences with students. Other approaches to providing feedback also were evident. Overall, teachers seemed to use feedback strategies to a greater extent during the writing component of the module than during the reading component (see Tables D8 and D9).

Teacher Survey Responses

In this section, we summarize teachers' responses to the RFA/CRESST implementation and scale-up survey. Results are described for a subset of questions that particularly bear on the CRESST implementation study, including survey items developed to parallel the log measure and those reflecting variables likely to influence classroom implementation. We start with the instructional items designed to align with the log measure, and then move to responses related to implementation support and sense of efficacy.

LDC implementation. Survey responses suggest that teachers on average spent relatively the most time on their LDC modules' reading process component, which accounted for about 40% of their instructional time, followed by the writing process component, which encompassed about a quarter of the module instruction. Introducing the module and transition to writing components, as would be expected, were allocated relatively less time at 15% and 19% respectively. The data, however, show considerable variability by teacher (see Table C6).

Teachers' responses regarding their attention to various reading skills and strategies during the reading component showed wide coverage. The vast majority of teachers reported giving at least some attention to all skill areas queried on the survey, although analysis of rhetorical

devices drew considerably less attention than the other skills. The great majority of teachers reported giving strong emphasis to citing evidence to support claims, drawing conclusions from evidence, and summarizing important points from reading. More than half further reported giving a great deal of attention to evaluating the quality of evidence, distinguishing fact from opinion, analyzing structure, comparing arguments, examining authors' perspectives, and note-taking. These responses suggest a strong emphasis on critical reading. Independent reading drew relatively less emphasis with fewer than half of the teachers reporting placing a great deal of emphasis on this activity. This finding stands somewhat in contrast with the log results, which suggest that students spent about a third of LDC classroom time reading and conducting research independently, and that critical reading drew uneven attention across the two modules (see Table C7).

Turning to emphasis during the writing component, survey responses also indicate that teachers gave substantial attention to a wide range of writing skills—a majority gave at least some attention to each of the 10 skills queried by the survey. A sizable majority—more than 70%—reported giving a great deal of emphasis to supporting their students' ability to formulate a thesis; write introductions, body paragraphs, and conclusions; and incorporate quotes. More than half, in addition, reported giving a great deal of attention to formulating counterarguments, using transitional words and phrases, and the structure of text (see Table C8).

Teachers further reported using a variety of strategies for assessing student learning during the course of instruction—the vast majority regularly circulated to review students' work, listened to student discussion during group work, asked questions, and collected and reviewed students' written work (see Table C9).

Teachers' feedback when they discovered problems in students' reading and/or writing also showed a range of responses. More frequently, teachers reported that they gave students additional time to try again and self-correct, with 70% of responding teachers reporting this as a frequent response to gaps in understanding. More than half reported often providing students specific written comments, providing hints or suggestions, and/or asking a peer to provide feedback. Interestingly, survey responses suggest that most teachers tended to provide immediate feedback, as only about a third of the teachers reported that they planned to respond to students' difficulties through a future review. Similarly, reteaching (e.g., a repeat of a prior lesson) was not a frequently used strategy for most teachers; one fifth of respondents claimed that they rarely or never did so. In addition, the majority of respondents rarely or never assigned grammar exercises when they noticed problems in student work (see Table C10).

Support for implementation. According to teachers, district administrators demonstrated strong support for and understanding of LDC. Teachers' perceptions of their school administrators' support for the intervention, however, varied widely. Some teachers reported that their administrators understood LDC and how it aligned with school priorities, communicated its importance, and provided feedback on instruction, and others reported a lack of knowledge, support, and feedback. Majorities of teachers reported having their classrooms visited by their principal, instructional coach or department head, and teacher colleagues during LDC module instruction, and 40% reported receiving a visit from a district LDC project leader (see Tables C11 and C12).

Over three quarters of teachers reported participating in formal professional development (PD) related to LDC in the 2012–2013 school year. This group of teachers participated on average in about two sessions, with a range between one and four sessions. Professional development was most commonly delivered in districtwide or small group meeting settings. Teachers generally found all settings to be effective. Teachers reported that LDC professional development covered a wide variety of topic areas. The most commonly cited professional development foci were using LDC as a way to implement Common Core, building a teaching task, using the instructional ladder, using mini-tasks to address skills in reading and writing, providing feedback on writing, and using rubrics to score student work. Teachers did not commonly report that they received PD on implementing LDC with high-needs students, for example, English language learners, special education students, or students reading or writing below grade level (see Tables C13 through C16).

Teachers also reported spending a considerable amount of time collaborating with teacher colleagues on LDC. Almost two thirds of respondents reported having regularly scheduled common planning time with colleagues to discuss LDC. Furthermore, a majority of teachers participated in both scheduled meetings and informal discussions around LDC at least every other week. Although there was variation across teachers, on average teachers had positive attitudes regarding this collaboration. Teachers generally felt that their LDC colleagues were collaborative. In addition, most teachers found this collaboration at least somewhat helpful in effectively using the LDC framework, better supporting student learning, and teaching LDC modules (see Tables C17 through C19).

Perhaps as a result of available professional development and collaborative opportunities, teachers felt confident in their capacity to implement the LDC modules. Most reported knowing which skills students needed to complete the task, and the types of mini-tasks that would help students prepare for the task. Some teachers, however, did report barriers to successful

implementation of LDC modules. Many teachers felt they did not have sufficient time to prepare for teaching the modules and to respond to student writing (see Tables C20 and C21).

Attitudes toward LDC efficacy. Overall, most district teachers seemed to find LDC to be a helpful and effective teaching tool. Large majorities of teachers reported that LDC helped them meet a wide range of instructional goals, including implementing the CCSS, increasing the rigor of writing assessments, engaging students, practicing formative assessment, and teaching literacy and subject matter content. Similarly, although there was variation in responses, teachers typically reported that the LDC framework was effective in promoting literacy instruction in secondary and content area classrooms, improving literacy, addressing the Common Core, and encouraging the use of formative assessment (see Tables C22 and C23).

Teachers were varied in their opinions regarding their students' level of engagement with LDC. Just over half of teachers reported that students were more engaged during LDC module instruction than in regular instruction, while a third of teachers felt their level of engagement was the same, and about 15% reported students were less engaged in LDC than other instruction. Nearly all teachers reported that their students experienced at least some success on reading mini-tasks, writing mini-tasks, and the final writing tasks; however, considerably more teachers reported that their students experienced a great deal of success on the final writing tasks than on the mini-tasks making up the instructional ladder. Based on these responses, teachers appear highly satisfied with the effectiveness of the LDC modules, but teachers and their students may need help to increase the productivity of the reading and writing mini-tasks (see Tables C24 and C25).

Finally, teachers in the district gave a strong endorsement regarding the impact of LDC on student learning. Although there was variation, most teachers agreed that LDC had resulted in higher quality student writing and had supported students' college readiness. When reflecting on their most recent module, over 90% of teachers reported that a majority of students improved their content knowledge, and over 85% of teachers reported a majority of students improved their literacy skills (see Tables C26 and C27).

Module Ratings

Here we present findings from the scoring of the four primary modules used in sixth-grade Advanced Reading, as displayed in Table 9. On average, the analysis found the modules to be of high quality; module quality dimensions were rated at least *moderately present or realized* (a score of 3) and more often approaching or at *sufficiently present or realized* (a score of 4). The results, however, show substantial variation in quality across modules, with Module 1, Personal Change, showing a lower average rating and the lowest ratings on each individual dimension.

Reviewers found the content relatively less aligned with the Common Core's major shifts and less rigorous than the other modules on a number of dimensions. This lesser rigor may have been an explicit strategy to start with relatively easier content and then introduce students more gradually to Common Core expectations over the series of modules. Module 2, Savage Harvest, and Module 3, Communication in a Cybernation, on the other hand received strong overall ratings.

The data also reveal considerable variation in quality across the nine dimensions. For example, module coherence, fidelity to LDC, effectiveness of writing task, and text alignment received high ratings overall. Alignment to literacy standards ratings were more variable; according to raters, the modules consistently included specific standards to which the modules were to be aligned, but alignment ratings suffered when raters could not identify strong evidence of those standards in the activities in which students engaged nor in the work students produced. Ratings for text appropriateness and text rigor were somewhat lower than for other dimensions.

In reviewing these findings, it is important to note that the modules have been subsequently revised. Moreover, module ratings here are significantly higher than those in the companion study of LDC implementation in eighth-grade history/social studies and science courses. The latter finding may suggest the value for module quality of a centralized approach to module development that involves literacy specialists.

Table 9

District Advanced Reading Module Scores

Dimension	Module 1: Personal Change Creates Community	Module 2: Savage Harvest	Module 3: Communication in a Cybernation	Module 4: Fit for Life	Average module ratings
Effective writing task	3.0	4.0	5.0	3.0	3.8
Alignment to literacy standards	2.5	3.0	3.0	4.0	3.1
Text alignment	3.0	4.5	4.0	4.0	3.9
Text appropriateness	2.5	4.0	4.0	3.0	3.4
Text rigor	2.5	4.0	4.0	2.5	3.3
Fidelity to LDC module instruction	4.0	4.0	4.0	4.0	4.0
Quality instructional strategies	3.0	5.0	4.0	3.0	3.8
Coherence and clarity of module	3.0	5.0	3.0	4.0	3.8
Overall impression	3.0	4.0	3.0	3.0	3.3
Average score across dimensions	2.9	4.2	3.8	3.4	3.6

Note. Ratings are on 1-5 point scale, where a score of 1 indicates that a dimension is not in evidence, a score of 3 indicates that quality was moderately realized, and 5 indicates that quality is fully realized.

Summary of Implementation Data

Teachers' responses to surveys and logs provide a portrait of by whom, how, and with what support LDC was implemented by the study sample, as well as participating teachers' impressions of effectiveness.

Who. Survey results indicate that study teachers were highly diverse in their prior experience, ranging from novice first- or second-year teachers to 40-year veterans. Almost all had experience in teaching diverse learners—from struggling to advanced literacy learners, students with disabilities, and English language learners.

Most of the study teachers had one to two years of experience implementing four to five LDC modules each of these years. Although teachers were required to participate in LDC, rather than having volunteered to do so, they appeared enthusiastic about their participation (see below regarding attitudes).

How. Teacher log, survey, and module review data indicate that teachers followed the LDC framework. As indicated by the logs and surveys, although independent reading and/or writing

were the most frequently occurring activities during LDC instruction, students engaged in a wide variety of reading and writing skills during this time. The log data indicate that direct strategy instruction and attention to critical reading—such as evaluating evidence, comparing arguments, and examining author's purpose—may need additional attention. However, variation in skills addressed from one module to the next and teacher survey responses suggest a more differentiated emphasis across modules. That is, while the analysis of one module may show little attention to a topic or skill, that topic or skill may be addressed in a subsequent module; for example, log data suggest that teachers' emphasis moved from general to more specific aspects of writing from Savage Harvest to Cybernation. Across all modules, our review showed attention to a wide range of reading and writing skills, consistent with teacher survey responses. The coordination of literacy skills across modules raises an important point in LDC implementation: That is, addressing the full range of ELA standards requires careful engineering and coordination across modules.

Across both reading and writing, teachers reported engaging in frequent formative assessment, involving multiple strategies for monitoring student learning and for responding to student misunderstandings as they occur. It is noteworthy that the modules specified a variety of specific assessment activities (and success criteria) and assessment techniques for each lesson, and many included exit slips, to support teachers' formative assessment practices.

Analysis of the district's modules provides another window into the quality with which LDC is being implemented. The modules generally received strong ratings for fidelity to the LDC framework, module coherence, effectiveness of writing task and text alignment. Ratings for all the nine dimensions examined approached or achieved high quality. Results, however, also indicated variation across modules and dimensions of quality.

With what support. Survey responses indicated that teachers felt their district leadership strongly supported the LDC intervention, but that the support of school administrators was more variable across the sample. Leadership support is evident in the LDC professional development that the majority of teachers reported participating in during the study year and in the regular scheduling of joint planning time for LDC teachers. In fact, teachers reported meeting formally or informally with their peers about LDC at least every other week, and most found that these various collaborative activities were helpful in implementing LDC. Although teachers felt capable of implementing the modules and knowledgeable about the skills and mini-tasks that were required, many teachers felt that they did not have sufficient time to prepare for teaching the modules and to respond to students' writing.

Attitudes toward LDC. Teachers reported that they found LDC a helpful and effective tool in meeting a variety of goals, including implementing the Common Core State Standards, using formative assessment, incorporating literacy into content classrooms, and increasing the rigor of their writing assignments. Most teachers also felt that LDC resulted in higher quality student writing and supported students' college readiness. When reflecting on their most recent module, over 90% of teachers reported that a majority of their students improved their content knowledge, and over 85% of teachers reported a majority of students improved their literacy skills.

Chapter 4: Student Learning Results

The study used multiple measures of student learning to examine LDC effects and to explore relationships between LDC implementation variables and student outcomes. We first present descriptive results for the CRESST Integrated Learning Assessment (ILA) and state and district assessment for the LDC sample only. We then present the results of the quasi-experimental matched control group analysis of LDC effects on student learning, followed by the within-district regression discontinuity analysis.

Descriptive Results

Descriptive results of Child Labor Integrated Learning Assessment. As noted earlier, study teachers who completed logs were asked to administer an ILA specifically developed to align with content in the Savage Harvest module, the second of the four required modules, which focuses on contemporary international child labor. The first component of the ILA calls for students to read and respond to a variety of texts through multiple choice and short extended response questions; the second component poses a prompt in which students are asked to combine their existing knowledge of the topic and new information garnered from the ILA readings to create an extended expository essay. These essays are scored on five dimensions: content understanding, rhetorical structure/quality, organization, reference support with text, and grammar and conventions, with each rated on a four-point scale. Scores on the five dimensions were summed to arrive at an overall score for the essay (see Chapter 2 for additional detail).

Overall, as shown in Table 10, student performance on both the reading and writing components of the Child Labor ILA was highly variable. On the reading component, students ranged from answering only one question correctly to achieving perfect scores. Scores on the writing component scores ranged from five to 17 out of 20 possible points. Student scores averaged 11 points for reading, or just over two thirds of the total and 11.5 of 20 total possible points in writing, equal to approximately 57% of the total possible score.

Table 10

Descriptive Results of Child Labor Integrated Learning Assessment

Component	Number of students	Total possible score	Mean score	*SD*	Minimum	Maximum
Reading	974	16	11.00	2.30	1	16
Writing	938	20	11.49	2.89	5	17

Data in Table 11 suggest that students performed at similar levels across all five writing dimensions. Although there was considerable variation across students, on average students performed between the basic and proficient levels, based on rubric criteria. Interestingly, scores were highest on average for content understanding, even though no student received the highest possible score (4) on this dimension. Mean scores across the four writing dimensions were in the basic range.

Table 11

Descriptive Statistics for Child Labor Writing Task Score Dimensions (n = *938)*

Dimension	Mean	*SD*	Minimum	Maximum
Content understanding	2.52	0.628	1	3
Rhetorical structure/quality	2.13	0.803	1	4
Organization	2.22	0.787	1	4
Reference/support with text	2.24	0.709	1	4
Grammar and conventions	2.35	0.635	0	4

Florida Comprehensive Achievement Test (FCAT 2.0). As described earlier, the study drew on students' end-of-year performance on the reading FCAT. Table 12 provides descriptive data on student performance on the FCAT at the end of the study year, 2012–2013, and the prior year. The sample of 6926 students includes all individual students taking Advanced Reading classes in the study district with available FCAT scores for both years. The results suggest that students whose teachers participated in LDC scored considerably higher than the statewide average in both 2012–2013 (state mean FCAT Reading = 225) and 2011–2012 (state mean FCAT Reading = 221). This is not surprising given that LDC was implemented in Advanced Reading classes and therefore students at the lower end of the achievement distribution in the study district would not be included in their mean.

Table 12

Sixth-Grade Advanced Reading Students' Performance on FCAT Reading and District Writing Scores

Variable	Number of students	Mean	*SD*	Minimum	Maximum
FCAT reading					
Spring 2013	6926	236.5	16.73	167	283
Spring 2012	6926	233.7	14.77	187	277
District writing					
Spring 2013	6619	2.2	0.91	0	4
Fall 2012	6577	1.69	0.73	0	4

Local district writing measure. The district writing results, seen in Table 12, indicate that sixth-grade Advanced Reading students started the year at a rudimentary level of writing. By the end of the year their writing showed significant improvement. However, a score of 2 indicates that the writing has weak focus and organization, lacks adequate support, and is limited in language.

Correlation between outcome measures. Before moving to our analysis of the effects of LDC on student learning, we report on the correlations between the four study measures addressing student learning outcomes: ILA writing, ILA reading, FCAT prior year and outcome year scores, and district writing pre- and post-test scores (see Table 13). In viewing these results, it is important to note that both the ILA and the district writing assessment are based on a single task, which limits the generalizability of the scores and thus the relationship to other measures. And indeed the district writing assessment shows the lowest correlation with other measures. The pattern of relationships suggests the distinctness of the constructs measured by each instrument: That is, the ILA is a writing-from-reading measure, while the FCAT focuses on reading comprehension. It is of interest that the spring FCAT scores show a stronger relationship with ILA scores, which are from the same time period, than do the FCAT results from the prior year.

Table 13

Correlation Between ILA, FCAT, and District Writing Scores

	ILA reading	ILA writing	ILA total	FCAT, spring 2012	FCAT, spring 2013	District writing, spring 2013	District writing, fall 2012
ILA reading	—						
ILA writing	0.39** (934)	—					
ILA total	0.78** (934)	0.88** (934)	—				
FCAT, spring 2012	0.39** (872)	0.38** (841)	0.45** (839)	—			
FCAT, spring 2013	0.48** (872)	0.47** (841)	0.55** (839)	0.63** (877)	—		
District writing, spring 2013	0.23** (812)	0.37** (782)	0.37** (780)	0.34** (817)	0.37** (817)	—	
District writing, fall 2012	0.09* (822)	0.16** (793)	0.16** (791)	0.19** (827)	0.21** (827)	0.13** (785)	—

Note. *n* presented in parentheses.
*$p < .05$, two-tailed. **$p < .01$ level, two-tailed.

Quasi-Experimental Analysis Overview

Two different types of quasi-experimental designs were utilized in the study to estimate the effect of LDC on student achievement: a matched control group design and a regression discontinuity design. The matched control group analyses compare the full population of LDC students in sixth-grade Advanced Reading courses in the study district to selected matched students from across Florida in Advanced Reading or language arts classes. Coarsened Exact Matching (CEM), described later in this chapter, was used to select matched students with similar demographic and prior achievement characteristics in schools with similar prior effectiveness. The regression discontinuity design takes advantage of a natural experiment created by the study district's selection process for entry into the Advanced Reading course. The design focuses on students near the cut-point for entry into Advanced Reading, and compares the performance of students that just made it into the course to students who just missed being assigned to the course.

Each of the two designs has advantages and disadvantages. The matched control group design includes a much more complete set of students receiving LDC instruction in sixth-grade Advanced Reading. However, because LDC was implemented districtwide in the study district and matched control students were selected from outside the district, it is difficult to tease out the impact of LDC from the effect of other district programs and conditions. That is, we cannot rule

out the possibility that differences between treated and matched control samples are due to other district-specific effects. With the regression discontinuity design, these district effects are controlled by nature of the fact that both treatment and control group students come from the district. However, the sample of students comes from a specific portion of the prior achievement distribution directly around the prior score cut-point, and therefore the estimates may not be generalizable to the full population of LDC students. Another advantage of the regression discontinuity design is that it allows us to test the effect of LDC on the local district writing measure, which is not possible in the matched control group analysis (because the district-specific writing measure is not available for students outside the district).

As described earlier, schools in the study district began implementing LDC in two stages. Ten Phase 1 pilot schools started implementing LDC in 2010–2011, with the remaining middle schools in the district beginning implementation in 2011–2012. The different quasi-experimental analyses tested the impact of LDC on both cohorts of schools. The primary results presented in this chapter, however, focus on the impact of Phase 2 schools in 2012–2013. In the case of the matched control group analysis, it was necessary to exclude Phase 1 schools from the 2012–2013 analysis to properly control for the effectiveness of schools prior to LDC intervention.

Matched Control Group Design

Modeling summary. Two different types of hierarchical linear models (HLM) were employed in our matched control group analyses: a three-level model with student at Level 1, school by year at Level 2, and school at Level 3, and a two-level model with student at Level 1 and school at Level 2. The three-level model used 2009–2010 as the baseline year and estimated effects in each subsequent year—2010–2011, 2011–2012, and 2012–2013—as compared to baseline. This model provided information on achievement trends for study district Advanced Reading students relative to matched controls across all of the years of implementation. The analysis showed a large dip in performance in the study district from 2009–2010 to 2010–2011 relative to statewide control students for students in both cohorts of schools: the Phase 1 pilot schools that began implementing LDC in that year and Phase 2 schools that hadn't begun LDC implementation yet. Given that this negative effect was found for both Phase 1 and Phase 2 students, it is unlikely to have been the result of LDC implementation, but rather the result of other unexplained district factors or conditions.

As mentioned earlier, one possible explanation for the negative effect in 2010–2011 is the introduction of the new state reading test, FCAT 2.0. Decreases in performance are common with the introduction of new assessments, and the study district may have been impacted by this

shift in a differential way from the state at large due to unexplained district conditions. See Table E1 in Appendix E for the 2012–2013 effect estimates from the three-level model.

Given the overall drop in performance in the study district in 2010–2011, and the fact that the state assessment changed in the same year, our main analysis used data only from the new test (starting with 2010–2011). We implemented this with a two-level HLM model estimating LDC impact in 2012–2013, while controlling for student prior achievement in 2011–2012 and the prior effectiveness of schools in 2010–2011. We exclude the 10 pilot schools from this analysis, as they had already started implementing LDC in the baseline year.

Methodology for two-level HLM analysis. Treatment students were not randomly selected to participate in the LDC initiative. To estimate the impact of LDC it is therefore necessary to control for the effects of student and school characteristics. One way to control for these characteristics is to use matching techniques to identify a group of comparison students who are demographically and academically similar to the intervention students. Our matching is conducted at the student level and accounts not only for student demographics and prior achievement, but the prior effectiveness of schools as well.

We employ a matching technique known as Coarsened Exact Matching (CEM) to identify comparison students. Coarsened Exact Matching is a flexible matching approach with many favorable properties, and allows the researcher to specify precise conditions under which a comparison student may be matched with an intervention student. For categorical variables such as race/ethnicity or free/reduced price lunch status, this often entails exact matching, while for continuous measures, such as prior outcomes, cut-points for matching can be specified. With this approach we can set precise cut-points on the most important indicators such as prior academic achievement to ensure that where possible every treatment student is matched with a suitable comparison.

Table 14 summarizes the variables used for the matching. Although we match on both student and school characteristics, all matching is at the student level. In addition to student demographics and prior achievement, we also match on the prior effectiveness of the student's school, as measured by the school's value added to student learning in 2010–2011, calculated using standard methods. That is, students whose teachers participated in LDC were matched to students in other districts with similar demographics and prior achievement, and who were attending similarly effective schools. A school's value added in 2010–2011 was obtained by running a two-level HLM model that controlled for student characteristics such as prior achievement, gender, and free and reduced price lunch eligibility at Level 1, and saving out empirical Bayes estimates of school value added at Level 2.

Table 14

Summary of Matching Variables

Indicator type	Variable
Student	Gender
Student	White
Student	Hispanic
Student	Black
Student	Asian
Student	Free/reduced price lunch
Student	English language speaker
Student	Spanish language speaker
Student	Prior achievement in reading
School	School prior effectiveness

The CEM process was successful in finding matches for a large majority of the eligible 5,548 LDC students, as seen in Table 15. The matching models were effective both in retaining a large percentage of treatment observations (96.2), and in achieving close balance with regard to prior student scores and demographics, as well as the school effectiveness indicator (see Table E2 in Appendix E for prior achievement and demographic characteristics of eligible and matched treatment and comparison samples).

Table 15

Summary of Treatment and Comparison Samples

Sample	Treatment	Comparison
Eligible for matching	5,548	14,523
Matched sample	5,338	9,241

Student demographic and prior achievement variables, as well as school prior effectiveness, are included as controls in the HLM regression model as well as the matching protocol. Our estimates therefore control for observables in two ways, at the matching and modeling stages. The model also included interactions between the LDC treatment indicator and student characteristics to test whether LDC had differential effects on student learning depending on the student's or school's characteristics. The interaction analyses should be considered exploratory and results treated as tentative, given sample size and other data limitations.

HLM results. Results for the two-level HLM presented in Table 16 show no evidence of an impact of LDC on FCAT reading performance. The coefficient for the treatment effect is negative but statistically insignificant. The interaction of treatment status with prior student achievement is positive and statistically significant at the 5% level, suggesting that LDC may be more effective for students with higher levels of prior achievement. This is consistent with findings in our companion study of LDC in eighth-grade history/social studies and science classes (Herman et al., 2015). We did not find statistically significant interaction effects for other demographic variables. Note that only the main variables of interest are reported in Table 16. The complete results can be found in Table E3 in Appendix E. The main specification reported here excludes schools without prior effectiveness data in 2010–2011 (i.e., new schools). An alternative specification including these schools found similar results and is reported in Table E4.

Table 16

2012–2013 LDC Student Effect Estimates on FCAT Reading, Including Interactions With Student Characteristics

Level 2 variables	Model coefficient (*SE*)
LDC treatment	-0.051 (0.048)
LDC treatment by student characteristics interactions	
Gender	0.073 (0.038)
Free/reduced price lunch eligible	-0.049 (0.038)
Prior achievement	0.056 (0.025)*

Note. Fixed effects for demographic predictors and for prior school effectiveness not shown.
*p = .05.

Regression Discontinuity Design

As described earlier, a regression discontinuity design (RDD) allowed us to examine the impact of LDC implementation on student achievement within the study district by exploiting a natural experiment created by the use of a cut-point to assign students into Advanced Reading courses (and therefore LDC). The regression discontinuity analyses tested the effect on both FCAT reading scores and local district writing scores. Students were assigned to Advanced Reading primarily based on prior year FCAT reading scores. Students above a certain threshold were significantly more likely to be assigned to Advanced Reading, compared to students just below this threshold. The RDD approach exploits this large change in the probability of being assigned to Advanced Reading as students cross the threshold to estimate the impact being assigned to Advanced Reading. If LDC had effects on student learning, we might expect to see

the benefit of being assigned to Advanced Reading increase after LDC implementation. We implemented this analysis for four school years: 2009–2010, 2010–2011, 2011–2012, and 2012–2013. As noted earlier in the report, the LDC intervention began with 10 Phase 1 pilot schools in 2010–2011, followed by expansion to all middle schools in the district in 2011–2012 and 2012–2013. For the 2010–2011 analysis, we removed students in the 10 Phase 1 pilot schools in 2010–2011. This methodological decision allowed us to analyze two cohorts of students prior to LDC intervention and two cohorts of students in the post-intervention period.

We implemented several standard tests to determine whether our setting was amenable to the RDD. We conducted tests to determine

- if the assignment measure (FCAT pre-score) was used to determine assignment to Advanced Reading, with an apparent threshold at a cut score,
- what the threshold on the assignment measure was,
- whether the density of the assignment measure was continuous through the threshold indicating potential manipulation/gaming of the assignment measure, and
- whether the observable characteristics of students were continuous through the threshold.

Having taken the proper pre-design steps we then proceeded with RDD analyses. Analytic steps included identifying a bandwidth of students around the assignment cut-point for inclusion in each model and producing a local average treatment effect estimate and standard error. In addition, a graph plotting the assignment measure and outcome estimate was used for visual inspection of potential discontinuity.

Diagnostics on assignment measure. The primary measure used for determination of assignment in Advanced Reading is the prior year FCAT reading score. From graphical and frequency-based analyses it is clear that while there is no single cut-point that correctly classifies every student into Advanced Reading classes, there are cut-points that fairly sharply assign the students. For example, in 2012–2013 only 2.1% of students with a prior 2011–2012 FCAT score of 214 or 215 were assigned into Advanced Reading, in contrast to 96.0% of students with a prior 2011–2012 scale score of 216 or 217. Thus we use a cut-point of 216 for the 2012–2013 RDD analysis. For the RDD analyses in 2009–2010, 2010–2011, and 2011–2012, the FCAT prior score was scaled differently, and a scale score of 1515 assigned students into Advanced Reading nearly as sharply as the score of 216 did in 2012–2013. Graphical analysis also verified the discontinuity in the probability of Advanced Reading assignment on either side of the cut-point suggesting that a “fuzzy” RDD would be appropriate. Figure 1, graphing the relationship between FCAT prior year scores and assignment into Advanced Reading in 2012–2013, clearly

demonstrates this discontinuity. See Figures E1, E2, and E3 in Appendix E for similar graphs for other analysis years.

To assess discontinuity in the density of observations at the cut-point, we performed a McCrary Test and visually examined density graphs in each year. Neither the analytic test nor visual inspection provided any evidence of discontinuity or manipulation around the cut-points. Overall the diagnostics suggested we had appropriate data to conduct RDD analyses.

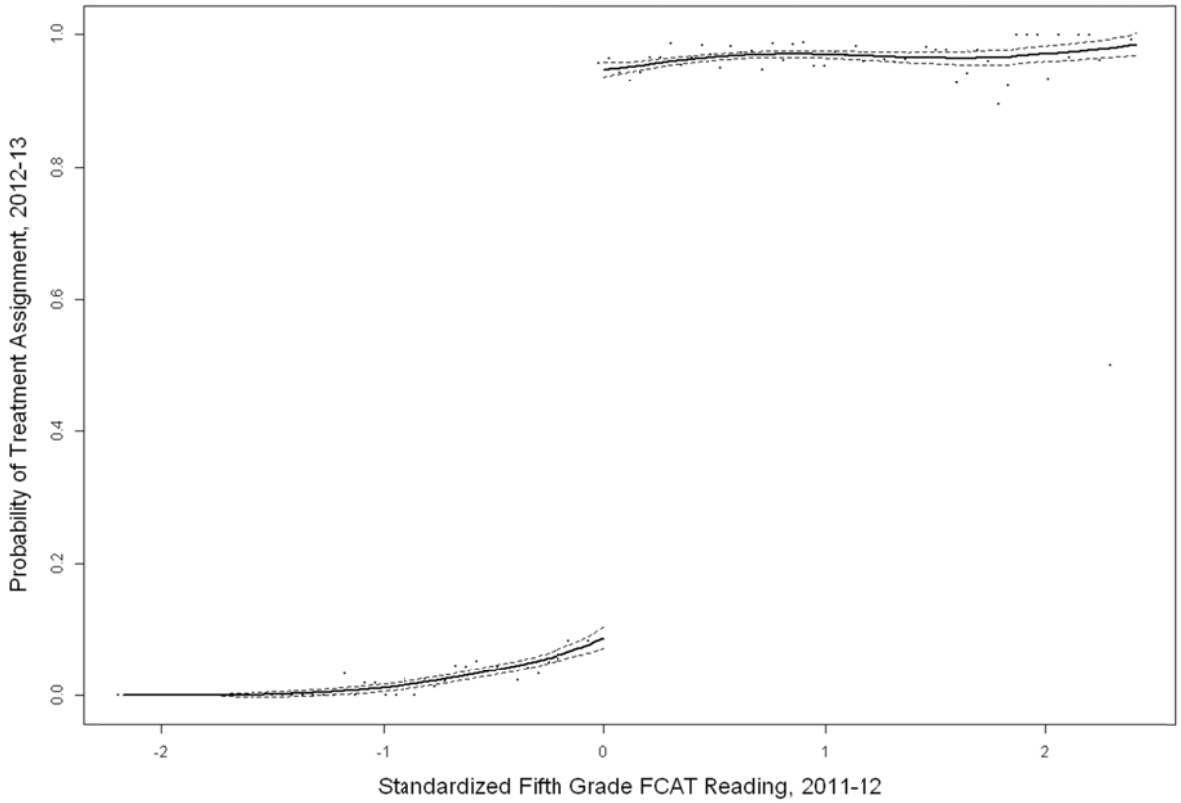

Figure 1. Relationship between assignment variable (fifth-grade reading in 2011–2012) and probability of assignment into Advanced Reading in 2012–2013.

Results for FCAT reading development. Regression discontinuity results for each of the four years are presented in Table 17. The assignment variable was standardized around a cut-point score of zero to ease comparison across years, as the scale of the FCAT score changed over time. The bandwidths shown in Table 17, which determine the observations included in the analysis, were obtained using the Imbens and Kalyanaraman optimal bandwidth algorithm. The results indicate no evidence of a discontinuity in outcomes around the threshold for assignment to Advanced Reading either in the years before or the years after the LDC intervention began. Figure 2 shows this graphically for 2012–2013, the key post-intervention year. There is no

evidence of discontinuity at the standardized cut-point of zero on the prior FCAT reading score (the assignment variable). Graphs for other years can be found in Appendix E (see Figures E4, E5, and E6).

Table 17

LDC Student Regression Discontinuity Design Local Average Treatment Effect Estimates on Sixth-Grade FCAT Reading Scores, 2009–2010 to 2012–2013

Year	Bandwidth	Observations	Estimate (*SE*)
2009–2010	1.032	8,324	0.031 (0.035)
2010–2011	0.749	5,136	-0.025 (0.057)
2011–2012	0.692	6,112	-0.015 (0.029)
2012–2013	0.597	6,313	-0.002 (0.022)

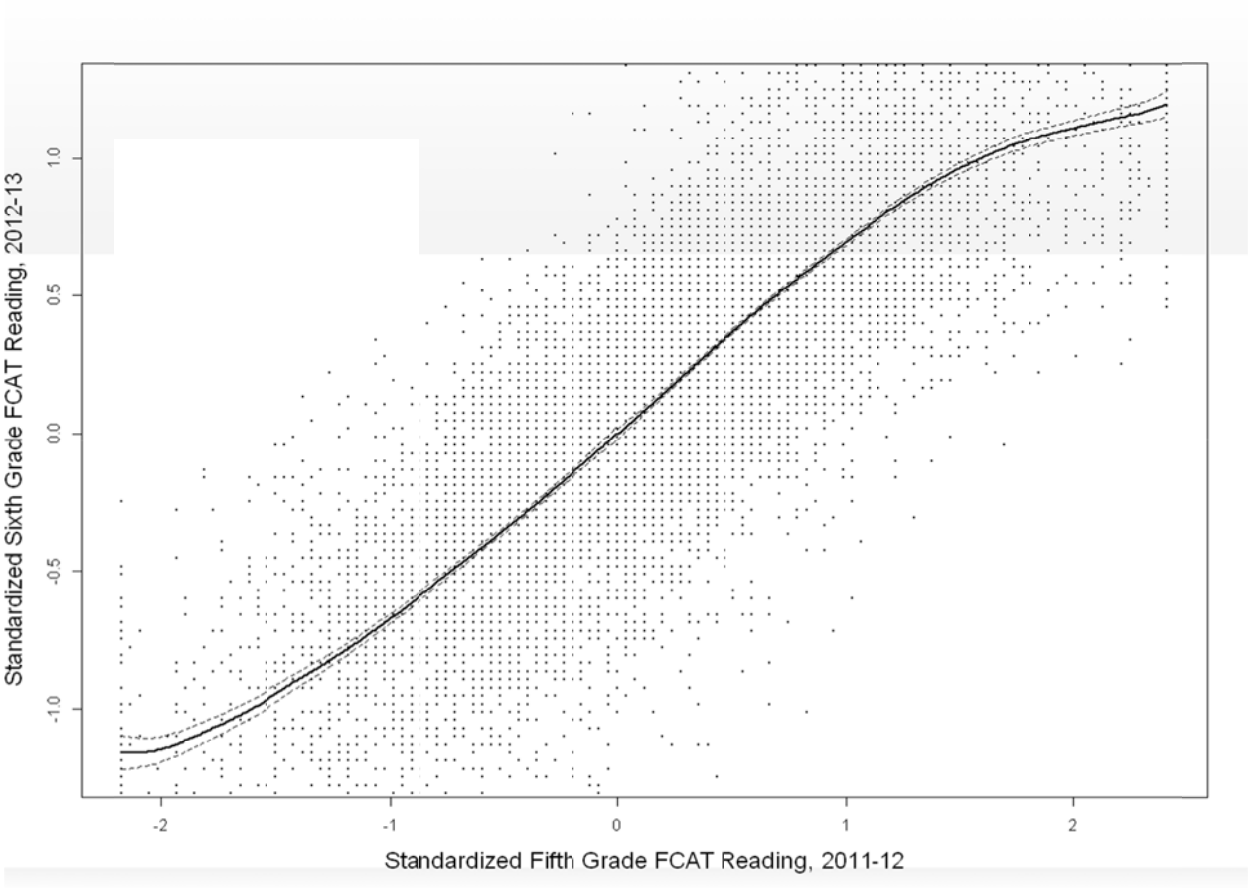

Figure 2. Regression discontinuity graph for 2012–2013 showing relationship between assignment variable (fifth-grade FCAT reading in 2011–2012) and the outcome variable (sixth-grade FCAT reading in 2012–2013).

Results for FCAT writing development. Regression discontinuity results for the share of students achieving a basic level of proficiency on the district writing assessment are presented in Table 18. As described in Chapter 2, the district writing assessments were scored using a six-point rubric in 2010–2011 and 2011–2012 based on the rubric for the state writing test. In 2012–2013, the study district began using the LDC four-point rubric to score writing assessments. Basic performance constituted a score of 3 on the earlier rubric and a score of 2 on the later rubric. Otherwise the methodology is similar to that used for the analysis of FCAT reading outcomes. As with reading, we see no evidence of a discontinuity in the share of students who have at least a basic level of proficiency according to the writing assessment at the threshold for Advanced Reading assignment either in the year before or the years after the LDC intervention began. Figure 3 shows this graphically for the primary outcome year of interest, 2012–2013. Graphs for other years can be found in Appendix E (see Figures E7 and E8).

Table 18

LDC Student Regression Discontinuity Design Local Average Treatment Effect Estimates on Probability of Scoring at a Basic Level on the District Writing Measure

Year	Bandwidth	Observations	Estimate (*SE*)
2010–2011	0.968	5,378	0.043 (0.032)
2011–2012	1.006	6,986	0.001 (0.026)
2012–2013	0.574	5,299	0.028 (0.034)

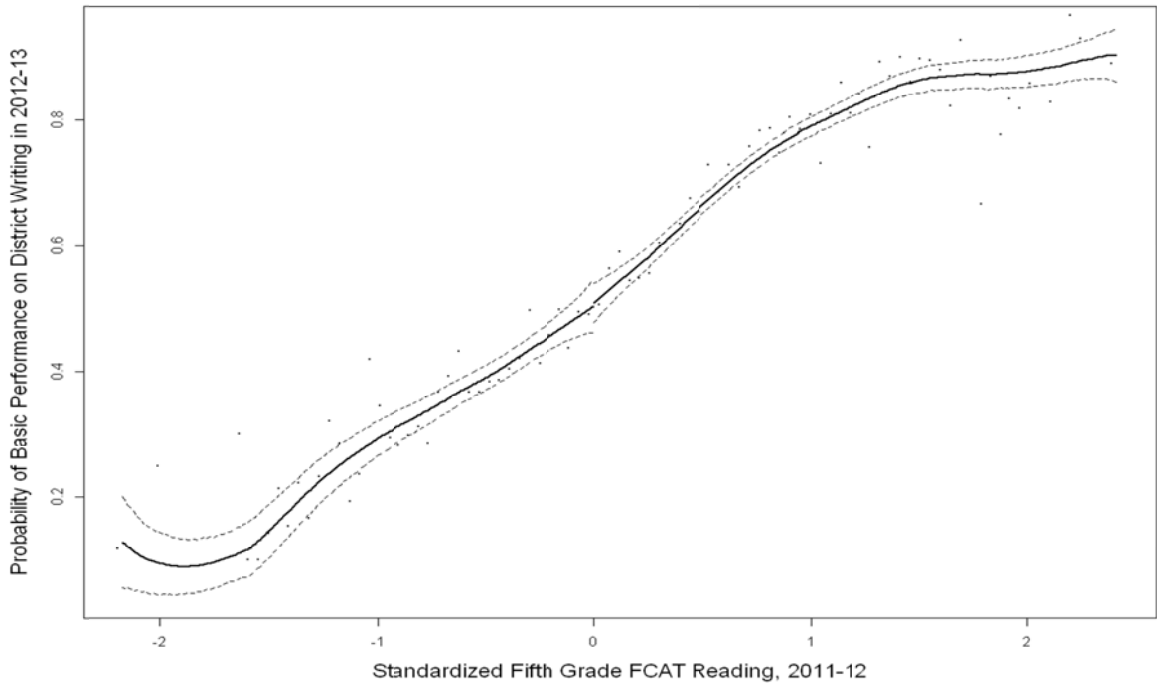

Figure 3. Regression discontinuity graph for 2012–2013 showing relationship between assignment variable (fifth-grade FCAT reading in 2011–2012) and the outcome variable (probability of basic performance on district writing in 2012–2013).

Chapter 5: Implementation Variables Related to LDC Success

In this chapter, we report on analyses of the relationship between variables derived from our implementation measures and student outcomes. Drawing on data from the teacher logs and surveys, we explored a variety of composite implementation variables and examined their relationship to student learning outcomes. When more standard regression analyses failed to produce stable patterns of results, we investigated the extent to which a variety of implementation variables differentiated LDC teachers at relatively high, middle, and low levels of effect on student learning, based on teachers' estimated value added during the study year. We then compared the mean scores on each variable using an ANOVA difference in means test. These processes are further described in the following section. Because these analyses are exploratory, particularly given the small sample sizes, results should be interpreted with caution.

Identification of Implementation Variables

Both substantive theory and psychometric analysis guided the development of composite variables. Our identification of priority variables centered on evidence-based teacher practices that were likely to influence student learning (e.g., Heritage, 2010; Herman, Osmundson, Dai, Ringstaff, & Timms, 2011; Hinchman & Sheridan-Thomas, 2008) and on variables that influence the implementation of new practices and programs—for example, teacher beliefs, sense of efficacy, leadership support, collaboration, and professional development (see for example, Fullan, Hargreaves, & Lieberman, 2010; O'Day, Bitter, & Gomez, 2011; Supovitz & Weinbaum, 2008). Through cycles of hypothesis generation and a variety of exploratory factor analyses (EFA) and cluster analyses, we identified 18 variables for additional study.

These variables, their sources, and operational definitions are shown in Table 19.

Table 19

Teacher-Level Implementation Variables Used in Within-Treatment Analyses

Instrument source	Variable	Description
Teacher log	Range and intensity of reading instruction	Sum of reading skills reported for each teacher log in which reading was addressed. A mean total score for each teacher was then computed as the average across all relevant logs. Scores for each reading skill indicated the emphasis it was given that day: *focus of student work* = 2; *touched on briefly* = 1; *not today* = 0.
Teacher log	Attention to close reading of text	Mean sum of reading skills reported representing high-level analysis of text on logs for which reading was addressed. Scores for each close reading item indicated the emphasis it was given that day: *focus of student work* = 2; *touched on briefly* = 1; *not today* = 0.
Teacher log	Attention to basic reading skills	Mean sum of basic reading skills items reported on logs for which reading was addressed. Scores for each basic reading skill item indicated the emphasis it was given that day: *focus of student work* = 2; *touched on briefly* = 1; *not today* = 0.
Teacher log	Attention to writing skills	Mean sum of all writing skills reported on logs for which writing was addressed. Coding: *focus of student work* = 2; *touched on briefly* = 1; *not today* = 0.
Teacher log	Range and intensity of formative assessment of student learning	Mean sum of all formative assessment practices reported in logs addressing reading and/or writing. Scores for each formative assessment practice indicated the extent to which it was used: *to a great extent* = 2; *to some extent* = 1; *not at all* = 0.
Teacher log	Range and intensity of feedback to students	Mean sum of all practices for providing feedback to students based on student work in reading and writing. Scores for each feedback practice indicated the extent to which it was used: *to a great extent* = 2; *to some extent* = 1; *not at all* = 0.
Teacher log	Range and intensity of teacher literacy practices (reading skills, writing skills, formative assessment)	Continuous variable measuring the extent to which teachers reported attention to reading skills, writing skills, formative assessment practice, and providing feedback. Each of these four domains was weighted equally to create the variable.
Teacher log	Teacher log cluster variable: high quantity literacy practice	Cluster binary variable distinguishing teachers who reported conducting a greater quantity of practices during LDC module instruction from teachers who reported a smaller quantity of practices. Variable was created by first performing cluster analysis on individual items in each domain (reading skills, writing skills, formative assessment), and then performing a second cluster analysis using the identified cluster variables.
Teacher survey	Factor 1: Attention to close reading of text	Factor 1 derived from exploratory factor analysis including teacher survey items on attention to reading skills, writing skills, and use of formative assessment. Factor 1 reflected reading items related to close reading of text. Variable confirmed and tested for reliability using confirmatory factor analysis.

Instrument source	Variable	Description
Teacher survey	Factor 2: Attention to paragraph writing/structure	Factor 2 derived from exploratory factor analysis including teacher survey items on attention to reading skills, writing skills, and use of formative assessment. Variable reflected writing items related to paragraph construction and structure of writing. Confirmed and tested for reliability using confirmatory factor analysis.
Teacher survey	Factor 3: Teacher-led formative assessment practice	Factor 3 derived from exploratory factor analysis including teacher survey items on attention to reading skills, writing skills, and use of formative assessment. Variable reflected teacher-oriented formative assessment practices. Confirmed and tested for reliability using confirmatory factor analysis.
Teacher survey	Factor 4: Peer-oriented formative assessment practice	Factor 4 derived from exploratory factor analysis including teacher survey items on attention to reading skills, writing skills, and use of formative assessment. Variable reflected student-to-student formative assessment practices. Confirmed and tested for reliability using confirmatory factor analysis.
Teacher survey	Total modules taught in 2011–2012 and 2012–2013 school years	Sum of responses to Questions 16 and 17 in teacher survey.
Teacher survey	Support for teaching literacy in content area classrooms	Mean across three items addressing content teachers' time and responsibility for teaching literacy. Coding: *disagree* = 0; *disagree somewhat* = 1; *agree somewhat* = 2; *agree* = 3.
Teacher survey	Teachers' perceived capacity to teach LDC	Mean response to questions about teacher efficacy (Question 26) and barriers with regard to LDC (Question 39). Coding: *disagree* = 0; *disagree somewhat* = 1; *agree somewhat* = 2; *agree* = 3, with Items 39c-g reverse coded.
Teacher survey	District and school support for LDC	Mean response to items about various ways that district and school leadership show support for LDC (Question 43). Coding: *disagree* = 0; *disagree somewhat* = 1; *agree somewhat* = 2; *agree* = 3.
Teacher survey	Utility of teacher collaboration	Mean response to items asking about extent and helpfulness of teacher collaboration in implementing LDC (Question 49). Coding: *disagree* = 0; *disagree somewhat* = 1; *agree somewhat* = 2; *agree* = 3.
Teacher survey	Professional development dosage	The number of formal scheduled LDC PD sessions in 2012–2013 (Question 55).

As the table shows, the implementation analyses included a number of teacher-level implementation variables created from teacher log responses. The variables are summary measures of teacher responses in four key domains of the log, which also represent component emphases for LDC: Teachers' daily focus on reading skills, teachers' daily focus on writing skills, teachers' daily use of strategies to assess student learning, and teachers' daily use of strategies to provide feedback to students. The latter two domains together constitute our measure of formative assessment practice. Mean sum variables were created for each domain, based on both the number of skills or strategies the teacher reported when reading and/or writing

was addressed and the depth of attention reportedly given to the skill (e.g., on the writing variable, a writing skill would be coded as 2 if the teacher reported it was a primary focus on the day of the log, and a 1 if the teacher reported that it was only touched on briefly). For the reading skills domain, we also separated mean sum variables for two subgroups of items: those emphasizing close reading of text and those addressing more basic reading skills. The decision to analyze this domain at a finer level of detail was based on both our theoretical assumptions regarding the relative importance of skill development in these two areas and exploratory analysis of the log and survey data that provided evidence of the dichotomy.

Finally, we included two variables that attempt to capture variety in the teachers' reported attention to all four domains. One variable is the mean sum of activity reported across all four domains described above, with equal weighting given to each. The second variable is a binary indicator derived from cluster analysis, a statistical methodology that creates a specified number of teacher groups based on the association of teacher responses to a series of items. We conducted separate cluster analyses for each of the above four domains. In each case, the derived clusters separated teachers into two groups: a high group that was high in reported practice in each domain and a low group, which represented those who reported a smaller sum of practice. We then conducted a second cluster analysis using the derived cluster variables. The final cluster variable is a binary variable (i.e., coded 1/0) that distinguishes two groups based on the individual cluster scores. The first group reflected teachers who were high on all the individual clusters and the second, teachers who were low on all the individual clusters. The two clusters thus represent teachers who more extensively implemented targeted practices in each domain (coded 1) versus those whose implementation was relatively less extensive.

The teacher survey variables reflected four factors derived from an exploratory factor analysis.[1] This factor analysis included all survey items designed to parallel the log reports in four key domains: reading skills, writing skills, assessing student learning, and feedback. Exploratory factor analysis clustered items in four theoretically distinct factors which we characterized as attention to close reading of text, paragraph writing/structure, teacher-led formative assessment practice, and peer-oriented formative assessment practice. We then tested the reliability of the identified factors. As can be seen in Table 20, reliability was high for each of the factors, including Factor 4, which had relatively few items. Other survey variables include the total number of modules taught in 2011–2012 and 2012–2013 (a measure of teacher LDC experience), a measure of teachers' commitment to teaching literacy in content area classes, a

[1]Note that the exploratory factor analysis was performed on a larger sample of teachers that included eighth-grade history/social studies in Kentucky and Pennsylvania from our companion study (Herman et al., 2015). Reliability analyses focused just on Florida teachers, and suggested that the constructs held for the smaller sample of teachers.

measure designed to capture teachers' perceived capacity to teach LDC, perceived district and school support for LDC, the perceived utility of teacher collaboration around LDC, and a variable measuring the amount of professional development received.

Table 20

Reliability of Teacher Survey Factors

Factor	Description	Number of items	Cronbach's alpha
1	Close reading	10	.87
2	Paragraph writing/structure	4	.84
3	Teacher-led formative assessment strategies	11	.82
4	Peer-oriented formative assessment strategies	3	.70

Methodology

The analysis started by classifying teachers as low, medium, or high value added, based on their students' performance on FCAT 2.0. An HLM analysis encompassing the total population of Advanced Reading teachers and students and controlling for students' prior performance and teachers' prior effectiveness was used to establish cut-points for classification. The algorithm yielded essentially equal numbers of teachers in each of the three categories, and the cut scores were then used to classify the 52 teachers who completed logs and the 54 teachers who completed surveys as high, medium, or low value added. Mean scores on each implementation variable were then created for each group and differences tested using an ANOVA difference in means test.

As the data in Table 21 and Table 22 show, for log variables, the high, medium, and low value-added groups were composed of 18, 15, and 19 teachers respectively, while the high, medium, and low value-added groups for survey variables consisted of 17, 20, and 17 teachers respectively. As with the implementation findings reported earlier, results show wide variation within each of the three groups. Essentially no differences were found to be statistically significant, which is not surprising given the relatively small sample sizes and the substantial within-group variation.[2]

[2]Although one variable did show statistical significance, given the number of variables tested, we view this as a chance result.

Table 21

Mean Scores on Teacher Log Implementation Variables for Teachers With Low, Medium, and High Value Added and ANOVA Test of Difference in Means

		Low value added (n = 19)			Medium value added (n = 15)			High value added (n = 18)				
Instruments	Variable	*n*	Mean	*SD*	*n*	Mean	*SD*	*n*	Mean	*SD*	Test statistic	*p* value
Teacher log	Range and intensity of reading instruction	19	0.60	0.18	15	0.63	0.26	18	0.55	0.23	0.60	.55
Teacher log	Attention to close reading of text	19	0.27	0.14	15	0.26	0.23	18	0.23	0.25	0.17	.85
Teacher log	Attention to basic reading skills	19	0.72	0.23	15	0.76	0.29	18	0.66	0.26	0.70	.50
Teacher log	Attention to writing skills	18	0.87	0.32	15	0.71	0.28	18	0.82	0.47	0.78	.46
Teacher log	Range and intensity of formative assessment of student learning	19	0.59	0.30	15	0.53	0.21	18	0.46	0.29	0.95	.39
Teacher log	Range and intensity of feedback to students	19	0.52	0.28	15	0.33	0.16	18	0.35	0.25	3.49	.04
Teacher log	Range and intensity of teacher literacy practices (reading skills, writing skills, formative assessment)	19	0.64	0.22	15	0.55	0.16	18	0.54	0.27	1.11	.34
Teacher log	Teacher log cluster variable: high-quantity literacy practice	18	0.67	0.49	15	0.40	0.51	18	0.50	0.51	1.20	.31

Table 22

Mean Scores on Teacher Survey Implementation Variables for Teachers With Low, Medium, and High Value-Added and ANOVA Test of Difference in Means

		Low value-added (n = 17)			Medium value-added (n = 20)			High value-added (n = 17)				
Instruments	Variable	*n*	Mean	*SD*	*n*	Mean	*SD*	*n*	Mean	*SD*	Test statistic	*p* value
Teacher survey	Factor 1: Attention to close reading of text	16	0.17	0.84	20	0.45	0.87	17	0.63	0.91	1.15	.32
Teacher survey	Factor 2: Attention to paragraph writing/structure	16	0.24	0.84	20	0.07	1.04	17	-0.27	1.00	1.19	.31
Teacher survey	Factor 3: Teacher-led formative assessment practice	16	-0.11	0.93	20	0.18	0.95	17	-0.02	0.91	0.45	.64
Teacher survey	Factor 4: Peer-oriented formative assessment practice	16	0.07	0.80	20	-0.09	1.14	17	-0.04	1.17	0.10	.91
Teacher survey	Total modules taught in 2011–2012 and 2012–2013 school years	17	7.00	2.09	20	6.80	2.26	17	8.35	1.41	3.23	.05
Teacher survey	Support for teaching literacy in content area classrooms	17	2.02	0.28	20	2.07	0.34	17	2.14	0.31	0.62	.54
Teacher survey	Teachers' perceived capacity to teach LDC	17	1.96	0.31	20	1.96	0.32	17	1.88	0.29	0.38	.69
Teacher survey	District and school support for LDC	16	1.34	0.93	18	1.58	0.75	17	1.59	0.72	0.50	.61
Teacher survey	Utility of teacher collaboration	16	2.05	1.02	20	2.10	0.91	17	1.93	0.65	0.19	.83
Teacher survey	Professional development dosage	12	2.00	0.85	16	1.50	0.73	13	1.69	0.48	1.74	.19

Chapter 6: Summary and Conclusions

This report has summarized CRESST's study of the implementation and effects of LDC in sixth-grade Advanced Reading classes in a large, urban school district in Florida. The study is one of two[3] conducted by CRESST, with funding from the Bill and Melinda Gates Foundation, to examine how LDC supports secondary teachers' and students' transition to the Common Core State Standards in English language arts. The Florida study features the use of LDC modules as core curriculum. Four centrally developed LDC modules, plus an orientation unit, provided the bulk of the district's curriculum for sixth-grade Advanced Reading classes.

In the sections below, we consider contextual factors that are important in interpreting study results before summarizing our findings with regard to the study's primary evaluation questions:

1. How do teachers implement LDC?
2. What is the impact of LDC on student learning?
3. What conditions and contexts, including quality of implementation, influence LDC effectiveness?

We conclude with implications and next steps for research and practice.

Contextual Considerations

The nature and generalizability of the study sample are a first, important contextual consideration. The study addresses only a subsample of those schools, teachers, and students across the country who are currently implementing LDC: the teachers and students in one large urban school district that piloted the intervention, and within this district, only sixth-grade teachers and students in Advanced Reading classes. The representativeness of the sample thus is an important constraint that limits the generalizability of any study findings. Demographically and in terms of prior achievement, the study sample looks similar to students in the state as a whole. However, the study cannot control for unobserved variables that may influence student success, and indeed, by virtue of their willingness to participate in early LDC trials, the district may well be unique.

Further, to ensure that the study would not be attempting to judge intervention effects as teachers were initially learning how to implement it, the research focuses on teachers who had at least one year of prior experience with LDC. In fact, the majority of the teachers in the study had only one year of experience implementing the intervention prior to the study year, a prior year

[3]A companion study examines the implementation and effects of LDC in eighth-grade history/social studies and science in two states. See Herman et al. (2015).

that included both initial learning and initial implementation. Because the LDC implementation essentially involved implementing a new, yearlong curriculum composed primarily of four LDC modules, it is likely that teachers needed additional experience to be fully comfortable and expert in implementing it. The LDC modules, and the Common Core more generally, make new demands on teachers' pedagogical and assessment practice, and therefore it is ambitious to expect LDC to have measurable impact on student learning at this early point in implementation.

The sensitivity of available outcome measures is another limitation of the study. LDC is an intervention that involves students in close reading of fiction and informational text completing culminating evidence-based, extended writing assignments, which draw on the reading. Yet the FCAT state assessment—the only measure available for both LDC and comparison students—is a measure of reading comprehension that focuses primarily on fiction. The district writing measure, used in the study's regression discontinuity design, also falls short in alignment with LDC in that it is not a reading-based prompt. Further, a major change in FCAT during the course of the study compromised the comparability from baseline to subsequent year scores for Phase 1 schools that initially implemented LDC and may have confounded subsequent trajectories for all schools.

Finally, the district that is the site of the study is known as a reform leader, and LDC was one of several major district initiatives being implemented at the time of the study. For example, just prior to embarking on LDC, the district initiated a seven-year, $100-million effort to develop a new teacher evaluation system. The presence of multiple initiatives makes it difficult to isolate the effects of any one.

How Did Teachers Implement LDC?

Teacher logs and end-of-year teacher survey results indicate that study teachers did implement the major components of the intervention and followed the district modules in introducing module content and goals, engaging students in reading module texts, transitioning to writing, and working with students on their end-of-module writing assignment. The bulk of module time, as would be expected, was spent in the reading and writing components. In implementing these components, teachers reported developing their students' skills in a range of reading and writing strategies. Furthermore, teachers reported frequent use of formative assessment: They noted using a variety of strategies to monitor their students' ongoing learning in both reading and writing, and generally reported taking action when misunderstandings and/or problems were observed, again with substantial variation in the strategies used.

The study's analysis of district-developed LDC modules provides another window into the quality of LDC implementation. A specially developed assignment measure was used to assess

the quality of the district-developed modules on nine dimensions reflecting alignment with standards, quality and rigor of reading and writing tasks, quality of instructional strategies, fidelity to the LDC framework, and coherence. Quality was found to be moderate to high on all dimensions. The relatively highest ratings occurred for fidelity, coherence, instructional strategies, text alignment, and quality of the writing tasks. Alignment with Common Core English language arts goals and text rigor, while still in the moderate range, were more variable, which may well reflect a purposeful strategy to gradually transition students and teachers to the demands of the new standards. It is noteworthy that the district's LDC modules were rated significantly higher in quality than those in the companion study of LDC implementation in eighth-grade content classes (see Herman et al., 2015), which may suggest the value of involving literacy experts in module development.

The sophistication of the modules and the variety of pedagogical strategies they incorporated, however, likely represented an implementation challenge for some teachers. Variation in teacher efficacy, as captured by teacher surveys, and in the quality of teachers' implementation may provide one reason why the study did not find strong relationships between any single LDC implementation variable and student learning outcomes. That is, the relationship between LDC implementation and student learning may depend on how well teachers were able to implement specific strategies and respond to student needs in classroom interaction, among other unobservables. In time, as teachers gain additional expertise in the use of these strategies, discernible patterns may emerge.

How Did LDC Affect Student Learning?

Teacher perspectives. The implementation data suggest that teachers overall were committed to the LDC intervention. Survey results indicate that study teachers found LDC to be a helpful and effective tool in meeting a wide variety of instructional goals, including implementing the CCSS, incorporating formative assessment and teaching literacy into content area classes, and increasing the rigor of writing assessments.

The majority of LDC teachers also agreed that their students experienced at least some success in each of the LDC component tasks—the reading mini-tasks, writing mini-tasks, and final writing task—and it is noteworthy that study teachers were more positive about their students' success than were content teachers in the companion study. Although there was variation across respondents, teachers agreed at least somewhat that LDC had resulted in higher quality student writing, and supported students' college readiness.

CRESST ILA results. Students' performance on the CRESST ILAs underscore teachers' concern about LDC's success for at least some of their students. The CRESST ILA generally

parallels the sequence of reading and writing activities in LDC: Students are asked to read and respond to several related texts about a central subject matter concept or topic and then to synthesize what they read with their existing knowledge to write an extended argumentative essay, explanatory essay, or other extended writing product. The study ILA focused on child labor, the topic of one of the district's LDC modules. Student essays were scored on five dimensions, using a four-point scale: content understanding, rhetorical structure and quality, organization, use of evidence/text support, and grammar and conventions.

The mean score for students across all dimensions was 2.3, indicating a basic level of performance. Scores for the content dimension were relatively the highest. Admittedly student motivation may have affected student scores, as the assessment was administered at the end of the year, but the scores also highlight the challenge of helping students achieve Common Core English language arts expectations for reading and writing.

LDC impact on student learning. The study used quasi-experimental matched control group and regression discontinuity designs to examine LDC effects on student learning. The matched control group methodology used Coarsened Exact Matching (CEM) to identify a group of comparison students across the state of Florida, which was demographically and academically similar to the study LDC student group. Control students were selected based on student characteristics and prior achievement as well as the prior effectiveness of the schools they attended.

Study analyses used both three-level longitudinal models and two-level cross-sectional models to test LDC effects on students' FCAT scores in reading. Each modeled students' performance under treated and non-treated teachers in sixth-grade Advanced Reading courses and included student demographic and prior achievement variables as covariates. The estimates thus controlled for observables in two ways, at both the matching and modeling stages. Results were consistent across all models, indicating the robustness of study findings: The analysis found no evidence of an overall LDC effect on FCAT reading scores. Interestingly, exploratory analysis of interaction effects suggests that initially higher achieving students may have benefited from LDC more than initially lower achieving students.

In addition, a regression discontinuity design was used to test the effect of LDC on students' scores on both the FCAT reading test and the study district's writing assessment. Here the scores of students who were just below the prior achievement threshold for Advanced Reading placement were compared to those just above it, who were placed in Advanced Reading. We tested the effects of crossing the threshold for placement into Advanced Reading before and after LDC implementation. The comparison found no evidence of effects of

Advanced Reading placement on performance on reading or writing assessments, either before or after LDC implementation. However, it is important to note that the design estimates the effect of the Advanced Reading placement (and by extension exposure to LDC) on the relatively lowest performing students in Advanced Reading, for whom large effects would not be expected. Results from the study's matched control group analysis and a similar analysis in our companion report of LDC in eighth-grade history/social studies and science (see Herman et al., 2015) both suggest that LDC effects are likely to be largest for relatively higher performing students.

What Conditions and Contexts Influence LDC Effectiveness?

Study analyses examining interactions between LDC treatment and student characteristics, in fact, further document such differential effects. In particular, the interaction of student prior achievement and LDC treatment was positive. That is, students who were relatively higher achieving prior to their LDC experience showed relatively greater benefit than did those who started relatively lower achieving, although the observed effect is small. No other interactions with student characteristics were statistically significant.

Conclusions

In summary, the study found no evidence of LDC effects on student learning, but it does provide lessons learned for teachers' and students' transitions to Common Core expectations. It also highlights important challenges involved in achieving and evaluating LDC success.

A new Common Core-oriented curriculum. The study context provides a unique approach to the use of LDC: The LDC module design was used to create the nucleus of a yearlong curriculum aligned with the Common Core. Although not a central focus of the current study, this curriculum design model is a noteworthy accomplishment and would seem to provide a viable model for incorporating both the spirit and the specifics of the Common Core State Standards into instruction. Within and across modules, the curriculum exemplifies major shifts advocated in the new Standards, as well as core claims new standards-aligned assessments[4] are designed to measure, such as students' ability to

- read closely and analyze complex text,
- write for a variety of audiences and purposes, and
- build knowledge and conduct research through content-rich nonfiction.

[4] See Achieve the Core, Common Core Shifts for ELA (http://achievethecore.org/content/upload/122113_Shifts.pdf); Smarter Balanced Content Specifications for ELA (http://www.smarterbalanced.org/wordpress/wp- content/uploads/2011/12/ELA-Literacy-Content-Specifications.pdf); PARCC assessment claims (http://www.parcconline.org/sites/parcc/files/FormattedItemGuidelines07.01.2013.pdf).

In building toward end-of-module writing performances that reflect these major competencies and claims, the modules also can be systematically designed to incorporate specific opportunities to learn and assess individual standards. This module-oriented approach seems nicely balanced between attention to specific standards and attention to a progression of learning that supports major student capacity, in authentic contexts that may support student motivation. The general approach seems an important step forward from the discrete, standard-by-standard approach to instruction that in the past has produced limited return.

Positive effects on teachers. Despite the frequent adage that change is difficult and teachers are resistant to it, study data indicate that teachers were very positive about LDC and the major curriculum change it wrought. They had positive attitudes about the professional development they received and reported that they found LDC helpful and effective in meeting a variety of goals, including implementing CCSS, using formative assessment, incorporating more complex thinking and problem solving into curriculum and instruction, and improving student learning. Teachers' reports about their fidelity of module implementation provide additional evidence of their positive attitudes.

Struggles in moving to higher standards. With positive effects on teachers, the study also demonstrated the challenge of moving to more rigorous Common Core State Standards. We see evidence of this challenge in students' basic performance on measures specifically designed to reflect the deeper learning demands of new standards and in teachers' reports that sizable proportions of their students are struggling relative to the goals of LDC.

That some teachers and students struggled is not meant to imply that current standards are unattainable or that Common Core expectations for students should be reduced—after all, we know that returning to prior standards will not get our children to 21st century success. However, the evidence does suggest that change will not come overnight and that both teachers and students will need support to meet the challenge. The issue is twofold: (a) How to address the needs and better prepare students and teachers who may not yet be ready to be successful with the challenges of LDC; and (b) how to modify and/or adapt the tools to scaffold teacher and student learning more effectively.

Achievement gap implications. Although we regard findings of the interaction between student characteristics and LDC as tentative and subject to further validation, these results indicate that initially higher achieving students benefited more from LDC than did initially lower achieving students. Such a finding makes intuitive sense in that lower achieving students are more likely to have engaged in the "drill and kill" test preparation curriculum of the past, are least likely to have acquired the prior grade knowledge and skills expected by new standards, and

are least likely to have been engaged in the deeper conceptual understanding and applications that mark the new standards. However understandable, study findings thus suggest that, in the absence of additional scaffolding and supports for low-achieving students, LDC may be gap enhancing.

Strengthening implementation. Although teachers reported implementing all module components, the findings suggest substantial variation in how they implemented the tool, and the sophistication of the strategies called upon in the modules suggest that at least some teachers may need more help. While district and school leadership supported implementation with common planning time and mentoring, and teachers found their colleagues very helpful, still teachers felt that they did not have adequate time to prepare nor to review and provide feedback on student writing. The former issue should dissipate with more experience with the curriculum, but the latter—time to analyze and provide feedback on student work—is more difficult to solve.

The study did not achieve strong findings with regard to what aspects of implementation mattered most or what specific strategies were most effective. The findings are suggestive, however, of some factors that might be important in success: District support for LDC was clear across the sample, yet principal or local school support was more variable, suggesting a potential problem point. Teachers found their peers highly collaborative and helpful in implementing the two tools, but time for collaboration and more formal professional development was somewhat limited; investing more heavily in these supports may strengthen implementation.

Challenges to discerning LDC effects. Some may consider study findings disappointing because they fail to reveal positive effects for LDC on student learning. It is well to remember the number of factors—previously noted—that clouded the study's ability to detect such effects. The early stage of implementation is a first issue: study analyses were based on teachers who had only one year of prior experience in implementing the LDC-based curriculum. Given the extent of change this curriculum represented, it seems likely that teachers were not yet fully secure nor fully accomplished in implementing well the LDC-oriented approach.

The sensitivity of study outcome measures is a second issue. The primary study measure was Florida's state assessment, a selected response measure focusing on reading comprehension and one that gives relatively little attention to informational text. LDC, in contrast, focuses on reading and writing and particularly on writing from close reading of informational text. The district writing measure, a secondary measure used in study within-district analyses, also failed to align strongly with LDC goals. Further, by its nature, the latter analysis focused on the lowest ability students within LDC, a subpopulation on which LDC is least likely to have strong effects, based on other studies (see Herman et al., 2015).

Other methodological challenges further confounded the study. The change in Florida's state assessment starting in 2009–2010, the same year 10 Phase 1 pilot schools initiated LDC, produced a conundrum. Our analyses revealed that district Advanced Reading scores for both Phase 1 students and those not yet in LDC dropped precipitously relative to comparable students across the state, raising serious questions about the comparability of FCAT scores prior to and subsequent to the change. As a result, Phase 1 teachers and students had to be excluded from our matched control group quasi-experimental analyses. The pressure of responding to FCAT results also likely influenced Advanced Reading teachers' subsequent teaching during the study year in unknown ways, particularly given that FCAT results were an element in school accountability ratings and teachers' evaluation. A major effort to develop a new teacher evaluation system, in fact, was just one of many district reforms that occurred simultaneously with LDC implementation and that confound our ability to isolate LDC effects from the effects of other ongoing district and school initiatives. That is, these other initiatives may have supported or diluted LDC implementation and also contributed in unknown positive and/or negative ways to study learning outcomes.

Concluding thoughts. In summary, our study findings of no evidence of LDC effect on student learning are simply that, and not evidence of no impact. The strength of study implementation findings—that teachers appeared to implement LDC as planned, generally felt positive and confident in its use, and believed that LDC is benefiting their students' learning—would seem to indicate that a strong foundation has been established for strengthening and sustaining future LDC implementation.

We leave it to future research to further examine LDC effects on learning under more sustained and longer term implementation as well as to examine issues of cost effectiveness. Future research and development also should continue the quest to identify both the most critical aspects of implementation in improving student learning and key infrastructure and supports that students who currently are struggling need to propel their success.

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Appendix A:
LDC Instruments and Rubrics

Exhibit A1:

LDC Teacher Log

Thank you for taking the time to complete your teacher log for LDC instruction. This log should take no longer than five (5) minutes to complete.

As a reminder, your logs will track instruction in only one of your LDC classes. Please remember to focus on the class period that was assigned to you when completing this log. For each log you complete, describe what happened in that particular class on that day.

Is this your first log for this module?

- ○ Yes
- ○ No

Is this your FINAL LOG for the current LDC module?

- ○ Yes
- ○ No
- ○ Not sure

What are your primary goals for this module?

Content goals	
Reading goals:	
Writing goals:	

How much total class time did students spend on any part of an LDC module today?

0 minutes	< 10 minutes	10-30 minutes	30-50 minutes	>50 minutes
○	○	○	○	○

Why was there no class time devoted to LDC today?

- ☐ I was absent
- ☐ School not in session
- ☐ Need to cover other content
- ☐ Field trip
- ☐ Other _____

Check which aspects of the module students focused on today. (Check all that apply). If you are not sure how to characterize today's lesson, check the aspect that best describes the focus of instruction.

- ☐ Preparing for the Task/Introducing Module
- ☐ Reading Process
- ☐ Transition to Writing
- ☐ Writing Process

Consider the total amount of class time spent on module instruction today. What proportion of time was spent on the following classroom activities? (Total should add up to 100%)

	0	10	20	30	40	50	60	70	80	90	100
Lecture on subject matter content											
Mini-lesson on _____											
Explicit strategy instruction (e.g., teacher think-aloud, modeling, guided practice about a specific strategy)											
Whole-class discussion											
Small group work											
Pair/share											
Independent reading/writing											
Student presentations											
Other_____											

Preparing for the Task/Introducing Module

How did you introduce the module? (check all that apply)

	Focus of instruction	Touched on briefly	Not today
Overview and/or review of topic	○	○	○
Connect topic to students' existing knowledge	○	○	○
Overview of readings	○	○	○
Review writing prompt	○	○	○
Review success criteria and/or rubric	○	○	○
Other _____	○	○	○

What did students do to prepare for module instruction? (check all that apply)

	Focus of student work	Touched on briefly	Not today
Listened as I explained task	○	○	○
Came up with questions about topic	○	○	○
Made predictions about topic	○	○	○
Came up with questions about writing task	○	○	○
Re-wrote task in their own words	○	○	○
Brainstormed possible answers to prompt	○	○	○
Made predictions about reading	○	○	○
Reviewed exemplars of student work	○	○	○
Completed planning sheet (e.g., graphic organizer)	○	○	○
Discussed important strategies needed to complete task	○	○	○

Reading Process

Which reading skills did students work on today? (check all that apply)

	Focus of student work	Touched on briefly	Not today
Independent reading research	○	○	○
Making predictions/previewing	○	○	○
Summarizing important points	○	○	○
Note-taking/annotation	○	○	○
Identifying/ defining vocabulary	○	○	○
Analyzing text structure (e.g., how part relates to whole)	○	○	○
Interpreting information from graphical text	○	○	○
Distinguishing fact from opinion	○	○	○
Drawing conclusions from textual evidence	○	○	○
Citing textual evidence to support claims	○	○	○
Evaluating strength/weakness of evidence	○	○	○
Comparing arguments in two or more texts	○	○	○
Examining author's perspective/bias	○	○	○
Examining rhetorical devices	○	○	○
Other _____	○	○	○

Did you assess student learning of the skills listed above?

- ○ Yes
- ○ No

If YES, to what extent did you rely on the following strategies to assess student understanding? (check all that apply)

	To a great extent	To some extent	Not at all
Listened as students discussed text with peers	○	○	○
Circulated and reviewed student notes	○	○	○
Reviewed peers' feedback	○	○	○
Collected and reviewed student written responses and/or graphic organizers	○	○	○
Asked students to answer oral questions	○	○	○
Listened to students thinking aloud while reading	○	○	○
Led whole-class discussion	○	○	○
Listened to student questions	○	○	○
Assigned a quiz	○	○	○
Graded student work	○	○	○
Exit slips	○	○	○

If you did discover student misunderstanding about READING, to what extent did you rely on the following strategies to respond? (check all that apply)

	To a great extent	To some extent	Not at all
One-on-one conference to provide feedback	○	○	○
Asked peer to provide feedback	○	○	○
Stopped class and modeled strategy	○	○	○
Wrote specific comments on student work	○	○	○
Scheduled in-class workshop time	○	○	○
Devoted time in lesson for students to use feedback	○	○	○
Grouped students together on a "need" basis for targeted instruction	○	○	○
Offered student a hint or suggestion	○	○	○
Gave student the answer	○	○	○
Gave student more time to try again and self-correct	○	○	○
Graded student work	○	○	○
Re-taught lesson segment	○	○	○
Planned to review skill in future lessons	○	○	○
Other _____	○	○	○

Transition to Writing

How did you help students prepare for the writing task? (check all that apply)

	Focus of instruction	Touched on briefly	Not today
Overview and/or review of topic	○	○	○
Review of readings	○	○	○
Review writing prompt	○	○	○
Review success criteria and/or rubric	○	○	○
Other _____	○	○	○

What did students do to prepare for the writing task?

	Focus of instruction	Touched on briefly	Not today
Listened as I explained task	○	○	○
Came up with questions about topic	○	○	○
Made predictions about topic	○	○	○
Came up with questions about writing task	○	○	○
Re-wrote task in their own words	○	○	○
Brainstormed possible answers to prompt	○	○	○
Generated thesis statements	○	○	○
Reviewed exemplars of student work	○	○	○
Completed planning sheet (e.g., graphic organizer)	○	○	○
Generated essay outline	○	○	○
Selected relevant quotes from documents	○	○	○
Discussed important strategies needed to complete task	○	○	○

Writing Process

What areas of writing did students work on today? (check all that apply)

	Focus of student work	Touched on briefly	Not today
Generating ideas for writing	○	○	○
Outlining	○	○	○
Writing/text structure	○	○	○
Formulating a thesis statement	○	○	○
Formulating a counter-argument	○	○	○
Writing an introduction	○	○	○
Writing a conclusion	○	○	○
Writing a body paragraph	○	○	○
Using transitional words or phrases	○	○	○
Incorporating quotes/evidence	○	○	○
Style/word choice/syntax	○	○	○
Grammar conventions	○	○	○

Did you assess student learning of the skills listed above?

- ○ Yes
- ○ No

If YES, to what extent did you rely on the following strategies to assess student understanding? (check all that apply)

	To a great extent	To some extent	Not at all
Listened as students discussed draft with peers	○	○	○
Asked students to provide feedback to each other	○	○	○
Observed and reviewed student work	○	○	○
Collected and reviewed student writing exercises	○	○	○
Asked students to answer oral questions	○	○	○
Reviewed student rough drafts	○	○	○
Asked certain students to present writing to class	○	○	○
Assigned a quiz	○	○	○
Graded student work	○	○	○
Exit slips	○	○	○

If you did discover student misunderstanding about WRITING, to what extent did you rely on the following strategies to respond? (check all that apply)

	To a great extent	To some extent	Not at all
Organized peer-editing session	○	○	○
Scheduled in-class workshop time	○	○	○
Held one-on-one conference with student	○	○	○
Devoted time in lesson for students to use feedback	○	○	○
Grouped students together on "need" basis for targeted instruction	○	○	○
Modeled skill using my own writing	○	○	○
Demonstrated skill using student's writing	○	○	○
Provided grammar mini-lessons	○	○	○
Wrote specific comments on student work	○	○	○
Had student revisit readings	○	○	○
Offered student a hint or suggestion	○	○	○
Gave student time to try again and self-correct	○	○	○
Corrected student writing	○	○	○
Graded student work	○	○	○
Re-taught lesson segment	○	○	○
Planned to review skill in future lessons	○	○	○
Other _____	○	○	○

How many weeks did you spend teaching this LDC module?

[ ]

How many days of instruction for each of the following?

Preparation for the task	
Reading process	
Transition to writing	
Writing process	

Please list the approximate start date of Module 3: Communication in Cybernation. (mm/dd/yyyy)

ADDITIONAL COMMENTS:

We are very interested in your feedback. Please let us know if you have any questions or concerns about this log. Thank you!

Exhibit A2:
LDC Teacher Survey 2013

[log in from previous]

Before you begin, note that the Literacy Design Collaborative (LDC) Initiative goes by a number of different names.

We use the phrases “LDC framework” or modules to refer to the tools that are part of this initiative.

Some of the questions in the survey make reference to the Common Core State Standards (CCSS). In different states, this could be referred to differently, for example, in the state of Colorado, it is referred to as Colorado Academic Standards.

The LDC Initiative is funded by the Gates Foundation.

You are about to enter the survey. To go back a page, please use

the survey’s red “Back” button, not your browser’s back button.

Your answers will be saved each time you click “Next.”

The survey takes about 30 minutes to complete. You may leave and return multiple times.

If you do return, after entering your login code, you will be placed in the screen you last visited.

Please select the best answer for each question. Some instructions are in *italics*.

TEACHER BACKGROUND INFORMATION

1. What is / are your current position(s)? *Please CHECK ALL that apply.*

- ☐$_a$ Classroom teacher
- ☐$_b$ Reading specialist
- ☐$_c$ Reading coach
- ☐$_d$ Special education teacher
- ☐$_e$ Librarian
- ☐$_f$ Department head
- ☐$_g$ Other *(please specify)* _____[100 characters]_____

2. At which grade level(s) do you teach? *Please CHECK ALL that apply.*

- ☐$_a$ Middle school (6^{th} – 8^{th} grade)
- ☐$_b$ High school (9^{th} – 12^{th} grade)

3. Which content areas do you teach? *Please CHECK ALL that apply.*

- ☐$_a$ English/Language Arts
- ☐$_b$ Science
- ☐$_c$ Social Studies
- ☐$_d$ Reading
- ☐$_e$ Other *(please specify)* _____[100 characters]_____

4. To the nearest year, how long have you …

a) … been a teacher? _____ year(s) [integer, 0-99]

b) … taught in your current school? _____ year(s) [integer, 0-99]

c) … taught in your current district? _____ year(s) [integer, 0-99]

	Yes	No
5. Do you teach ELL students?	❍1	❍0
6. Do you teach special education students?	❍	❍
7. Do you teach students who read or write below grade level?	❍	❍
8. Do you teach students with advanced literacy levels?	❍	❍

PARTICIPATION IN LDC INITIATIVE

9. How would you describe your participation in the LDC initiative?

❍1 Required
❍2 Voluntary
❍3 I have not taught a module in **2012-2013**. [End survey; go to regular close]
❍4 I opted out of participating in **2012-2013** *(please specify a reason for opting out)* _____[1000 characters]_____
[End survey; go to regular close]

10. Is this your first year in the LDC initiative?

❍1 Yes ❍0 No

11. My involvement with the LDC Initiative has included the following activities: *(please CHECK ALL that apply)*

☐a Teaching a teaching task without a full module
☐b Revising LDC modules that I did not develop myself
☐c Developing LDC modules
☐d Teaching LDC modules
☐e Coaching others on how to use LDC modules
☐f Presenting at an LDC professional development session

MODULE DEVELOPMENT

12. How many modules have you **developed** during the **current** school year (**2012-13)**? ____[integer, 0 – 99]___ module(s)
Please enter a 0 if you have not developed any modules during the current school year (2012-13).

13. During the **current** school year (**2012-13)**, I have …

❍1 … often ❍2 … sometimes ❍3 … never [skip if 12=0]

…developed modules with the support of a colleague.

14. How many modules have you **revised** during the **current** school year (**2012-13**)? ____ [integer, 0 – 99] ___ module(s)

*Please include modules you developed in a previous year AND modules others developed. Enter a 0 if you have not revised any modules during the **current** school year (2012-13).*

15. During the **current** school year, I have …

❍1 … often ❍2 … sometimes ❍3 … never [skip if 14=0]

… revised modules with the support of a colleague.

[skip next if Q10 = yes]

16. How many modules did you **teach last** year **(2011-12)**? ____ [integer, 0-99] ____ module(s)
Please enter a 0 if you did not teach any modules last year (2011-12).

17. How many modules in total will you have taught during the **current** school year (**2012-13)**? ____ [integer, 0-99] ____ module(s)

18. During the **current** school year (**2012-13**), I have …

❍1 … often ❍2 … sometimes ❍3 … never [skip if 17=0]

…taught modules with the support of a colleague.

19. Please indicate the frequency with which you are accessing existing modules on online?

❍1 … often ❍2 … sometimes ❍3 … never

SUPPORT FOR USING LDC MODULES

20. Indicate whether the following people visited your classroom when you were teaching a module:
[note: randomize options, letters don't appear]

	Visited	Did not visit
a. District or network LDC project lead	❍1	❍0
b. Principal	❍	❍
c. Instructional coach/department head	❍	❍
d. Teacher colleague	❍	❍

BELIEFS ABOUT TEACHING LITERACY

Q21 is about teaching literacy.

21. Please indicate the degree to which you agree or disagree with the following statements:

	Agree	Agree Somewhat	Disagree Somewhat	Disagree
a. Teachers from all content areas should help students improve their reading and writing skills.	❍1	❍2	❍3	❍4
b. Science and social studies teachers do not have time to teach reading and writing.	❍	❍	❍	❍
c. Writing assignments can help my students develop a deeper understanding of important concepts.	❍	❍	❍	❍

PURPOSE OF INITIATIVE

22. Please indicate the degree to which you agree or disagree with the statements below:

The LDC framework is effective in …	Agree	Agree Somewhat	Disagree Somewhat	Disagree
a. … improving students' literacy skills.	❍1	❍2	❍3	❍4
b. … providing a curricular resource for teachers to address the Common Core State Standards.	❍	❍	❍	❍
c. … encouraging science and social studies teachers to teach literacy skills.	❍	❍	❍	❍
d. … encouraging secondary school teachers to teach literacy skills.	❍	❍	❍	❍
e. … making instruction more engaging for the students.	❍	❍	❍	❍
f. … using formative assessment to identify student strengths and weaknesses to inform instruction.	❍	❍	❍	❍

TEACHER PERCEPTIONS OF TOOL UTILITY

23. Please indicate whether using the modules has helped you in the following ways during module instruction:

During LDC instruction, using the modules has helped me …	Yes	No
a. … find effective strategies for teaching my subject content.	❍1	❍0
b. … learn new ways to include formative assessment in my classes.	❍	❍
c. … develop new ways to teach literacy skills in my content area.	❍	❍
d. … learn detailed information about my students' literacy strengths and weaknesses.	❍	❍
e. … provide students with more detailed feedback about their writing.	❍	❍
f. … implement the Common Core State Standards.	❍	❍
g. … increase the rigor of writing assignments.	❍	❍
h. … better engage students.	❍	❍

24. Please indicate the degree to which you agree or disagree with the statements below.

	Agree	Agree Somewhat	Disagree Somewhat	Disagree
LDC modules help me differentiate instruction …				
[skip next if Q5 = no]				
a. … for ELL students.	❍1	❍2	❍3	❍4
[skip next if Q6 = no]				
b. … for special education students.	❍	❍	❍	❍
[skip next if Q7 = no]				
c. … for students who read or write below grade.	❍	❍	❍	❍
[skip next if Q8 = no]				
d. … for students with advanced literacy levels.	❍	❍	❍	❍

25. The modules are flexible enough to fit the needs of all my students. ❍ ❍ ❍ ❍

*Questions 26a-d are about the **most recent** LDC module you taught.*

26. Please indicate the degree to which you agree or disagree with the statements below.

	Agree	Agree Somewhat	Disagree Somewhat	Disagree
a. I knew what skills my students needed in order to complete the teaching task.	❍1	❍2	❍3	❍4
b. I knew the type of mini-tasks to give my students to prepare them to complete the template task.	❍	❍	❍	❍
c. I understood how to use the LDC instructional ladder.	❍	❍	❍	❍
d. Based on the information collected from using the LDC modules, I adjusted my instruction to meet the needs of individual students.	❍	❍	❍	❍

27. Please indicate the degree to which you agree or disagree with the statements below.

a. Using the modules raised my expectations for students' writing.	❍	❍	❍	❍
b. The LDC framework has become an important part of my instructional practice.	❍	❍	❍	❍

28. Select the phrase that best completes the following sentences:

I use module instructional strategies …

❍1 … often ❍2 … sometimes ❍3 … rarely

…during non-LDC instruction.

STUDENT IMPACT

29. Compared to my usual instruction, during the use of the modules, my students …

❍1 …are more engaged. ❍2 …show the same level of engagement. ❍3 …are less engaged.

30. Please indicate the degree to which you agree or disagree with the statements below.

	Agree	Agree Somewhat	Disagree Somewhat	Disagree
a. The modules have resulted in higher quality student writing.	❍1	❍2	❍3	❍4
b. The LDC framework is supporting my students' college-readiness.	❍	❍	❍	❍

*Question 31a-b asks you to reflect back on your **most recent** experience implementing an LDC module during the **current** school year **(2012-13)**.*

31a. When I taught the most recent LDC module, the **majority** of my students improved their understanding of content.

❍1 Yes ❍0 No

31b. When I taught the most recent LDC module, the **majority** of my students improved their literacy skills.

❍1 Yes ❍0 No

TOOL USE [FOI questions]

Q32-37 are about your LDC instruction in the current school year (2012-13).

32. What percent of class time did you spend on each of the following LDC components during your LDC instruction in the current school year **(2012-13)**?

a. Preparation for Task/Introducing the Module [Enter Number]
b. Reading Process [Enter Number]
c. Transition to Writing [Enter Number]
d. Writing Process [Enter Number] [limit the sum of the numbers in this ques to 100]

33. Please indicate the degree of emphasis you placed on each of the following skills in your LDC **reading** instruction:
[note: randomize options, letters don't appear]

	A great deal of emphasis	Some emphasis	Little Emphasis	No Emphasis
a. Independent reading/ research	❍1	❍2	❍3	❍4
b. Making predictions/previewing	❍	❍	❍	❍
c. Summarizing important points	❍	❍	❍	❍
d. Note-taking/ annotation	❍	❍	❍	❍
e. Identifying/ defining vocabulary	❍	❍	❍	❍
f. Analyzing text structure (e.g. how part relates to whole)	❍	❍	❍	❍
g. Interpreting information from graphical text	❍	❍	❍	❍
h. Distinguishing fact from opinion	❍	❍	❍	❍
i. Drawing conclusions from textual evidence	❍	❍	❍	❍
j. Citing textual evidence to support claims	❍	❍	❍	❍
k. Evaluating strength/ weakness of evidence	❍	❍	❍	❍
l. Comparing arguments in two or more texts	❍	❍	❍	❍
m. Examining author's perspective/bias	❍	❍	❍	❍
n. Examining rhetorical devices	❍	❍	❍	❍

34. Please indicate the degree of emphasis you placed on each of the following skills in your LDC **writing** instruction:
[note: randomize options, letters don't appear]

	A great deal of emphasis	Some emphasis	Little emphasis	No emphasis
a. Generating ideas for writing	❍1	❍2	❍3	❍4
b. Outlining	❍	❍	❍	❍
c. Writing/text structure	❍	❍	❍	❍
d. Formulating a thesis statement	❍	❍	❍	❍
e. Formulating a counter-argument	❍	❍	❍	❍
f. Writing an introduction	❍	❍	❍	❍
g. Writing a conclusion	❍	❍	❍	❍
h. Writing a body paragraph	❍	❍	❍	❍
i. Using transitional words or phrases	❍	❍	❍	❍
j. Incorporating quotes/ evidence	❍	❍	❍	❍

35. Please indicate how frequently you use the following strategies to **assess student learning** during your LDC instruction. [note: randomize options, letters don't appear]

		Often	Sometimes	Rarely	Never
a.	Listened as students discussed reading or writing with peers	❍1	❍2	❍3	❍4
b.	Asked students to provide feedback to each other	❍	❍	❍	❍
c.	Circulated and reviewed student notes and work	❍	❍	❍	❍
d.	Collected and reviewed student writing exercises	❍	❍	❍	❍
e.	Asked students to answer oral questions	❍	❍	❍	❍
f.	Reviewed student rough drafts	❍	❍	❍	❍
g.	Asked certain students to present writing to class	❍	❍	❍	❍
h.	Assigned a quiz	❍	❍	❍	❍
i.	Graded student work	❍	❍	❍	❍
j.	Exit slips	❍	❍	❍	❍

36. Please indicate how frequently you use the following strategies to **provide feedback to students** during your LDC instruction.
[note: randomize options, letters don't appear]

		Often	Sometimes	Rarely	Never
a.	Held one-on-one conference with student	❍1	❍2	❍3	❍4
b.	Asked peer to provide feedback or organized peer editing session	❍	❍	❍	❍
c.	Stopped class and modeled strategy	❍	❍	❍	❍
d.	Scheduled in-class workshop time	❍	❍	❍	❍
e.	Wrote specific comments on student work	❍	❍	❍	❍
f.	Offered student a hint or suggestion	❍	❍	❍	❍
g.	Gave student more time to try again and self-correct	❍	❍	❍	❍
h.	Gave student the answer	❍	❍	❍	❍
i.	Graded student work	❍	❍	❍	❍
j.	Re-taught lesson segment	❍	❍	❍	❍
k.	Planned to review skill in later lessons	❍	❍	❍	❍
l.	Assigned grammar exercises	❍	❍	❍	❍

37. Please indicate the degree of success your students had in completing the following LDC activities?

	A great deal of success	Some success	Little success	No success
a. The reading mini-tasks built into the instructional ladder	❍1	❍2	❍3	❍4
b. The writing mini-tasks built into the instructional ladder	❍	❍	❍	❍
c. The final writing task	❍	❍	❍	❍

38. In your **most recent** module, indicate yes or no for each of the following questions: [note: randomize options, letters don't appear]

	Yes	No
a. I have used the LDC rubric to assess my students' final writing piece.	❍1	❍0
b. I found the LDC rubric helpful in assessing my students' final writing piece.	❍	❍
c. Using the rubric has helped my students understand the expectations for high quality writing.	❍	❍

POTENTIAL BARRIERS TO TOOL USE

39. Please indicate the degree to which you agree or disagree with the following statements.

	Agree	Agree Somewhat	Disagree Somewhat	Disagree
a. I had sufficient time to prepare to teach modules.	❍1	❍2	❍3	❍4
b. I felt adequately prepared to effectively use modules.	❍	❍	❍	❍
c. It is difficult to find the time to respond to student writing.	❍	❍	❍	❍
d. I am unsure about how best to give productive feedback to student writing.	❍	❍	❍	❍
e. Using the LDC modules takes too much time away from covering required curriculum topics.	❍	❍	❍	❍
f. It is challenging for me to find content-rich reading materials at my students' reading level.	❍	❍	❍	❍
g. It is challenging for me to find the time to develop modules.	❍	❍	❍	❍

SCALING of LDC INITIATIVE

*Q40 is about using the LDC modules next year (**2013-14**).*

.

40. Please indicate the degree to which you agree or disagree with the following statements:

	Agree	Agree Somewhat	Disagree Somewhat	Disagree
a. I would like to develop modules next year.	❍1	❍2	❍3	❍4
b. I look forward to teaching modules next year.	❍	❍	❍	❍
c. I plan to improve how I teach modules next year.	❍	❍	❍	❍

41. Please indicate the degree to which you agree or disagree with the statements below:

	Agree	Agree Somewhat	Disagree Somewhat	Disagree
a. My participation in the LDC initiative is worth the time and effort involved.	❍1	❍2	❍3	❍4
b. I see the ideas and practices of the LDC initiative gaining traction in my school.	❍	❍	❍	❍
c. I have noticed an increase in the number of teachers using the LDC modules/tasks in my school since last year.	❍	❍	❍	❍
d. There are other curricular initiatives or programs in the district that address some of the same purposes as LDC.	❍	❍	❍	❍
e. The other curricular initiatives or programs in the district create competing priorities with the LDC initiative.	❍	❍	❍	❍
f. The district has the commitment to sustain the LDC initiative.	❍	❍	❍	❍
g. The district has the funding to sustain the implementation of the LDC initiative.	❍	❍	❍	❍

42. Have you shared any of your LDC modules with a teacher who is not participating in the LDC initiative? ❍1 Yes ❍0 No

SCHOOL LEADERSHIP

Q43 is about the administrators at your school.

43. Please indicate the degree to which you agree or disagree with the following statements.

	Agree	Agree Somewhat	Disagree Somewhat	Disagree	Don't Know
My school administrators …					
a. … have a firm understanding of the LDC framework.	❍1	❍2	❍3	❍4	❍-99
b. … have made formative assessment a priority at my school.	❍	❍	❍	❍	❍
c. … encouraged me to participate in the LDC initiative.	❍	❍	❍	❍	❍
d. … provided me with feedback about my instruction of the module(s).	❍	❍	❍	❍	❍
e. … provided ongoing support for the implementation of the LDC tools.	❍	❍	❍	❍	❍
f. … expressed concerns that teaching modules is taking time away from other instructional priorities.	❍	❍	❍	❍	❍
g. … have attended professional development about the LDC framework.	❍	❍	❍	❍	❍
h. … have communicated how the LDC framework is aligned with other school initiatives	❍	❍	❍	❍	❍
District administrators …					
i. … support the LDC framework.	❍	❍	❍	❍	❍
j. … encourage my participation in the LDC initiative.	❍	❍	❍	❍	❍
k. … provide ongoing support for implementation of the LDC framework.	❍	❍	❍	❍	❍
l. … have a firm understanding of the LDC framework.	❍	❍	❍	❍	❍
m. … have attended professional development about the LDC framework.	❍	❍	❍	❍	❍

ALIGNMENT

44. Please indicate the degree to which you agree or disagree with the following statements.

	Agree	Agree Somewhat	Disagree Somewhat	Disagree
a. The LDC framework aligns well with my school's curriculum.	❍1	❍2	❍3	❍4
b. The modules help prepare my students for current state assessment(s).	❍	❍	❍	❍
c. The LDC framework aligns with the Common Core State Standards.	❍	❍	❍	❍
d. I see the unique value of the LDC framework to address the Common Core State Standards.	❍	❍	❍	❍
e. The LDC rubric aligns well with my school's expectations for assessing student writing.	❍	❍	❍	❍

COLLABORATION

Q45-46 are about your interactions with your LDC colleagues.

45. Do you and your LDC colleagues have regularly scheduled common planning time to discuss LDC?

❍1 Yes ❍0 No

	Agree	Agree Somewhat	Disagree Somewhat	Disagree
46. I would describe my LDC colleagues as collaborative.	❍1	❍2	❍3	❍4

47. About how often do you have **scheduled meetings** (as opposed to informal discussions) with your LDC initiative colleagues to discuss student work, instructional strategies, or teaching approaches? [skip if Q45=no]

- ❍1 At least once a week
- ❍2 Every other week
- ❍3 Once a month
- ❍4 Once per quarter/trimester/semester
- ❍5 Never

48. About how often do you have **informal discussions** (as opposed to scheduled meetings) with your LDC colleagues to discuss student work, instructional strategies or teaching approaches?

- ❍1 At least once a week
- ❍2 Every other week
- ❍3 Once a month
- ❍4 Once per quarter/trimester/semester
- ❍5 Never

Please indicate the degree to which you agree or disagree with the following statements.

49. Collaboration with my LDC colleagues helps me …

	Agree	Agree Somewhat	Disagree Somewhat	Disagree
a. … more effectively use the LDC framework.	❍1	❍2	❍3	❍4
b. … better support student learning.	❍	❍	❍	❍
c. … develop LDC modules.	❍	❍	❍	❍
d. … teach LDC modules.	❍	❍	❍	❍
e. … revise LDC modules.	❍	❍	❍	❍
f. … use the LDC framework rubric.	❍	❍	❍	❍
g. … use students' products to inform my instruction.	❍	❍	❍	❍
h. …provide helpful feedback to students about their writing.	❍	❍	❍	❍

WORKING WITH EXPERIENCED LDC COLLEAGUES

50. Are there teachers in your school or district who used LDC modules **last** year **(2011-12)**?

❍1 Yes ❍0 No [skip to Q53]

51. Did you work with a colleague more experienced with LDC **this** year (**2012-2013**)?

❍1 Yes ❍0 No [skip to Q53]

52. How much did working with a colleague more experienced with LDC help you to develop and teach modules?

❍$_1$ a great deal
❍$_2$ a fair amount
❍$_3$ some
❍$_4$ not much
❍$_5$ not at all

PROFESSIONAL DEVELOPMENT

53. Have you participated in formal professional development sessions related to **LDC** during the **current** school year (**2012-13)**?

❍$_1$ Yes ❍$_0$ No [skip to Q61]

54. Which PD providers facilitated the LDC professional development you attended this year **(2012-13)**? *Please CHECK ANY that applies*

☐$_a$ State or regional staff
☐$_b$ External partner (e.g., Metametrics, SREB, LDC)
☐$_c$ District or network staff
☐$_d$ School-based staff
☐$_e$ I don't remember who facilitated the PD this year

55. How many formal, scheduled LDC professional development sessions have you attended this year (**2012-13)**? _____[integer, 1-99]_____

56. Please indicate whether you participated in the following **types of LDC professional development sessions**.

	Participated	Did not participate
a. One-on-one classroom visits	❍$_1$	❍$_0$
b. Coaching	❍	❍
c. Webinars	❍	❍
d. Small group meetings	❍	❍
e. School-wide meetings	❍	❍
f. District-wide meetings	❍	❍
g. Cross-district meetings	❍	❍

57. Please indicate whether the LDC professional development sessions you participated in was effective or not effective.

	Effective	Not Effective
a. [fill choice from previous item here]	❍$_1$	❍$_0$
b. [fill choice from previous item here]	❍	❍
c. [fill choice from previous item here, etc., etc.]	❍	❍

58. Please indicate whether the LDC professional development sessions you have participated in contained the following **types of content**:

	PD contained this content	PD did not contain this content
a. Using LDC modules as a way to implement the Common Core State Standards	❍1	❍0
b. Building a teaching task	❍	❍
c. Finding appropriate content materials	❍	❍
d. Designing modules	❍	❍
e. Using the instructional ladder	❍	❍
f. Using mini-tasks to address reading and writing skills	❍	❍
g. Providing students with feedback on their writing	❍	❍
h. Scoring student work with LDC rubric	❍	❍
i. Building modules with Module Creator	❍	❍
j. Differentiating module instruction to meet student needs	❍	❍
k. Implementing modules with special education students	❍	❍
l. Implementing modules with ELL students	❍	❍
m. Implementing modules with students who read or write below grade level	❍	❍
n. Implementing modules with students with advanced literacy levels	❍	❍

Q59 asks about LDC professional development that would support your implementation of the LDC initiative.

	Yes	No
59. Please indicate whether you would like more LDC professional development on …		
a) …using LDC modules as a way to implement the Common Core State Standards		
b) … building a teaching task.	❍1	❍0
c) … finding appropriate content materials.	❍	❍
d) … designing modules.	❍	❍
e) … using the instructional ladder.	❍	❍
f) … using mini-tasks to address reading and writing skills.	❍	❍
g) … providing students with feedback on their writing.	❍	❍
h) … scoring student work with the LDC rubric.	❍	❍
i) … building modules with Module Creator.	❍	❍
j) … differentiating module instruction to meet student needs.	❍	❍
k) … implementing modules with ELL students.	❍	❍
l) … implementing modules with special education students.	❍	❍
m) … implementing modules with students who read or write below grade level.	❍	❍
n) … implementing modules with students with advanced literacy levels.	❍	❍

60. Are you compensated for attending professional development sessions? ❍1 Yes ❍0 No

[limit 1000 characters]

[limit 1000 characters]

61. What additional supports and training would help you use the LDC framework? *Please use the field below to describe.*

62. Surveys are not perfect. Maybe we missed some things that you think are important about the LDC initiative. Below, we invite you to write your assessment and comments about the framework as you have experienced it.

63. What is your race/ethnicity? Please CHECK ONE that apply.

- ☐a Native American
- ☐b Asian/Pacific Islander
- ☐c Black or African American
- ☐d Hispanic or Latino
- ☐e White or Caucasian
- ☐f Multiracial
- ☐g Other *(please specify)* _____

[Go to "Regular Close"]

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REGULAR CLOSE

Thank you very much for the time and thought you have put into completing this survey.

To ensure anonymity, your responses will be combined with those from teachers of numerous schools.

Your responses will help to inform implementation of the Literacy Design Collaborative.

= = = = = = = = = = = = = = =

DON'T AGREE CLOSE

We are sorry you have chosen not to participate in the survey.

Thank you for visiting *Research for Action*'s *and the National Center for Research on Evaluation, Standards, and Student Testing's* survey on the Literacy Design Collaborative.

= = = = = = = = = = = = = = =

ERROR MESSAGE IF AN ANSWER IS LEFT BLANK:

You have not given an answer for a question on this screen.

Do you want to go back to give an answer or continue with the survey?

❍ I want to go back to answer the question.

❍ I want to continue without answering the question.

Exhibit A3:

Rubric for LDC Module Implementation Measure

Each dimension is scored on a 5-point scale ranging from "Fully Present or Realized" to "Not Present or Realized."

Fully Present or Realized	Sufficiently Present or Realized	Moderately Present or Realized	Barely Present or Realized	Not Present or Realized
5	4	3	2	1

IMPORTANT: Descriptions are provided for three anchor points in the scale: 5 (Fully Present or Realized), 3 (Moderately Present or Realized), and 1 (Not Present or Realized). Use the intermediate points in the scale (4 and 2) to rate assessment practice that lies between 5 and 3 and 3 and 1.

Dimension 1: *Effective Writing Task*

Dimension 2: *Alignment to the CCSS and Local and State Literacy and Content Standards*

Dimension 3: *Text Alignment*

Dimension 4: *Text Appropriateness*

Dimension 5: *Text Rigor*

Dimension 6: *Fidelity to LDC Module Instruction*

Dimension 7: *Quality Instructional Strategies*

Dimension 8: *Coherence and Clarity of Module*

Dimension 9: *Overall Impression*

Dimension 1: *Effective Writing Task*	
Definition: *Degree to which teaching task makes effective use of the template task's writing mode (i.e., argumentation or explanation); requires sustained writing and effective use of ideas and evidence to substantiate claims; and is feasible for most students to complete (i.e., appropriate for the grade-level and subject matter).*	
Main Sources of Information: *Module Creator Handout (Task)* - Read and evaluate the teaching task, student background/prior knowledge, and summary information. - Evaluate the difficulty or ease students may encounter trying to answer the question. - Compare module teaching task to teaching task template options.	
5. Fully Realized	*The teaching task and performance expectations for the module are explicit and clear, require students to engage in higher-order thinking and writing, and are appropriate for the grade-level and subject matter.*
4.	
3. Moderately Present or Realized	*Clear module teaching task and performance expectations are available, but do not require students to engage in higher-order thinking and writing and/or are not appropriate for the grade-level and subject matter.*
2.	
1. Not Present or Realized	*Minimal evidence of an effort to identify explicit and clear teaching task and performance expectations that provide opportunities for critical thinking and are appropriate for the grade-level and subject matter.*

Dimension 2: *Alignment to the CCSS and Local and State Literacy and Content Standards*	
Definition: *Extent to which module addresses content essential to the discipline, as well as reading comprehension and writing standards informed by local and state standards.*	
Main Sources of Information: *Module Creator Handout (Task)* - Read and evaluate the standards included in the module. - Module should include ELA as well as subject matter CCSS/state standards. - Compare and contrast the standards the module includes with those that could have been included. - Particular attention to content standards (CCSS History/Social Studies, Science, and Technical Subjects); State Standards; Specific Reading, Writing, Speaking/Listening, Language Skills	
5. Fully Realized	*Module specifically addresses content essential to CCSS and local or state standards in science or social studies, as well as reading comprehension and writing. All standards are well aligned to the topic and teaching task.*
4.	
3. Moderately Present or Realized	*Module broadly addresses content essential to CCSS and local or state standards in science or social studies and reading comprehension and writing. Standards are sufficiently aligned to the topic and teaching task.*
2.	
1. Not Present or Realized	*Minimal evidence that module addresses content essential to the discipline and literacy standards. Standards are poorly aligned to the topic and teaching task.*

Dimension 3: *Text Alignment*	
Definition: *Degree to which assigned texts address teaching task content.*	
Main Sources of Information: *Module Creator Handout (Task, Resources, Links)* - Read and evaluate texts (hard copies or online). *Student Work* - References in student work.	
5. Fully Realized	*Assigned readings address the disciplinary content in science or social studies and give students the opportunity to gather information needed to complete the task. Readings are well aligned to the topic and teaching task, and provide students with well-balanced perspectives.*
4.	
3. Moderately Present or Realized	*Assigned readings mostly address the disciplinary content in science or social studies and give students some opportunities to gather information needed to complete the task. Readings are sufficiently aligned to the topic and teaching task, and provide students with moderately balanced perspectives.*
2.	
1. Not Present or Realized	*Minimal evidence that assigned readings address the disciplinary content in science or social studies and give students the opportunity to gather information needed to complete the task. Readings are poorly aligned to the topic and teaching task, and do not provide students with well-balanced perspectives.*

Dimension 4: *Text Appropriateness*	
Definition: *Degree to which teaching task includes reading texts that are accessible to most students (i.e., appropriate for the grade-level and subject matter).*	
Main Sources of Information: *Module Creator Handout (Task, Resources, Links)* - Read and evaluate texts (hard copies or online). *Student Work* - References in student work. *Anchor Readings* - Read for examples of appropriate reading levels for 8th grade students.	
5. Fully Realized	*Assigned readings are highly accessible and appropriate for most students in 8th grade social studies or science classrooms. Selection of readings addresses the needs of students with a range of literacy skills, including students who are above, at, or below grade level, and English Language Learners.*
4.	
3. Moderately Present or Realized	*Assigned readings are mostly accessible and appropriate for the majority of students in 8th grade social studies or science classrooms. Selection of readings sufficiently addresses the needs of students with a range of literacy skills.*
2.	
1. Not Present or Realized	*Assigned readings are not accessible or appropriate for students in 8th grade social studies or science classrooms. Selection of readings poorly addresses the needs of students with a range of literacy skills.*

Dimension 5: *Text Rigor*	
Definition: Degree to which teaching task includes reading texts that use and develop academic understanding and vocabulary, and offer opportunities for multiple interpretations and higher-order thinking.	
Main Sources of Information: *Module Creator Handout (Task, Resources, Links)* - Identify list of selected articles/links. - Read and evaluate texts (hard copies or online). - Consider issues of source credibility. *Student Work* - References in student work.	
5. Fully Realized	*Assigned readings require students to engage in higher-order thinking, and develop a strong academic understanding and vocabulary in social studies or science. Readings afford a deep conceptual and contextual understanding of the teaching task and topic. Selection of readings includes a broad range of credible primary and secondary sources.*
4.	
3. Moderately Present or Realized	*Assigned readings require students to engage in some higher-order thinking, and develop an adequate academic understanding and vocabulary in social studies or science. Readings afford a sufficient conceptual and contextual understanding of the teaching task and topic. Selection of readings includes a moderate range of credible primary and secondary sources.*
2.	
1. Not Present or Realized	*Assigned readings require students to engage in little higher-order thinking, or develop an academic understanding and vocabulary in social studies or science. Readings afford a limited conceptual and contextual understanding of the teaching task and topic. Selection of readings includes few credible primary and secondary sources.*

Dimension 6: *Fidelity to LDC Module Instruction*	
Definition: *Degree to which module instruction, activities, and teaching task address each of the four stages of instructional practice (preparation for the task, reading process, transition to writing, writing process).*	
Main Sources of Information: *Module Creator Handout (Instruction)* *Information Sheet* - Evaluate for distribution of activities and time spent on each of the four stages of instructional practice.	
5. Fully Realized	*The module instruction, activities, and teaching task reflect deliberate attention and fidelity to the four discrete stages of LDC module instruction. Classroom materials reflect demonstrable effort to develop instructional scaffolding within and across each stage of instruction.*
4.	
3. Moderately Present or Realized	*The module instruction, activities, and teaching task reflect moderate attention and fidelity to the four discrete stages of LDC module instruction. Classroom materials reflect sufficient effort to develop instructional scaffolding within and across each stage of instruction.*
2.	
1. Not Present or Realized	*The module instruction, activities, and teaching task reflect poor attention and lack of fidelity to the four discrete stages of LDC module instruction. Classroom materials reflect inadequate effort to develop instructional scaffolding within and across each stage of instruction.*

Dimension 7: *Quality Instructional Strategies*	
Definition: Degree to which the module provides clear instructional strategies aimed at helping students develop literacy skills and successfully complete the teaching task. And the degree to which module instruction and activities scaffold critical thinking and performance in a way that is meaningful within the context of a given field or subject-matter.	
Main Sources of Information: *Module Creator Handout (Instruction)* *Classroom Handouts* *Student Work* - Evaluate extent to which instructional strategies guide student learning in literacy and ability to complete the teaching task. - Evaluate extent to which the module activities scaffold critical thinking and student performance within the context of the subject matter at the core of the teaching task.	
5. Fully Realized	*Module provides clear and targeted instructional strategies and activities that scaffold student learning and promote critical thinking in social studies or science. There is explicit attention to helping students develop an accurate understanding of the topic and teaching task, and literacy skills necessary to successfully complete the writing task.*
4.	
3. Moderately Present or Realized	*Instructional strategies and activities are available to support adequate student learning and critical thinking in social studies or science. There is moderate attention to helping students develop an understanding of the topic and teaching task, and literacy skills necessary to complete the writing task.*
2.	
1. Not Present or Realized	*Limited instructional strategies and activities available to support student learning and critical thinking in social studies or science. Insufficient attention to helping students develop an understanding of the topic and teaching task, or literacy skills necessary to complete the writing task.*

Dimension 8: *Coherence and Clarity of Module*	
Definition: Degree to which there is logical alignment between the teaching task and other module goals with readings, mini-tasks, and instructional strategies.	
Main Sources of Information: *Module Creator Handout* *Classroom Handouts* *Student Work*	
5. Fully Realized	*Strong alignment between the teaching task and goals of the module, including the CCSS and local and state literacy and content standards, with the readings, mini-tasks, student work, and instructional strategies.*
4.	
3. Moderately Present or Realized	*Moderate alignment between the teaching task and goals of the module, including the CCSS and local and state literacy and content standards, with the readings, mini-tasks, student work, and instructional strategies.*
2.	
1. Not Present or Realized	*Poor alignment between the teaching task and goals of the module, including the CCSS and local and state literacy and content standards, with the readings, mini-tasks, student work, and instructional strategies.*

Dimension 9: *Overall Impression*
Definition: *Holistic assessment of LDC Module.*
Main Sources of Information: *Module Creator Handout* *Classroom Handouts* *Student Work*
Main question: *To what extent does this module contribute to student college readiness and development of advanced literacy skills?* 5. Advanced LDC Module Implementation 4. Proficient LDC Module Implementation 3. Adequate LDC Module Implementation 2. Marginal LDC Module Implementation 1. Inadequate LDC Module Implementation

Exhibit A4:
Child Labor Integrated Learning Assessment

National Center for Research
on Evaluation, Standards, & Student Testing

UCLA | Graduate School of Education & Information Studies

English Language Arts

Child Labor

STUDENT	
TEACHER	

Assessment Directions

This is a two part assessment. In part 1, you will go over the directions, read the materials, and answer questions. In part 2, you will write an essay on the topic provided.

You will be asked about the rights of children and how they apply to child laborers.

You may take notes directly on the assessment.

The materials include:

1. Reading Passage - Rizwan, Pakistan
2. Reading Passage - Shiv, India
3. Reading Passage - United Nations Convention on the Rights of the Child

Underlined terms are defined in a glossary.

Stop at the 

sign at the end of part 1.

1. Reading Passage - Rizwan, Pakistan

The passage below includes excerpts from a story about a teenager in Pakistan. The story comes from a larger collection of interviews put together by The International Center on Child Labor and Education (ICCLE).

Rizwan, 14, is from a village near Lahore in Pakistan called Chachey Wali. He is the third oldest child of eight children in his family. He has three brothers and four sisters.

Rizwan's mother has not been well since she received an electrical shock four years ago. His father is unable to find a job. Because of this, Rizwan and four of his siblings (ages 5-13 years) are forced to work making bricks. Rizwan's 3 year-old brother and two oldest sisters do not work. The sisters, who are 16 and 18 years old, are married. In Rizwan's society, it is out of the question for them to go out to work.

In Chachey Wali, there are twelve brick kilns. Rizwan started working in the kilns at the age of seven. Rizwan gets up at 4:00 a.m. and makes bricks for eleven hours a day, six days a week. He works all day long outside in the hot sun. Rizwan earns 500 Pakistan rupees ($8.35) a week for making about 1,000 bricks.

Brick-making is tough work. Bricks are made outdoors, meaning that the children who make them have to sit in the harsh sun all day. Most people who make bricks have to sit on their heels and bend forward, hurting their spine, neck, feet and knees, causing extreme discomfort. The most common side effects of this work are back pains, skin infections, and lung infections from inhaling a lot of dust. Because of the long hours and tough conditions, Rizwan does not think he and his siblings will be able to work much by the time they are 25 years old.

Rizwan does not like his bosses, who yell at him and embarrass him and his siblings when they make mistakes. Once, a supervisor hit his younger sister for laying her foot on a brick before it dried. Rizwan has also been injured at work. He has a scar on his forehead from a nail. When he is sick and cannot work, Rizwan does not get paid.

Through a human rights organization called Godh Lahore, Rizwan receives informal education for two hours each night, six nights a week. So far, he has completed four years of school.

Adapted from http://www.knowchildlabor.org/true_stories/pdf/ICCLE_RIZWAN_Pakistan.pdf

Glossary

kiln – an oven for drying bricks

rupees – money in Pakistan

siblings – brothers and sisters

Reading Comprehension Questions

In this part of the assessment, you will answer questions about the content of the passage you read. You may look back at the materials to help you answer the questions.

Multiple Choice

Choose the best answer for each question. Fill in the bubble next to the answer you choose.

1. **What does the author mean by "Rizwan and four of his siblings (ages 5-13 years) are forced to work" (lines 4-5)?**

   Ⓐ All children five years or older are required to work in Chachey Wali.

   Ⓑ The bosses made Rizwan and his siblings work.

   Ⓒ Rizwan's father wanted them to work.

   Ⓓ The children had no choice but to work to support their family.

2. **What educated guess can you make about Rizwan's society from the following sentence: "In Rizwan's society, it is out of the question for them [Rizwan's two older sisters] to go out to work" (lines 6-7)?**

   Ⓐ Women are not considered strong enough to work in the kilns.

   Ⓑ Teenagers who are 16 years or older are not allowed to work.

   Ⓒ Women are not allowed to work once they are married.

   Ⓓ Married women do not need to work.

3. **According to the article, which is true of brick-making?**

   Ⓐ It pays more money than farming.

   Ⓑ It can lead to physical problems.

   Ⓒ It requires being inside all day.

   Ⓓ Only children are allowed to work in the kilns.

Short Answer

4. The reading passage discusses the conditions of working in brick kilns (lines 12-18). Based on the information in the passage, list two reasons why employers want to hire children like Rizwan instead of adults to work in brick-making.

a) _____

_____

b) _____

_____

2. Reading Passage - Shiv, India

The passage below includes excerpts from a story about a teenager in India. The story comes from a larger collection of interviews put together by The International Center on Child Labor and Education (ICCLE).

Shiv, 16, is from Madhepura village in the state of Bihar in India. He has three brothers: 8, 13, and 15 years old, and two sisters: 18 and 20 years old. Both Shiv's mother and father work as agricultural laborers. All of his brothers and his sisters help their mother when she works on the farm. None of them goes to school, as there is no school in the village.

When he was barely seven years old, Shiv was lured away from home by a man who promised him chocolate. The man took him 370 miles away from his home to the Varanasi district in India, where he worked in a carpet factory for five years around the clock for no pay. He was abused and beaten by his employer. "Have you ever realized that carpets are made by children like me?" Shiv asked. Since he worked for no pay and was not allowed to leave the factory, Shiv was considered to be a bonded laborer.

"The work was hard," Shiv said. He worked 16 hours a day from 4:00 a.m. to 9:00 p.m., seven days a week with an hour for lunch. He used to get up at 4:00 a.m. and go to bed at 10:00 p.m. He did not go to school.

Shiv lived, slept, and ate in the same room where he worked. He lived and worked with 18 other boys between the ages of 7 and 16. Shiv was not given proper food. The children did not get breakfast. For lunch and dinner, they received "very badly cooked" rice and lentils.

There was no time to play or have fun. Shiv was not allowed to go outside, even though it was very hot and dirty inside and there was no fan. Shiv was often sick and tired but was never taken to the doctor. He was just given some pills and told to continue working. Often, he cut his fingers while weaving. When this happened, the employer used a chemical to burn shut the cuts on his fingers. He said it was very painful. If Shiv ever said "no" to work, he was subjected to verbal and physical abuse.

continue reading →

Glossary

lured – tempted

whim – sudden desire or change of mind

Shiv did not like his boss, who only wanted the boys to work hard and produce more every day. "For this he used to beat us. His behavior was very bad with us. He used to ill-treat us. He always used bad language with us. If there was any small mistake, or when we did not meet the deadline for completing the carpets, we were beaten very badly," Shiv said. This happened quite often, at the employer's whim. His boss never praised anyone.

For five years, Shiv worked without any time off. He never went home or saw anyone in his family. He did not enjoy a single day of work. At that time he had no dreams.

After five years in the factory, Shiv was rescued by Mr. Kailash Satyarthi and a team of human rights activists when local police raided the factory where Shiv was working. Now Shiv lives and attends school in New Delhi. "Now I am getting love and education," Shiv said. He goes home during school vacations. Shiv has completed the fifth grade and no longer works.

Adapted from http://www.knowchildlabor.org/true_stories/pdf/ICCLE_SHIV_India.pdf

Reading Comprehension Questions

In this part of the assessment, you will answer questions about the content of the passage you read. You may look back at the materials to help you answer the questions.

Multiple Choice

Choose the best answer for each question. Fill in the bubble next to the answer you choose.

1. If Shiv had not been taken to the factory, how would he have probably have spent his childhood?

Ⓐ going to school

Ⓑ playing and having fun

Ⓒ making carpets

Ⓓ working on the farm

2. Based on the passage, you can infer that a bonded laborer is defined as:

Ⓐ a child taken against their will.

Ⓑ someone who works for no pay and has no freedom.

Ⓒ a child who is beaten by their employer.

Ⓓ someone who works long hours.

3. What was the main goal of the carpet factory boss?

Ⓐ to keep the boys healthy so they could work more

Ⓑ to abuse the boys physically

Ⓒ to produce many carpets quickly

Ⓓ to produce high-quality carpets

Short Answer

4. In 1-2 sentences, explain why Shiv "had no dreams" while he was working in the factory.

3. Reading Passage - United Nations Convention on the Rights of the Child

The articles below are taken from the *United Nations Convention on the Rights of the Child*, which is a human rights treaty that lists the civil, political, economic, social, health and cultural rights of children.

Nations that sign this document are required by international law to follow it. The Convention has been signed by 193 countries, including India and Pakistan. There are a total of 54 articles in the original document.

Article 1: Everyone under 18 has all the rights listed in this document.

Article 3: All adults should always do what is best for you.

Article 5: You have the right to be given guidance by your parents and family.

Article 9: You have the right to live with your parents, unless it is bad for you.

Article 15: You have the right to meet with friends and to join groups and organizations, as long as it does not stop other people from enjoying their rights.

Article 19: You have the right to be protected from being hurt or badly treated.

Article 24: You have the right to the best health possible and to medical care and to information that will help you stay well.

Article 28: You have the right to education.

Article 35: No one is allowed to kidnap you or sell you.

Article 36: You have the right to protection from any other kind of exploitation.

Adapted from "Convention on the Rights of the Child," U.N. Security Council, 44th Year (A/RES/44/25), Official Record, November, 1989, pp. 166-173.

Glossary

Article – a section of a legal document

exploitation – taking unfair advantage of someone

Reading Comprehension Questions

In this part of the assessment, you will answer questions about the content of the passage you read. You may look back at the materials to help you answer the questions.

Multiple Choice

Choose the best answer for each question. Fill in the bubble next to the answer you choose.

1. Why are Rizwan and Shiv protected by the *Convention on the Rights of the Child*?

Ⓐ They don't live with their parents.

Ⓑ They are younger than 18.

Ⓒ They both work in factories.

Ⓓ They were both kidnapped and taken from their families.

2. Which of the following is a violation of Article 24?

Ⓐ Shiv's boss used bad language and swore at the workers.

Ⓑ Rizwan's boss hit his sister for making a mistake.

Ⓒ Shiv's boss burned his cuts and did not take him to the doctor.

Ⓓ Rizwan's boss embarrassed him in front of the other workers.

3. Why might Shiv's boss oppose Article 15?

Ⓐ He would not want Shiv to play sports and become strong.

Ⓑ He would not want Shiv to learn about his rights.

Ⓒ He would not want Shiv to have any friends.

Ⓓ He would not want Shiv to enjoy his free time.

Short Answer

4. a. List one Article violated by Rizwan's boss._____

Explain your answer.

_____

_____

_____

b. List one Article violated by Shiv's boss._____

Explain your answer.

_____

_____

_____

_____

End of Part 1

Writing Task

Write a formal essay explaining three ways in which Shiv's and Rizwan's bosses violated the boys' rights according to the *United Nations Convention on the Rights of the Child*.

Be sure to support your explanation using examples from the readings and what you have learned about child labor.

Your essay will be scored on how well you:

- demonstrate an understanding of the issue of child labor and the *United Nations Convention on the Rights of the Child*.
- state and support your thesis with information from the readings.
- present your essay in a logical and well-organized manner.
- use the materials to support your explanation.
- use proper punctuation, spelling, and grammar.

CRESST Literacy Assessment Scoring Rubric for Grade 6

Overview

The five scoring dimensions are: content understanding, rhetorical structure/quality, reference to text, and use of grammar/conventions. There may be some overlap between some of these dimensions, which is fine. When scoring, keep in mind we are looking at on overall indicator of proficiency on each of these dimensions.

Dimension	Name	Description
A	Content understanding	This is a measure of overall how well the student has demonstrated that they understand the materials and the topic in their essay.
B	Rhetorical structure/quality	*Explanation:* Measures how well the elements of explanatory writing as described in the response. For 6th grade writing, explanations should establish a thesis and develop the topic with information, examples, and analysis.
C	Organization	This evaluates the focus, logical progression of ideas, and structure demonstrated by the student's writing.
D	Reference/support with text	This is a measure of how well references to text details are used to support statements in the. A text detail is a quotation, paraphrase, or any other reference to information and ideas in the texts provided.
E	Grammar and Conventions	Evaluates the command of standard English conventions demonstrated by the response: proper English usage and control of grammar, formal tone, correct paragraph and sentence structure.

Student ID: _____

Score point	Explanation Rubric		Score
Content understanding	The response demonstrates well-developed and thorough understanding of the topic.	4	☐
	The response demonstrates solid understanding of the topic.	3	☐
	The response demonstrates some understanding of the topic.	2	☐
	The response demonstrates little or no understanding of the topic.	1	☐
Rhetorical structure/quality	Important elements of the explanation are clearly and thoroughly described and articulated and the response is aligned to the prompt.	4	☐
	Elements of the explanation are clearly described and the response is aligned to the writing prompt.	3	☐
	There is an attempt to describe some elements of the explanation.	2	☐
	Elements of the explanation are not described, or the descriptions are unclear.	1	☐
Organization	The essay is well organized.	4	☐
	The essay is appropriately organized.	3	☐
	The essay is somewhat organized.	2	☐
	The essay has little or no appropriate organization.	1	☐
Reference support with text	The response uses detailed and well chosen references to the text to thoroughly develop the explanation.	4	☐
	The response uses accurate and detailed references to the text to provide solid development of the explanation.	3	☐
	The response uses some accurate and detailed references to the text to develop the explanation.	2	☐
	The response uses little or no accurate and detailed references to the text to develop the explanation.	1	☐
Grammar and Conventions	The response demonstrates a well-developed command of standard English conventions.	4	☐
	The response demonstrates a solid command of standard English conventions.	3	☐
	The response demonstrates some command of standard English conventions.	2	☐
	The response demonstrates little or no command of standard English conventions.	1	☐

Child Labor Short Answer Rubric

Child Labor			
Question ID	Question	Question Stem & Sample Answer	Scoring Rubric
MLA_RP_133	4	The readings passage discusses the conditions of working in brick kilns. Based on the information in the passage, list two reasons why employers want to hire children like Rizwan instead of adults? Answer: a) Brick makers have to sit low to the ground, and children are small and can do this better. b) the owners can intimidate and control the children easier than adults.	BL = Blank 0 = The student gives either an incomplete or incorrect response. If reasons are given, they are not based on the article. 1 = The student provides one reason for why children are hired to work as brick makers. The reason given is both plausible and based on the text, e.g. "they have small hands and work faster" is not mentioned in the article. 2 = The student provides two reasons that are based on the article. Ideas mentioned in the article that could be used in reasoning include but are not limited to: • low pay • abuse and intimidation • physical challenges of brick making • long term damage to health/ability to work
MLA_SI_113	4	In 1-2 sentences, explain why Shiv "had no dreams" while he was working in the factory. Answer: Shiv was taken away when he was very young; he worked long hours, and was not allowed any free time. He had very little hope for the future.	BL = Blank 0 = The student gives either an incomplete or an incorrect response. If given, the explanation is inaccurate or literally addresses sleeplessness, not dreaming while sleeping, not day dreaming, etc. 1 = The student provides at least one reason why Shiv had no hope for his future. E.g. • Describes his life/living conditions. • Describes his state of mind as a result of his living conditions. (This does not require details, as long as it is a reasonable conclusion.)

Child Labor			
Question ID	Question	Question Stem & Sample Answer	Scoring Rubric
MLA_UNC_117	4, part a	List one Article violated by Rizwan's boss: Explain your answer. Answer: Student answers will vary, but the article should relate to Rizwan's situation and the explanation should support and explain the reasoning behind why they selected that particular article.	BL = Blank 0 = The student gives either an incomplete or an incorrect response. 1 = The student lists a correct article but fails to explain their answer. Example: Article 19 2 =The student gives both a correct article and explains why they selected that article.
MLA_UNC_119	4, part b	List one Article violated by Shiv's boss: Explain your answer. Answer: Student answers will vary, but the article should relate to Shiv's situation and the explanation should support and explain the reasoning behind why they selected that particular article.	BL = Blank 0 = The student gives either an incomplete or an incorrect response. 1 = The student lists a correct article but fails to explain their answer. Example: Article 35 2 =The student gives both a correct article and explains why they selected that article.

Appendix B:

Summary Report:
Developing an Assignment Measure to Assess Quality of LDC Modules

November 2013

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Developing an Assignment Measure of Common Core State Standards Literacy Practice

The National Center for Research on Evaluation, Standards and Student Testing (CRESST) is developing evaluation tools to support the transition to the Common Core State Standards (CCSS). Generously supported by the Bill and Melinda Gates Foundation, the CRESST tools include measures of both teacher practice and student learning. The Assignment Measure tool presented here examines how well 8th grade science and social studies teachers were able to incorporate selected CCSS standards in English Language Arts into classroom curriculum and instruction. The tool specifically measures how teachers implemented the Literacy Design Collaborative (LDC) framework, an intervention designed to help teachers create integrated literacy and content instruction around core writing tasks.

Assignment and artifact collection has been identified as an efficient and economical means of measuring the quality of classroom instruction (e.g., Clare & Aschbacher, 2001; Newmann, Bryk, & Nagaoka, 2002; Storms, Riazantseva, & Gentile, 2000; Matsumura, Slater, Wolf, Crosson, Levison, Peterson, Resnick, Junker, 2006; Martínez, Borko, Stetcher, Luskin, & Kloser, 2012). Classroom assignments shed light on such variables as teacher clarity, cognitive rigor of instruction, and in this case, degree of LDC fidelity of implementation. Careful assessment of assignments can potentially capture instructional quality with a degree of accuracy that approaches actual observation. In addition to shedding light on the nuances of instructional practice, artifact collection and analysis can potentially be leveraged for professional development purposes, to model and improve effective practices. The CRESST Assignment Measure was designed with both of these uses–instructional evaluation and professional development—in mind. Furthermore, the benefit of the Assignment Measure is its transferability: with only minor modifications, the measure can be used to assess to any instruction that involves reading texts and writing about them.

In contrast to previous artifact studies that examine discrete assessment practices or assignments (cf. Martínez, Borko, Stetcher, Luskin, & Kloser, 2012), the CRESST Assignment Measure was designed to capture instruction that occurred within the framework of an LDC "Module," a unit of instruction lasting 2-4 weeks that culminates in a summative writing task. In building an LDC Module, teachers begin with fill-in-the-blank template tasks—or extended writing prompts—that are designed to help them incorporate the literacy demands specified in the Common Core State Standards into units of instruction in literature, history/social studies, or science. Teachers design instructional activities using the LDC framework that is comprised of four "skill clusters:" (1) Preparing for the Task, (2) Reading Process, (3) Transition to Writing, and (4) Writing Process. Each LDC Module includes an instructional ladder of "mini-tasks" that build the requisite skills in both *reading* and *writing* to complete the final writing task. The final product—instructional ladder plus template task—is referred to as an LDC module.

LDC has also designed *Module Creator,* an online platform that walks teachers through the four steps of building a module: What task? What skills? What instruction? What results? This platform is replete with pull-down menus and default settings that teachers are invited to augment and/or revise, depending on their instructional needs. For example, in the Reading Process skills cluster, teachers are invited to add additional skills beyond the ones suggested by LDC: text selection, active reading, essential vocabulary, academic integrity, note-taking. Likewise, if they choose to teach the skill of "active reading," they have the option of adding additional instruction or "mini-tasks" beyond the default option on Module Creator, which simply has students "brainstorm ways to figure out any author's intent" and "share and discuss their answers for each text."

The CRESST Assignment Measure was designed to assess both the clarity and quality of the writing task and the appropriateness and relevance of the activities in the instructional ladder. Despite the fill-in-the-blank format of the final writing task, the process of building an LDC module leaves tremendous room for variation. Teachers are responsible for choosing the topic, selecting appropriate texts, and designing daily instruction around all elements of literacy, from reading comprehension, paragraphing, to all aspects of writing style and mechanics. This potentially wide range in teacher implementation has important implications for the design of fidelity of implementation measures. The breadth of instruction contained in a given LDC Module poses logistical challenges for artifact collection, which will be discussed below.

In the report below, we describe the CRESST Assignment Measure and report findings from a reliability study. In particular, we examine variation and sources of error in ratings, attending to what these results might suggest about teacher implementation of LDC. Lastly, using both the quantitative results from the reliability study, as well as qualitative data from interviews and surveys, we make suggestions for how the Assignment Measure might be used in the future.

CRESST Assignment Measure

CRESST's LDC Assignment Measure was designed to capture the specific demands of integrating content and literacy, as is required in subject area classrooms implementing LDC. Over the past year, CRESST has been involved in revising, piloting, and validating the LDC Assignment Measure, based on findings from last year's pilot. Our original measure consisted of eight dimensions, each targeting a discrete component of the module. Each dimension was scored on a four-point scale. Our current measure has nine dimensions, each scored on a 5-point scale. The revised version of the assignment measure focuses on rigor and content literacy, while also drawing more explicitly on the criteria for "what makes a great teaching task" and "what makes a great module" that are discussed in *The 1.0 Guidebook to LDC* (See Appendix A for complete rubric).

The final measure includes only those areas for which we are able to collect sufficient evidence of classroom practice. The challenge with each of these potential domains of LDC implementation is the availability of information to support their assessment. The final rubric assumes that scorers have the following materials before them: 1) a completed template task (often printed from Module Creator); 2) one sample of supplemental instructional materials in reading instruction and one sample of instructional materials in writing instruction (e.g., graphic organizers, worksheets, lesson plans) that speak to the specificity of instruction; 3) three samples of student work on the template task, marked high, medium, and low; and 4) a short cover sheet where teachers indicate how long they spent teaching the modules and state their goals for content, reading, writing. Below, we make suggestions for additional classroom artifacts that might be collected in future iterations of the Assignment Measure to assist raters in making inferences about classroom instruction.

Each dimension was scored on a five-point scale for scoring to reduce any clustering or bias towards the mean. A score of 1 indicates that a dimension is not present or realized in the assignment measure artifacts; a score of 3 suggests that a dimension is moderately present or realized; and a score of 5 indicates that the dimension is fully realized. The first five dimensions in the revised measure address the question, "what makes a great teaching task?" These dimensions center on the teaching task rather than the module in its entirety. This approach aligns with the steps suggested for building an effective module, as outlined in *The 1.0 Guidebook to LDC* (cf. Crawford, Galiatsos, Lewis, & Ottesen, 2011):

1) *Effective Writing Task* considers the degree to which the teaching task makes effective use of the template task's writing mode (i.e., argumentation or explanation); requires sustained writing and effective use of ideas and evidence to substantiate claims; and is feasible for most students to complete (i.e., appropriate for the grade-level and subject matter). Sources of information for evaluating this dimension include the teaching task template options, the teaching task, and summary information sections of Module Creator.

2) *Alignment to the CCSS and Local and State Literacy and Content Standards* focuses on the extent to which teaching task addresses content essential to the discipline, as well as reading comprehension and writing standards informed by local and state standards. Evidence for assessing this dimension can be found in the CCSS and state standards provided in Module Creator, as well as the literacy and content standards that teachers include in the module.

3) *Text Alignment* is the degree to which the assigned texts address teaching task content. The main sources of information for evaluating this and the following two dimensions are the reading

texts themselves, as well as the task, resources, and links listed in the Module Creator Handout or referenced in the student work.

4) *Text Appropriateness* is the degree to which the teaching task includes reading texts that are accessible to most students (i.e., appropriate for the grade-level and subject matter). Rater materials included sample readings that represented 8th grade Lexile levels. Raters were encouraged to refer to these exemplar texts when assessing text appropriateness.

5) *Text Rigor* is the degree to which the teaching task includes reading texts that use and develop academic understanding and vocabulary, and offer opportunities for multiple interpretations and higher-order thinking.

The remaining four dimensions of the revised assignment measure address the question, "what makes a great module?" The dimensions capture the extent to which teachers engage in high quality instructional strategies, and address the four stages of instructional practice delineated in the LDC *Instructional Ladder*. These dimensions also provide an opportunity to assess the coherence and clarity of the module as a whole:

6) *Fidelity to LDC Module Instruction* is the degree to which module instruction, activities, and the teaching task address each of the four stages of instructional practice (preparation for the task, reading process, transition to writing, writing process). The main sources of information include the instruction section of the Module Creator handout and any information provided about the distribution of activities and time spent on each of the four stages.

7) *Quality Instructional Strategies* considers the degree to which the module provides clear instructional strategies aimed at helping students develop literacy skills and successfully complete the teaching task, and the degree to which module instruction and activities scaffold critical thinking and performance in a way that is meaningful within the context of a given field or subject-matter. In addition to the instruction section of Module Creator and completed teacher logs, evidence for this dimension can be found in classroom handouts and examples of student work.

8) Coherence and Clarity of Module is the degree to which there is logical alignment between the teaching task and other module goals with readings, mini-tasks, and instructional strategies.

All classroom artifacts should be used to assess this and the final dimension, including materials and information listed or uploaded into Module Creator, classroom handouts, and examples of student work.

9) *Overall Impression* is a holistic assessment of LDC Module. This dimension gives raters the opportunity to make an overall assessment of LDC implementation, and determine the extent to which a module contributes to student college readiness and development of advanced literacy skills.

Methods

LDC Modules were collected from 8th grade social studies and science teachers who were part of a larger quasi-experimental study of LDC implementation. We asked that teachers submit data on two modules if possible, preferably in the fall and spring semesters. Most teachers taught at least two modules, but some taught only one. Although timing of module submission varied, in all cases Module 2 reflected instruction that occurred later in the academic year. Each module captured teacher LDC instruction over the course of 2-4 weeks. As part of the larger study, teachers were also asked to complete an online log twice per week during each week of LDC instruction. These online logs were designed on the online survey engine Qualtrics and we requested that teachers submit modules and classroom artifacts online when they completed logging on a given module. In addition to the specific instructional materials listed above, teachers had an opportunity to submit any additional materials that they believed would help us understand their module instructional practice. We followed up with teachers who had completed logging but did not submit their materials. The final sample included 21 social teachers, who submitted 40 social studies modules, and 17 science teachers who submitted 29 science modules.

We used a within-subject design to explore teacher variation in LDC implementation. The design allowed us to investigate variation in LDC implementation over time, as well as between subject areas (science and social studies) and between states (Pennsylvania and Kentucky).

Pilot Study

We piloted the assignment measure and rater training in April 2013 with two expert teachers, including one science and one social studies teacher. The four science and social studies modules used for the pilot session were selected from a pool of completed modules that were submitted to our research team from study participants in the early spring. These modules included all of the classroom materials that teachers were asked to submit, and represented the types of teaching task topics similar to what raters

encountered in the official rating session, including those on climate change, transportation of hazardous materials, the Electoral College, and the American Revolution. Both raters found the dimensions logical and intuitive, and the training in LDC, Module Creator, and the CCSS thorough and useful for their own practice. Their suggestions for how we might clarify the rubric and rater training protocol were minor and almost all were incorporated. We determined that it took approximately 45 – 60 minutes for a teacher to rate a module.

Recruitment and Training

We recruited raters for a week-long scoring session held on June 17-21, 2013. We generated a list of eligible and potentially interested teachers from local district leaders and experts in social studies and science education and we ultimately invited over 90 teachers to apply. Five social studies and four science teachers were selected from a total pool of over 70 applicants. Raters were offered $200 for each day of participation, in addition to breakfast, lunch and parking. The recruitment letter explained:

> UCLA's *Center for Research on Evaluation, Standards, & Student Testing* (CRESST) and the *Gates Foundation* are investigating an instructional intervention aligned to the C*ommon Core State Standards* (CCSS) in 8th grade science and social studies classrooms. We are looking for experienced teachers to review and score instructional materials collected in middle school science and social studies classrooms during the 2012-2013 school year. **Rating sessions will take place from Monday, June 17, 2013 - Friday, June 21, 2013**.
>
> **Job Details:**
> - Raters will received a daily stipend of $200 ($25/hour)
> - Breakfast, lunch, and parking will be provided
> - Sessions will take place at the UCLA campus from 9:00AM-5:00PM
>
> **Job Qualifications:**
> - Experienced teachers who currently or recently taught 8th grade science and social studies
> - May not have been a UC Employee within the last two years
>
> If you are interested in rating instructional materials or would like further information about our study, please fill out and return the attached form April 30, 2013.

Rater training and calibration occupied the first day and a half of the weeklong session. The first morning was devoted to introducing raters to LDC and Module Creator, as well as to familiarizing them with the dimensions of the rubric. During the afternoon of the first day and the morning of the next, social studies and science teachers independently scored two anchor modules in their subject areas. Each group of teachers met with a subject area expert who had also scored the modules to discuss and calibrate

their ratings. The remainder of the week was devoted to rating modules. Each teacher rated approximately 24 modules.

Generalizability Study Design

Generalizability theory, or G theory, is a statistical framework for determining the reliability of measurements under specific conditions. The theory asserts that there are multiple sources of error, rather than a single error term as in classical reliability theory. Each source of potential error is considered a *facet,* and the goal of a G-study is to determine the amount of error caused by each facet and the interaction of facets. We conducted Generalizability studies to investigate the reliability of module ratings, with the goal of separating true teacher variation from other sources of measurement error, for example rater variation or variation in LDC implementation over time (Shavelson & Webb, 1991). We also conducted a decision study, or D study, to estimate how generalizability coefficients would change if different aspects of the study (e.g., number of raters, number of modules) were altered. Therefore, for each set of modules, we estimated two kinds of reliability coefficients: a generalizability coefficient (ρ) reflecting consistency in relative score interpretations (i.e., rank ordering) and a dependability coefficient (ϕ) for absolute interpretations (i.e., judging performance against set criteria or standards). In both cases, we estimated hypothetical scenarios that vary the number of modules collected per teacher and the number of raters. Finally, we conducted exploratory factor analyses to investigate the extent to which one or more dominant factors or traits underlie the correlation patterns observed among ratings on the nine rubric dimensions.

Social studies and science modules were analyzed separately because raters exclusively scored modules in their subject area. A fully crossed design with all raters scoring all modules in a given subject area was not feasible due to time constraints, but most raters scores majority of the teacher artifacts. We analyzed all valid data by using the missing data option in SPSS, which enabled us to omit an observation when there were missing values in the independent effects.

Qualitative Data

In addition to the analyses described above, we conducted 20-30 minute interviews with individual raters during the final two days of week to inquire about their experience with the assignment measure and their initial reactions to teacher implementation of LDC. The nine raters also completed a short survey on Qualtrics that asked them to review their experience over the course of the week. The

survey was comprised of three sections. The first asked raters to "indicate how strongly you agree or disagree with the following statement as it applies to each rubric dimension:"

1) I clearly understood this dimension and the aspect of LDC module instruction that it was intended to capture.
2) The LDC module notebook provides sufficient evidence to judge this aspect of LDC module instruction.
3) I am confident about the ratings I assigned in this dimension.

In the second section, the raters were asked to indicate how useful each of the following components were "as a source of information for judging each dimension:" one-page information form; module creator handout; other planning materials; reading/texts; reading supports; writing supports; samples of student work; other instructional materials. Finally, raters were asked to comment on what knowledge, experiences, or personality characteristics might make someone a good rater of LDC modules.

Results

Table 1 presents mean scores for all social studies and science modules across all dimensions. Several cautions must be considered in reviewing these findings. First, given the limited sample size, we must be careful of making generalizations about social studies or science LDC implementation. It is important to note that different groups of raters scored each set of modules, and thus the scores are incomparable. Moreover, it is conceivable that science raters may have been more lenient in their scoring for any number of reasons, including their lack of experience integrating literacy and content.

However, we see that, in general, science modules received higher ratings across dimensions, with the exception of two dimensions. This may appear counter-intuitive: one would think that social studies teachers would have an easier time integrating writing instruction, given the subject matter. The mean scores may suggest science teachers were better able to integrate subject matter content and literacy within the framework of LDC instruction. Science teachers were most successful at following and elaborating upon the structure of the LDC module. Their modules not only contained the four "skill clusters" –Preparing for the Task, Reading Process, Transition to Writing, and Writing Process—but these skills clusters included mini-tasks that went beyond the default options provided on Module Creator. Science teachers were also able to find texts that aligned with the writing task, but these were not particularly rigorous, in that they did not necessarily promote multiple interpretations or higher-order thinking.

Social studies modules scored higher than science modules on the Effective Writing Task (the linchpin of the module) and Text Rigor (the academic substance of the texts) suggesting that social studies teachers struggled less with integrating writing tasks into their content instruction, and more with

designing instruction and supporting student execution of the task. Of all the dimensions, social studies teachers were most successful at finding texts to align with the writing task. Again, it is possible that social studies raters were more exacting in their ratings, given their experience integrating literacy and content instruction. For the remainder of the report, we present results for social studies and science modules separately.

Table 1: Mean Scores for Social Studies and Science Modules Across Dimensions (Scale 1-5)

Dimensions	Social Studies	Science
1. Effective Writing Task	3.40	3.05
2. Alignment to Literacy and Content Standards	2.42	3.25
3. Text Alignment	3.44	3.52
4. Text Appropriateness	3.24	3.41
5. Text Rigor	3.35	3.05
6. Fidelity to LDC Module Instruction	3.04	3.85
7. Quality Instructional Strategies	2.85	3.09
8. Coherence and Clarity of Module	2.82	3.23
8. Overall Impression	2.73	3.04

Social Studies Modules

Descriptive Statistics by Module and State: Social Studies

Table 2 presents descriptive statistics for social studies by dimension separated by module. A few comparative observations can be made. First, surprisingly, the average rating for the *second* social studies module was lower than the first in almost all dimensions except Overall Impression (D9) and Effective Writing Task (D1), where the improvement from the first to the second module was slight. It is unclear why social studies modules would have, on average, declined over the course of the year, and it is important to consider that ratings could reflect teacher fatigue (and a lack of willingness to upload relevant, supplementary instructional materials). The case for teacher fatigue may be further supported by the consistent means for Overall Impression and Effective Writing Task between Modules 1 and 2; these two dimensions rely less on the presence of extensive artifacts and more on raters' gut sense of the intellectual value and rigor of the instruction. That the means on D1 and D9 remained consistent suggests that module quality may not have varied as much as may appear at first glance.

Table 2: Descriptive Statistics by Dimension and Module for Social Studies Teachers (*N=40*)

	Module 1 (N=19)		*Module 2 (N=21)*	
Dimensions	*M*	*SD*	*M*	*SD*

Effective Writing Task	3.37	1.08	3.39	1.18
Alignment to Literacy and Content Standards	2.54	1.25	2.22	1.02
Text Alignment	3.49	1.07	3.37	1.31
Text Appropriateness	3.32	0.78	3.15	1.11
Text Rigor	3.51	1.09	3.17	1.26
Fidelity to LDC Module Instruction	3.19	1.04	2.80	1.18
Quality Instructional Strategies	2.88	1.05	2.79	0.99
Coherence and Clarity of Module	2.83	1.15	2.77	1.11
Overall Impression	2.70	0.93	2.74	1.02

Tables 3 present descriptive statistics for social studies modules by state.[1] Again, we must be cautious about drawing conclusions from these results, as differences may be a sign of pre-existing differences between teachers. Nonetheless, we see here that scores on social studies modules did not vary tremendously by state. Perhaps the biggest distinction is that teachers in IU13 scored considerably higher on Fidelity to LDC Module Instruction (D6). The higher score on this dimension likely reflects the fact that all teachers from IU13 submitted modules designed on the online LDC platform, Module Creator. Approximately half of Kentucky social studies modules were submitted using an older paper template for LDC or without any template. If it was difficult for raters to identify the four skill clusters –Preparing for the Task, Reading Process, Transition to Writing, and Writing Process—the module could not receive a score of 3 in D6. However it is important to note that a module could earn a 3 on D6 by simply defaulting to mini-task options automatically provided in Module Creator for each skill-cluster. In other words, the average score of 3.35 in D6 for IU13 social studies modules does not necessarily suggest that those teachers elaborated or expanded on the default options provided for instruction. The overall mean across dimensions for IU13 social studies modules (M=3.03) is only marginally higher than that for Kentucky (M=2.99).

Table 3: Descriptive Statistics for Social Studies Modules by Dimension and State (*N=40*)

	IU13 (N=18)		*Kentucky (N=22)*	
Dimensions	*M*	*SD*	*M*	*SD*
Effective Writing Task	3.38	0.95	3.38	1.26
Alignment to Literacy and Content Standards	2.71	0.99	2.10	1.19
Text Alignment	3.36	1.09	3.48	1.28
Text Appropriateness	3.07	0.86	3.36	1.03
Text Rigor	3.02	1.03	3.58	1.25
Fidelity to LDC Module Instruction	3.35	0.64	2.70	1.33
Quality Instructional Strategies	2.80	0.87	2.86	1.13

[1] See Appendix B for comparisons with scores on five LDC modules designed at the district level in Hillsborough, FL.

Coherence and Clarity of Module	2.80	0.85	2.80	1.31
Overall Impression	2.76	0.90	2.68	1.04

Generalizability Study: Social Studies

Table 4 presents the estimated variance components for a teacher by rater by module (t*r*m) generalizability analysis for social studies modules. Again, the goal here is to separate true teacher variation from other sources of measurement error, for example rater variation or variation in LDC implementation over time. This model partitions variance into seven components; each column represents a source of variation in module ratings on each of the rubric dimensions. In this particular G study, if we found high systematic variation between raters that might suggest that the ratings were not reliable. On the other hand, we might expect to find high variation across modules, because teachers may improve at LDC implementation over time. The main effects reflect true variance across teachers (σ^2t) and error variance across raters and modules (σ^2r, σ^2m); a residual term (σ^2trm,e) combines the t*r*m interaction and residual error unexplained in the model. Across the dimensions, the results are quite promising: we see virtually no variation across raters, and high variation between teachers. In particular, it is important to note the high teacher variance captured in D9: Overall Impression, a dimension that asked raters to assess the degree to which the module contributed to student college readiness and development of advanced literacy skills. This suggests that raters were able to assess the overall instructional potential of the modules, separate from the particularities of LDC implementation.

For the three dimensions where we see lower variation between teachers (D1: Effective Writing Task; D3: Text Alignment; and D4: Text Appropriateness) we nonetheless see that a large portion of the variance for those dimensions is captured in the teacher by module interaction effect. The σ^2tm interaction suggests that certain teachers' scores on these dimensions varied between their first and second module. In other words, although we do not see high variation *overall* between first and second modules (σ^2m), it appears that differences between modules were tied to particular teachers. As discussed earlier, this variation may reflect inconsistencies in how teachers assembled and uploaded module materials, or it may reflect *true* variation in teacher implementation of LDC. In either case, this variation suggests that any single module may not accurately represent teacher LDC implementation. Finally, the residual error term (σ^2trm,e) may also reflect systematic rater inconsistency and other sources of error not captured in the design.

Table 4: Generalizability Studies of Social Studies Module Ratings (t*r*m*tr*tm*rm)*

	Percentage of Total Variance (%)						
Dimension	σ2t	σ2r	σ2m	σ2tr	σ2tm	σ2rm	σ2trm,e
Effective Writing Task	5.6	0.0	0.0	11.3	22.2*	6.0	55.0*
Alignment to Standards	42.2*	3.1	1.8	0.0	16.9	2.5	33.5*
Text Alignment	15.1	1.8	0.0	2.3	35.3*	0.0	45.5*

Text Appropriateness	14.6	2.1	0.0	3.2	23.0*	1.3	55.9*
Text Rigor	33.1*	0.0	2.3	0.0	24.5*	0.0	40.1*
Fidelity to LDC Module Instruction	49.4*	0.0	3.7	0.0	22.7*	0.0	24.2*
Quality Instructional Strategies	32.7*	0.0	0.0	12.6	21.8*	0.1	32.9*
Coherence and Clarity of Module	40.2*	0.0	0.0	15.5	12.0	4.5	27.8*
Overall Impression	34.8*	2.6	0.0	7.2	17.1	1.7	36.5*

*Indicates large proportion of variance captured by this facet.

Decision Study: Social Studies

We also conducted decision studies to determine dependability estimates under hypothetical scenarios that varied the number of modules and raters. Dependability estimates provide information about the consistency of absolute performance (in this case, on a given dimension) independent of others' performance, rather than consistency of relative standing. These findings are presented in Table 5. In social studies, with two modules, estimated dependability with 3 raters exceeds .60 for all dimensions except Effective Writing Task, Text Alignment, and Text Appropriateness. The estimates for all three dimensions are slightly improved with 3 modules, but still below .5. These are the same three dimensions for which we saw low teacher variance, which may suggest that the dimensions are simply not effective in discriminating among teachers. On the other hand, considering that the teacher by module variance is quite large for all three of these dimensions, it is possible that the low dependability estimates for these dimensions raises questions about how many modules might be necessary to capture true teacher variation.

Table 5: Social Studies: Decision Studies of Module Ratings by Dimension (t*r*m Design)

	Dependability Coefficients			
	2 Modules		3 Modules	
	Raters (Crossed)		Raters (Crossed)	
Dimension	2	3	2	3
Effective Writing Task	0.149	0.182	0.194	0.237
Alignment to Literacy and Content Standards	0.680*	0.721*	0.754*	0.790*
Text Alignment	0.327	0.362	0.413	0.453
Text Appropriateness	0.339	0.390	0.423	0.480
Text Rigor	0.585	0.622*	0.679*	0.712*
Fidelity to LDC Module Instruction	0.719*	0.741*	0.794*	0.811*
Quality Instructional Strategies	0.562	0.614*	0.632*	0.684*
Coherence and Clarity of Module	0.648*	0.709*	0.701*	0.759*
Overall Impression	0.601*	0.656*	0.672*	0.724*

*Indicates dependability estimates greater than .60.

Factor Analysis: Social Studies

Table 6 presents the principal component solutions extracted from the average teacher scores for each dimension over raters and modules. Overall Impression (D9) was initially excluded to avoid artificial unidimensionality in the data, but later included when we determined that it did not skew the loadings. The result of the factor analysis for social studies module ratings is encouraging: all 9 dimensions load heavily on one factor, and account for 63% of the variance in social studies ratings. This suggests a dominant factor or trait underlying the nine dimensions of LDC implementation measured in the Assignment Measure, and makes the case for the coherence and conceptual validity of the tool. It is interesting to note that two of the dimensions (Alignment to Literacy and Content Standards: D2 and Fidelity to LDC Implementation: D6) load equally well on a second factor. Because both of these dimensions require the rater to evaluate the module according to outside criteria (e.g., standards, LDC framework), it is possible that they point to a trait that is distinct from how the rater might go about evaluating classroom instruction.

Table 6: Principal Component Analysis of Social Studies Modules (N=40)

	Component	
	1	2
D1_mean	.736	-.191
D2_mean	.604	.656
D3_mean	.803	-.415
D4_mean	.827	-.351
D5_mean	.768	-.389
D6_mean	.664	.599
D7_mean	.906	.119
D8_mean	.948	.142
D9_mean	.927	.029

Extraction Method: Principal Component Analysis.

Science Modules

Descriptive Statistics by Module and State: Science

Table 7 presents descriptive statistics for science by dimension separated by module. We found that with the exception of D5: Text Rigor, average ratings improved across all dimensions between Modules 1 and 2. This trend reflects what we would expect as teachers become more experienced in implementing LDC instruction.

Table 7: Descriptive Statistics by Dimension and Module for Science Teachers (*N=29*)

	Module 1 (N=15)		*Module 2 (N=14)*	
Dimensions	*M*	*SD*	*M*	*SD*
Effective Writing Task	3.00	1.20	3.09	1.14
Alignment to Literacy and Content Standards	2.98	1.24	3.45	1.06
Text Alignment	3.46	1.24	3.55	1.14
Text Appropriateness	3.30	1.18	3.53	1.06
Text Rigor	3.06	1.29	3.00	1.20
Fidelity to LDC Module Instruction	3.59	0.94	4.04	0.88
Quality Instructional Strategies	3.04	1.18	3.09	1.08
Coherence and Clarity of Module	3.17	1.22	3.23	1.16
Overall Impression	2.85	1.14	3.19	1.08

Tables 8 present descriptive statistics for science modules by state. Science modules in Kentucky (*M*=3.44) were consistently higher across dimensions than those from IU13 (*M*=3.05). It is important that we refrain from overstating these mean differences – all fall well within the standard deviations. Furthermore, observed differences could be the result of pre-existing differences between teachers. Nonetheless, given the consistency of these differences, it is worth exploring and comparing the professional development offered to IU13 and Kentucky science teachers, to identify whether and/or how Kentucky teachers were able to develop stronger modules.

Table 8: Descriptive Statistics for Science Modules by Dimension and State (*N=29*)

	IU13 (N=14)		*Kentucky (N=15)*	
Dimensions	*M*	*SD*	*M*	*SD*
Effective Writing Task	2.80	1.15	3.27	1.14
Alignment to Literacy and Content Standards	3.18	1.11	3.21	1.24
Text Alignment	3.39	1.10	3.62	1.27
Text Appropriateness	3.10	1.14	3.69	1.04
Text Rigor	2.80	1.08	3.25	1.36
Fidelity to LDC Module Instruction	3.59	0.79	4.00	1.03
Quality Instructional Strategies	2.92	1.00	3.19	1.24
Coherence and Clarity of Module	2.92	1.10	3.46	1.23
Overall Impression	2.76	0.99	3.25	1.19

Generalizability Study: Science

Table 9 presents the estimated variance components for a teacher by rater by module (t*r*m) generalizability analysis for science modules. This model partitions variance into seven components. The main effects reflect true variance across teachers (σ^2t) and error variance across raters and modules (σ^2r, σ^2m); a residual term (σ^2trm,e) combines the t*r*m interaction and residual error unexplained in the model. The results here resemble those found for social studies module ratings, with a few differences.

Although we again see virtually no variance across raters, we do see high variance in the teacher by rater interaction for two of the dimensions: Text Alignment (D3) and Text Rigor (D5). And although we see high variation between teachers for four of the dimensions (D1, D6, D7, D9), the variance components for the remaining dimensions are fairly low.

How do we interpret these results? First, it is important to note once again the high teacher variance captured in D9: Overall Impression, a dimension that asked raters to assess the degree to which the module contributed to student college readiness and development of advanced literacy skills. This suggests that raters were able to assess the overall instructional potential of the modules, separate from the particularities of LDC implementation. On the other hand, the high variance in the rater by teacher interaction (σ^2tr) signals inconsistencies in rater understanding or use of the scoring rubrics with different teachers. That we see high variation for this interaction in two of the dimensions dealing with text selection (D3 and D5), suggests that science raters were less clear—or possibly systematically disagreed—about what constituted a relevant and academically challenging text in science.

As for the five dimensions for which we see low variation between teachers (D2: Alignment to Content and Literacy Standards; D3: Text Alignment; D4: Text Appropriateness; D5: Text Rigor; and D8: Coherence and Clarity), we nonetheless see that a large portion of the variance for those dimensions is captured by the teacher by module interaction effect. The σ^2tm interaction suggests that differences between modules were tied to particular teachers. As discussed earlier, this variation may reflect inconsistencies in how teachers assembled and uploaded module materials, or it may reflect *true* variation in teacher implementation of LDC. In either case, this variation suggests that any single module may not accurately represent teacher LDC implementation. Again, the variance captured by residual error term (σ^2trm,e) remains high for all but one dimension, likely reflecting systematic rater inconsistency and other sources of error not captured in the design.

Table 9: Generalizability Studies of Science Module Ratings (t*r*m*tr*tm*rm)

	Percentage of Total Variance (%)						
Dimension	σ2t	σ2r	σ2m	σ2tr	σ2tm	σ2rm	σ2trm,e
Effective Writing Task	24.8*	0.0	0.0	3.7	6.8	11.3	53.4*
Alignment to Standards	17.6	0.0	3.1	17.6	35.2*	4.0	22.5*
Text Alignment	7.1	0.2	0.0	25.4*	41.2*	2.2	23.9*
Text Appropriateness	9.1	8.0	0.0	18.7	25.8*	0.4	38.1*
Text Rigor	12.6	0.0	0.0	28.7*	40.0*	7.2	11.5
Fidelity to LDC Module Instruction	33.8*	14.0	8.7	2.3	0.0	0.6	40.6*
Quality Instructional Strategies	34.9*	0.0	0.0	15.3	0.0	6.8	43.0*
Coherence and Clarity of Module	15.0	0.0	0.0	6.4	21.0*	7.2	50.4*
Overall Impression	27.9*	0.0	0.0	17.1	4.8	14.2	36.0*

*Indicates large proportion of variance captured by this facet.

Decision Study: Science

We also conducted decision studies to determine dependability estimates under hypothetical scenarios that varied the number of modules and raters. These findings are presented in Table 10. In science, estimated dependability with 2 modules and 3 raters is quite low for five of the nine dimensions, but exceeds .60 in Effective Writing Task, Fidelity to LDC Instruction, Quality Instructional Practices, and Overall Impression. That these four dimensions all deal with the *general* sense of the module, rather than the particularities of text selection, text preparation, and standards alignment, might suggest that science raters could reliably discern teacher overall fidelity of implementation, but were less confident about their interpretation of the specific components of module design. None of the dimensions are substantially improved by adding another module to the model. These findings of the decision studies are considerably less robust than what we saw with social studies, which might be a consequence of the smaller sample size. However, it also may suggest that raters of science modules may need additional training in LDC, and perhaps a better understanding of what the effective integration of literacy instruction and science content looks like.

Table 10: Science: Decision Studies of Module Ratings by Dimension (t*r*m Design)

	Dependability Coefficients			
	2 Modules		3 Modules	
	Raters		Raters (Crossed)	
Dimension	2	3	2	3
Effective Writing Task	0.536	0.616*	0.624	0.698*
Alignment to Literacy and Content Standards	0.338	0.375	0.405	0.450
Text Alignment	0.150	0.174	0.186	0.219
Text Appropriateness	0.202	0.244	0.243	0.294
Text Rigor	0.244	0.278	0.290	0.335
Fidelity to LDC Module Instruction	0.597	0.670*	0.654	0.724*
Quality Instructional Strategies	0.653	0.723*	0.687	0.767*
Coherence and Clarity of Module	0.347	0.402	0.430	0.491
Overall Impression	0.543	0.629*	0.601	0.684*

*Indicates dependability estimates greater than .60.

Factor Analysis: Science

Finally, Table 11 presents the principal component solutions extracted from the average scores for each dimension over raters and modules. Overall Impression (D9) was initially excluded to avoid artificial unidimensionality in the data, but later included when we determined that it did not skew the loadings. The result of the factor analysis for science module ratings is encouraging: all 9 dimensions load heavily on one factor, and account for 67% of the variance in social studies ratings. This suggests a

dominant factor or trait underlying the nine dimensions of LDC implementation measured in the Assignment Measure, and makes the case for the coherence and conceptual validity of the tool.

Table 11: Principal Component Analysis of Science Modules (N=29)

	Component	
	1	2
D1_mean	.706	-.537
D2_mean	.658	-.142
D3_mean	.896	-.194
D4_mean	.833	-.329
D5_mean	.919	-.241
D6_mean	.551	.759
D7_mean	.884	.355
D8_mean	.877	.335
D9_mean	.955	.121
Extraction Method: Principal Component Analysis.		

Qualitative Results

The qualitative data collected from the rater interviews and the rater survey sheds light on how raters experienced the scoring session and suggests ways to potentially improve rater reliability in the future. One key finding that emerges from analysis of qualitative data is the sense that the artifacts collected and assembled in each module notebook were not necessarily sufficient to assess or make inferences about LDC instruction. Both science and social studies teachers found this to be especially true for dimensions 6, 7, and 8 (Fidelity to LDC Implementation, Quality Instructional Strategies, and Coherence and Clarity). When asked to assess the relative strength of each source of information, both social studies and science teachers found the actual Module Creator print-out *not* useful or only somewhat useful for rating most of the dimensions, with the exception of Fidelity to Implementation (D6) and Alignment to Standards (D2), two dimensions that required teachers to consult specific sections of the print-out. But many teachers did not find it particularly useful in rating the text-related dimensions, Instructional Quality, Coherence and Clarity, and the Overall Impression.

By contrast, both groups of raters found the actual readings and texts extremely useful in assessing most of the dimensions of the rubric, especially, not surprisingly, the text-related dimensions. Social studies raters also found the texts useful for rating Quality Instructional Practices, Coherence and Clarity, and Overall Impression. Interestingly, science teachers reported that the texts were *not* useful in making such inferences. Likewise, whereas social studies raters found Reading Supports extremely

useful in rating almost all dimensions, science raters mostly found them useful in rating D6, D7, D8, and D9, but Not Useful for rating D1-D5. At the risk of making too much of this finding, it is possible that science raters were less comfortable drawing inferences about literacy instruction from the assembled artifacts than social studies raters. This finding is supported by our impression from the interviews that science teachers had less experience teaching literacy than social studies teachers.

Raters suggested certain sources of information that would have made scoring easier. First, one rater suggested that in addition to final student work, teachers submit evidence of student progress in the form of revised drafts. Several raters wished they had had more evidence of teacher implementation – lesson plans, scaffolds, and actual readings, for those modules where teachers just listed readings on Module Creator. Raters also wanted much more information about school context, student demographics, and most importantly, the extent of professional development and support that teachers received in implementing LDC. Given the extent to which LDC departs from business-as-usual in content classrooms, raters felt that knowing the extent and quality of teacher training in the approach would have informed their evaluation.

We also asked raters to give their impressions of LDC as an intervention geared to helping teachers integrate literacy and content instruction. The majority of raters indicated support and enthusiasm for the intervention, but highlighted (as mentioned above) what they saw as a tremendous need for professional development and coaching. One rater warned that LDC should not be seen as a "magic bullet." Several raters questioned whether the stronger modules reflected the strength of LDC as an intervention or the instructional skills that the teacher brought to the model. Raters emphasized that the strong modules basically reflected good instruction, and one rater thought that in some modules "LDC gets in the way." Science raters, in particular, highlighted that science teachers will need much more help in teaching reading and writing, beyond the LDC template. At the same time, science raters were quite enthusiastic about the actual topics that they saw in the modules, and several stated that the modules gave them ideas for their own practice. Social studies teachers were less enthusiastic about the actual modules they rated. Several commented on the lack of differentiation and the lack of instructional support that pushed students to consider multiple perspectives and read text critically. Others were frustrated that the rubric did not include a dimension to rate the quality of the actual content delivered in the module. For example, they found instances where student work that was marked 'high' by the teacher included glaring historical inaccuracies.

Discussion

Overall, we are buoyed by the findings discussed above and believe the CRESST Assignment Measure to be a promising assessment tool for gauging teacher success in integrating literacy and content

instruction. In both the social studies and science analyses, we found low rater variance and high teacher (or teacher by module) variation. These findings indicate that raters generally found the dimensions intuitive and aligned with the available sources of information. Moreover, the factor analyses indicate that all dimensions load on a single factor, making the case that the CRESST Assignment Measure effectively measures a coherent trait that might be understood to be LDC implementation, or perhaps more generally, instructional quality in the integration of literacy and content. These findings are especially promising given our limited data set and the myriad logistical challenges of artifact collection.

At the same time, we can identity certain questions that are worthy of further investigation and consideration. First, how much instructional material is required for raters to make informed, reasonable inferences about LDC implementation? Raters would ideally have additional artifacts on which to base their judgments, however requiring teachers to submit additional artifacts raises logistical considerations in terms of efficiency and cost-effectiveness. Nonetheless, if the tool is to be used in future evaluations of LDC instruction, it is worth exploring whether additional samples of classroom instruction (e.g., classroom handouts, actual lesson plans, and samples of all student work on mini-tasks) would increase rater reliability. Second, in both the social studies and science analyses, we saw considerable teacher by module variation. Clearly, a single module is not sufficient to achieve a high dependability estimate; evidence from the decision study suggest that 3 modules may be sufficient in social studies, but perhaps not in science. With teachers struggling to understand how to implement LDC, perhaps it is not surprising that quality varies considerably across modules. If that's the case, it may be unreasonable to expect that we can get a reliable teacher-level score with a small sample size of modules. This, too, needs to be explored if the CRESST Assignment Measure is to be used in further evaluation of LDC instruction.

Third, we found that the results for the science module ratings to be slightly less robust than those for social studies. It is unclear whether this is a result of smaller sample size, or whether science raters, in general, were less experienced and less familiar with instruction that integrates literacy and content. We suspect the latter based on our qualitative data and if so, there are implications not only for rater training, but also for how to support science teachers implementing LDC. It is particularly telling that the less robust findings in the science module analyses tended to cluster around the text-related dimensions (D3, D4, D5). These findings might suggest that science teachers (and raters) need additional support in identifying and evaluating texts that can be used in LDC implementation.

Lastly, there are some indications in both the quantitative and qualitative data that the text-related dimensions might not be sufficiently distinct, or sufficiently discriminating. In future iterations it is worth exploring whether they might be collapsed. We only caution that this not be done prematurely. The three dimensions are designed to capture distinct aspects of module design –the selection of texts that align with the content demands of the template task (D3); teacher attention to grade appropriate reading levels

(D4); and teacher attention to the disciplinary or academic rigor of the reading (D5). Admittedly, at first glance these distinctions may appear subtle. However, we believe that they capture some of the nuance involved in developing effective and *teachable* modules of LDC instruction.

How one chooses to revise the CRESST Assignment Measure no doubt depends on how it will be used. We see potential for the tool both in future evaluations of the program, as well as in professional development. If used for professional development purposes, we believe that more nuanced dimensions (e.g., the text dimensions described above) can be useful in helping teachers hone the skills necessary in designing instruction around texts. We might even suggest adding additional dimensions that assess reading instruction separately from writing instruction. Clearly, such hair-splitting might not be necessary in a large-scale evaluation. In both cases, however, we see great potential for the tool in helping content teachers design quality instruction that integrates Common Core State Standards.

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Appendix A

Each dimension is scored on a 5-point scale ranging from "Fully Present or Realized" to "Not Present or Realized."

Fully Present or Realized	Sufficiently Present or Realized	Moderately Present or Realized	Barely Present or Realized	Not Present or Realized
5	4	3	2	1

IMPORTANT: Descriptions are provided for three anchor points in the scale: 5 (Fully Present or Realized), 3 (Moderately Present or Realized), and 1 (Not Present or Realized). Use the intermediate points in the scale (4 and 2) to rate assessment practice that lies between 5 and 3 and 3 and 1.

Dimension 1: *Effective Writing Task*
Dimension 2: *Alignment to the CCSS and Local and State Literacy and Content Standards*
Dimension 3: *Text Alignment*
Dimension 4: *Text Appropriateness*
Dimension 5: *Text Rigor*
Dimension 6: *Fidelity to LDC Module Instruction*
Dimension 7: *Quality Instructional Strategies*
Dimension 8: *Coherence and Clarity of Module*
Dimension 9: *Overall Impression*

Dimension 1: *Effective Writing Task*	
Definition: *Degree to which teaching task makes effective use of the template task's writing mode (i.e., argumentation or explanation); requires sustained writing and effective use of ideas and evidence to substantiate claims; and is feasible for most students to complete (i.e., appropriate for the grade-level and subject matter).*	
Main Sources of Information: *Module Creator Handout (Task)* - Read and evaluate the teaching task, student background/prior knowledge, and summary information. - Evaluate the difficulty or ease students may encounter trying to answer the question. - Compare module teaching task to teaching task template options.	
5. Fully Realized	*The teaching task and performance expectations for the module are explicit and clear, require students to engage in higher-order thinking and writing, and are appropriate for the grade-level and subject matter.*
4.	
3. Moderately Present or Realized	*Clear module teaching task and performance expectations are available, but do not require students to engage in higher-order thinking and writing and/or are not appropriate for the grade-level and subject matter.*
2.	
1. Not Present or Realized	*Minimal evidence of an effort to identify explicit and clear teaching task and performance expectations that provide opportunities for critical thinking and are appropriate for the grade-level and subject matter.*

Dimension 2: *Alignment to the CCSS and Local and State Literacy and Content Standards*	
Definition: *Extent to which module addresses content essential to the discipline, as well as reading comprehension and writing standards informed by local and state standards.*	
Main Sources of Information: *Module Creator Handout (Task)* - Read and evaluate the standards included in the module. - Module should include ELA as well as subject matter CCSS/state standards. - Compare and contrast the standards the module includes with those that could have been included. - Particular attention to content standards (CCSS History/Social Studies, Science, and Technical Subjects); State Standards; Specific Reading, Writing, Speaking/Listening, Language Skills	
5. Fully Realized	*Module specifically addresses content essential to CCSS and local or state standards in science or social studies, as well as reading comprehension and writing. All standards are well aligned to the topic and teaching task.*
4.	
3. Moderately Present or Realized	*Module broadly addresses content essential to CCSS and local or state standards in science or social studies and reading comprehension and writing. Standards are sufficiently aligned to the topic and teaching task.*
2.	
1. Not Present or Realized	*Minimal evidence that module addresses content essential to the discipline and literacy standards. Standards are poorly aligned to the topic and teaching task.*

Dimension 3: *Text Alignment*	
Definition: *Degree to which assigned texts address teaching task content.*	
Main Sources of Information: *Module Creator Handout (Task, Resources, Links)* - Read and evaluate texts (hard copies or online). *Student Work* - References in student work.	
5. Fully Realized	*Assigned readings address the disciplinary content in science or social studies and give students the opportunity to gather information needed to complete the task. Readings are well aligned to the topic and teaching task, and provide students with well-balanced perspectives.*
4.	
3. Moderately Present or Realized	*Assigned readings mostly address the disciplinary content in science or social studies and give students some opportunities to gather information needed to complete the task. Readings are sufficiently aligned to the topic and teaching task, and provide students with moderately balanced perspectives.*
2.	
1. Not Present or Realized	*Minimal evidence that assigned readings address the disciplinary content in science or social studies and give students the opportunity to gather information needed to complete the task. Readings are poorly aligned to the topic and teaching task, and do not provide students with well-balanced perspectives.*

Dimension 4: *Text Appropriateness*	
Definition: *Degree to which teaching task includes reading texts that are accessible to most students (i.e., appropriate for the grade-level and subject matter).*	
Main Sources of Information: *Module Creator Handout (Task, Resources, Links)* - Read and evaluate texts (hard copies or online). *Student Work* - References in student work. *Anchor Readings* - Read for examples of appropriate reading levels for 8th grade students.	
5. Fully Realized	*Assigned readings are highly accessible and appropriate for most students in 8th grade social studies or science classrooms. Selection of readings addresses the needs of students with a range of literacy skills, including students who are above, at, or below grade level, and English Language Learners.*
4.	
3. Moderately Present or Realized	*Assigned readings are mostly accessible and appropriate for the majority of students in 8th grade social studies or science classrooms. Selection of readings sufficiently addresses the needs of students with a range of literacy skills.*
2.	
1. Not Present or Realized	*Assigned readings are not accessible or appropriate for students in 8th grade social studies or science classrooms. Selection of readings poorly addresses the needs of students with a range of literacy skills.*

Dimension 5: *Text Rigor*	
Definition: Degree to which teaching task includes reading texts that use and develop academic understanding and vocabulary, and offer opportunities for multiple interpretations and higher-order thinking.	
Main Sources of Information: *Module Creator Handout (Task, Resources, Links)* - Identify list of selected articles/links. - Read and evaluate texts (hard copies or online). - Consider issues of source credibility. *Student Work* - References in student work.	
5. Fully Realized	*Assigned readings require students to engage in higher-order thinking, and develop a strong academic understanding and vocabulary in social studies or science. Readings afford a deep conceptual and contextual understanding of the teaching task and topic. Selection of readings includes a broad range of credible primary and secondary sources.*
4.	
3. Moderately Present or Realized	*Assigned readings require students to engage in some higher-order thinking, and develop an adequate academic understanding and vocabulary in social studies or science. Readings afford a sufficient conceptual and contextual understanding of the teaching task and topic. Selection of readings includes a moderate range of credible primary and secondary sources.*
2.	
1. Not Present or Realized	*Assigned readings require students to engage in little higher-order thinking, or develop an academic understanding and vocabulary in social studies or science. Readings afford a limited conceptual and contextual understanding of the teaching task and topic. Selection of readings includes few credible primary and secondary sources.*

Dimension 6: *Fidelity to LDC Module Instruction*	
Definition: *Degree to which module instruction, activities, and teaching task address each of the four stages of instructional practice (preparation for the task, reading process, transition to writing, writing process).*	
Main Sources of Information: *Module Creator Handout (Instruction)* *Information Sheet* - Evaluate for distribution of activities and time spent on each of the four stages of instructional practice.	
5. Fully Realized	*The module instruction, activities, and teaching task reflect deliberate attention and fidelity to the four discrete stages of LDC module instruction. Classroom materials reflect demonstrable effort to develop instructional scaffolding within and across each stage of instruction.*
4.	
3. Moderately Present or Realized	*The module instruction, activities, and teaching task reflect moderate attention and fidelity to the four discrete stages of LDC module instruction. Classroom materials reflect sufficient effort to develop instructional scaffolding within and across each stage of instruction.*
2.	
1. Not Present or Realized	*The module instruction, activities, and teaching task reflect poor attention and lack of fidelity to the four discrete stages of LDC module instruction. Classroom materials reflect inadequate effort to develop instructional scaffolding within and across each stage of instruction.*

Dimension 7: *Quality Instructional Strategies*	
Definition: Degree to which the module provides clear instructional strategies aimed at helping students develop literacy skills and successfully complete the teaching task. And the degree to which module instruction and activities scaffold critical thinking and performance in a way that is meaningful within the context of a given field or subject-matter.	
Main Sources of Information: *Module Creator Handout (Instruction)* *Classroom Handouts* *Student Work* - Evaluate extent to which instructional strategies guide student learning in literacy and ability to complete the teaching task. - Evaluate extent to which the module activities scaffold critical thinking and student performance within the context of the subject matter at the core of the teaching task.	
5. Fully Realized	*Module provides clear and targeted instructional strategies and activities that scaffold student learning and promote critical thinking in social studies or science. There is explicit attention to helping students develop an accurate understanding of the topic and teaching task, and literacy skills necessary to successfully complete the writing task.*
4.	
3. Moderately Present or Realized	*Instructional strategies and activities are available to support adequate student learning and critical thinking in social studies or science. There is moderate attention to helping students develop an understanding of the topic and teaching task, and literacy skills necessary to complete the writing task.*
2.	
1. Not Present or Realized	*Limited instructional strategies and activities available to support student learning and critical thinking in social studies or science. Insufficient attention to helping students develop an understanding of the topic and teaching task, or literacy skills necessary to complete the writing task.*

Dimension 8: *Coherence and Clarity of Module*	
Definition: Degree to which there is logical alignment between the teaching task and other module goals with readings, mini-tasks, and instructional strategies.	
Main Sources of Information: *Module Creator Handout* *Classroom Handouts* *Student Work*	
5. Fully Realized	*Strong alignment between the teaching task and goals of the module, including the CCSS and local and state literacy and content standards, with the readings, mini-tasks, student work, and instructional strategies.*
4.	
3. Moderately Present or Realized	*Moderate alignment between the teaching task and goals of the module, including the CCSS and local and state literacy and content standards, with the readings, mini-tasks, student work, and instructional strategies.*
2.	
1. Not Present or Realized	*Poor alignment between the teaching task and goals of the module, including the CCSS and local and state literacy and content standards, with the readings, mini-tasks, student work, and instructional strategies.*

Dimension 9: *Overall Impression*
Definition: *Holistic assessment of LDC Module.*
Main Sources of Information: *Module Creator Handout* *Classroom Handouts* *Student Work*
Main question: *To what extent does this module contribute to student college readiness and development of advanced literacy skills?* 5. Advanced LDC Module Implementation 4. Proficient LDC Module Implementation 3. Adequate LDC Module Implementation 2. Marginal LDC Module Implementation 1. Inadequate LDC Module Implementation

Appendix B: Hillsborough Modules

UCLA CRESST's study is also evaluating district-wide implementation of LDC in 6th grade Advanced Reading classrooms in Hillsborough, FL. The implementation differed significantly from what occurred in IU13 and Kentucky for two reasons. First, the modules were designed by literacy experts at the district level, not by individual classroom teachers. Second, although the modules included template tasks that asked students to write about content (e.g., physical fitness, child labor), developers were not saddled with the additional burden of integrating subject-specific content standards. Nonetheless, comparison between subjects and between states might reveal whether these differences in implementation were evident in module quality as measured by the CRESST Assignment Measure.

We recruited an experienced middle school teacher, certified in social studies and English Language Arts, to rate the Hillsborough modules using the CRESST Assignment Measure. In comparing the ratings, it is important to keep in mind two limitations: (1) because the Hillsborough modules were designed by district leaders and distributed to teachers as mandated curriculum, we were effectively in possession of *all* the instructional materials that constituted instruction of a particular module. Such detailed evidence of module implementation stands in contrast to samples we collected from IU13 and Kentucky; (2) whereas a few of the modules include models of student work, these are not marked high, medium, and low, and in any event, do not reflect an individual teacher's assessment of student achievement.

Table 1A: Average Module Ratings by Subject Area

Dimensions	KY and IU-13: 8th grade Social Studies	KY and IU-13: 8th grade Science	Hillsborough: 6th grade Advanced Reading
1. Effective Writing Task	3.4	3.05	3.75*
2. Alignment to Standards	2.42	3.25	3.13
3. Text Alignment	3.44	3.52	3.88*
4. Text Appropriateness	3.24	3.41	3.38
5. Text Rigor	3.35	3.05	3.25
6. Fidelity to LDC	3.04	3.85	4.00*
7. Quality Instructional Strategies	2.85	3.09	3.75*
8. Coherence and Clarity of Module	2.82	3.23	3.75*
8. Overall Impression	2.73	3.04	3.25*

*Indicates higher means.

Table 1B: Average Module Ratings by State

Dimensions	IU13	KY	FL
1. Effective Writing Task	3.09	3.33	3.75*
2. Alignment to Standards	2.95	2.66	3.13*
3. Text Alignment	3.38	3.55	3.88*
4. Text Appropriateness	3.09	3.53	3.38
5. Text Rigor	2.91	3.42	3.25
6. Fidelity to LDC	3.47	3.35	4.00*
7. Quality Instructional Strategies	2.86	3.03	3.75*
8. Coherence and Clarity of Module	2.82	3.23	3.75*
8. Overall Impression	2.73	3.04	3.25*

*Indicates higher means.

We see in Tables 1A and 1B that Hillsborough modules scored higher on almost all dimensions when compared to the modules collected from IU13 and KY. This finding should not be surprising. The modules were developed by literacy experts and included elaborate lesson plans with carefully scaffolded instruction in reading and writing. However, on three dimensions, the modules from FL were more or less the same as the others. Putting aside the score on Alignment to Standards (D2) in Table 1A, which was difficult to assess since the Hillsborough Modules were not required to address content standards, we see that the means for D4 and D5 were roughly the same across subject area and across states. This finding may suggest two distinct, but related, challenges about LDC implementation in ELA classrooms. First, in choosing topics that appear to have high potential for student engagement, developers may struggle to find "naturally occurring" texts that are appropriate and aligned with students' reading level (e.g., one module included dense articles produced by UNESCO on global child labor practices). Second, and relatedly, in an effort to find readable texts, developers may sacrifice substantive, academic rigor (e.g., many of the readings could be characterized as fluff articles about how to build an exercise routine or the dangers of texting).

Despite the methodological limitations of the above comparison, it has crucial policy implications for any scale-up of LDC implementation. In particular, we see that module quality may be improved if materials are designed and disseminated by instructional experts at the district level. On the other hand, the challenge of selecting subject-specific texts that are both age-level appropriate and academically rigorous may persist even under such conditions. A more conclusive study might compare modules *in the same subject area* designed at the district level and by individual teachers, as a way of investigating the affordances of each approach.

Appendix C:
Descriptive Analyses of Teacher Survey

Table C1

Years of Teaching Experience

Type of experience	*N*	Mean	Std Dev	Minimum	Maximum
Years of teaching	55	13.65	9.92	1	40
Years taught in current school	55	6.33	4.71	1	21
Years taught in current district	55	11.64	8.58	1	39

Table C2

Teaching of Different Student Populations (*n* = 55)

Student population	*n*	Yes (%)	*n*	No (%)
ELL students	45	81.8	10	18.2
Special education students	40	72.7	15	27.3
Students reading or writing below grade level	50	90.9	5	9.1
Students with advanced literacy levels	53	96.4	2	3.6

Table C3

Type of Participation in the LDC Initiative (*n* = 55)

Type of participation	*n*	LDC teachers (%)
Required	51	92.7
Voluntary	4	7.3

Table C4

Modules Developed and Taught

School year	*n*	Mean	Std Dev	Minimum	Maximum
Modules taught in 2011-12	47	3.60	.901	0	5
Modules developed in 2012-13	55	0.11	.369	0	2
Modules taught in 2012-13	55	4.31	.960	2	7

Table C5

Teacher Attitudes Regarding Literacy Instruction in Content Area Classrooms

Question	*n*	Mean	Std Dev
Teachers from all content areas should help students improve their reading and writing skills.	55	2.85	0.52
Science and social studies teachers do not have time to teach reading and writing.	55	0.62	0.83
Writing assignments can help my students develop a deeper understanding of important concepts.	55	2.75	0.55

Note. Scale is 0 = disagree, 1 = disagree somewhat, 2 = agree somewhat, and 3 = agree.

Table C6

Percent of Class Time Spent on the Different LDC Components

Components	*n*	Mean	Std Dev	Minimum	Maximum
Preparation for task/introducing the module	54	15.04	6.71	5.00	30.00
Reading process	54	39.76	13.56	15.00	75.00
Transition to writing	54	19.06	8.16	4.00	40.00
Writing process	54	26.15	8.87	10.00	50.00

Note. Means represent percents.

Table C7

Degree of Emphasis Placed on Different Reading Strategies during LDC Instruction

Strategies	*n*	No emphasis (%)	Little emphasis (%)	Some emphasis (%)	A great deal of emphasis (%)
Independent reading research	54	0.0	13.0	42.6	44.4
Making predictions/ previewing	54	0.0	9.3	57.4	33.3
Summarizing important points	54	0.0	1.9	25.9	72.2
Note-taking/ annotation	54	1.9	3.7	37.0	57.4
Identifying/ defining vocabulary	54	1.9	9.3	61.1	27.8
Analyzing text structure	54	1.9	11.1	33.3	53.7
Interpreting information from graphical text	54	3.7	9.3	51.9	35.2
Distinguishing fact from opinion	54	0.0	5.6	33.3	61.1
Drawing conclusions from textual evidence	54	0.0	1.9	18.5	79.6
Citing textual evidence to support claims	54	0.0	0.0	9.3	90.7
Evaluating strength/ weakness of evidence	54	1.9	5.6	29.6	63.0
Comparing arguments in two or more texts	54	3.7	9.3	33.3	53.7
Examining author's perspective/ bias	54	1.9	11.1	33.3	53.7
Examining rhetorical devices	54	9.3	35.2	42.6	13.0

Table C8

Degree of Emphasis Placed on Different Writing Strategies during LDC Instruction

Strategies	*n*	No emphasis (%)	Little emphasis (%)	Some emphasis (%)	A great deal of emphasis (%)
Generating ideas for writing	54	0.0	14.8	38.9	46.3
Outlining	54	1.9	14.8	50.0	33.3
Writing/ text structure	54	1.9	0.0	35.2	63.0
Formulating a thesis statement	54	1.9	1.9	22.2	74.1
Formulating a counter-argument	54	5.6	11.1	29.6	53.7
Writing an introduction	54	0.0	0.0	25.9	74.1
Writing a conclusion	54	0.0	1.9	25.9	72.2
Writing a body paragraph	54	0.0	0.0	18.5	81.5
Using transitional words or phrases	54	0.0	7.4	35.2	57.4
Incorporating quotes/ evidence	54	1.9	1.9	11.1	85.2

Table C9

Frequency of Use of Strategies to Assess Student Understanding

Strategies	*n*	Never (%)	Rarely (%)	Sometimes (%)	Often (%)
Listened as students discussed reading or writing with peers	54	0.0	5.6	20.4	74.1
Asked students to provide feedback to each other	54	0.0	0.0	38.9	61.1
Circulated and reviewed student notes and work	54	0.0	1.9	20.4	77.8
Collected and reviewed student writing exercises	54	0.0	3.7	18.5	77.8
Asked students to answer oral questions	54	0.0	1.9	24.1	74.1
Reviewed student rough drafts	54	0.0	5.6	33.3	61.1
Asked certain students to present writing to class	54	5.6	24.1	37.0	33.3
Assigned a quiz	54	16.7	40.7	31.5	11.1
Graded student work	54	0.0	0.0	25.9	74.1
Exit slips	54	3.7	14.8	46.3	35.2

Table C10

Frequency of Use of Strategies to Respond to Misunderstanding

Strategies	*n*	Never (%)	Rarely (%)	Sometimes (%)	Often (%)
Held one-on-one conference with student	54	1.9	11.1	61.1	25.9
Asked peer to provide feedback or organized peer editing session	54	1.9	5.6	37.0	55.6
Stopped class and modeled strategy	54	1.9	11.1	38.9	48.1
Scheduled in-class workshop time	54	9.3	13.0	46.3	31.5
Wrote specific comments on student work	54	0.0	3.7	37.0	59.3
Offered student a hint or suggestion	54	0.0	1.9	40.7	57.4
Gave student more time to try again and self-correct	54	0.0	1.9	27.8	70.4
Gave student the answer	54	7.4	50.0	33.3	9.3
Graded student work	54	0.0	1.9	22.2	75.9
Re-taught lesson segment	54	1.9	18.5	64.8	14.8
Planned to review skill in later lessons	54	0.0	14.8	53.7	31.5
Assigned grammar exercises	54	29.6	48.1	18.5	3.7

Table C11

School and District Support for LDC

Question	*n*	Mean	Std Dev
School administrators …			
Have a firm understanding of the LDC framework	39	1.72	1.12
Have made formative assessment a priority at my school	47	2.28	0.83
Encouraged me to participate in the LDC initiative	52	1.96	1.10
Provided me with feedback about my instruction of the module(s)	50	1.62	1.23
Expressed concerns that teaching modules is taking time away from other instructional priorities	48	0.40	0.94
Communicated how the LDC framework is aligned with other school initiatives	44	1.14	1.21
District administrators …			
Support the LDC framework	45	2.69	0.67
Have a firm understanding of the LDC framework	39	2.26	1.02

Note. Scale is 0 = disagree, 1 = disagree somewhat, 2 = agree somewhat, and 3 = agree.

Table C12

Individuals who Visited Teachers' Classrooms during LDC Module Instruction (*n* = 55)

Individuals	*n*	Yes (%)	*n*	No (%)
District or network LDC project lead	22	40.0	33	60.0
Principal	45	81.8	10	18.2
Instructional coach/department head	43	78.2	12	21.8
Teacher colleague	31	56.4	24	43.6

Table C13

Teacher Participation in LDC Professional Development in 2012-13 School Year (*n* = 54)

District/Subject	*n*	Yes	*n*	No
Hillsborough County, FL Advanced Reading	42	77.8	12	22.2

Table C14

Number of Professional Development Sessions Attended in 2012-13 School Year

District/Subject	*n*	Mean	Std Dev	Minimum	Maximum
Hillsborough County, FL Advanced Reading	42	1.76	0.79	1.00	4.00

Table C15

Types and Perceived Effectiveness of Professional Development in which Teachers Participated (*n* = 42)

	Participated		If participated, perceived effectiveness			
Type	*N*	Yes (%)	*n*	Yes (%)	*n*	No (%)
One-on-one classroom visits	19	45.2	18	94.7	1	5.3
Coaching	15	35.7	9	100.0	0	0.0
Webinars	1	2.4	0	0.0	0	0.0
Small group meetings	25	59.5	11	91.7	1	8.3
School-wide meetings	14	33.3	6	85.7	1	14.3
District-wide meetings	33	78.6	13	81.3	3	18.8
Cross-district meetings	2	4.8	1	100.0	0	0.0

Note. Only teachers who indicated that they participated in a specific type of PD were asked about the effectiveness.

Table C16

Content Included in LDC Professional Development Sessions in which Teachers Participated (*n* =56)

Question	*n*	Yes (%)	*n*	No (%)
Using LDC as a way to implement CCSS	37	88.1	5	11.9
Building a teaching task	35	83.3	7	16.7
Finding appropriate content materials	28	66.7	14	33.3
Designing modules	17	40.5	25	59.5
Using the instructional ladder	38	90.5	4	9.5
Using mini-tasks to address reading and writing skills	33	78.6	9	21.4
Providing students with feedback on their writing	32	76.2	10	23.8
Scoring student work with LDC rubric	36	85.7	6	14.3
Building modules with Module Creator	11	26.2	31	73.8
Differentiating module instruction to meet student needs	25	59.5	17	40.5
Implementing modules with special education students	9	21.4	33	78.6
Implementing modules with ELL students	10	23.8	32	76.2
Implementing modules with students who read/write below grade level	11	26.2	31	73.8
Implementing modules with students with advanced literacy levels	29	69.0	13	31.0

Table C17

Regularly Scheduled Common Planning Time with Colleagues to Discuss LDC (*n* = 54)

District/Subject	*n*	Yes (%)	*n*	No (%)
Hillsborough County, FL Advanced Reading	35	64.8	19	35.2

Table C18

Frequency of Formal and Informal Teacher Collaboration around LDC

Frequency	*N*	Scheduled meetings (%)	*n*	Informal discussions (%)
At least once a week	14	40.0	31	57.4
Every other week	7	20.0	8	14.8
Once a month	9	25.7	5	9.3
Once per quarter/trimester/semester	3	8.6	5	9.3
Never	2	5.7	5	9.3

Note. Scheduled meetings (*n* = 35), informal meetings (*n* =54)

Table C19

Perceptions of Teacher Collaboration during LDC Implementation

Question	*n*	Mean	Std Dev
I would describe my LDC colleagues as collaborative	54	2.15	1.02
Collaboration with my LDC colleagues helps me …			
More effectively use the LDC framework	54	2.33	0.93
Better support student learning	54	2.39	0.94
Develop LDC modules	54	1.28	1.19
Teach LDC modules	54	2.28	0.92
Revise LDC modules	54	1.89	1.16
Use the LDC framework rubric	54	2.02	1.12
Use students' products to inform my instruction	54	2.07	1.11
Provide helpful feedback to students about their writing	54	2.06	1.14

Note. Scale is 0 = disagree, 1 = disagree somewhat, 2 = agree somewhat, and 3 = agree.

Table C20

Teacher Perceptions of Efficacy in Teaching LDC Modules

Question	*n*	Mean	Std Dev
I knew what skills my students needed in order to complete the teaching task	54	2.57	0.77
I knew the type of mini-tasks to give my students to prepare them to complete the template task	54	2.56	0.79
I understood how to use the LDC instructional ladder	54	2.35	0.91
Based on the information collected from using the LDC modules, I adjusted my instruction to meet the needs of individual students	54	2.52	0.77

Note. Scale is 0 = disagree, 1 = disagree somewhat, 2 = agree somewhat, and 3 = agree.

Table C21

Potential Barriers to Use of LDC Modules

Barriers	*n*	Mean	Std Dev
I had sufficient time to prepare to teach modules	54	2.04	1.01
I felt adequately prepared to effectively use modules	54	2.31	0.89
It is difficult to find the time to respond to student writing	54	2.06	0.86
I am unsure about how best to give productive feedback to student writing	54	0.91	0.96
Using the LDC modules takes too much time away from covering required curriculum topics	54	1.00	1.10
It is challenging for me to find content-rich reading materials at my students' reading level	54	1.02	1.07
It is challenging for me to find the time to develop modules	54	2.04	1.12

Note. Scale is 0 = disagree, 1 = disagree somewhat, 2 = agree somewhat, and 3 = agree.

Table C22

Teacher Perceptions of Whether LDC Modules Helped Them Meet Instructional Goals (*n* = 55)

Question	*n*	Yes (%)	*n*	No (%)
Find effective strategies for teaching my subject content	43	78.2	12	21.8
Learn new ways to include formative assessment in my classes	43	78.2	12	21.8
Develop new ways to teach literacy skills in my content area	44	80.0	11	20.0
Learn detailed information about students' literacy strengths and weaknesses	40	72.7	15	27.3
Provide students with more detailed feedback about their writing	51	92.7	4	7.3
Implement the CCSS	49	89.1	6	10.9
Increase the rigor of writing assessments	52	94.5	3	5.5
Better engage students	45	81.8	10	18.2

Table C23

Teacher Perceptions of the Effectiveness of LDC

Question	n	Mean	Std Dev
Improving students' literacy skills	55	2.47	0.81
Providing a curricular resource for teachers to address the CCSS	55	2.55	0.74
Encouraging science and social studies teachers to teach literacy skills	55	2.15	0.97
Encouraging secondary school teachers to teach literacy skills	55	2.42	0.83
Making instruction more engaging for the students.	55	2.24	1.00
Using formative assessment to identify student strengths and weaknesses to inform instruction	55	2.16	1.00

Note. Scale is 0 = disagree, 1 = disagree somewhat, 2 = agree somewhat, and 3 = agree.

Table C24

Student Engagement during LDC Module Instruction (*n* = 54)

Effect on engagement	*n*	LDC teachers (%)
More engaged	29	53.7
Same level of engagement	17	31.5
Less engaged	8	14.8

Table C25

Perceptions of Student Success on LDC Tasks

Strategies	*n*	No success (%)	Little success (%)	Some success (%)	A great deal of success (%)
Reading mini-tasks built into the instructional ladder	54	1.9	5.6	38.9	53.7
Writing mini-tasks built into the instructional ladder	54	1.9	3.7	35.2	59.3
Final writing task	54	0.0	1.9	24.1	74.1

Table C26

Teacher Perceptions on Student Impact of LDC Modules

Student impact	*n*	Mean	Std Dev
Resulted in higher quality student writing	54	2.46	0.794
Supporting my students' college-readiness	54	2.50	0.863

Note. Scale is 0 = disagree, 1 = disagree somewhat, 2 = agree somewhat, and 3 = agree.

Table C27

Teacher Perceptions on Student Impact during Most Recent LDC Module (*n* = 54)

Student impact	*n*	Yes (%)	*n*	No (%)
Majority of students improved their understanding of content	49	90.7	5	9.3
Majority of students improved their literacy skills	46	85.2	8	14.8

Appendix D:
Descriptive Analyses of LDC Logs

Table D1

Average Percent of Time Spent on Different Classroom Activities

	Module one			Module two			Overall		
Activities	*n*	Mean	Std Dev	*N*	Mean	Std Dev	*n*	Mean	Std Dev
Lecture on subject matter content	55	6.95	5.07	50	7.89	6.00	105	7.40	5.53
Mini-Lessons	55	5.12	5.70	50	5.90	6.74	105	5.49	6.20
Explicit strategy instruction	55	9.10	5.62	50	12.51	9.57	105	10.72	7.91
Whole-class discussion	55	11.21	8.22	50	12.49	9.79	105	11.82	8.98
Small group work	55	14.18	9.24	50	12.89	13.10	105	13.57	11.21
Pair/share	55	6.20	7.93	50	6.92	8.19	105	6.54	8.03
Independent reading/writing	55	36.06	16.73	50	30.95	16.76	105	33.62	16.86
Student presentations	55	2.73	4.01	50	3.80	6.12	105	3.24	5.13
Other	55	8.47	9.63	50	6.66	8.69	105	7.61	9.19

Note. Means represent percents.

Table D2

How Teachers Introduce the Modules

	Module one			Module two			Overall		
	n	Mean	Std Dev	*N*	Mean	Std Dev	*n*	Mean	Std Dev
Overview and/or review of topic	46	1.38	0.53	42	1.45	0.54	88	1.41	0.53
Connect topic to students' existing knowledge	47	1.45	0.46	42	1.48	0.53	89	1.47	0.49
Overview of readings	44	0.72	0.67	37	1.03	0.67	81	0.86	0.68
Review writing prompt	46	0.97	0.75	37	0.97	0.64	83	0.97	0.70
Review success criteria and/or rubric	45	0.51	0.66	35	0.55	0.63	80	0.53	0.65
Other	23	1.06	0.83	19	0.89	0.98	42	0.98	0.89

Note. Scale is 0=not today, 1=touched on briefly, 2=focus of instruction.

Table D3

What Students do to Prepare for Module Instruction

Activities	Module one			Module two			Overall		
	n	Mean	Std Dev	*N*	Mean	Std Dev	*n*	Mean	Std Dev
Listened as I explained task	44	1.33	0.59	40	1.46	0.54	84	1.39	0.57
Came up with questions about topic	42	1.03	0.65	37	0.84	0.67	79	0.94	0.66
Made predictions about topic	44	1.08	0.63	36	0.80	0.69	80	0.95	0.67
Came up with questions about writing task	41	0.50	0.59	34	0.60	0.70	75	0.55	0.64
Re-wrote task in their own words	41	0.42	0.62	32	0.35	0.69	73	0.39	0.65
Brainstormed possible answers to prompt	41	0.55	0.65	36	0.75	0.76	77	0.64	0.71
Made predictions about reading	42	0.80	0.55	38	0.69	0.68	80	0.75	0.62
Reviewed exemplars of student work	41	0.34	0.56	31	0.12	0.40	72	0.24	0.51
Completed planning sheet (e.g., graphic organizer)	43	1.25	0.72	34	0.72	0.84	77	1.02	0.81
Discussed important strategies needed to complete task	43	1.09	0.69	37	1.06	0.70	80	1.08	0.69

Note. Scale is 0=not today, 1=touched on briefly, 2=focus of instruction.

Table D4

Reading Skills Students Worked on the Day of the Log

Activities	Module one			Module two			Overall		
	n	Mean	Std Dev	*N*	Mean	Std Dev	*n*	Mean	Std Dev
Independent reading/ research	53	1.33	0.55	44	1.36	0.59	97	1.34	0.56
Making predictions/ previewing	53	0.96	0.53	42	0.81	0.56	95	0.89	0.55
Summarizing important points	54	1.45	0.44	44	1.31	0.59	98	1.39	0.51
Note-taking/ annotation	52	1.13	0.52	43	1.34	0.61	95	1.22	0.57
Identifying/ defining vocabulary	53	0.88	0.56	45	0.93	0.62	98	0.90	0.58
Analyzing text structure (e.g., how part relates to whole)	51	0.74	0.61	46	0.91	0.74	97	0.82	0.68
Interpreting information from graphical text	51	0.65	0.50	41	0.56	0.66	92	0.61	0.57
Distinguishing fact from opinion	48	0.31	0.44	46	1.19	0.63	94	0.74	0.70
Drawing conclusions from textual evidence	53	1.15	0.59	42	1.26	0.66	95	1.20	0.62
Citing textual evidence to support claims	51	0.87	0.60	46	1.30	0.65	97	1.07	0.66
Evaluating strength/ weakness of evidence	50	0.38	0.50	45	1.17	0.69	95	0.76	0.72
Comparing arguments in two or more texts	47	0.25	0.36	43	0.69	0.76	90	0.46	0.62
Examining author's perspective/ bias	50	0.41	0.58	42	0.79	0.67	92	0.58	0.64
Examining rhetorical devices	48	0.12	0.34	37	0.18	0.49	85	0.15	0.41
Other	37	0.79	0.88	30	0.55	0.87	67	0.68	0.88

Note. Scale is 0=not today, 1=touched on briefly, 2=focus of instruction.

Table D5

Extent Teachers Relied on Different Strategies to Assess Student Understanding during Reading Component

	Module one			Module two			Overall		
Activities	*n*	Mean	Std Dev	*N*	Mean	Std Dev	*n*	Mean	Std Dev
Listened as students discussed text with peers	52	1.31	0.47	44	1.39	0.56	96	1.35	0.51
Circulated and reviewed student notes	52	1.36	0.50	45	1.53	0.50	97	1.44	0.50
Reviewed peers' feedback	47	0.65	0.64	36	0.74	0.69	83	0.69	0.66
Collected and reviewed student written responses and/or graphic organizers	49	1.24	0.55	39	1.30	0.64	88	1.26	0.59
Asked students to answer oral questions	51	1.02	0.55	44	1.24	0.57	95	1.12	0.57
Listened to students thinking aloud while reading	49	0.73	0.62	37	0.85	0.77	86	0.78	0.68
Led whole-class discussion	51	1.05	0.63	42	1.27	0.57	93	1.15	0.61
Listened to student questions	50	1.02	0.53	37	1.13	0.57	87	1.07	0.55
Assigned a quiz	46	0.06	0.17	31	0.21	0.56	77	0.12	0.38
Graded student work	47	0.87	0.67	39	0.97	0.74	86	0.91	0.70
Exit slips	47	0.44	0.59	36	0.71	0.81	83	0.56	0.70

Note. Scale is 0=not at all, 1=to some extent, 2=to a great extent.

Table D6

Strategies Used when Teachers Discovered Student Misunderstandings about Reading

	Module one			Module two			Overall		
Activities	*n*	Mean	Std Dev	*N*	Mean	Std Dev	*n*	Mean	Std Dev
One-on-one conference to provide feedback	53	0.83	0.55	41	1.02	0.64	94	0.91	0.60
Asked peer to provide feedback	53	0.92	0.53	42	1.06	0.66	95	0.98	0.59
Stopped class and modeled strategy	52	0.60	0.55	41	0.96	0.66	93	0.76	0.63
Wrote specific comments on student work	50	0.41	0.51	35	0.52	0.65	85	0.46	0.57
Scheduled in-class workshop time	48	0.27	0.47	34	0.28	0.53	82	0.28	0.49
Devoted time in lesson for students to use feedback	50	0.75	0.54	41	0.91	0.71	91	0.82	0.62
Grouped students together on a "need" basis for targeted instruction	49	0.66	0.58	37	0.57	0.60	86	0.62	0.59
Offered student a hint or suggestion	51	0.89	0.50	41	1.04	0.51	92	0.96	0.51
Gave student the answer	49	0.33	0.42	36	0.36	0.61	85	0.34	0.51
Gave student more time to try again and self-correct	51	0.79	0.53	37	0.99	0.57	88	0.87	0.55
Graded student work	48	0.64	0.56	39	0.86	0.66	87	0.74	0.61
Re-taught lesson segment	48	0.29	0.44	33	0.31	0.44	81	0.30	0.43
Planned to review skill in future lessons	49	0.61	0.58	35	0.70	0.67	84	0.65	0.62
Other	30	0.33	0.57	22	0.35	0.71	52	0.34	0.63

Note. Scale is 0=not at all, 1=to some extent, 2=to a great extent

Table D7

Areas of Writing Students Worked on the Day of the Log

Activities	Module one			Module two			Overall		
	n	Mean	Std Dev	*N*	Mean	Std Dev	*n*	Mean	Std Dev
Generating ideas for writing	43	1.02	0.68	32	1.17	0.75	75	1.08	0.71
Outlining	42	0.61	0.57	33	1.10	0.75	75	0.83	0.69
Writing/text structure	45	1.35	0.64	37	1.39	0.73	82	1.37	0.67
Formulating a thesis statement	43	0.73	0.74	40	1.39	0.68	83	1.05	0.78
Formulating a counter-argument	38	0.14	0.37	39	1.36	0.73	77	0.76	0.84
Writing an introduction	45	0.91	0.76	41	1.39	0.69	86	1.14	0.76
Writing a conclusion	45	0.85	0.67	43	1.34	0.66	88	1.09	0.70
Writing a body paragraph	45	1.23	0.68	41	1.45	0.63	86	1.34	0.66
Using transitional words or phrases	44	1.04	0.65	33	1.10	0.73	77	1.07	0.69
Incorporating quotes/evidence	45	1.38	0.62	38	1.54	0.60	83	1.45	0.61
Style/ word choice/ syntax	42	0.94	0.67	32	1.11	0.78	74	1.02	0.72
Grammar conventions	44	1.04	0.67	34	1.14	0.74	78	1.08	0.70

Note. Scale is 0=not today, 1=touched on briefly, 2=focus of instruction.

Table D8

Extent Teachers Relied on Different Strategies to Assess Student Understanding during Writing Component

Activities	Module one			Module two			Overall		
	n	Mean	Std Dev	*N*	Mean	Std Dev	*n*	Mean	Std Dev
Listened as students discussed draft with peers	38	1.09	0.67	33	1.04	0.68	71	1.06	0.67
Asked students to provide feedback to each other	37	1.15	0.64	31	1.11	0.64	68	1.13	0.64
Observed and reviewed student work	39	1.56	0.45	34	1.62	0.58	73	1.59	0.51
Collected and reviewed student writing exercises	37	1.22	0.77	32	1.09	0.92	69	1.16	0.84
Asked students to answer oral questions	35	0.86	0.64	27	0.86	0.69	62	0.86	0.66
Reviewed student rough drafts	36	1.25	0.67	34	1.34	0.70	70	1.29	0.68
Asked certain students to present writing to class	36	0.54	0.68	28	0.56	0.73	64	0.55	0.70
Assigned a quiz	32	0.04	0.14	24	0.06	0.22	56	0.05	0.18
Graded student work	37	0.65	0.71	28	0.61	0.81	65	0.64	0.75
Exit slips	33	0.17	0.43	25	0.27	0.51	58	0.21	0.46

Note. Scale is 0=not at all, 1=to some extent, 2=to a great extent.

Table D9

Strategies Used when Teachers Discovered Student Misunderstandings about Writing

	Module one			Module two			Overall		
Activities	*n*	Mean	Std Dev	*N*	Mean	Std Dev	*n*	Mean	Std Dev
Organized peer-editing session	39	0.82	0.66	35	0.93	0.74	74	0.87	0.70
Scheduled in-class workshop time	38	0.71	0.76	27	0.88	0.82	65	0.78	0.78
Held one-on-one conference with student	40	1.19	0.57	35	1.38	0.65	75	1.28	0.61
Devoted time in lesson for students to use feedback	37	0.80	0.66	32	1.11	0.72	69	0.94	0.70
Grouped students together on "need" basis for targeted instruction	34	0.56	0.59	28	0.78	0.77	62	0.66	0.68
Modeled skill using my own writing	37	0.67	0.58	34	1.15	0.68	71	0.90	0.67
Demonstrated skill using student's writing	38	0.75	0.58	29	0.98	0.70	67	0.85	0.64
Provided grammar mini-lessons	33	0.25	0.38	26	0.37	0.61	59	0.30	0.49
Wrote specific comments on student work	35	0.68	0.65	29	1.00	0.82	64	0.82	0.74
Had student revisit readings	39	1.12	0.71	31	1.34	0.60	70	1.22	0.67
Offered student a hint or suggestion	39	1.06	0.58	35	1.19	0.59	74	1.12	0.58
Gave student time to try again and self-correct	40	1.20	0.52	35	1.47	0.62	75	1.33	0.58
Corrected student writing	36	0.88	0.62	30	0.97	0.76	66	0.92	0.68
Graded student work	34	0.43	0.64	29	0.61	0.80	63	0.52	0.72
Re-taught lesson segment	31	0.25	0.47	26	0.43	0.58	57	0.34	0.53
Planned to review skill in future lessons	34	0.48	0.61	26	0.60	0.73	60	0.53	0.66
Other	20	0.30	0.66	16	0.28	0.58	36	0.29	0.61

Note. Scale is 0=not at all, 1=to some extent, 2=to a great extent

Appendix E: Quasi-Experimental Results

Table E1

2012-13 LDC Effect Estimates on FCAT Reading, 3-Level Model (Students within Time within School)

Fixed Effect	Coefficient (S.E.)
Level 1 Variables (Student)	
Female	0.028 (0.006)*
White	-0.002 (0.014)
Hispanic	-0.041 (0.015)*
Black	-0.152 (0.015)*
Asian	0.125 (0.022)*
English speaker	-0.041 (0.020)*
Spanish speaker	-0.050 (0.023)*
Free/reduced price lunch	-0.142 (0.007)*
Grade 5 FCAT Reading	0.648 (0.005)*
Level 2 Variables (Year Compared to 2009-10)	
Year 2010-11	0.032 (0.030)
Year 2011-12	0.061 (0.033)
Year 2012-13	0.027 (0.035)
Level 3 Variables (School)	
Treated first in 2010-11	-0.140 (0.127)
Treated first in 2011-12	-0.137 (0.067)*
LDC Interactions by Year 2010-11	
Treated first in 2010-11	-0.184 (0.058)*
Treated first in 2011-12	-0.116 (0.040)*
Mean Prior Grade 5 Student Achievement	0.174 (0.054)*
LDC Interactions by Year 2011-12	
Treated first in 2010-11	-0.175 (0.084)*
Treated first in 2011-12	-0.090 (0.046)*
Mean Prior Grade 5 Student Achievement	0.167 (0.059)*
LDC Interactions by Year 2012-13	
Treated first in 2010-11	0.042 (0.083)
Treated first in 2011-12	0.020 (0.054)
Mean Prior Grade 5 Student Achievement	0.227 (0.063)*

Note: *significant at p =.05

Table E2

Prior Achievement and Demographic Characteristics of Eligible and Matched Treatment and Comparison Groups for FCAT Reading Outcome Analysis

Student Characteristics	Eligible Sample		Matched Sample	
	LDC (n=5,548)	Comparison (n=14,523)	LDC (n=5,338)	Comparison (n=9.241)
Prior Achievement on FCAT Reading	234.1	234.1	234.1	237.6
Female (%)	51.4	52.8	51.4	51.4
White (%)	48.4	40.6	49.6	49.6
Hispanic (%)	25.6	32.9	25.7	25.7
Black (%)	14.2	20.0	14.2	14.2
Asian (%)	5.1	3.2	4.8	4.8
English Speaker (%)	82.5	72.6	83.2	83.2
Spanish Speaker (%)	14.1	22.4	13.7	13.9
Free/reduced price lunch (%)	50.3	55.6	49.3	49.3

Table E3

2012-13 LDC Effect Estimates on FCAT Reading, 2-Level Model Including Phase 2 Schools (Began LDC in 2011-12) with Prior Effectiveness Data in 2010-11

Fixed Effect	Coefficient (S.E.)
Level 1 Variables (Student)	
Female	0.071 (0.032)*
White	-0.052 (0.044)
Hispanic	-0.030 (0.041)
Black	-0.145 (0.035)*
Asian	0.021 (0.075)
English speaker	-0.058 (0.077)
Spanish speaker	-0.101 (0.079)
Free/reduced price lunch	-0.109 (0.027)*
Grade 5 FCAT reading	0.606 (0.021)*
Level 2 Variables (School)	
LDC Treatment	-0.051 (0.048)
Mean Prior Grade 5 Student Achievement	0.174 (0.041)*
Prior School Effectiveness (2010-11)	0.218 (0.099)*
LDC treatment by Student Characteristics Interactions	
Female	0.073 (0.038)
Free/reduced price lunch	-0.049 (0.038)
Grade 5 FCAT reading	0.056 (0.025)*

Note: *significant at p =.05

Table E4

2012-13 LDC Effect Estimates on FCAT Reading, 2-Level Model Including Phase 2 Schools (Began LDC in 2011-12) with and without Prior Effectiveness Data in 2010-11

Fixed Effect	Coefficient (S.E.)
Level 1 Variables (Student)	
Female	0.073 (0.029)*
White	-0.038 (0.040)
Hispanic	-0.050 (0.044)
Black	-0.128 (0.033)*
Asian	0.047 (0.069)
English speaker	-0.064 (0.069)
Spanish speaker	-0.101 (0.071)
Free/reduced price lunch	-0.114 (0.025)*
Grade 5 FCAT Reading	0.604 (0.019)*
Level 2 Variables (School)	
LDC Treatment	-0.033 (0.043)
Mean Prior Grade 5 Student Achievement	0.173 (0.037)*
Prior School Effectiveness (2010-11)	0.229 (0.098)*
School Missing 2010-11	-0.020 (0.030)
LDC treatment by Student Characteristics Interactions	
Female	0.061 (0.035)
Free/reduced price lunch	-0.050 (0.034)
Grade 5 FCAT Reading	0.054 (0.023)*

Note: *significant at p =.05

Figure E1

Relationship between Assignment Variable (Fifth Grade Reading in 2010-11) and Probability of Assignment into Advanced Reading in 2011-12

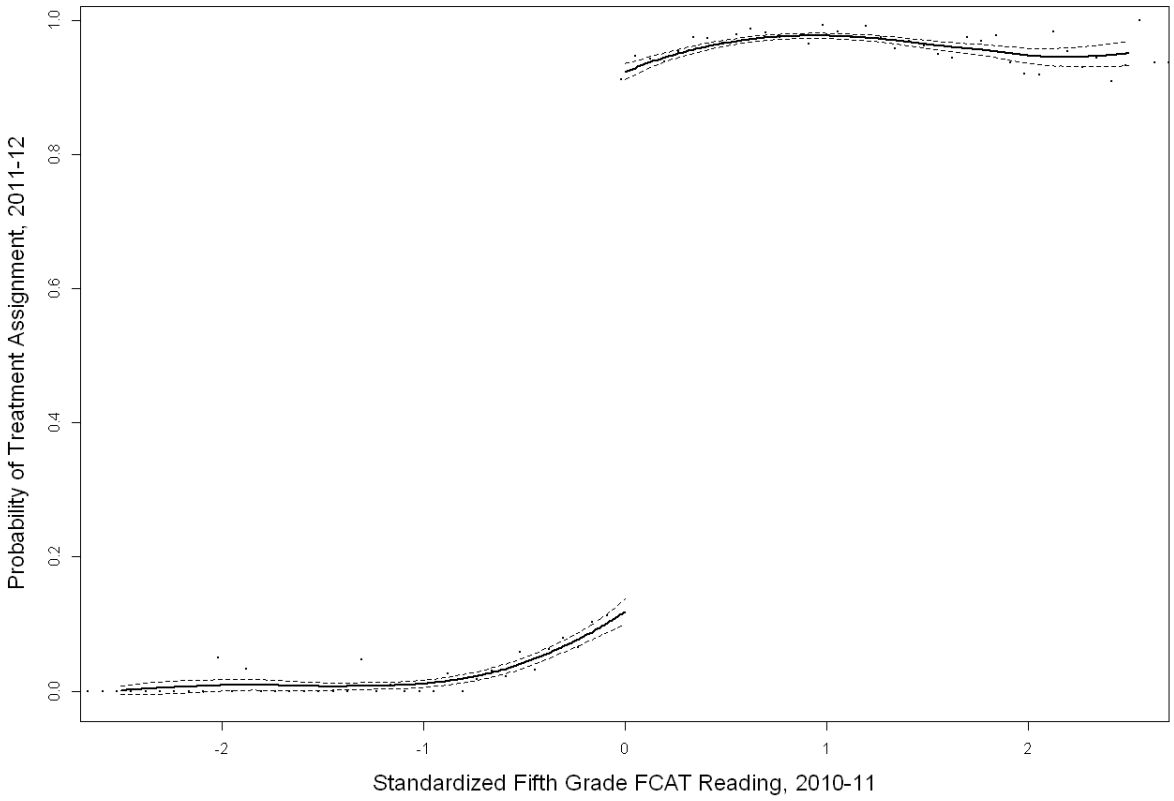

Figure E2

Relationship between Assignment Variable (Fifth Grade Reading in 2009-10) and Probability of Assignment into Advanced Reading in 2010-11

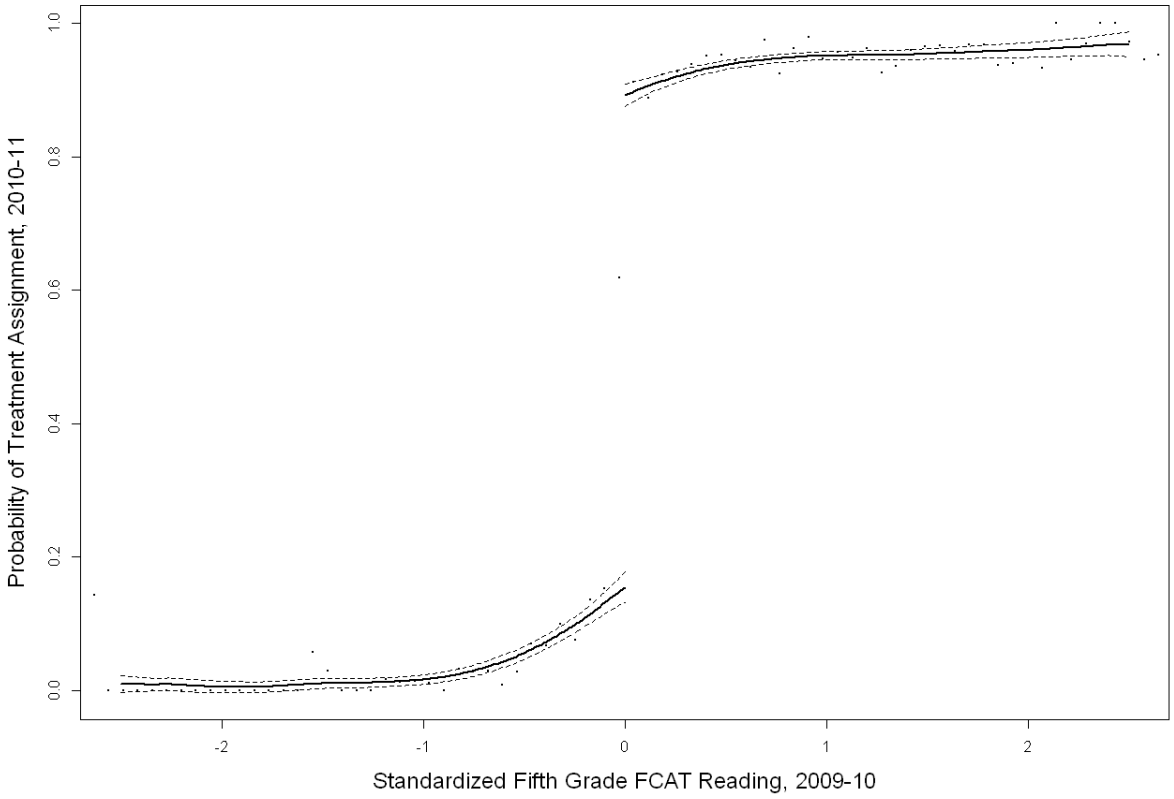

Figure E3

Relationship between Assignment Variable (Fifth Grade Reading in 2008-09) and Probability of Assignment into Advanced Reading in 2009-10

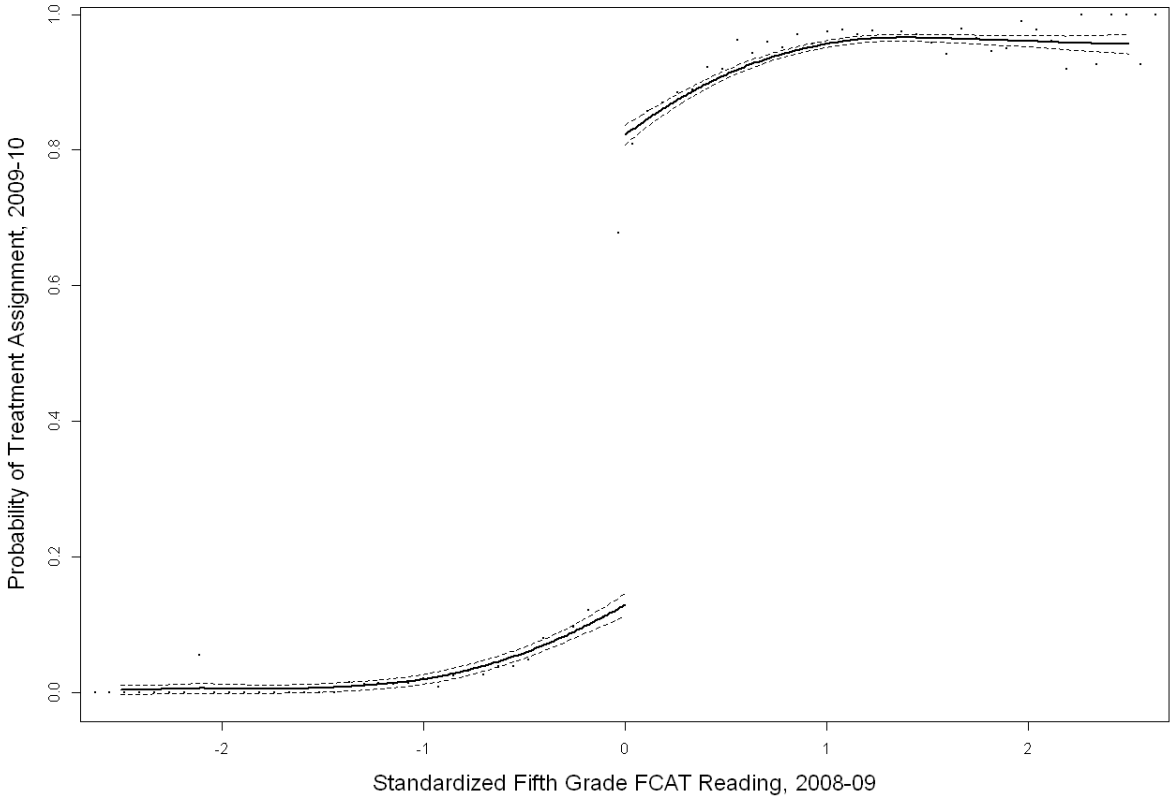

Figure E4

FCAT Regression Discontinuity Graph for 2011-12 Showing Relationship between Assignment Variable (Fifth Grade FCAT Reading in 2010-11) and the Outcome Variable (Sixth Grade FCAT Reading in 2011-12)

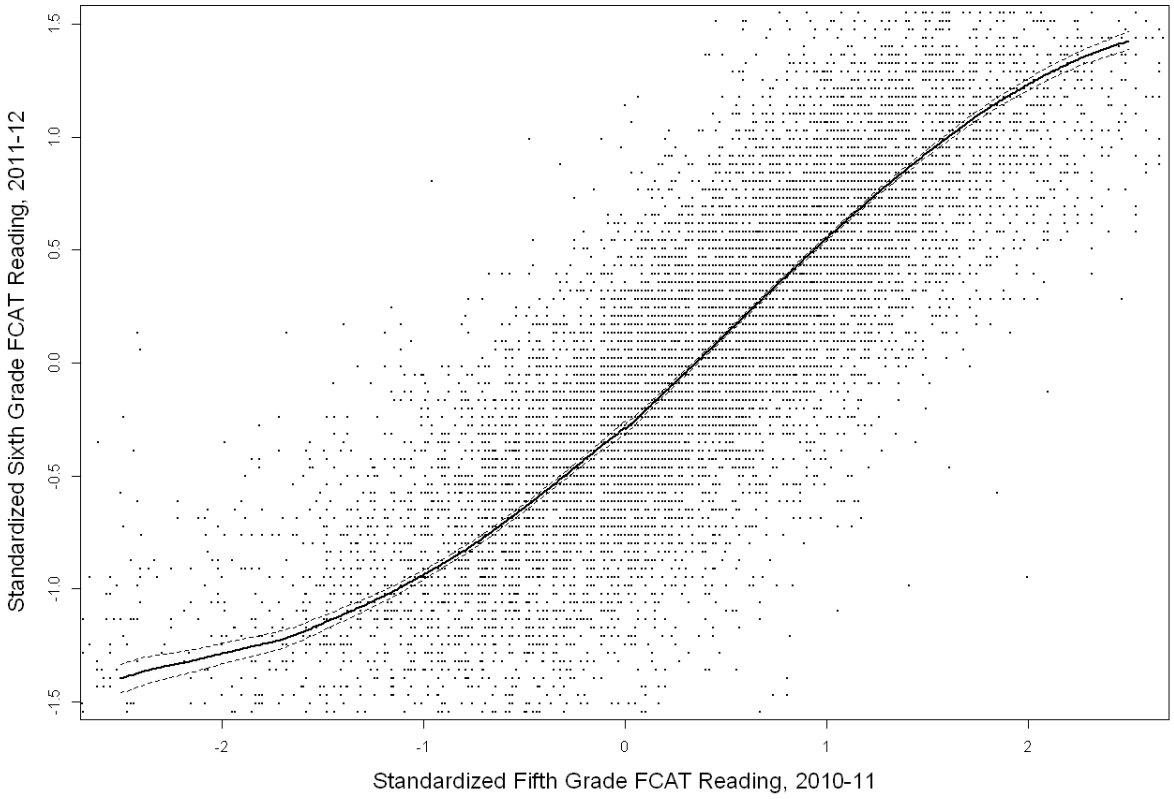

Figure E5

FCAT Regression Discontinuity Graph for 2010-11 Showing Relationship between Assignment Variable (Fifth Grade FCAT Reading in 2009-10) and the Outcome Variable (Sixth Grade FCAT Reading in 2010-11)

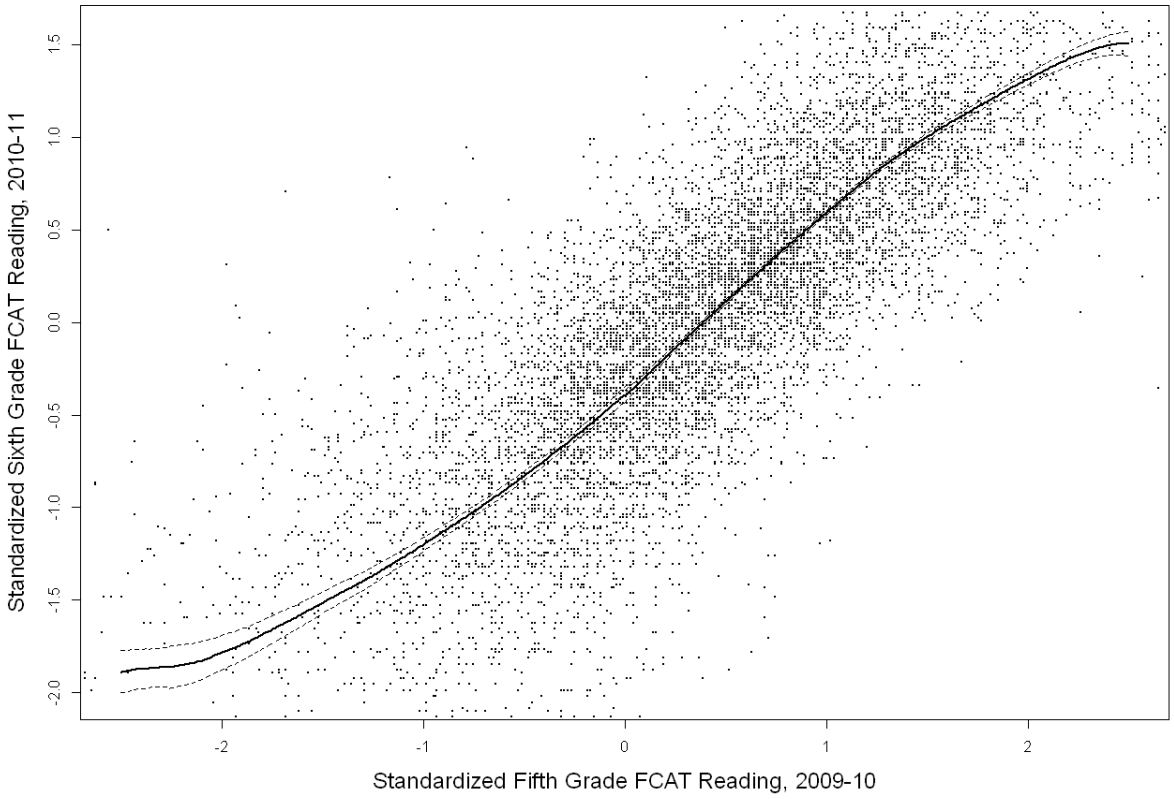

Figure E6

FCAT Regression Discontinuity Graph for 2009-10 Showing Relationship between Assignment Variable (Fifth Grade FCAT Reading in 2008-09) and the Outcome Variable (Sixth Grade FCAT Reading in 2009-10)

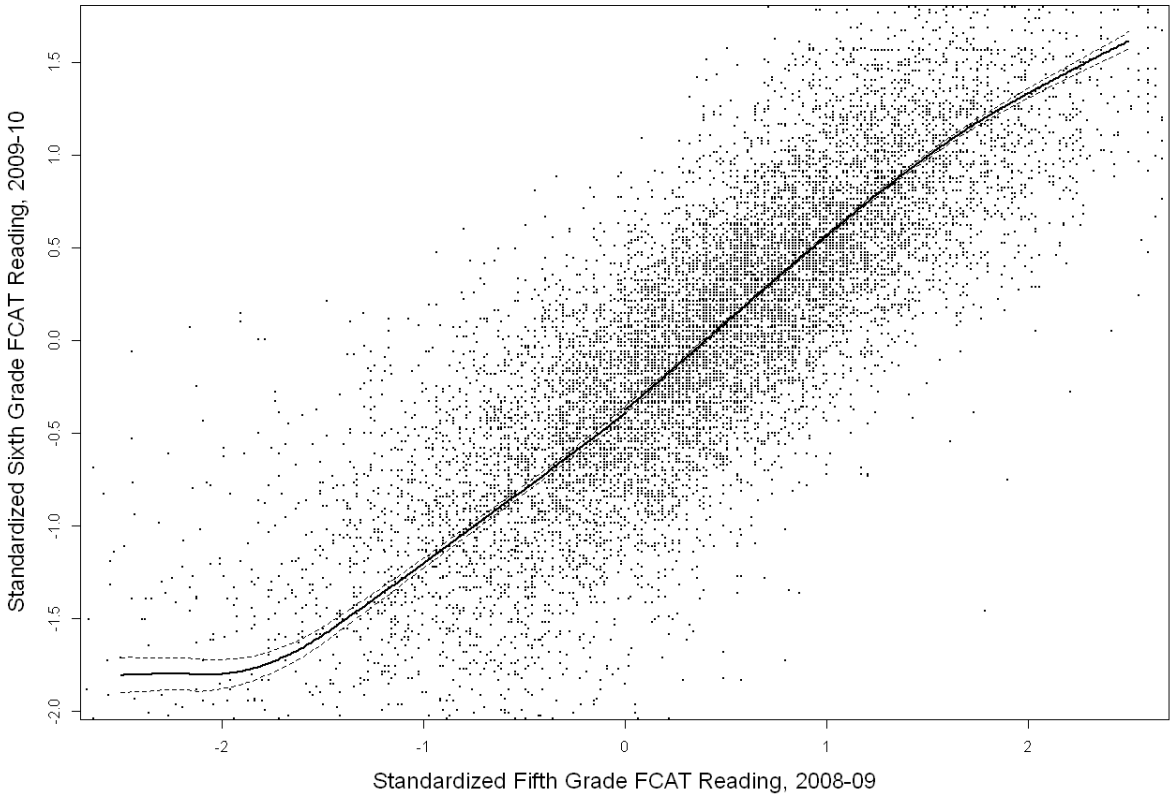

Figure E7

District Writing Regression Discontinuity Graph for 2011-12 Showing Relationship between Assignment Variable (Fifth Grade FCAT Reading in 2010-11) and the Outcome Variable (Probability of Basic Performance on District Writing in 2011-12)

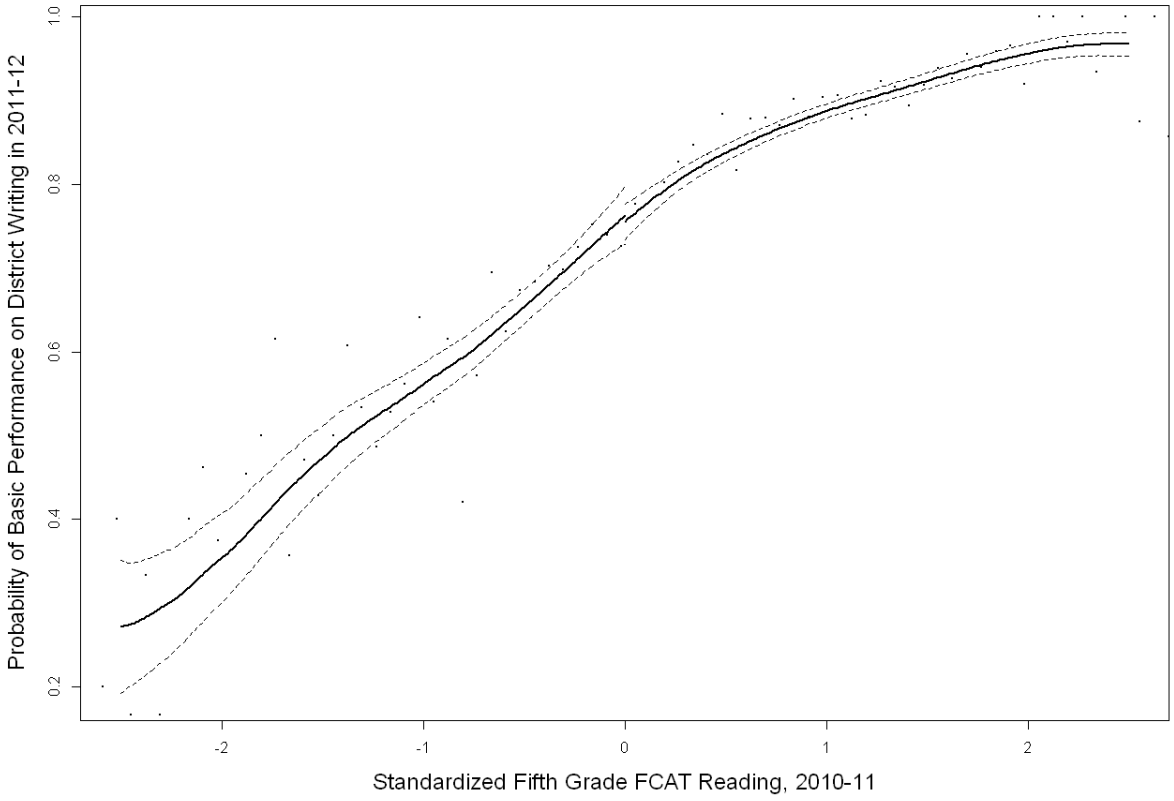

Figure E8

District Writing Regression Discontinuity Graph for 2010-11 Showing Relationship between Assignment Variable (Fifth Grade FCAT Reading in 2009-10) and the Outcome Variable (Probability of Basic Performance on District Writing in 2010-11)