

**Milpitas Early Learning
Transitions Model: Using
Assessment Data to Inform
Teacher Practice**

Final Report

February 6, 2014

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Policy Research

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EXECUTIVE SUMMARY

In 2012–2013, the Heising-Simons Foundation funded the Milpitas Unified School District’s Early Learning Transitions Model (ELTM) to enhance supports for children and families as they prepare for elementary school. Although the ELTM has many components, one key feature is the integration of a computerized, adaptive assessment—the Children’s Progress Academic Assessment (CPAA)—into teachers’ practice in preschool classrooms. The CPAA, which assesses literacy and mathematical skills, is intended to complement the Desired Results Development Profile-Preschool[®] (2010) (DRDP-PS,[®] referred to in this report as DRDP), a teacher rating of children’s skills that has been used in the district for over 10 years. The addition of the CPAA expands the information available to teachers and parents regarding children’s progress.

In order to provide information and guidance to the district as it implements the ELTM, the Heising-Simons Foundation engaged Mathematica Policy Research to conduct a formative evaluation in the district’s two preschool programs, referred to as child development centers (CDCs). The two CDCs have a total of six preschool classes serving children ages 3 to 5. Both CDCs began using a blended learning model in 2012–2013 that combines teacher-directed instruction and small-group learning with opportunities for children to work independently on computers or tablets.

A. Study Goals and Methods

The study’s two key goals, described below, are geared toward highlighting the supports teachers may need to implement a new assessment and integrate it into their practice. This includes the types of guidance necessary for understanding whether and how two overlapping but distinct assessments complement one another.

Goal 1. Examine the implementation of the CPAA and DRDP in the district’s early learning programs, including how the results are used for planning and communication and how teachers perceive the successes and challenges. To meet this goal, we conducted qualitative interviews with seven teachers and two supervisors from the CDCs. We also interviewed eight K–3 teachers from three of the district’s nine elementary schools about the CPAA. The CPAA was new to all the CDC teachers, but the eight K–3 teachers had previous (though varying) years of experience with the CPAA.

Goal 2. Examine what teachers learn about children’s skills from each assessment and the alignment of the results. To meet this goal, we collected and analyzed DRDP and CPAA results from the six CDC classrooms. In all six classrooms, the DRDP had been administered in October and March, and the CPAA in February and May.

B. About the CPAA and DRDP

To achieve the study goals, we first undertook two tasks that parallel what teachers need to do to use the DRDP and CPAA in planning: we compared the design and approach of the two tools, and we examined their conceptual alignment (that is, the degree to which the skills addressed by the CPAA and DRDP overlap).

Table ES.1 shows the key characteristics of the DRDP and CPAA. Notably, the DRDP is a teacher-administered rating, whereas the CPAA is a self-administered direct assessment—children

complete it independently on a computer. Although teachers determine what skills are assessed and how they are assessed for the DRDP, for the CPAA, the complexity of the items presented to a child changes in response to the child's performance on previous items. In other words, the CPAA is adaptive—each child receives a unique set of items reflecting his or her performance. The program also provides “scaffolding” following an incorrect response—children receive a targeted verbal or visual hint. In addition, the scope and sequence of the skills assessed in the CPAA do not necessarily align with the scope and sequence of skills targeted by teachers in their planning. Teachers do not have access to CPAA items banks. However, the CPAA does provide automated reports for the classroom and individual children that include recommended activities; the individual reports describe the types of items children received.

Table ES.1. Differences Between the DRDP and CPAA

	DRDP	CPAA
Overview	The DRDP is a teacher rating that is required for all programs that receive California Department of Education (CDE) funding. Teachers conduct ongoing observations in the period leading up to the assessment and complete the ratings based on the data they have chosen to collect.	The CPAA is a direct assessment of children's outcomes independently completed by children on a computer . The assessment is adaptive —the complexity of the items presented to a child changes in response to his or her performance on previous items (including whether the item could be completed correctly with a hint [scaffolding]). Children respond to multiple-choice items using the computer mouse.
Home language	The DRDP instructs teachers to consider all languages the child uses.	The CPAA is administered only in English at the CDCs, but a Spanish version is available.
Ratings	Each measure is rated on a four-point scale for demonstrating competency (or a “developmental level”): (1) exploring, (2) developing, (3) building, and (4) integrating. Teachers summarize classroom performance in the DRDP “summary sheet.” Most children are expected to progress along the four-point scale during the year and to reach the building level by the end of preschool. Ratings reflect the expectations established by the state of California.	Scores refer to the level of development expected at a given point in the school year (fall, winter, or spring). Performance can be scored as: (1) below expectations, (2) approaching expectations, (3) at expectations, and (4) above expectations. Ratings are provided in automated reports (for individual children and classrooms) that include recommended follow-up activities. Progress is reflected by children maintaining the same score (that is, continuing on the same trajectory toward meeting end-of-year expectations) or moving up a level. CPAA reports can be aligned to California state standards.

We assessed the conceptual alignment of DRDP “measures” and CPAA “concepts” by reviewing the available descriptions of the literacy and math components addressed. For the DRDP, we read each level's descriptor, unique to each measure, demonstrating the typical sequence. For the CPAA, we reviewed how the measured content areas align with California learning standards as documented by the CPAA developers. We then mapped the descriptors and standards to determine the types of behaviors or competencies each assessed. In the analysis conducted to meet the second study goal, we compared children's performance for the conceptually aligned DRDP measures and CPAA concepts.

C. Key Findings

Goal 1. Examining assessment implementation—lessons from CDC teachers. All teachers reported using the DRDP. Even though they find it time-consuming and challenging to

complete, teachers typically valued the role the DRDP plays in informing instruction. All teachers also reported that their students completed the CPAA. A few teachers praised the objective data provided by the CPAA, and those who had used recommended activities spoke highly of them. Challenges associated with the CPAA include a lack of teacher familiarity with the tool and difficulty situating computers so that children are not distracted while completing the assessment.

Most teachers thought the CPAA accurately captured children's skills, but a few were concerned about whether English-language learners comprehended the task and questions. There was also concern about distractions in the classroom. In general, teachers believed the results from the DRDP observations aligned with those from the CPAA, but they were likely to trust their own observations over the CPAA should there be any conflict.

Supervisors held monthly meetings or one-on-one conversations with teachers to help them interpret the DRDP and plan for their classrooms. Likewise, some teachers received help administering the CPAA (particularly if there were no computers in their classrooms) and interpreting the results. Several teachers said they would appreciate a formal training on both the DRDP and CPAA to make sure they are using the tools correctly and to their full benefit.

Teachers have limited time to meet and collaborate with each other outside of monthly meetings. Informal collaboration and resource sharing occurred during breaks and when bringing children to the playground.

Most teachers embraced technology as part of their classroom practice and felt that young children should be exposed to computers early on and develop the skills needed to use technology in various contexts. A few teachers did not share this view, however, and believed technology distracts from learning other skills.

Goal 1. Examining assessment implementation—lessons from elementary school teachers. Most teachers reported using the CPAA regularly in the prior year and said that the tool was typically accurate. However, several teachers questioned the validity of the results for some students who had higher or lower ratings than expected. Most teachers said that if they were confronted with conflicting assessment data, they would trust one of the other assessments with which they have greater familiarity over the CPAA. According to teachers, the strengths of the CPAA related to its administration (easy to administer, time saving and convenient, child friendly) and the value of its data and reports (easy-to-use data, an alternative perspective on students, information for instruction, helpful for informing parents).

Teachers reported reviewing CPAA data in combination with other forms of test data to get a more complete picture of students' capabilities. Most teachers reviewed the CPAA data soon after administering the assessment to help them complete report cards and progress reports. A few reported that they were more likely to review CPAA data for students who were struggling or who seemed particularly advanced in certain areas.

To aid their planning, teachers used the classroom and individual reports automatically produced by the CPAA. The most common use of these reports was to create leveled groups according to students' needs. Teachers indicated they were selective about what elements of instruction and planning were informed by the CPAA. For example, a teacher might use results regarding only a subset of the skills measured for planning. Teachers were typically enthusiastic about the value of the recommended activities but had mixed opinions on the degree to which they found the activities practical, given the time needed to prepare them.

Most teachers reported sharing the CPAA parent reports and recommended activities with parents, either directly or by discussing the information from the reports along with data from other assessments, sometimes targeting parents whose children might need extra support. Several teachers used CPAA results and activities to highlight how parents can support their children's learning outside the classroom.

Goal 2. Examining DRDP and CPAA results—lessons from children's data. Both the DRDP and CPAA are sensitive to children's progress in literacy and mathematics over the year. For the DRDP, the vast majority of children had a higher rating in spring than in fall, whereas for the CPAA, most children had either the same rating in spring as in winter (meaning they progressed enough to maintain the same trajectory) or had a higher rating in the spring. For both assessments, some children received lower ratings later in the year compared with earlier in the year. Overall, the majority of children demonstrated proficiency (defined as a rating of 3 or 4 for both measures) in literacy and mathematics on at least one of the assessments in the spring, with a substantial proportion achieving that level on both the CPAA and DRDP (31 percent to 61 percent depending on the skill being assessed).

We also compared CPAA and DRDP ratings from the two closest administrations—the winter CPAA, which occurred in February, and the spring DRDP, which took place in March. We examined the alignment of the results by looking at the percentage of children matching in the four-point scales (that is, the percentage receiving a 1 on both assessments, a 2 on both, a 3 on both, or a 4 on both). Comparisons show that across the literacy and mathematics constructs addressed, 25 to 46 percent of children with both DRDP and CPAA data had the same rating for the spring DRDP and the winter CPAA depending on the skill being assessed. In most cases, children had a higher rating on one assessment (typically the DRDP) than on the other. In terms of correlations, all were lower than expected for conceptually aligned constructs (ranging from .09 to .56), showing that children are not rank ordered the same way by the two tools.

D. Implications

Assisting teachers in the use of the DRDP and CPAA can help maximize the value of these tools as indicators of children's development and tools for planning. For example, teachers would benefit from an opportunity to understand when to expect that information about children's skills from the CPAA and DRDP may align or differ and from support in integrating the CPAA into their practice. Helping teachers in these areas will ensure assessments are being completed in a way that generates information teachers can productively use for individualization and classroom instruction.

Provide additional training for using assessments. For the CPAA, a formal training in which teachers can see the CPAA implemented from a child's point of view may promote buy-in to efforts to integrate technology into practice and help teachers perceive the value of the CPAA results and recommended activities.

Support teachers in understanding CPAA content and scores. Compared with the DRDP, the CPAA poses challenges to teachers because they cannot see the breadth of what is addressed—item banks are not available to teachers for review. It also may not be clear to teachers what skills are addressed in the fall, winter, and spring assessments relative to what the teachers emphasize in their classrooms. Reviewing individual child reports that briefly summarize the types of items addressed could shed light on both the meaning of CPAA scores and the content addressed with each child.

Work with teachers to understand the conceptual alignment of the CPAA and DRDP and how to use the tools together. Individual CPAA reports can be examined alongside DRDP measures to strengthen teachers' comprehension of alignment. This can also help teachers better understand how the assessments complement one another. It would be helpful to consider the time between assessments; children will continue to progress during even brief windows of time.

CDC teachers desire and may benefit from more opportunities for collaboration. The responses from elementary school teachers indicate that they value such opportunities. With guidance from administrators or supervisors, combining the CDC's standing one-hour monthly meeting with additional brief meetings or online discussions could help staff members develop their own professional learning community and increase their comfort with technology and assessment. The assessments could be reviewed and discussed in the context of teachers' collaborations—both within the CDCs and potentially with the elementary school teachers who will be teaching CDC children in subsequent years.

CPAA parent reports could be a valuable resource, but teachers should be selective in sharing activities with parents so as not to overwhelm them. Asking parents for support in creating materials for recommended activities could be a positive way to promote family engagement. Alternatively, service organizations connected to the district may be interested in supporting schools by compiling and organizing materials for activities.

I. INTRODUCTION

In 2012–2013, the Heising-Simons Foundation funded the Milpitas Unified School District’s Early Learning Transitions Model (ELTM). With the ELTM, the district aims to support children and families who participate in its early learning programs as they prepare for elementary school. Although the ELTM has many components, one key feature is the expansion of information available to teachers and parents regarding children’s skills through the integration of a computerized, adaptive assessment—the Children’s Progress Academic Assessment (CPAA)—into classroom practice. Results could inform practice within the early learning programs; they also serve to support cross-classroom and cross-grade collaboration and communication with parents. The CPAA, which is completed independently by children, provides teachers with a tool for ongoing, adaptive assessment as well as suggestions for responding to assessment results at both the individual and classroom level. The CPAA is intended to complement what teachers were already learning by completing the the Desired Results Development Profile Preschool[®] (2010) (DRDP-PS[®], referred to in this report as DRDP), a teacher-administered rating of children’s skills for use in planning for individual children, small groups, or the classroom as a whole.

A. Research Aims and Methods

In order to provide information to the district to support the successful implementation of the ELTM, the Heising-Simons Foundation contracted with Mathematica Policy Research to document aspects of assessment practice and examine the degree of alignment between information provided by the two assessment tools in the early learning programs. The study has two primary goals.

Goal 1. Assess implementation of the CPAA and DRDP in the district’s early learning programs. We sought to document and explain how the DRDP and CPAA are being implemented, with a particular focus on how teachers are using the CPAA to inform their practice and communicate with parents. Research questions associated with this goal include the following:

- How do teachers prepare for and complete assessments?
- How do teachers review, interpret, and plan based on assessment data?
- What formal and informal supports are available to teachers as they implement and review assessments?
- How do teachers use assessment information in their collaborations with parents? With other teachers?
- What are teachers’ views on the use of technology in the classroom?
- What do teachers see as the primary successes and challenges in their assessment practice?

To address research questions on assessment practice, we conducted qualitative interviews with seven teachers and two supervisors from the district’s two preschools, referred to as Child Development Centers (CDCs). We also interviewed the facilitator of the Milpitas Family Literacy Project (MFLP), a district program focused on building parents’ capacity to promote literacy skills among preschool-age children in preparation for school. The program meets weekly at the district’s elementary schools throughout the school year with activities that include both parents and children. The program is targeted at children who do not have another preschool experience.

In addition to interviewing the district’s early educators, we also interviewed eight K–3 teachers from district elementary schools who had previous experience with the CPAA.¹ Information from these interviews—teachers’ implementation experiences and perceptions of success and challenges—can provide insights on how to maximize the value of the CPAA to the CDCs and MFLP.

Goal 2. Examine what teachers learn about children’s skills from each assessment and the alignment of results. For both the DRDP and CPAA, we examined children’s skills at each administration and their progress between administrations. We also assessed the degree to which information about children’s skills from the two different assessments aligned in overlapping domains. Research questions associated with this goal include the following:

- What domains are addressed by each assessment, and to what degree can we expect results to align?
- What are teachers learning from the DRDP and CPAA about children’s progress?
- How closely do messages from each assessment about the level of children’s skills match?

To address research questions on what teachers learn from each assessment, we collected and analyzed DRDP and CPAA results from the six CDC classrooms. In all six classrooms, the DRDP had been administered in October and March, and the CPAA in February and May.

B. District Context

In this section, we provide additional information regarding key elements of the district context—the structure and approach in the CDCs and elementary schools, including changes that took place in the elementary schools during the 2012–2013 year. This information is important to consider when evaluating qualitative data from teacher interviews.

Structure and change in the CDCs. The district’s two CDCs offer a total of six preschool classes, five of which are part day. All six classes meet five days each week. Classes serve children ages 3 to 5 years and range in size from 18 to 24 children.

Both CDCs began using a blended learning model in 2012–2013 that combines teacher-directed instruction and small-group learning with opportunities for children to work independently on computers. There are several models of blended learning (Staker and Horn 2012). In all of them, children learn, in part, through web-based applications in which they have some control over the pace and path. These web-based applications are blended with traditional learning methods. In this particular model, rotations occur three days each week and provide an opportunity for each teacher to spend time with children from other classrooms. Each class is split into three groups, which rotate into another teacher’s classroom for 20-minute blocks. Each teacher is charged with

¹ As originally conceived, this study was to address assessment practice in both the CDCs and select elementary schools in the district. For the elementary schools, we planned to compare results on the CPAA and the district’s own Benchmark Assessment. However, for the 2012–2013 year only, the district opted to halt the Benchmark Assessment to allow time to consider alignment with Common Core standards and whether the benchmarks needed revision. Once that decision was made, the district and the Heising-Simons Foundation agreed the study should focus only on assessment practice in the CDCs. Qualitative interviews with these eight elementary teachers had already been conducted by that time.

addressing two specific activities that may touch upon multiple content areas, and children are exposed to a variety of teaching styles and formats. In some classrooms, computers and iPads are available to children at centers to use alongside peers (but not necessarily assisted by teachers). Thus, CDC children have other preschool-based exposure to technology beyond the CPAA. For all CDC teachers, the 2012–2013 school year was their first opportunity to use the CPAA.

Structure and change in the elementary schools. The district has nine elementary schools; teachers from three of those schools participated in this study. As the study began, two of the three elementary schools were in the process of becoming 21st Century schools. That program includes a combination of learning labs, direct instruction, small-group instruction, and collaborative and independent learning time. Students at these schools are placed in multi-aged groups according to developmental needs. Thus, they do not follow traditional grade structures. Like the CDCs, 21st Century schools also embrace a blended learning model that includes rotations. Teachers are provided with additional time to collaborate and plan for these rotations. Unlike the CDCs, elementary school teachers had access to the CPAA starting with a 2010 pilot in one school. However, not all teachers in this sample began using the CPAA at that time.

Technological upgrades. To support blended learning approaches, the district began implementing technological upgrades in preparation for the 2012–2013 year; however, some challenges in this process resulted in a delay of CPAA implementation. Thus, a fall 2012 baseline assessment is not available. The CPAA was implemented twice during the school year: in February (“winter”) and May (“spring”).

C. About the DRDP and CPAA

In this section, we briefly describe the DRDP and CPAA.

About the DRDP. The DRDP, developed by the California Department of Education, Child Development Division (CDE/CDD), is a teacher rating that is required for all programs that receive CDE funding. Teachers base ratings on evidence collected over time. The DRDP instructs teachers to “record your evidence or provide references to other documentation for each measure.” The desired results for children reflect four overall outcomes: they (1) are personally and socially competent, (2) are effective learners, (3) show physical and motor competence, and (4) are safe and healthy. As described by its developers, the instrument “is designed for teachers to observe, document, and reflect on the learning, development, and progress of all children in an early care and education program. The assessment results are intended to be used by the teacher to plan curriculum for individual children and groups of children and to guide continuous program improvement.”² A version of the DRDP has been in use in the CDCs for approximately 10 years. In 2012–2013, the CDC teachers completed the DRDP in fall (October) and spring (March).

The DRDP addresses seven domains of development designed to align with the California Preschool Learning Foundations (CDE 2008): Self and Social Development (SSD), Language and Literacy Development (LLD), English Language Development (ELD), Cognitive Development (COG), Mathematical Development (MATH), Physical Development (PD), and Health (HLTH). ELD applies only for children who are English-language learners (ELLs). The quantitative analyses presented in this report (Chapter IV) focus on the LLD and MATH domains, given their overlap

² The DRDP-PS[®] is available at [http://www.desiredresults.us/docs/Forms%20page/DRDP%20\(2010\)/PS_Final_8-26.pdf](http://www.desiredresults.us/docs/Forms%20page/DRDP%20(2010)/PS_Final_8-26.pdf).

with the CPAA. Across the six domains, teachers assess children's behavior for 43 measures (10 of which apply to LLD and 6 to MATH) and specify the developmental level that has been reached: "exploring," "developing," "building," or "integrating." Most children are expected to reach the building level by the end of preschool.³ Children can be rated at a different developmental level for different measures within the same domain. Teachers can also specify that a child is "not yet at first level" for a specific measure, that the teacher is "unable to rate" a specific measure, or that the child is "emerging" to the next developmental level. The developers note that "unable to rate" should be used rarely, for example, in a case where a child was frequently absent and the teacher was unable to gather the necessary information (Child Development Division [CDD], California Department of Education [CDE] 2012).

About the CPAA. The CPAA is a direct assessment of children's outcomes independently completed by the child on a computer. The assessment is adaptive, that is, the complexity of the items presented to a child adjusts in response to the child's performance on previous items. In other words, each child receives a unique set of items that reflects his or her performance. The program also provides "scaffolding" following an incorrect response—children receive a targeted verbal or visual hint. In determining what items to present to a child, the program takes into account whether scaffolding was necessary for answering questions and whether it was effective (Camacho 2010).

The CPAA draws on three different item banks (fall, winter, and spring) intended to address whether children's skills are in line with expectations for a particular point in the year. The preschool version of the CPAA taps aspects of literacy and mathematics. In 2012–2013, the CDC children completed the CPAA in winter (February) and spring (May); it was first completed in the MFLP at the end of the 2011–12 school year, in June 2012. For each outcome area addressed, the CPAA provides a score along a four-point scale: (1) "below expectations," (2) "approaching expectations," (3) "at expectations," and (4) "above expectations." Scores refer to the level of development expected at that point in the school year (fall, winter, or spring). The scope and sequence of skills presented in the assessment reflect expectations regarding when and in what order children are expected to develop certain skills.

The CPAA provides three automated reports: an individual child report for use by the teacher, a classroom report that summarizes data across all children in that classroom, and a parent report for individual children. (Data can also be summarized to the school or district level). All three reports include suggested follow-up activities for building children's skills. The classroom report also includes suggestions for grouping. The CPAA reports the district received were aligned to California state standards.

The district opted to pilot the CPAA in 2010 in light of its capacity to provide real-time data suggestions for classroom practice. The low level of burden on teachers was also appealing. As stated by one person in the district, "Teachers felt too much time was being spent on assessment. There was a need to target instruction using data. CPAA had a ready-made piece that showed teachers 'this is what you do next.' And it enabled teachers to build on a child's prior knowledge." Based on positive feedback from teachers and administrators following the pilot, the CPAA was rolled out more broadly at the elementary level. In 2012, the CDC leadership conducted a small CPAA pilot. For the same reasons identified above, the CPAA was implemented CDC-wide in 2012–2013.

³ This and other information about the DRDP is available at http://www.desiredresults.us/resource_faqs.htm.

The CPAA has a Spanish version but the school district uses only the English version. Some children may not complete the assessment based on the program screening them out during a set of pre-assessment exercises used to determine familiarity with computer tasks and use of the mouse, or based on item performance or time to respond (the assessment ends after repeated long delays in answering).

D. Report Structure

In the rest of this report, we present additional detail about study methods followed by an overview of analysis approaches and findings. In Chapter II, we present findings from the CDC and MFLP interviews, and in Chapter III we address interviews with elementary school teachers; these data all speak to the first study goal. In Chapter IV, we present analyses of CPAA and DRDP data that address the second study goal. In each chapter, we discuss implications.

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II. ASSESSMENT PRACTICE IN DISTRICT EARLY LEARNING PROGRAMS: QUALITATIVE FINDINGS

Key Findings and Implications

To complete the DRDP, teachers combine direct assessment of the skills addressed by each measure with observing and documenting children's skills in an ongoing way and compiling and reviewing a portfolio of student work. Not all teachers complete DRDP rating records for individual children, but all are required to complete the classroom-level summary sheet for use in planning for classrooms.

Teachers felt the CPAA accurately captured children's skills, but a few were concerned about whether ELL children comprehended the task and questions. There was also concern about distractions in the classroom. Teachers felt results from the observations they completed for the DRDP and CPAA typically aligned, but they were likely to trust their own observations over the CPAA should there be any conflict.

Teachers received support from supervisors for interpretation of the DRDP and planning based on it in monthly meetings or in one-on-one conversations. Some teachers received support for administering the CPAA (particularly if there were not computers in their own classrooms) and for interpreting results. Several said that they would appreciate a formal training on both the DRDP and CPAA to make sure they are using the assessment tools correctly and to their full benefit.

Teachers have limited time to meet and collaborate with each other outside of monthly meetings. Informal collaboration and resource sharing occurs during breaks and on the playground.

Most teachers embraced technology and felt that young children should be exposed to computers early on and develop the skills needed to use technology in various contexts. A few teachers did not embrace technology and feel it distracts from learning other skills.

Even though they find it time-consuming and challenging to complete, teachers typically valued the role the DRDP plays in informing instruction. A few teachers valued the objective data provided by the CPAA, and those who had used recommended activities evaluated them positively. Challenges associated with the CPAA included a lack of teacher familiarity with the tool and situating computers so that children are not distracted while trying to complete the assessment.

Implications

- Provide additional training for using assessments. For the CPAA, a formal training in which teachers have the opportunity to see the CPAA implemented from a child's point of view may promote buy-in to efforts to integrate technology into practice and help teachers perceive the value of the CPAA results and recommended activities.
 - Support teachers in embracing and enhancing their skills with technology. Assess whether teachers are properly trained on using technology in the classroom (including those who embrace it) and have an opportunity to share concerns about the role of technology. Help teachers see how technology can save them time (for example, by developing DRDP classroom summaries through the developer-provided Excel file or online tools rather than manually).
 - Provide teachers with additional opportunities to collaborate with their colleagues. With guidance from administrators or supervisors, combining the one-hour monthly meeting with brief meetings in between and/or online discussions could help staff develop their own professional learning community and potentially increase comfort with technology.
 - Have supervisors support teachers in integrating the CPAA results and resources into practice as they do for the DRDP. For example, in monthly meetings, teachers and supervisors could together review sample reports from a classroom and individual children. Supervisors could recommend select activities for teachers to implement from among the many recommended. As in the case of the DRDP, teachers could be asked to select goals based on CPAA results.
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A. Sample and Methods

To meet the study's first goal—assess implementation of the CPAA and DRDP in the district's early learning programs—we conducted one-on-one qualitative interviews with CDC teachers and the MFLP coordinator. Although the study aimed to assess teacher experiences with both the CPAA and DRDP, the district was particularly interested in the CPAA, because it was new to CDC teachers in the 2012–2013 school year. Therefore, we held two rounds of interviews with CDC teachers in spring 2013 following the two rounds of CPAA administration. Due to the timing of CPAA implementation, the two interviews were scheduled just six weeks apart. In round one, we interviewed six teachers. In round two, we interviewed the same six teachers plus one additional teacher and two supervisors. All of the interviews were conducted at the CDCs during school hours and were approximately 45 minutes in length. A substitute teacher assisted in the classroom while the teacher participated in the interview. We held a one-hour interview with the MFLP coordinator in fall 2012 during work hours (but not during an MFLP session). Unlike the CDC teachers, the MFLP coordinator had used the CPAA during the prior school year. In her interview, she reflected on that experience. Thus, a total of 10 individuals participated in interviews at one or two time points.

The teachers in the CDCs and MFLP coordinator are an experienced group; on average, they have 16 years of experience working with children, including in preschool and afterschool programs and in various classroom contexts (years of experience ranged from 5 to 38). Although the CDC was new to teachers and the MFLP coordinator, the average experience level with the DRDP was high, with an average of 8.4 years (a range from 6 to 10 years) across all the respondents who provided answers to this question.

Teachers were asked to reflect on their experiences administering, planning, collaborating, interpreting, and communicating with parents and other teachers using assessment tools and the data they provide. Because the CPAA was new to CDC teachers, at both interviews, we asked about some of their experiences with it. At the time of the second interviews, teachers had limited exposure to the CPAA, but were able share their initial impressions. We distributed the remaining topics across the two interviews so as not to overburden teachers at either time.

B. Analysis and Findings

As a first step toward analysis, notes from the qualitative data collection were reviewed for consistency and completeness in preparation for coding. Based on the topical categories included in the interview protocols, we sorted the data by topic. Analysis focused on examining the themes that emerged in relation to each research question and on identifying examples of practice relevant to each question. It is useful to note that, although the interview protocols were semi-structured, conversations sometimes took divergent paths depending on what respondents told us. Thus, not every study participant provided a response to every question. As a consequence, we typically do not provide precise counts of teachers who endorsed a given theme. To convey the prevalence of themes, we use the following terminology:

- “Few” refers to two or three respondents
- “Several” refers to groups of four or five respondents
- “Most” refers to more than five but not all respondents

We now present findings, organized according to the study research questions (RQs) identified in Chapter I. Note that not all questions applied to all respondents (for example, the MFLP coordinator does not implement the DRDP). In order to protect participant confidentiality, we do not differentiate when responses came from the MFLP coordinator, CDC teachers, or CDC supervisors. We refer to all participants as teachers.

RQ1: How do teachers prepare for and complete assessments?

Gathering evidence for the DRDP. The skills measured on the DRDP can be assessed and documented in a variety of ways. We asked teachers how they go about completing the DRDP. Teachers reported that they used multiple methods of gathering and assessing information to assign ratings on each of the 43 measures. Most respondents said that they combine direct assessment of the skills addressed by each measure with observing and documenting children’s skills in an ongoing way, and compiling and reviewing a portfolio of student work.

A few teachers explicitly assessed children’s skills by posing specific questions in one-on-one situations. For example, one teacher said, “One thing is when you sit down with the child and ask several questions in relation to the skills you will develop. By answering or doing the act, you can see the child [and] collect evidence or examples of his work. Then you gather them and analyze them.” Another teacher described her approach:

I start from the beginning, one-on-one. I go and sit with the child with my materials. Cut and paste, very easy. I have matching shapes—if they have nothing, I help them to cut the shapes. I see if they can match. I have one page to color: Do they know how to color? Which hand do they use? For the shapes, I also have, do they know the name? Can they point at the shape? Or is it just matching?

One teacher said she creates a packet for children to complete that becomes a part of the child’s portfolio.

Teachers use a variety of methods to document children’s skills when directly assessing and observing. A few teachers said they like to use sticky notes and photographs to quickly capture evidence of children’s progress. One teacher described her procedure for recording observations:

You can tell if the child is getting some progress. . . . When I do the observation, I write [a note indicating what] the child is doing—if she can hold a pencil, write her name, identify some letters of the alphabet. For example, “4/17, the name, could identify numbers 1–5.” That’s for the math part of the DRDP.

Another described how she uses checklists and photographs to document progress:

Basically [I use] learning games. I sit and play and observe with my checklist. Maybe next day I’ll do movement, and then math or reading. I do it as a center. So if I have three tables, one will be letter recognition, one will be color game, and [I will say] to my assistant, “Keep an eye on them, find out what they know.” One center will be art, math, language arts—I divide it like that. Over several days, each child’s checklist is completed. And you do it again several months later and see what they learned. It’s just a good tool to sit and observe. When we’re doing circle or board math, I see who is responding and raising their hand. And maybe I’ll bring someone up, see if it’s over his head, maybe scaffold it down. I like to bring the file, whatever I have for the kid, and then tally what level the child should be. I can look back into his file and see what

level he's at. I take pictures, I love to take pictures. I took a lot when it came to patterning, building, big and small—can they measure? Every time you see them doing something to do with the DRDP, you keep it. There's your evidence.

Completing the DRDP. All respondents said that they review a file of children's work as well as documentation from their observations and assessments to help them complete the DRDP. Some complete the entire DRDP for one child at a time, whereas others focus on several measures at a time and complete the DRDP in chunks. All teachers said they complete the DRDP after school hours and/or at home. One teacher explained her approach:

I collect information first. Whatever I see happen, I jot it down on a sticky note and write down the date and the name of the kid. If I remember the measure—like the number 13—then I write that, too. But I usually don't, because there are 43 measures. I put it in the child's folder and bring it home. . . . I have to collect information on-site, and bring it home, only a few kids a day.

Respondents were asked to provide an estimate of the amount of time they spend completing the DRDP form for each child. The average time spent per child was approximately 31 minutes (responses ranged from 20 to 40 minutes). When asked whether they receive help with assigning ratings, a few teachers said that their assistant or paraprofessional assists by taking notes and collecting samples of children's work, but the lead teacher ultimately assigns DRDP ratings.

Implementing the CPAA. Teachers were next asked to describe the approach used to complete the CPAA. Some teachers said that they had the opportunity to observe children completing the CPAA; others did not. As fewer respondents had administered it, descriptions of the approach were more uniform. Several respondents said that the CPAA was administered to small groups; a few said that children were tested one at a time. All who commented on the way it is administered said that children sit at a computer with headphones on and click through the assessment independently.

It is important to note that reports about children's experiences with it were secondhand for some; a few respondents commented that support staff, including assistants and an administrator, conducted the CPAA to save time and assist teachers who were unfamiliar with the process. However, most respondents said they had a sense of the timing and logistics of administering the CPAA even if they had not administered it themselves.

When asked about the amount of time it takes to complete the CPAA, most answers ranged from 10 to 20 minutes; on average, each individual child or small group took 15 minutes. One teacher reported testing times ranging from 30 to 60 minutes. The location and set-up of the computers seemed to be the main determinant of whether children were tested individually or in small groups and whether the teachers received assistance from administrators in implementing the CPAA. There are three computers at both CDC sites, but at one of the sites, the computers are in one classroom, whereas at the other, the computers are situated between two classrooms. Neither site has a designated computer lab. For the MFLP, the assessment was completed in small groups.

Respondents who had administered the CPAA or observed CPAA administration were asked to share their thoughts on how children manage the technology, including using the mouse and headphones. Those who commented said that most children knew how to use the equipment and that those who did not learned quickly. "It was smooth—I could see that they had the knowledge to

do it the right way. I just made sure they could hear the right way, they were sitting properly, so they could be comfortable to do it. But I saw that they are comfortable [with the equipment].”

Concerns regarding CPAA administration. When asked whether the CPAA accurately captures what children know and can do, most responded “yes,” but with caveats. A few respondents expressed concern that the ELL students did not fully comprehend the questions and tasks, and perhaps were less engaged with the program. One thought the ELL children might be guessing or clicking items at random. Distraction was a concern expressed by a few respondents; they thought children might not be focused on completing the test if there were other activities happening in the areas around the computer. One respondent shared a concern that she was uncertain children were able to manage the computer and mouse.

RQ2: How do teachers review, interpret, and plan based on assessment data?

Assessment data can be used to adjust and tailor instruction. We asked teachers about their process of interpreting assessment results and using them in planning. To provide context for this discussion, we first asked a general question about resources used for planning for their students.

Planning resources. Teachers in the CDCs have many resources available to them that are accessible from the designated on-site “resource room” or from site supervisors, or that they access on their own. Teachers reported that they drew on a range of resources that fall into one of two categories: (1) sources for instructional content and practices and (2) data on children to inform instruction. Regarding sources for instructional content, a few referenced learning standards, including the Preschool Foundations and the Common Core standards. A few others mentioned personal books and published curriculum packages such as High Scope and Creative Curriculum. One mentioned Board Math, an interactive math program recently adopted by the CDCs. A few teachers said that they use the internet to find activity ideas, but did not specify which websites they use. A few said that children’s own interests drive the selection of topics to address. One said:

[I determine activities by] being with the children and talking with them. Seeing what they want to do, where they’re at, what they want to learn. Sometimes they want to learn about bugs, so I say okay, let’s do it. And then I do a whole lesson plan on that and they learn so much. Everything you incorporate with it—counting, colors. And you go, wow, they retain so much. It’s helpful to listen to the children a lot.

Similar to curriculum and content sources, teachers may draw upon a variety of tools and sources to gauge students’ progress. Nearly all teachers who responded described using the DRDP, using their observations for it both to complete ratings and to monitor progress. Several discussed using their own checklists, games, and/or pencil and paper tasks to document children’s progress and the development of particular skills. A few mentioned the CPAA.

Planning with the DRDP. As described by one teacher, “The assessment itself isn’t difficult—it’s implementing the plans and following through.” Thus, we asked teachers about the steps in the planning process, from processing results to implementing plans based on those results. DRDP results can be processed and aggregated using two basic tools: an individual rating record and a classroom-level summary sheet. The rating record serves to summarize in two pages the child’s progress and the scoring from across all 43 pages of individual measures. Teachers did not directly comment on the rating record in the context of the interviews, but in collecting DRDP data for the analyses presented in Chapter IV, we learned that not all teachers complete the rating record. Thus, if teachers were referring back to DRDP results once they completed the ratings, they were

sorting through the 43 pages of measures. Results are manually summarized in the classroom-level summary sheet, which can be used to examine strengths and needs at the classroom level. In this sheet, which teachers are required to complete, they identify the number of children at each developmental level for a given measure. Administrators informed us that the classroom-level DRDP summary sheets are intended to be used for planning purposes. They should drive lesson plans, with desired results posted alongside plans so parents are aware of the teachers' goals and teachers ensure that the lessons are aligned to the goals. Several teachers commented that the summary sheet is helpful for determining what kind of help children need. One teacher described the process:

When I do my lessons, I see what I need to add. . . . Next to our lesson plans, we have desired results, and summary of findings. And we physically write our goals and where they're at, so parents can see what [the children are] working towards. It's there for six months. Every trimester we put up new desired results. The lesson plans are weekly, but the results guide you. Each class has its own statistic of what they need to work on.

To help better understand how teachers are integrating assessment results into their planning and instruction, we asked teachers to describe how they use DRDP results at the whole-class, small-group, and individual level. Most teachers use results to select objectives and plan whole-class activities and some use results to form small groups. Only a few respondents said that they use results for individualization. Two teachers explained how they use DRDP results to plan their lessons:

From the tally sheet, that's where we get our objectives for the lesson—what we will improve. . . . Example, how many children will need to increase to that level? So we base our lesson plan on the result of the DRDP. Example, the children have trouble indentifying numbers. You have to focus on that. Sometimes they can say [the numbers] 1 to 10, but they cannot identify what is number 1, 2. From the DRDP you can go to the next level, providing more exercises, based on the observations of the children.

We do the DRDP and . . . use the testing [to] figure out who needs help in what area, and according to that we plan our lessons. The kids are divided. We have 18, so I divide them into three groups depending on who needs what. Yes, that's how the groups are divided—based on the DRDP. You know how there are different measures—in the language arts, literacy skills—we have number recognition, phonics. You pick different measures.

One teacher who used the DRDP for planning for the class also commented, “The DRDP is what I use to make sure [parents] know academically what [the children] need for kindergarten.”

Planning with the CPAA. For teachers, the CPAA generates reports with individual results and with results for the class as a whole. The reports include a breakdown of results by skill area, as well as suggested activities and next steps for educators. The classroom report recommends small-group composition. Reports can be accessed online, but only administrators did so. We asked teachers to tell us about which of the reports they reviewed, whether results informed instruction for individual children or groups, and whether they had used any of the recommended activities. (Note, however, that due to district-level technology issues, CDC teachers did not have much opportunity to interpret CPAA results and integrate them into planning or instructional decision making during the 2012–2013 school year.)

Several respondents said that they had seen individual and/or whole-class CPAA reports, but have not had much time to incorporate the results into their planning; a few commented they were easy to understand. In terms of how they used information from the reports, a few said they had used the class reports to form leveled groups and/or for planning center time, and a few said the results were used to inform instruction for the whole class. One teacher used CPAA results in combination with DRDP results when forming leveled small groups. She uses both results to focus on developing particular skills, such as concepts about print and comprehension, or selecting which iPad apps to download for rotations.

Few respondents had used the recommended activities, but those who had used them remarked that they were useful: “There are a lot activities based on the kids’ needs, whatever area they need help with. For language, we use a lot of those activities in class. They’re good.” A few respondents noted they had not even seen the activities.

One respondent summarized the first year of CPAA as follows: “This was the beginning, it’s a trial process. We’ll have time to sit together, work together. Everyone wants to see how they are. But next year, it will be more formal. We will get to talk to each other and plan.” Another teacher said, “I’m already planning to use those activities [next year]. I’m trying to do that.”

Planning with multiple assessments. Teachers were asked which assessments they would be more likely to rely on in cases where results from various assessments were misaligned or provided conflicting information. Among the five teachers who had used the CPAA, most commented that results were typically (“pretty much,” according to one teacher) aligned. Nonetheless, teachers indicated that they would trust their own observations (including the DRDP) more than the CPAA. One of these teachers acknowledged, “I think that they are both telling the truth because you are assessing. That’s what they learned.”

RQ3: What formal and informal supports are available to teachers as they implement and review assessments?

Training on the DRDP. Despite teachers’ many years of experience with this assessment tool (8.4 years on average), only a few had ever received formal training, and each of those receiving it had attended only one training. However, several mentioned that they had received some informal support for completing the DRDP, including another teacher or administrator sharing training materials or showing them how to document and evaluate whether a child is exploring, developing, building, integrating, or emerging for each measure.

Training on the CPAA. None of the teachers reported receiving formal training for the CPAA. However, a few said that they had received informal support, including another teacher or administrator showing them how to use it.

Additional training desired. We asked respondents what kinds of additional training they would like to receive. Most said that they would benefit from a complete overview of the CPAA, including how to administer, review, interpret, and make lesson plans using results. A few said they would like to polish their skills by seeing examples of completed DRDPs or learning tricks for completing the DRDP more efficiently. Several said that they would appreciate a formal training on both the DRDP and the CPAA to make sure they are using the assessment tools correctly and to their full benefit. The general sentiment among all respondents was that they are eager to learn more, and wish they had more time for professional development activities. One teacher summarized the need for training as follows: “Having formal training is so beneficial. . . . If

everyone’s winging it, it’s useless, because no one knows how to do it. . . . You have to be trained before you can be expected to do it properly.”

Support for assessment use. Another core focus of our interviews was the level of support teachers receive for administering, interpreting, and integrating assessments into their practice. We sought information on how administrators were helping teachers use assessment tools to enrich their practice and better meet the needs of their students.

One teacher elaborated on how site administrators help teachers understand the measures the DRDP comprises and collect appropriate evidence for each one:

The DRDP is an observation tool. . . . Those observations should be documented. It’s not an assessment, in that [we] ask a child and then see if [the child is] wrong or right. . . . From there, they will look into the domain, measurement, and see if the observation is fully supported by the activity. . . . [They check to] make sure that . . . there is an actual phrase said by the child or actual work that can be used to support that observation . . . [and] make sure you have the actual documentation of what the child is doing.

Respondents reported that CDC teachers receive support from supervisors for DRDP interpretation through monthly meetings. Several respondents mentioned one-on-one meetings with a supervisor to review DRDP summary sheets, set goals, and plan lessons around those goals. One teacher described the process:

Yes, our supervisor checks the results of our DRDP. We have to turn in the tally and the measures—we have to tally the measures 1–43. We use that form for the summary of findings of the children. You pick three measures that you will be working on. She also gives us some information, like how to help you understand your findings.

One teacher summarized the breadth of training and supports for completing the DRDP in the following way:

I haven’t had training in this program, just previously with the [supervisor] who came out here six months ago. She did an overview, what each measure is, how we document. She went over the last part, where you show what level the class is at. Say, 13 out of 15 understand—the whole statistical part. Also how to write it out and fill it out correctly. I go to her with questions, if I’ve forgotten. She was very helpful, and did a little review of that. . . . She called all the teachers one by one to go over the final report sheet, the summary of findings.

Respondents reported that they received support for administering and reviewing the CPAA as well. In some instances, administrative staff administered the CPAA when teachers were unable to do so, by taking small groups of children over to the computers, logging them in, and taking notes on how children interacted with the program. A few respondents said that CPAA results were disseminated and discussed by administrators at monthly staff meetings and used to examine and compare class-level and center-level achievement in specific domains.

RQ4: How do teachers use assessment information in their collaborations with other teachers or parents?

Collaboration in the CDCs. As collaboration is a stated goal of the Early Learning Transitions Model, we sought teachers’ perspectives on whether they are able to collaborate with fellow CDC teachers for planning purposes and/or to share information about children’s progress. The rotation

model exposes children to different teachers, content, and groupings. In theory, the rotations also provide an opportunity for teachers to observe children from different classes and note their progress on skills developed during rotations. This information could be shared among teachers to adjust and tailor instruction to meet students' needs.

We asked teachers if they ever have a chance to collaborate, plan, or share information about students' progress. Nearly all teachers commented that they do collaborate with colleagues and plan together, especially during monthly meetings. However, respondents mentioned that they have limited time to meet and collaborate with each other outside of monthly meetings. Unlike K-12 teachers, CDC teachers do not have a common planning time or prep period. Informal collaboration and resource sharing occurs during breaks and on the playground. One respondent commented: "...we don't have prep time like the elementary school teachers. So it's hard for us to sit together—we share outside on the playground. I learn a lot from the other teachers."

Perhaps due to limited time for collaboration, teachers reported that they do not have a chance to discuss how children from their own classrooms are doing when rotating to another teacher. Although some teachers regularly share progress updates with assistants in order to focus lesson plans for the week, lead teachers have limited opportunities to hear from other lead teachers about the progress of the children in their classroom, and to tell others about the progress of their children. The few teachers who said they do share information about children's progress during rotations said that the information shared is usually behavior concerns. Monthly meetings were mentioned by several teachers as the main venue to discuss progress observed by teachers during rotations.

Another avenue for sharing learning practices and aligning instruction is observation. We asked teachers whether they have recently been observed or if they conducted an observation of another teacher. Several respondents said they have had an opportunity to observe other CDC teachers to try to align rotation activities. One respondent commented that the observation was helpful, and another said she disagreed with what she observed.

Communicating with parents. Sharing information on children's progress with parents and supporting their involvement in children's learning is a primary focus of the ELTM and the mission of the MFLP.

Teachers were asked about how they communicate with parents and what tools they use to discuss their students' progress with parents. Respondents shared that they can speak with parents during pickup and drop-off, and that most exchanges are brief. However, there are parent-teacher conferences twice a year that allow for some discussion of children's progress. For the parent-teacher conference, all respondents said that they use a standard conference form that consists of three paragraphs on the child's strengths, needs, and ideas for parents to support their child's learning outside of the classroom. Time during conferences is limited to about 15 minutes, so they are not able to discuss assessment results in great depth. Most respondents said that they draw on assessments in filling out the conference form but do not directly present assessment results to parents. One teacher said that she shares work samples during conferences, and all said that they refer to the DRDP while typing up the conference form. A few respondents said they had shared the CPAA-recommended activities with parents.

Teachers were also asked how they share information on children's progress when there are language differences between parents and teachers. Many of the teachers described their classes as having several ELLs. District wide, about a quarter of all students are classified as ELLs.⁴ All CDC respondents reported that they have access to an interpreter or can communicate with parents in their native language.

The unique format of the MFLP allows open and ongoing communication with parents. Many of the parents speak a language other than English; one parent can translate for another to facilitate communication between parents and the MFLP coordinator as needed. The activities provided in the MFLP are designed by the coordinator. Because the CPAA was new at the time of the interview, the recommended activities and data on students' progress had not yet been incorporated into lesson plans. Parents in the MFLP were aware that their children had used the CPAA, but they had not seen reports or recommended activities at the time of our interviews.

Connections to kindergarten and beyond. Collaboration and alignment across preschool into the early elementary grades is another component of the ELTM program. Respondents were asked whether they have the opportunity to collaborate, discuss assessment results with, or observe teachers in other grades.

Responses varied, but the majority of teachers said they do not regularly talk to or observe kindergarten or 1st-grade teachers. However, a few respondents said they recently attended collaborative gatherings that included teachers from other grade levels. Preschool teachers' observations of elementary teachers are also limited. A few respondents mentioned that kindergarten teachers had come to visit the CDC and observe the rotations, but there was no time for discussion or collaboration following this observation.

Teachers were asked about the information they relay to kindergarten teachers about students when they complete preschool, and if they would like to share other information. The CDC teachers all use a tool called a Preschool to Kindergarten Transition Form that is passed on to the kindergarten teachers. The transition form covers basic skills that children are expected to master before beginning elementary school (for example, identifying shapes, numbers, and letters; social skills; and book-handling skills). Respondents were also asked about their approaches to completing the transition form. Most teachers said they explicitly retest the children to assess whether they've mastered the skills on the list. A few teachers mentioned that they reference the DRDP (completed in March) and one mentioned that she used the CPAA results as well.

Teachers were asked what other information they would like to share with kindergarten teachers beyond what is on the transition form. Five teachers directly responded to the question; most of them want to or attempt to communicate additional information regarding behavior and social-emotional development. For example, one teacher said:

I think a lot of the social-emotional parts [should be communicated]. What's going on at home, maybe what the living situation is at home. They might need to know that. A lot of that reflects in the classroom—especially with kids who are hitting, having temper tantrums, crying a lot. You wonder why—is there something going on emotionally, or at home? That is a big part—the kindergarten teachers need to know.

⁴ California Department of Education, Educational Demographics Office. Accessed online through DataQuest at <http://dq.cde.ca.gov/dataquest>.

One teacher wanted to provide work samples to the kindergarten teacher. One said that she would like to hear more from the kindergarten teacher, perhaps indicating a desire for additional collaboration. “I guess in the back of my mind [I want to know], ‘What do you want from these children? Did we prepare them for you?’ Confirmation that we are on the same pathway with these children. We want them to go there confident and be there on their own. They don’t have a lot of help if they need it.”

RQ5: What are teachers’ views on the use of technology in the classroom?

In order to provide context for teachers’ opinions on the CPAA (discussed in the next section), we asked respondents to share their views on technology use in the preschool classroom and ways that technology is helpful or not helpful. Responses were mixed, but fairly aligned to the opinions expressed about the CPAA; those who spoke favorably of the CPAA have embraced the role of technology in the classroom and those who spoke less favorably about it felt that computers detract from time that would be better spent developing other skills.

Only one teacher felt technology was entirely unhelpful, as it led to underdeveloped handwriting skills and took time away from supporting social-emotional development: “I said no—no computers or iPads. Social skills, practicing penmanship, not writing ABCs on iPad. I have kids now, they don’t know how to write at the end of the school year. That’s why I don’t like it.” A second teacher had more mixed opinion on technology. She felt that although tools such as the iPad might have a role in motor development, they took time away from learning to write. She said, “My concern is the proper way of writing. We have to teach the basic skills of handwriting, how to use the pencil, what kind of pencil they use. Not all children will be able to use [a computer], like if you have to write a check. My concern is the handwriting. I see older children who can’t hold a pencil or a pen.”

Several respondents said that technology in the classroom is helpful. Some expressed opinions that, because computers are ubiquitous, young children should be exposed to them early on and develop the skills needed to use technology in various contexts. Another said that computer skill development is part of school readiness and necessary to avoid falling behind. One teacher commented that the blended learning model provides an important opportunity to expose children who do not have computers at home to computer-based learning before kindergarten:

I believe it’s really helpful for the children who don’t have computers at home to be acquainted with it when they move on to kindergarten and 1st grade, because they’re using them completely over there. . . . I introduced them to Computer 101: using the mouse, maneuvering around the computer. My classroom uses it for about an hour every day. . . . And we do it in rotation, too; we try to let all the children have some time on it.

RQ6: What do teachers see as the primary successes and challenges in their assessment practice?

Lastly, respondents were asked to describe the main successes and challenges associated with each of the assessment tools. Teachers shared similar thoughts about the usefulness of the DRDP, but varied on their opinions of the CPAA.

DRDP successes. Most respondents commented that the DRDP is useful for lesson planning. In particular, teachers discussed how they were able to home in on specific measures and skill areas that the whole class needs to develop, using results from the DRDP. One teacher explained: “It helped to gather information—to see what needs to be done, improved, changed in order to be a

better teacher. It helped me teach more effectively. It narrows things down now, because there are a million things [I could] put in my lesson plan.”

A few respondents stated that a strength of the DRDP is its usefulness for gauging students’ progress and organizing leveled groups according to children’s respective strengths and needs. For example, “[I like] that I can see how my class is doing. I can have the picture of their progress or limitations. I like that, even though it’s a lot of work, it’s a good tool to know where everyone’s at, what level.” One respondent found the sample lessons provided on the DRDP website for each measure to be valuable.

CPAA successes. As nearly all of the respondents are still building familiarity with the CPAA, they were only able to provide initial impressions based on their limited exposure to the tool. However, the comments teachers shared reflected that some felt the CPAA was more specific and more objective than the DRDP. A few specifically mentioned that, because the data are computer-generated, they are more objective. One respondent explained that, unlike the DRDP, which comprises findings the teacher has compiled on her own, the CPAA does the work of collecting and analyzing the data, so a teacher could potentially discover information about students’ strengths and weaknesses that she did not already know; there was appreciation for the data. One said, “It makes a difference when [you] could see the results versus the DRDP—you’re doing the DRDP and you’re telling the results, the results are based on your findings. With this, it’s computer generated—it makes a big difference.”

Another respondent said that a success of the CPAA is that it assesses skills that are difficult to measure, such as comprehension and following instructions. She remarked that these skills are especially challenging to assess for ELL students, who may lack expressive language skills. “It’s a great tool to have in the classroom—it’s specific, and lets me know where the child is in the class. I have a lot of English-language learners, and I was surprised to see they understood everything. They know their stuff, they just can’t express themselves. That’s what I especially like about it.”

Respondents who have had a chance to use the recommended activities seemed to like them. A few respondents said they liked the new ideas and thought some of the activities would be good to share with parents. Other comments about the CPAA from single respondents included:

- It’s interactive
- It provides very specific data about children’s progress in specific domains and skill areas
- It is aligned with the DRDP and can be used to validate the DRDP
- It is a good introduction to technology for children who do not have computers at home

DRDP challenges. When asked to discuss challenges associated with each assessment, teachers were again more aligned in their comments about the DRDP. Nearly all of the respondents mentioned that the amount of time required to complete the DRDP presents a challenge. A few said that the results are not useful because they lack nuance, represent a one-dimensional snapshot of a child’s progress at a single point in time, or are teacher-generated and therefore highly subjective.

CPAA challenges. Several respondents commented on challenges associated with the CPAA. Comments addressed the computerized format and level of familiarity with the tool, rather than the content of what was assessed by the CPAA. One teacher emphasized her dislike for computers and that they distracted from learning. A few noted that, at this point, teachers have had limited

exposure and thus they are not familiar with how it works or the actual content of the assessment (what the children see). One respondent referred to overcoming the hurdle of moving out of one's "comfort zone" and also remarked, "If you try something you didn't necessarily like, but the kids are taking to it. . . The unfamiliar territory, that's the biggest challenge."

A few teachers commented that the computers were set up in such a way that children were distracted while taking the CPAA or that getting started was more difficult for children with no prior exposure to computers. Others said it was challenging to find time to take the children to the computers to be assessed.

The value of assessment. Respondents were also asked to share their thoughts on assessment use in general for informing teacher practices. Nearly all respondents had positive remarks about the usefulness of assessment tools. They expressed relief and satisfaction in using assessment tools to confirm that children are making adequate improvement. Several said that they liked being able to gauge children's progress and use assessment results to narrow the focus of lessons. Another remarked that it is essential to use standardized assessment tools consistently, in order to get an accurate picture of progress and quality across the program. "We have to have a tool everyone's using to get the same information. We can't have a quality program unless we have tools to assess the teachers, students, program. We need a universal resource so everyone's on the same page. I think assessment is very valuable."

Although respondents had different opinions about which tools best illuminate useful information on children's needs, all agreed that a tool that helps teachers improve their practice and ultimately help the children learn was very positive.

C. Summary and Implications

In this section, we summarize key findings from the qualitative interviews with staff from the district's early learning programs and present implications for district consideration. The summary is organized according to the study research questions. Implications follow.

1. Summary

Administering assessments. To complete the DRDP, teachers use a combination of direct assessment of the skills addressed by each measure and ongoing observation and documentation of children's skills, and compiling and reviewing a portfolio of student work. Teachers have different approaches to completing the DRDP (for example, focusing on one child at a time versus a group) but all said they complete the DRDP ratings after school hours and/or at home. Not all teachers had the opportunity to observe children completing the CPAA, but teachers typically had the impression that children were able to use the technology well. Teachers felt the CPAA accurately captured children's skills, but a few were concerned about whether ELL children comprehended the task and questions. There was also concern about distractions in the classroom.

Reviewing, interpreting, and planning based on assessment data. Not all teachers complete DRDP rating records for individual children, but all are required to complete the classroom-level summary sheet. This summary sheet is a focus of CDC planning. Because the CPAA is new to the CDCs, few teachers have had an opportunity to thoroughly review the reports it provides or to implement activities. For those who had, results had been used to inform planning for groups and the whole class. A few teachers expected opportunities to use it in the next school

year. Teachers felt results from different assessments typically aligned with one another, but they were likely to trust their own observations over the CPAA should there be any conflict.

Formal and informal supports for assessment practice. Teachers have many years experience implementing the DRDP, but few have had any formal training. The CPAA was new to all teachers this year. All teachers desired additional training regarding both the CPAA and the DRDP. Teachers receive support from supervisors for DRDP interpretation and for planning based on it in monthly meetings or in one-on-one conversations. Some teachers received support for administering the CPAA (particularly if there were not computers in their own classrooms) and for interpreting results. Several said that they would appreciate a formal training on both the DRDP and CPAA to make sure they are using the assessment tools correctly and to their full benefit.

Collaboration and communication with parents and other teachers. Teachers have limited time to meet and collaborate with each other outside of monthly meetings. Informal collaboration and resource sharing occurs during breaks and on the playground. Teachers reported that they do not have a chance to discuss how children from their own classrooms are doing when the children rotate to another teacher. Teachers do not discuss assessment results in great depth during parent conferences, but they do use results to inform completion of the conference form that discusses children's strengths, needs, and ideas for parents to support learning. In addition to information on the kindergarten transition form, teachers felt it would be important to share information with kindergarten teachers on behavior and social-emotional development.

Views on technology. Most teachers embraced technology and felt that young children should be exposed to computers early on and develop the skills needed to use technology in various contexts. A few teachers did not embrace technology and felt it distracted from learning other skills.

Successes and challenges in assessment. Even though they find it time-consuming and challenging to complete, teachers typically value the role the DRDP plays in informing instruction. A few teachers value the objective data provided by the CPAA, and those who had used recommended activities evaluated them positively. Challenges associated with the CPAA included a lack of teacher familiarity with the tool and situating computers so that children are not distracted while trying to complete the assessment.

2. Implications

As described in Chapter I, although the ELTM has many components, one key feature is the expansion of information available to teachers and parents regarding children's skills through the integration of the CPAA into classroom practice. Along with the DRDP, the CPAA could be used for communicating with parents and collaborating with other teachers—both within the CDCs and potentially with the elementary teachers that will be teaching CDC children in subsequent years—to better support children. Here, we consider implications of findings for these features of the ELTM with an eye toward the blended learning approach that has been embraced in the district.

Provide additional training for using assessments. Even though the CDC teachers are a very experienced group, they expressed a desire for more formal training (beyond a one-hour monthly meeting) about their assessment tools. Although they value the support provided by supervisors, a formal training would help CDC teachers feel they were properly implementing the DRDP (which has gone through multiple revisions since it was introduced) and support skills for review and interpretation. For the CPAA, a formal training in which CDC teachers and the MFLP coordinator have the opportunity to see the CPAA implemented from a child's point of view may

promote buy-in to efforts to integrate technology into practice and enhance perceptions of the value of the CPAA results and recommended activities. The administrative/supervisory teams for the CDCs and MFLP have the knowledge base and experience to implement such trainings.

Support teachers in embracing and enhancing their technology skills. District leadership has embraced technology, but not all teachers have done so. As the blended learning model becomes more established in district schools (including the CDCs), it would be valuable to assess whether teachers are properly trained on using technology in the classroom (including those who embrace it) and have an opportunity to share concerns about the role of technology. For example, do the teachers who are leading rotations that include technology follow consistent procedures for supporting children as they use iPads? Are teachers who are more resistant to technology discounting or ignoring iPads as a potential classroom resource? For the CPAA in particular, teachers who are not typically involved in helping children complete it because there are no computers in their own classrooms may benefit from watching some of their students do the assessment.

Teachers may also be more likely to embrace technology if they see that it can save them time and enhance their practice. For example, it was not clear whether teachers develop DRDP classroom summaries manually or use the Excel file developed by DRDP that will automatically tally classroom results based on data entered for individual children. The Excel file would provide teachers with a record that addresses both individual children and the class as a whole. DRDP has also developed online tools that could introduce greater efficiencies.

Provide teachers with additional opportunities to collaborate with their colleagues. Teachers are eager to share ideas and resources and plan together. However, time is an issue. Perhaps between monthly meetings, teachers at each CDC could be given brief, formal opportunities to meet and collaborate. To support collaboration across the CDCs, teachers could develop an online community for sharing ideas and concerns. The MFLP facilitator could participate as well. With guidance from administrators or supervisors, the combination of the one-hour monthly meeting with brief meetings in between and/or online discussions could help staff develop their own professional learning community and potentially increase comfort with technology. Because teachers do not have time to discuss with rotation teachers how their own students are doing in other classrooms, these collaborations might also be an opportunity for teachers to develop a shared understanding of what they should be assessing to determine what children are learning in rotations.

Have supervisors support teachers in integrating the CPAA results and resources into practice like they do for the DRDP. To the extent the administrators want teachers to embrace the CPAA, ongoing support from supervisors that mirrors what is provided for the DRDP would help. For example, in monthly meetings, teachers and supervisors could together review sample reports from a classroom and individual children. Supervisors could recommend select activities for teachers to implement from among the many recommended. As in the case of the DRDP, teachers could be asked to select goals based on CPAA results. It might also help to review with teachers the overlap between the CPAA and DRDP, noting when similar skills are being tapped.

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III. THE ROLE OF THE CPAA IN ELEMENTARY SCHOOL TEACHER PRACTICE: QUALITATIVE FINDINGS

Key Findings and Implications

Most teachers reported using the CPAA regularly in the prior year. Most teachers reported the CPAA was typically accurate. Several teachers questioned the validity of the results for some students, with ratings being higher or lower than expected.

Teachers reported that CPAA data were reviewed in combination with other forms of test data to get a more complete picture of students' capabilities. Most teachers reviewed the CPAA data soon after administering it or in order to help them complete report cards and progress reports. A few reported that they reviewed CPAA reports more for students who were struggling or who seemed particularly advanced in certain areas.

Teachers used the classroom and individual reports for planning. The most commonly reported use of CPAA reports was to create leveled groups according to students' needs. Teachers indicated they were selective about what elements of instruction and planning were informed by the CPAA. Teachers were typically enthusiastic about the value of the recommended activities but were mixed on the degree to which they found the activities helpful, given the time needed to prepare them. Most teachers indicated that if they were confronted with conflicting assessment data, they would trust one of the other assessments with which they have greater familiarity and practice over the CPAA.

All respondents said that they felt adequately prepared to implement the CPAA, perhaps because all reported having received some kind of formal training provided by the CPAA developer, either in person or through a webinar.

Among those who mentioned regular opportunities to discuss data and collaborate, teachers said that CPAA data did play a part in the conversations, but their role was supplemental to other assessment data and resources.

Most teachers reported they shared CPAA parent reports and recommended activities with parents, either directly or by discussing information from the reports in combination with information from other assessments; sometimes teachers targeted parents whose children might need some extra support. Several teachers used CPAA results and activities to highlight how parents can support children's learning outside the classroom.

Strengths of the CPAA related to administration (easy to administer, time-saving and convenient, child friendly) and the value of the data and reports provided (easy-to-use data, an alternative perspective on students, information for instruction, helpful for informing parents).

Implications for District Early Learning Programs

- CPAA parent reports could be a valuable resource, but teachers should be selective in sharing activities with parents so as not to overwhelm them. Asking parents for support in creating activities recommended for teachers could be a positive way to promote family engagement.
- Elementary teacher responses highlight that they value opportunities for collaboration. CDC teachers desire and may benefit from such opportunities as well.
- In addition to the general training on using the CPAA, teachers would benefit from training or support that helps them understand exactly what the CPAA addresses (as compared to the assessment tools they usually use) and to perceive that the CPAA is simply another perspective on what children know and can do. Such training may help communication the value of multiple perspectives when planning instruction.
- Teachers need a forum in which to share concerns about whether the CPAA is accurately assessing children's skills. By considering the reasons for such differences with supervisors and/or other teachers, their assessment skills may grow.

A. Sample and Methods

In fall 2012, we conducted interviews with district elementary teachers that focused primarily on the CPAA. Information from these interviews can provide insights on how to maximize the value of

the CPAA to the CDCs and MFLP. Elementary school teachers came from three schools that had been targeted for participation in the ELTM, two of which were 21st Century schools. A fourth school was invited to participate in the study but declined to do so. We invited kindergarten and first grade teachers from each school to participate and stopped once our targeted number of interviewees was reached (two or three from each school). Note that kindergarten and first grade teachers from 21st Century schools may have been teaching older children as well because those schools do not follow traditional grade structures. We interviewed eight teachers (two or three teachers from each school in the sample), conducting one-on-one interviews with five teachers and a small group interview with three teachers. All conversations lasted approximately one hour. Children who attend the CDCs and participate in the MFLP will ultimately end up in these or other district schools.

All eight teachers were very experienced, having taught, on average, for 16 years (a range of 9 to 26 years). They reported teaching children from kindergarten and grades 1, 2, and/or 3 in the 2012–2013 school year. Six of the teachers were from 21st Century schools; four of them taught children from multiple grade levels. (Among the eight teachers, three taught kindergarteners, five taught 1st graders, three taught 2nd graders, and two taught 3rd graders.) Most of the elementary teachers we interviewed had used the CPAA multiple times. One teacher had used it only once (with one child), four teachers had used the CPAA two or three times, and two reported using it 10 to 12 times. Six of the eight teachers reported they planned to use the CPAA in the upcoming year.⁵

Through the interviews, we sought to capture information on teachers' experiences and their reflections on administering, reviewing and interpreting, planning, integrating, collaborating, and sharing with parents using child assessments and the data they provide. As mentioned previously, we focused primarily on the implementation of the CPAA, but also asked teachers to share their thoughts on other assessments. Because technology issues in the district delayed implementation of the CPAA in 2012–2013, teachers reflected on CPAA use in prior school years.

B. Analysis and Findings

We followed the same analysis procedures as for the qualitative interviews with early educators from the school district. Notes from the qualitative data collection were reviewed for consistency and completeness in preparation for coding. The analysis focused on examining the themes that emerged in relation to each research question and on identifying examples of practice relevant to each question. As in the prior chapter, we typically do not provide precise counts of teachers who endorsed a given theme. To convey the prevalence of themes, we use the following terminology:

- “Few” refers to two or three respondents
- “Several” refers to groups of four or five respondents
- “Most” refers to more than five respondents but not all

We now present findings, organized according to the study research questions (RQs) identified in Chapter I. Note that the fifth research question regarding teachers' views on technology was not addressed in these interviews.

⁵ We did not follow up with the teachers to determine whether they ultimately used CPAA. Because the district was transitioning to using the Common Core to guide instruction, assessment practice was in flux at the elementary level in 2012–2013.

RQ1: How do teachers go about administering assessments?

Administering the CPAA. Teachers described how they administered the CPAA, including whether students completed it as a class, in small groups, or alone, as well as the length of time required to complete it. It is important to note that some of the elementary schools have designated computer labs, whereas others do not. Teachers' reports revealed that problems with the computers or equipment hindered ongoing use of the CPAA, whereas regular access to functioning computers facilitated CPAA use.

Most teachers reported using the CPAA regularly in the prior year, and most reported going to a computer lab to complete it with the entire class all at once. A few teachers also mentioned that they could have a few students finish the assessment in the classroom if they ran out of time. Teachers reported needing 30 to 60 minutes to complete the assessment, inclusive of setup time. Students typically required 20 to 30 minutes to complete the assessment (based on reports of three teachers) but some may have required more time. Four teachers reported setup times that ranged from 10 to 20 minutes.

Teachers were asked to share their thoughts on how children managed the technology required to complete the CPAA, including the mouse and headphones. Most of those who commented on the topic indicated children had the computer skills necessary for completing the CPAA, although one felt there were exceptions in her class. All felt the tasks were appropriate for the children, but one expressed concern that some ELL students may not have understood all of the tasks: "They're really good except those that come in with no language—no English. It was difficult for them. The others, they loved it, and it was easy."

Teachers were asked if they thought the tasks in the CPAA accurately capture what the children know and can do. Several teachers shared impressions of whether the CPAA was accurate: only one gave an unqualified "yes," and another gave an unqualified "no." The remaining few said there were exceptions to the accuracy, because the CPAA results did not necessarily match other information they had collected on children's skill development. One teacher commented that this was especially true for young children, in the hard-to-assess area of comprehension:

Over the years I have seen that there are students that are guessing but don't know it. . . . For most of the kids, they can guess correctly but still not know the content. . . . But I felt my kids did poorly when they tell the story of all these people, and it goes on forever, and then they ask a [comprehension] question at the end. And every year my class fails it. It's too long for a 5-year-old."

Another explained that inaccuracies arise in the assessment of reading:

For reading, I see lots of gaps between the progress report and the test I give them in the classroom. It's mixed—if the kids are visual learners, then the CPAA helps them. But I have a group of kids where I have to sit down and point out, "This is what it asked you to do." . . . There is one kid, he can read, but he isn't reading it correctly. But the "proficient" and "not proficient" levels in the CPAA don't correlate with reading levels in the classroom.

One teacher who did not comment on accuracy commented that the CPAA, like most assessments, provides a perspective of a child's capabilities at a particular point in time. That perspective may be different than the one captured by the teacher through other, noncomputerized forms of testing: "It's a snapshot; it's just another assessment. It could tell the parents this is how

their child scored with on-to-one letter assessment, letter names, letter sounds. Sometimes the children don't want to respond to us, but with this, they use the computer to show what they know, and they respond to the computer."

RQ2: How do teachers review, interpret, and plan based on assessment data?

Reviewing and interpreting. Our discussions with elementary teachers about practices related to reviewing and interpreting data focused primarily on the CPAA, but we did ask them to provide an overview of other sources of assessment data to provide context for conversations about how CPAA data are used. Nearly all teachers mentioned the district's Benchmark Assessment,⁶ both literacy and math components. This battery of assessments was administered three times a year and conducted one-on-one in the early elementary grades. The literacy benchmark includes the Developmental Reading Assessment (DRA, a running record) for grades 1 through 3; it provides information on students' decoding, fluency, and comprehension skills. Kindergarten teachers indicated they use the Kindergarten Entry Assessment at the start of the year as well as checklists, observations, and teacher-created assessments throughout the year. For older grades, other sources of assessment data include chapter tests and other assessments associated with the curriculum, teacher-created tests, and data from a computer-based math program.

Many teachers mentioned that CPAA data are reviewed in combination with these other forms of test data to get a more complete picture of students' capabilities. One teacher commented on the value of an alternative perspective:

As teachers, I think sometimes we scaffold too much, so it's nice to see what they can do independently. They don't have a relationship with the computer; they have an everyday relationship with us and can read our faces sometimes. It's nice that [the CPAA] can adjust, and it's nice to have someone else test your kid—to see "oh okay, that matches..." It's another way of assessing.

When asked about the frequency with which they review CPAA reports, most reported that they only review CPAA data soon after administering the assessment or in order to help them complete report cards and progress reports. A few reported that they reviewed CPAA reports more for students who were struggling in particular areas or for those who seemed particularly advanced in certain areas. Said one teacher, "I would print out individual reports for struggling students to see where they were struggling. I attached recommend activities to the progress reports as suggested activities, to lead [parents] in a direction of something to do." One of these teachers indicated the report was used as a piece of evidence in a student review team:

The parents and the team [support/resource teacher, principal] would look at the CPAA individual report. It's to gather information as to where the student is and if [he or she is] progressing. It wasn't to qualify [the student] for IEPs [Individualized Education Programs] or special education. A student needs a review team if he or she is below grade level and [has not been] making progress, and if the teacher feels the student needs other strategies to help [him or her] move forward. CPAA provides another assessment.

⁶ The district's Benchmark Assessment was suspended midway through the 2012–2013 school year to allow for development of a new version aligned to the Common Core.

Only one teacher reported receiving any direct assistance with reviewing CPAA reports; this occurred in the context of a grade-level team in a 21st Century school. Another teacher commented she could have gotten help if she needed it.

Planning. When we explicitly asked teachers whether the CPAA informed planning and classroom practices, several teachers said this was the case. In the rest of this section, we focus on how teachers used individual and class reports. We return to use of the parent reports in a subsequent section.

Teachers shared information on whether and how they used CPAA data in planning instruction for individual children, small groups, and the entire class. Most reported using class-level reports and individual reports, and several used parent reports. The most commonly reported use of CPAA reports was to inform the creation of leveled groups according to students' needs. Although most of the teachers who used the CPAA for planning instruction used the groups recommended within the class report, teachers also reported relying on individual results to create their own groups. Two teachers explained their respective approaches. One said, "For math, I use the proficiency levels—1 to 4. But I also click on the strands to go deeper, so I can group the kids based on the results. First I use the strand to group the kids. I use the classroom report to split the class into four groups based on ability levels for math and use the individual report to form small groups." The other said, "I think I used [the CPAA] more for small groups than for individuals. I used the language arts activities a lot during centers, but not as much for math. It was the first year of the program and we implemented a lot, so I had to pick and choose what I could handle."

One teacher commented on the usefulness of CPAA for grouping, given the school's new 21st Century approach:

There's a teacher in a room with eight or nine kids, and in the next room the children are in collaboration, and another [group] is the learning lab, and every 35 minutes they rotate. You set the groups up—the colors are the student groups—so we can take CPAA data and put them into the color groups for each domain or skill. So when they get back from the learning lab, I'm doing this activity with them.

Another teacher reported using the individual reports more, because they were more useful than the class report for guiding instruction at the whole-class level. "I would [use them] at the beginning of the school year, and the first two times I give the assessments. I use [the reports] to determine 'Do I have to move back or move forward?' . . . I thought that the individual reports helped me better guide my whole instruction."

Teachers indicated they were selective about what elements of instruction and planning were informed by the CPAA. For example, teachers differed on whether they used the CPAA for informing language arts or math instruction: "Last year, I used it mainly for math, and also for reading and language arts. For reading and language arts, I didn't use it to group as much—I based that on my running record and the district benchmark. I used the CPAA and district benchmark to group for math, and then go into details with chapter tests and observations."

Teachers were typically enthusiastic about the value of the recommended activities, but they were mixed on the degree to which they found the activities helpful, given the time needed for preparing them. One teacher said, "The only thing is that it's time-consuming. If you have seven groups, that's a lot of games that you have to make, and it's a lot of time." Another teacher commented that she only used the activities if she did not have to create something new, and

another commented she did not use the activities because they, “took too long to prepare, or because I already had something similar.”

Planning with multiple assessments. In light of the fact that teachers use multiple forms of assessment to plan instruction, we asked them about how they responded to conflicting results from multiple assessments. It is important to note that most teachers did not report extensive conflict between the CPAA and other assessments (despite the concerns about accuracy noted above). As described by one teacher, “Most of the assessments are pretty standard as to how they do in the classroom—it usually matches up. I haven’t found they score really well here but not at all there.” One teacher said math results rarely conflict, but for reading, it is difficult to align CPAA scores with the DRA because the CPAA does not address all of the same domains as the DRA.

Consistent with what CDC teachers reported, most teachers indicated that they would trust one of the other assessments with which they have greater familiarity and practice over the CPAA, if confronted with conflicting assessment data. These included benchmark results, one-on-one assessments, or anecdotal records. One teacher said, “We base things more on our observations and our assessments because CPAA was just a snapshot.” Said another, “The CPAA data matches the benchmark a lot, so the CPAA serves as the backup.”

Another described the choice to prioritize data from other assessments over the CPAA as stemming from familiarity, even though she does consider the CPAA as part of the planning process:

At that point, I look at the student and try to figure out, was it because CPAA was on the computer and it was more engaging, and so they were more attentive? Or if in the classroom, were they trying to go ahead rather than stay on pace with me? I try and see which of the assessments is telling where the student is at. I rely on the benchmark because I’ve only used the CPAA one school year. . . . I’m going to rely on something I’ve used more often, that I find more reliable . . . which isn’t to say that the CPAA isn’t reliable. If I used it frequently, it could be that it holds more credibility for me than the first time I used it.

In raising the issue of reliability, this teacher touched on a theme raised by several teachers—whether they could consider the results valid, either overall or for specific children. For example, a few teachers hypothesized that alignment issues between the CPAA and other assessments may stem from children being able to guess on the CPAA or from the CPAA being too lenient in determining whether a standard has been met. Two teachers reflected on this issue in the following way. One said:

When we started getting the results and looking at the scores, we had a question about what the CPAA was demonstrating students were capable of. The results from the test didn’t match what students were doing or demonstrating in the classroom. What do the numbers really mean? Is a 4 really mastery or above? Is 3 grade level? . . . We had this discussion last year . . . [about] questions and concerns about the CPAA. We said we don’t see why, for the students who are at risk, they are hitting 4, 3, 3, 4. If this is supposed to drive our instruction and the student is scoring this number here [on the CPAA], but in the classroom it’s not the same case, we could be going down the wrong path if we only follow the CPAA recommendations.

The other teacher said, “I did notice that occasionally you would have someone low that would come out high on the CPAA. There are some that I would think would be proficient or advanced, but didn’t quite make it. I’m more likely to trust something I’ve administered one-on-one.”

However, rather than questioning validity, a few teachers emphasized that differences may reflect that the CPAA offers an alternative perspective (and assesses skills in a different manner) than other forms of assessment in use.

RQ3: What formal and informal supports are available to teachers as they implement and review assessments?

All respondents said that they felt adequately prepared to implement the CPAA, perhaps because all reported having received some kind of formal training provided by the CPAA developer, either in person or through a webinar. Respondents reported that the in-person training gave teachers the opportunity to try out and interact with the program. A few described the training as “good” or “helpful,” whereas others were neutral. One teacher explained that the training was helpful because the hands-on practice allowed her to see how a computerized adaptive assessment works:

We had one or two training days where they took us through the program and explained the benefits of the CPAA as an adaptive assessment—that if it recognizes that a student is doing better, it adjusts up, or if they’re struggling, it adjusts down. . . . They let us play around with it, and see what happens if you get a wrong answer. . . . I thought the training was really good. It got us familiar with the program as well as what parts of it they had available for teachers.

A few teachers felt that they did not need much training for the CPAA because they found it to be fairly self-explanatory. Said one teacher who did not plan on using the CPAA in the upcoming year:

I thought that I could figure it out on my own and didn’t need the training to use or understand the program. It does give you a lot of data, but I think with most of my kids, I know what to do for them. I felt like it wasn’t anything new. I probably stayed for about 20 minutes of the training. Yeah, I played around with it to see what it would be like for my kids, and it wasn’t anything hard for them to figure out.

Respondents were also asked if they would like to receive further training on the CPAA. Of the six teachers who planned to use the CPAA this year, only one commented on wanting more training, due in part to the fact that the scores on the assessment were not matching her impression of how children were actually doing; she thought that the scaffolding and prompting provided by the program might be inflating students’ scores.

RQ4: How do teachers use assessment information in their collaborations with other teachers or parents?

Collaborating within and across grade levels. All of the elementary teachers reported that they have some time to collaborate, either formally or informally. Most of the elementary teachers reported that they have regular meetings for collaboration within and across grade levels. The 21st Century schools both have built-in time for collaboration at least once a week. The non-21st Century school has monthly grade-level meetings. However, the teachers who were not part of 21st Century schools described only informal cross-grade collaborations. Formal opportunities described by teachers include “pull-out collaboration days” and a “monthly collaboration for examining student data.” Teachers described informal collaborations, such as a weekly conversation over coffee or sharing ideas over lunch. A few teachers indicated within-grade collaboration was more consistent than cross-grade collaboration.

We asked teachers to describe whether the CPAA played a role in their collaborations. In general, the CPAA was not mentioned as augmenting cross-grade or within-grade collaboration; teachers who collaborated regularly before the introduction of CPAA have continued to do so, and teachers who had not collaborated much in the past continue to not collaborate. Among those who mentioned regular opportunities to discuss data and collaborate, teachers said that CPAA data did play a part in the conversations, but its role was supplemental to other assessment data and resources teachers were using. One teacher explained, “Basically, we have a collaboration day and we bring the data. The CPAA data matches the benchmark a lot, so the CPAA serves as the backup.” Another said that use of the CPAA was discussed during collaboration time when it was first adopted, but that teachers did not share results: “We talk about what’s going on in our classes, and when they started the CPAA, it was a big topic of conversation. The discussion was about that, but it’s very informal—it’s more of a meet-up. We did not talk about results.”

Several teachers commented on the value of collaboration for cultivating mutual support and sharing ideas, with one stating, “The best part of the week is collaboration.” Said another, “It’s nice to see other classrooms and know what they’re doing, and pick up on new things. [I say] ‘Oh, I can do that, I can tweak it and make it work for my class.’”

We also asked teachers whether they have observed teachers in other grade levels. Several said they had observed teachers in other grades within their own school. Only one said she had been to observe the CDC teachers. A few said they had some interaction with the ELTM program and/or the CDC teachers.

One early elementary teacher, who reported having some direct exposure to the CDC program and occasional opportunities to collaborate with preschool teachers, said that she perceived openness to sharing and communication between the preschool and elementary schools:

[I know a] little bit. I know [a CDC administrator] tried to contact us, and we’ve gone to meetings, talking about what we do and what goes on at the CDCs. I attend maybe one meeting a year, but other than that, we haven’t fully discussed it. . . . They always invite us to their open house at the end of the year. . . . I also went to a CDC open house, where we discussed what they do at the CDC, but that’s it, meetings-wise. For me, it’s more of an “I’m here for them to ask questions.” The CDC teachers can come observe and see what the day is like and what the program is like. We’ve always had an open door policy to both them and the teachers at the other schools.

Communicating with parents. As with the preschool teachers, we inquired about how elementary teachers share information on children’s progress using assessment data in general and CPAA data in particular. Most teachers reported they shared CPAA parent reports and recommended activities with parents, either directly or by discussing information from the reports in combination with information from other assessments. Sometimes teachers targeted parents whose children might need some extra support. Two teachers did not seem to have access to the parent report, but nonetheless shared results and activities based on the individual report for each child provided to the teacher. Several teachers said they provided CPAA results and/or activities during parent–teacher conferences. Several also reported that they used them in combination with other assessment results to complete progress reports or report cards. For example, “We used the parent report and we gave that along with the report card. I did give out some of the games suggestions to [parents of children] who were a little lower, since the parents wouldn’t know what to do.” Another teacher said:

Yes, I found it to be valuable once I got the results and looked at how my students had performed. When I had conferences with parents, I would share the document . . . and caution that it was just a snapshot. I tried to highlight three to four activities that would be beneficial to the families, those that they could practice at home. The fact that it was available in Spanish was very helpful. Since there's a difference in languages, they think that they can't do the letter sounds or word games.

This teacher's comment also captures the value placed on the availability of Spanish-language versions of CPAA reports, although a few teachers indicated they did not have access to these and/or that parents spoke other non-English languages. However, teachers did share information on strategies they use to communicate children's progress to parents when there are language barriers. Said one teacher, "I've never seen a [CPAA report in a] different language. In the past, I'd put everything through Google Translate that I wanted to send to a parent." Others said that they utilized their own dual-language skills or else had a translator present during conferences with parents who speak Spanish or Vietnamese.

Several teachers use CPAA results and activities to highlight how parents can support children's learning outside the classroom because, according to one teacher, "A lot of times the parents want to do something but don't know what's appropriate, or what they should be doing. Some of them aren't online, so they can't hunt for activities." A few teachers who used the CPAA to communicate with parents during conference time said they used all of the recommended activities: "I share reports at conference time. Last year I printed all the suggested activities for the parents. It showed where there child was having difficulty, so if you try this activity it may help clarify where they're having trouble." But a few others indicated the reports and lists of activities were too long and needed to be edited or shortened before being shared with parents. "I cut out some, because there's too much for the parent to do. If you give them too much they won't do anything at all. Just do enough. I had to edit the parent reports for the parents, cut and paste mostly, and reword." Consistent with what teachers told us about the suggested classroom activities, one teacher said regarding the parent activities, "We would have loved to make the games for our programs, but we didn't have enough time." Teachers were typically unaware of whether parents actually implemented the suggested activities at home.

RQ6: What do teachers see as the primary successes and challenges in their assessment practice?

The final interview questions asked teachers to reflect on the primary successes and challenges associated with the CPAA. In this section, we summarize responses to those concluding questions.

Successes. All but one teacher shared impressions of successes and strengths of the CPAA, including one who did not plan to use it in the upcoming year. Overall, elementary teachers found the CPAA useful. Successes related to administration (easy to administer, time-saving and convenient, child friendly) and the value of the data and reports provided (easy-to-use data, an alternative perspective, informs instruction, helpful for informing parents).

- **Easy to administer.** A few teachers felt that the CPAA is easier to administer than other assessments because students complete it independently and it can thus be completed with the whole class at once. One said the ease of use made her want to use it in place of other, lengthier tests administered by the teacher. "Administering the test was a success, and it was easier to administer the CPAA. If there was a correlation between the CPAA and the running record that would be so much easier."

- **Time-saving and convenient.** Several teachers felt that the CPAA saved time because it was quick to administer and the reports were generated immediately, without any work on the teacher's part to tally or summarize results. One teacher explained that the amount of time to obtain data on the entire class was under an hour using the CPAA, in contrast to other forms of assessment that require observation and documentation over two months. "It's short, it doesn't take more than 45 minutes . . . it's short and sweet and the information is already there. I don't have to read all the reports—it's time-saving and already done for you." Said another, "I think it's beneficial in the way it's administered, so that I don't have to sit with each student one-on-one. Also, I like that I get the results instantly. I can go through it and see how my student has done."
- **Child friendly.** A few teachers felt that the tone and format of the CPAA are oriented toward young children and that made it easier for them to use. One teacher said, "It was geared toward the child, and I liked that."
- **Easy-to-use data from the reports.** One benefit reported by teachers was the instant, easy-to-use data. Immediately after the CPAA is administered, teachers can review results and suggested groupings. One teacher noted that she is selective in the data she uses: "The success is the phonics test, which I like. I can get a lot of data from that and plan accordingly. The reading is not as successful. The math I like, it gives me data to start with—a baseline at the beginning of the year."
- **Offers an alternative perspective.** A few teachers reported the CPAA offered a perspective on children's skills and abilities that might differ from what they learned through other tests or observations. "I loved the printout, how it broke down each section. . . . The teacher report gave us a different view of the child." Another teacher reflected:

It's just a different form of assessment, because they may perform better than on pencil and paper. That was an eye-opener. Some do better . . . whether they can answer on the computer, but just won't say it. Some students won't say anything at all to me, but can answer on the computer. I don't know why.
- **Informs instruction.** A few teachers felt it was especially useful for tailoring instruction and forming leveled groups. One teacher explained: "I do like the activities and that they group the kids for me. . . . It's by domain. . . . It also shows challenge activities, for kids who did really well."
- **Helpful for informing parents.** In considering successes, a few teachers reiterated the value of the parent reports and suggested activities. "It was helpful to inform parents with some concrete activities and where the areas were—language arts or fluency or sight words. It helped to clarify what exactly I meant [during conferences] and what they could do at home to support the child."

Challenges. The challenges noted here were identified by the six teachers who planned to use the CPAA in the upcoming year. Challenges were more varied than successes, going beyond administration and reports, and each challenge was identified by only one or two teachers.

- **Issues with technology.** Although several teachers commented on the technology issues the district faced at the start of the 2012–2013 year, only one teacher identified it as a challenge for her practice. Delays meant that she could not get baseline data on her students.

- **Administering the assessment to large groups of children.** Getting full classes of children logged on could be challenging, as children had to sit and wait as teachers went from station to station. Teachers reported that help from another staff member alleviated this problem.
- **Lack of alignment with what the teacher knows of the child.** One teacher explained, “When you see a kid who’s proficient or advanced, and their results are not right—then what?”
- **Lengthy reports for parents.** Parent reports used “too much paper.”
- **Activities take too long to prepare.** Recommended activities required too much preparation time. One teacher described a solution: “The PTA president stepped in with the high school student volunteers, and they made some of the activities. I tweaked some of the activities so my students could do them independently.”
- **Partial implementation limits collaboration with other teachers.** One CPAA user lamented that she could not collaborate with others regarding results because other teachers were not using it. “I want more information, so I test them a lot. But the other teachers didn’t have it, so we couldn’t talk much. If they don’t do it, what’s the point?”
- **Lack of alignment with Common Core.** One teacher felt that the lack of alignment to Common Core standards made the CPAA less useful. (However, a version of the CPAA aligned to these new standards does exist.)
- **Computer format focused on soliciting answers rather than process.** One teacher explained that the real challenge was that her children did not work out their answers on paper before selecting a response:

My kids never took to using scratch paper—they’re getting things wrong that they know how to do. If they would just use paper, if they’d go back to writing it down. . . . There’s something about the [computer] format that means they can click through it—they don’t even realize they have paper there that they can use.

For the two teachers who did not plan to use the CPAA in the upcoming school year, one indicated she was neutral about the CPAA as a tool but simply felt that students were assessed “so much as it is.” The second teacher expressed doubts about the CPAA’s accuracy and value of the guidance:

I was disillusioned when—I only did it once—but I had a resource kid who didn’t even know his letters, and he passed as advanced. And it was like, “No.” I don’t even know what I was using at the time—Curriculum Associates, or the benchmark? And I felt that the guidance that they gave was—I don’t know, that it wasn’t all that useful.

C. Summary and Implications

In this section, we summarize key findings from the qualitative interviews with staff from the district elementary schools and present implications for district consideration. The summary is organized according to the study research questions. The implications follow and focus on potential lessons for the early learning programs.

1. Summary

Administering assessments. Most teachers reported using the CPAA regularly in the prior year and most reported going to a computer lab to complete it with the entire class all at once. Teachers typically felt children had the computer skills necessary for completing the CPAA and that the tasks were appropriate for the children. Most teachers reported the CPAA was typically accurate. However, several teachers questioned the validity of the results for some children in their classrooms, with ratings being higher or lower than expected.

Reviewing, interpreting, and planning based on assessment data. Teachers reported that CPAA data are reviewed in combination with other forms of test data to get a more complete picture of students' capabilities. Most teachers reviewed the CPAA data soon after administering the assessment or in order to help them complete report cards and progress reports. A few reported that they reviewed CPAA reports more for students who were struggling or who seemed particularly advanced in certain areas. Teachers used the classroom and individual reports for planning. The most commonly reported use of CPAA reports was to inform leveled groups according to students' needs. Teachers indicated they were selective about what elements of both instruction and planning were informed by the CPAA. Teachers were typically enthusiastic about the value of the recommended activities but were mixed on the degree to which they found the activities helpful, given the time needed for preparing them. If confronted with conflicting assessment data, most teachers indicated that they would trust one of the other assessments with which they have greater familiarity and practice over the CPAA.

Support for assessment practice. All respondents said that they felt adequately prepared to implement the CPAA, perhaps because all reported having received some kind of formal training provided by the CPAA developer, either in person or through a webinar.

Collaboration and communication with parents and other teachers. Among those who mentioned regular opportunities to discuss data and collaborate, teachers said that CPAA data did play a part in the conversations, but its role was supplemental to other assessment data and resources teachers were using. Most teachers reported they shared CPAA parent reports and recommended activities with parents, either directly or by discussing information from the reports in combination with information from other assessments; sometimes teachers targeted parents whose children might need some extra support. Several teachers used CPAA results and activities to highlight how parents can support children's learning outside the classroom.

Successes and challenges in assessment. Strengths related to administration (easy to administer, time-saving and convenient, child friendly) and the value of the data and reports provided (easy-to-use data, an alternative perspective on students, information for instruction, helpful for informing parents). Challenges were more varied than successes, going beyond administration and reports, each challenge was identified by only one or two teachers.

2. Implications

In Chapter II, we presented implications for assessment practice based on CDC and MFLP experiences. In this chapter, we consider what the elementary teachers' experiences signal about what could be beneficial for the CDCs. In general, data from elementary teachers bolster implications identified in Chapter II and highlight a few additional considerations.

- CPAA parent reports could be a valuable resource for the CDCs and MFLP, but teachers should perhaps be selective in sharing activities with parents so as not to overwhelm them. Asking parents for support in creating activities recommended for teachers could be a positive way to promote family engagement in the CDCs. For example, a family event could involve having parents create activities for use in the classroom and to take home.
- Elementary teacher responses highlight that they value opportunities for collaboration. As noted in Chapter II, CDC teachers desire and may benefit from such opportunities as well.
- In addition to the general training recommended in Chapter II, teachers would benefit from training or support that helps them understand exactly what the CPAA addresses (as compared to the assessment tools they usually use) and to perceive that the CPAA is simply another perspective on what children know and can do. Differences in performance could stem from differences in what is being assessed and from the fact that the skill is being assessed in a different context.
- Teachers need a forum in which to share concerns about whether the CPAA is accurately assessing children's skills. By considering the reasons for such differences with supervisors and/or other teachers, their assessment skills may grow.

Finally, we return to one of the goals of ELTM: to use assessment data to enhance cross-grade collaboration. Although both the early educators and elementary teachers reported limited opportunities for cross-grade collaboration or information sharing, one teacher did highlight the potential value of the CPAA for creating such connections: "I'd like to see if the PreK is going to use [the CPAA]. I would like those reports to come with the child as they enter kindergarten." In combination with the Preschool to Kindergarten Transition Form, CPAA results could provide kindergarten teachers with a broader perspective on their incoming students.

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IV. ALIGNMENT OF DRDP AND CPAA RESULTS: QUANTITATIVE FINDINGS

Key Findings and Implications

Both the DRDP and CPAA are sensitive to children's progress in literacy and mathematics over the year. For the DRDP, the vast majority of children have a higher rating in spring than in fall. For the CPAA, the vast majority of children have either the same rating in spring as in winter (indicating they made enough progress to maintain the same trajectory) or have a higher rating in the spring. For both assessments, some children received lower ratings later in the year as compared to earlier in the year.

Comparisons of the winter (February) CPAA versus spring (March) DRDP show that across the literacy and mathematics constructs addressed, one-quarter to one-half of children with data on both the DRDP and CPAA had the same rating for the spring DRDP and the winter CPAA. In most cases, children had a higher rating on one assessment than on the other; it was typically higher on the DRDP. In terms of correlations, all were lower than expected for conceptually aligned constructs, showing that children are not rank ordered the same way by the two tools.

Overall, the majority of children demonstrated proficiency in literacy and mathematics on at least one of the assessment tools in the spring, with a substantial proportion achieving that level on both the CPAA and DRDP. Among children who are ELLs, in most cases the majority demonstrated readiness on at least one of the assessment tools, but as compared to the full sample, a smaller proportion demonstrated mastery through both tools. Not surprisingly, more children who entered the program as 4-year-olds than those who entered as 3-year-olds showed proficiency on both tools.

Implications

- Support teachers in understanding CPAA content and scores. Relative to the DRDP, the CPAA poses challenges to teachers because they cannot see the breadth of what is addressed—item banks are not available to teachers for review. It may also not be clear to teachers what skills are addressed in the fall, winter, and spring assessments relative to what they emphasize in their classrooms. Reviewing individual child reports that briefly summarize the types of items addressed by a child could help shed light on both the meaning of CPAA scores and the content addressed.
- Work with teachers to understand conceptual alignment of the CPAA and DRDP and how to use the tools together. Individual CPAA reports can be examined alongside DRDP measures to strengthen understanding of alignment. This can also support teachers in understanding how the assessments complement one another. It would be helpful to consider the time between assessments; children will continue to progress during even brief windows of time.
- Give teachers an opportunity to observe students completing the CPAA. Teachers can assess whether children are engaged or guessing. For example, is a child always picking the same option in a multiple choice? Are students paying attention to the screen or to their surroundings? Do some children seem to struggle with the computer? These observations can promote teacher buy-in to the CPAA, can help them evaluate what scores mean, and may shed light on why some children receive lower ratings in the spring.
- A lack of alignment between the CPAA and DRDP ratings could relate to a lack of alignment in what each assesses, in how they assess it, or in inappropriate evidence being applied when developing DRDP ratings for some measures. Because any of these could be at issue, it would be valuable for teachers to consider with supervisors whether DRDP ratings are being used consistently and whether evidence is used appropriately.

A. Sample and Methods

To meet the study's second goal—to examine what teachers learn about children's skills from each assessment and the alignment of results—we collected and analyzed results from the CPAA and DRDP assessments administered in the district's two CDCs. In Table IV.1, we present the timing of each assessment as categorized by the assessment developer (fall, winter, or spring), the month it was administered, and the number of cases of each that we received. Note that the spring

DRDP actually occurred within one month of the winter CPAA; more time passed between the spring CPAA and the spring DRDP.

Table IV.1. Assessment Timing and Samples

	Fall DRDP	Spring DRDP	Winter CPAA	Spring CPAA
Month administered	October 2012	March 2013	February 2013	May 2013
Number received	105	127	95	98

1. Study Sample

We received assessment data for 134 children, 40 of whom (30 percent) are ELLs. For the 130 children with date of birth information, 44 (34 percent) were 3 years old by August 2012 and the rest were 4 years old. We collected hard copies of the DRDP rating records for each child from the fall and spring, and received CPAA data electronically. The low number of fall DRDP ratings (relative to spring) may reflect that rating records were not available for some children (for example, records were lost between completion and the time of data collection) rather than that the DRDP was not completed in the fall. For the CPAA, the number received refers to children with a score of 1 to 4. Some children may not have received a 1 to 4 rating if they did not get a sufficient number of practice items correct or perseverated on assessment items (resulting in the assessment timing out); they would be considered missing. Seven of the 29 children with no CPAA data are ELLs. When considering each measure individually, 87 children have CPAA data at both time points and 100 children have DRDP data at both time points.

2. Research Questions and Methods

As described in Chapter I, our key research questions are as follows:

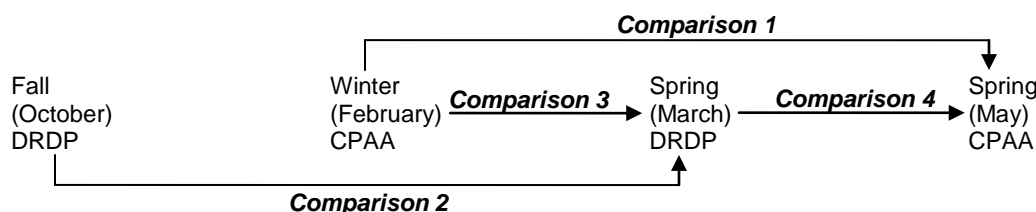
- RQ1: What domains are addressed by each assessment, and to what degree can we expect results to align?
- RQ2: What are teachers learning from the DRDP and CPAA about children's progress?
- RQ3: Do messages from each assessment about the level of children's skills match or differ?

To answer the first question, we begin this chapter with an examination of the conceptual alignment of the two assessments. The results of this comparison will guide quantitative analyses. Typically, we would expect that if these tools are aligned in what they are measuring about children's skills then children with higher scores on one will tend to have similar or higher scores on the other tool. Note that in this comparison we are limited by the fact that we do not have access to the individual CPAA items, but only to the broad descriptions of what each concept addresses.

Figure IV.1 highlights the comparisons we made to answer the second and third research questions—we looked within assessments over time and across assessments. To address what teachers are learning from the DRDP and CPAA about children's progress, we completed **comparisons 1 and 2** (comparing fall and spring DRDP ratings and comparing winter and spring CPAA scores, respectively). Demonstrating that each individual tool can detect change in children's skills over time is a useful first step in understanding the alignment between the two tools and whether we should even expect any alignment.

To address whether messages teachers receive about the level of children’s skills from each assessment match, we conducted two additional comparisons. **Comparison 3** examines alignment of assessments that occurred closest in time (one month apart)—the winter CPAA versus the spring DRDP; to the extent that results do align, we would expect these results to be most similar (versus comparisons of other time points). **Comparison 4** examines the alignment of results from the final implementation of each assessment (that is, the final results teachers receive from each assessment about readiness for kindergarten and proficiency of skills assessed), comparing the spring DRDP to the spring CPAA.

Figure IV.1. Time Comparisons Within and Across Assessment Tools



Because the DRDP and CPAA are administered one to four months apart from each other, we can expect some differences in children’s outcomes across these tools due to developmental change and growth in relation to instructional differences. For example, even if teachers are using the same curriculum, they may emphasize different parts of the curriculum or use supplementary materials. Thus, with comparisons 3 and 4, we address the hypothesis that children with higher scores on one will tend to have similar or higher scores on the other tool if the tools are aligned, but we do not expect perfect correspondence.

B. Conceptual Alignment of the DRDP and CPAA

In Chapter I, we briefly described the DRDP and CPAA. In this section, we highlight where the assessments may align conceptually and reiterate features of the assessments important to consider for this analysis.

1. DRDP Measures Potentially Aligned with the CPAA

As described in Chapter I, the DRDP addresses seven domains of development that were designed to align with the California Preschool Learning Foundations (CDE 2008). The DRDP potentially aligns with the CPAA in measures of two domains: the literacy domain (LLD), which features 10 measures, and the mathematics domain (MATH), which features 6 measures, as follows:

- Literacy
 - LLD1: Comprehension of meaning
 - LLD2: Following increasingly complex instructions
 - LLD3: Expression of self through language
 - LLD4: Language in conversation
 - LLD5: Interest in literacy
 - LLD6: Comprehension of age-appropriate text presented by adults

- LLD7: Concepts about print
- LLD8: Phonological awareness
- LLD9: Letter and word knowledge
- LLD10: Emergent writing
- Mathematics
 - MATH1: Number sense of quantity and counting
 - MATH2: Number sense of mathematical operations
 - MATH3: Classification
 - MATH4: Measurement
 - MATH5: Shapes
 - MATH6: Patterning

Note that for children from homes where a language other than English is spoken, the DRDP instructs that the teacher completing it should speak the child's home language or receive assistance from someone who does (although this may not always be possible in practice). For LLD measures in particular, the DRDP instructs teachers to consider any languages the child uses.

2. CPAA Concepts Potentially Aligned with the DRDP

The CPAA is an adaptive, direct assessment of children's outcomes independently completed on a computer. The preschool version of the CPAA taps a number of concepts within the literacy and mathematics domains. Due to the adaptive nature of the assessment, children may not attempt items from each dimension at each administration. The CPAA provides scores for each of the following concepts. Dimensions addressed within each concept can be found in parentheses; the CPAA does not provide scores for individual dimensions:

- Literacy
 - Listening (listening skills, comprehension)
 - Phonemic awareness (initial sound, compound words, rhyming, blending)
 - Writing (letter ID, letter-sound single letter)
 - Reading (name fluency, concepts about print-book, concepts about print-text)
- Mathematics
 - Measurement (quantity comparison, size comparison, length/height/weight, positions, shape ID)
 - Numeracy (number ID, quantity ID, number after, correct order)
 - Patterns (category, shape patterns)

The English version is administered to all children in the CDCs. Some children may not complete the assessment based on the program screening them out during practice exercises (to

determine familiarity with computer task and use of the mouse) or based on item performance or time to respond, with the assessment ending after repeated long delays in answering.

RQ1: To what degree do the DRDP measures and CPAA concepts align?

We assessed the alignment of DRDP measures and CPAA concepts by reviewing the available descriptions of the aspects of literacy and mathematics addressed. For the DRDP, we read each level's descriptor, unique to each measure, demonstrating the typical sequence. For the CPAA, we considered the documented learning standard from its California alignment table. We then mapped the descriptors and standards to determine the types of behaviors or competencies each assessed. Table IV.2 (for literacy) and Table IV.3 (for mathematics) describe the constructs we analyzed and the corresponding DRDP measure and CPAA concept available that appear adequately aligned.

Table IV.2. Conceptually Aligned Literacy and Language Constructs, Comparing DRDP and CPAA

Analysis Construct	DRDP Measure(s)	CPAA Concept
Listening comprehension	LLD1: Comprehension of Meaning LLD2: Following increasingly complex instructions LLD6: Comprehension of age-appropriate text presented by adults	Listening
Phonological awareness	LLD8: Phonological awareness	Phonemic awareness
Alphabet knowledge	LLD9: Letter and word knowledge	Writing
Print knowledge	LLD7: Concepts about print	Reading

Table IV.3. Conceptually Aligned Mathematics Constructs, Comparing DRDP and CPAA

Analysis Construct	DRDP Measure(s)	CPAA Concept
Measurement and geometry	Math4: Measurement Math5: Shapes	Measurement
Number operations	Math1: Number sense of quantity and counting Math2: Number sense of mathematical operations	Numeracy
Mathematical reasoning	Math3: Classification Math6: Patterning	Patterns

As the tables illustrate, some DRDP measures do not align with any of the CPAA concepts. These include literacy measures LLD3 (expression of self through language), LLD4 (language in conversation), LL5 (interest in literacy), and LLD10 (scribbling and writing for meaning). A computer would be unable to tap any of these measures. They are excluded from the analyses presented in this chapter.

For those measures that do align, the degree of alignment may vary. In particular, for the CPAA, all dimensions are embedded in a single concept score and cannot be disentangled. Thus, a lack of alignment between the CPAA and DRDP may reflect differences in what was measured to address particular constructs. Notable differences between the two tools include the following:

- The CPAA reading concept includes a “name fluency” dimension, whereas the DRDP measures target broader print concepts.
- The CPAA measurement concept includes a “positions” (of people or objects in space) dimension, whereas the DRDP measures focus on comparisons of objects for measurement (length/weight).
- The CPAA numeracy concept includes a “number ID” (to recognize numerals) dimension in addition to “ordinality,” “quantity ID,” “number after,” and “correct order.” The DRDP measures focus more on the latter three dimensions.

In addition to conceptual differences, a number of differences about the measures should be kept in mind when considering results of analyses comparing the CPAA and DRDP (particularly comparison 3). These differences are presented in Table IV.4.

C. Quantitative Analysis Approach and Available Data

1. Constructed Variables

Because the DRDP and CPAA have different rating scales (described in Table IV.4), we had to consider the appropriate approach for comparing scores across the two measures. For the DRDP, each measure is rated on a four-point scale for demonstrating competency (or a “developmental level”): (1) exploring, (2) developing, (3) building, and (4) integrating. Most children are expected to reach the building level by the end of preschool.⁷ For each concept addressed, the CPAA provides a score also along a four-point scale: (1) below expectations, (2) approaching expectations, (3) at expectations, and (4) above expectations. Scores refer to the level of development expected at that point in the school year (fall, winter, or spring).

For both assessments, we used the original four-point scales in analyses of progress on each measure (comparisons 1 and 2) and for examining alignment of the winter CPAA and spring DRDP (comparison 3). For the DRDP, we included a fifth level at the bottom of the scale: scores were coded as 0 when the teacher rated the child as “not yet at first level.”⁸ This rating was considered to be parallel to a CPAA rating of “below expectations” for this comparison. To examine messages from each assessment regarding school readiness (comparison 4), we defined a proficiency variable for each measure. For the DRDP, ratings of 3 (building) and 4 (integrating) signal proficiency. For the CPAA, spring ratings of 3 (meets expectations) and 4 (exceeds expectations) signal proficiency.

⁷ This and other information about the DRDP is available at http://www.desiredresults.us/resource_faq.htm.

⁸ The DRDP also provides options to note if a child is “emerging” to the next developmental level or if the teacher is “unable to rate” a developmental level. For the children under consideration here, “emerging” was not used. “Unable to rate” was only used for one child on the spring DRDP, on three literacy measures and all six mathematics measures. This child did not have any CPAA data or a fall DRDP.

Table IV.4. Differences Between the DRDP and CPAA

	DRDP	CPAA
Administration	<p>Teachers conduct ongoing observations in the period leading up to the assessment (over one month), potentially one-on-one or in the context of groups.</p> <p>Approach to observations can be determined by teachers. Teachers can choose to observe the same skills in multiple contexts.</p> <p>Teachers can complete ratings on their own or with input from other staff.</p>	<p>Children complete the assessment independently on a computer with headphones at a single time point.</p> <p>Children use a computer mouse to select their responses (recognition).</p> <p>Children pick from among three or four choices.</p> <p>Skills are assessed in only one context.</p>
Skills assessed at each administration	<p>Teachers have the option of considering the same set of skills each time ratings are completed for each measure. Teachers are likely to consider only what they have addressed in classroom instruction to date.</p> <p>Children may need to expressively respond to teachers (rather than just recognize that a response is appropriate) for a teacher to consider the child proficient.</p>	<p>The scope and sequence of skills assessed for a concept reflects the expected progression of skill development (i.e., within a concept, some skills are learned before others). Order is independent of how a teacher chooses to sequence instruction.</p> <p>The set of dimensions within a concept a child sees at each administration is dependent on his or her pattern of responses.</p> <p>Within a dimension of each concept, different children may see easier/harder questions depending on their performance on prior questions.</p>
Home language	DRDP instructs teachers to consider all languages the child uses (but this may be difficult in practice, given diversity in CDCs).	CPAA is administered only in English at the CDCs.
Skills reflected in ratings	<p>Individual measures address different dimensions of the domain being addressed.</p> <p>Teachers know which dimensions they considered in making a rating.</p>	<p>All dimensions are embedded in a single concept score and cannot be disentangled.</p> <p>If accessed, individual child reports provide teachers with a sense of what was assessed.</p>
Ratings	<p>Each measure is rated on a four-point scale for demonstrating competency (or a “developmental level”):</p> <p>(1) Exploring (2) Developing (3) Building (4) Integrating</p> <p>Most children are expected to progress along the four-point scale during the year and to reach the building level by the end of preschool.</p> <p>Ratings reflect expectations established by the state of California.</p>	<p>Scores refer to the level of development expected at that point in the school year (fall, winter, or spring):</p> <p>(1) Below expectations (2) Approaching expectations (3) At expectations (4) Above expectations</p> <p>Progress is reflected by children maintaining the same score (i.e., continuing on the same trajectory toward meeting end-of-year expectations) or moving up a level.</p> <p>CPAA reports can be aligned to California state standards.</p>

Table IV.5. Alignment of Ratings for DRDP and CPAA (Comparisons 3 and 4)

	0	1	2	Proficiency	
				3	4
DRDP	Not yet at first level	Exploring	Developing	Building	Integrating
CPAA	--	Below expectations	Approaching expectations	At expectations	Above expectations

2. Approach to Comparisons

All of the analyses examine what percentage of children receive each rating for each of the assessments. The comparisons occur across time and/or across assessments. As appropriate, we also examine correlations within measures (over time) or across measures. Correlations provide an indication of whether the children are in the same rank order across time (or across measures). Higher correlations indicate similar patterns—children who receive the higher scores in the fall (or on one measure) would also receive the higher scores in the spring (or on the other measure), and children who receive lower scores in the fall (or on the first measure) would also receive lower scores in the spring (or on the second measure). Correlations can range from 0.0 to 1.0; they are considered low if in the 0.0 to 0.3 range; moderate if in the 0.3 to 0.6 range, and high if in the 0.7 to 1.0 range.

- **Comparisons 1 and 2.** For both the DRDP and CPAA, we calculated the percentage of children receiving each rating at the first and second time point for each assessment, as well as change in ratings on each assessment across its two time points. We also examined the correlations between the two time points for a particular assessment tool. In comparing ratings on a measure over time (in this case, about three months apart for the CPAA and five months apart for the DRDP), one would expect moderate to high correlations, particularly if teachers are using the same curriculum across classrooms. In describing results at each time point, we used all available data. In describing progress on each assessment between the two time points, we limited the sample to children with data at both points.
- **Comparison 3.** To address alignment of the two assessments, we compared the winter (February) CPAA and spring (March) DRDP by looking at the percentage of children matching in the four-point scales (that is, the percentage receiving a 1 on both assessments, a 2 on both, and so on). This analysis parallels how teachers would be viewing results of the two assessments alongside one another. We also examined correlations between ratings on the two different assessments; this analysis reflects whether children rated higher (or lower) by teachers also received higher (or lower) ratings on the CPAA. As discussed above, multiple DRDP measures align with a single CPAA concept (see Tables IV.2 and IV.3); for the comparisons, each DRDP measure was examined separately. For example, analyses for the measurement and geometry construct feature two comparisons—the CPAA measurement concept against each conceptually aligned DRDP measure (MATH4 and MATH5). We looked at alignment for (1) all children in the CDCs and (2) ELLs (ELL status was based on teacher report).
- **Comparison 4.** We compared the spring DRDP and spring CPAA to examine alignment of messages regarding school readiness using the proficiency variables for each of the tools (see Table IV.5). We calculated the percentage of children who

demonstrated proficiency on neither, one, or both tools. As in the case of comparison 3, we examined each conceptually aligned DRDP–CPAA combination separately when multiple DRDP measures aligned with a single CPAA concept. We looked at proficiency across assessment tools for (1) all children in the CDCs, (2) ELLs, and (3) children by age (3-year-olds versus 4-year-olds at the start of the year).

D. Quantitative Findings

RQ2: What are teachers learning from the DRDP and CPAA about children's progress?

In order to understand our ability to detect alignment across the two tools, we looked first at each tool separately. In the text, we highlight key findings from the analysis. Supporting tables can be found in the report appendix.

Comparison 1: DRDP over time. We first examined the percentage of children rated at each level and the progress made. From October 2012 to March 2013, children demonstrated progress on all of the DRDP literacy and mathematics measures. As a reminder, “a child is not expected to be at the same developmental level on all measures because development does not generally proceed at the same rate in all areas” (CDD 2012). In other words, different measures have different levels of difficulty.

In the fall, as may be expected, teachers rated most children (58 to 88 percent) as exploring or developing for all of the literacy and math measures (Table A.1). Six to 21 percent of children were rated as building in the fall, and 3 percent or fewer were integrating, with only three exceptions (4 percent for letter and word knowledge [LLD9], 7 percent for emergent writing [LLD10], and 20 percent for number sense of quantity and counting [MATH1]). Teachers rated 3 to 16 percent of children as not yet being at the first level across the measures.

By the spring (March), children progressed in all measures (Table A.2). Depending on the measure, between 24 and 56 percent of children were still exploring or developing, but 26 to 47 percent had reached building (most children are expected to reach building by the end of preschool). Integrating levels vary by domain. In literacy, 17 to 25 percent of children were rated as integrating the various skills, except for phonological awareness (LLD8), where integrating was evident for 10 percent of children. In terms of mathematics, teachers rated 21 to 34 percent of children as integrating. By the spring, teachers identified some children as not yet at the first level for only half of the measures—between 2 and 5 percent for the literacy measures and only 1 percent for each of the mathematics measures.

When considering progress for individual children, we see that most children moved forward in the rating, but a few children received a lower rating in the spring relative to the fall (Table A.3). Between 55 and 85 percent of children received a higher rating from teachers in the spring as compared to the fall. For 12 of the 16 literacy and mathematics measures, a small percentage of children received a lower spring than fall rating, typically less than 5 percent. However, 9 percent of children received lower ratings for phonological awareness (LLD8) in the spring as compared to the fall, and 6 percent were rated lower for number sense of mathematical operations (MATH2).

As shown in Tables A.2 and A.3, the percentage of children whom teachers identified as not yet at the first developmental level for a given measure varies from 3 to 17 percent across all fall measures and 1 to 5 percent for half of the measures in the spring. Further analysis showed that the frequency with which children were rated by teachers as not yet at the first level varied across

classrooms. One teacher used this rating for about half of her students on 4 of 16 measures and for five or fewer students on the other 12 measures. Among the rest of the teachers, one teacher never used it and the others used it for most measures for five or fewer children. This variation may reflect that children with lower abilities are clustered in one classroom or it may indicate differences in how teachers use this rating.⁹

When we shift to the correlations, we see that, across time, the children whom teachers rated higher or lower on DRDP measures changed to at least some degree. In a direct assessment of the same set of skills over time, we could reasonably expect moderate to high correlations between fall and spring scores. For the DRDP literacy measures, with one exception, all over-time correlations are moderate (0.48 to 0.67); for phonological awareness (LLD8) the correlation is very low (0.06). Mathematics measures also are moderately correlated, though somewhat lower than literacy (0.36 to 0.43).

There are four possible reasons that correlations are somewhat lower than we would expect. First, correlations that are below 0.60 could result from variable rates of growth across children. As shown in Table A.3, a majority of children progressed over the year for each measure, but not all did, and some received lower scores from fall to spring. For phonological awareness—where the correlation was so low—the vast majority of children were either exploring or not rated in the fall (69 percent) and none were integrating. It is not surprising that some children among the 69 percent would progress at different rates. Second, given the instances of children who received lower ratings (1 to 9 percent) or receiving the same rating (10 to 31 percent), it is possible that teachers are not evaluating developmental levels in a consistent way over time or that teachers are evaluating skills in a different way (for example, differences in how “not yet at first level” is used). Third, it is possible that children in different classrooms have different experiences; even if teachers are using the same curriculum, they may be using it in different ways. Because these correlations do not account for how children are clustered in classrooms, this may depress the level of correlation we see. Finally, the fact that the DRDP has a ceiling (ratings only go as high as integrating) could influence correlations.

Comparison 2: CPAA over time. As with the DRDP, we first examined the percentage of children scoring at each level and the progress made. Although the DRDP developmental levels reflect whether children have particular skills with no reference to time or age, the CPAA scores reflect whether children have expected skills for a particular point in the school year (and whether they are on track to meet end-of-year expectations). Thus, children are progressing if they receive the same or higher score from one assessment period to the next. From late February to late May, on average, children’s CPAA scores remain similar, with the majority meeting expectations.

In the winter (February 2013), the majority of children were on track to meet or exceed end-of-year expectations for two of four literacy concepts (writing and reading) and all of the mathematics concepts (59 to 71 percent of children were meeting or exceeding expectations) (Table A.4). For the other two literacy measures—listening and phonemic awareness—slightly fewer than half (44 to 45 percent) scored at the same levels. Notably, 64 percent of children were rated as exceeding expectations in the winter for writing. In the spring (May 2013), the majority of children were meeting or exceeding end-of-year expectations for all of the literacy and mathematics concepts

⁹ Future analyses can address the degree of variation in ratings within a classroom. This will allow us to explore both whether children are clustered by skill level and whether different teachers use ratings in different ways.

measured by the CPAA (Table A.5). For writing and patterns, slightly more than half (53 to 55 percent) of children exceeded expectations.

Looking across the winter and spring assessments, we see that many children received the same rating, indicating that they stayed on a similar trajectory of growth toward end-of-year goals (Table A.6). About 38 to 63 percent of children stayed at the same level for literacy concepts and about half (50 to 56 percent) did so for the mathematics concepts. For most of the concepts—listening, phonemic awareness, reading, measurement, and patterns—one-quarter to more than one-third of children received a higher rating at the second CPAA, indicating improving trajectories.

For all of the concepts, some children received lower ratings in the spring compared to the winter. For literacy, 20 to 25 percent of children received a lower rating in the spring compared to the winter. In mathematics, the percentage of children with lower ratings in the spring as compared to the winter varied by concept; 11 percent of children received lower ratings for patterns, but 18 percent did so for measurement and 35 percent for numeracy. Lower ratings over time could reflect that children’s growth slowed or that instruction did not match what was measured in the CPAA. Alternatively, it could indicate that children’s assessment experience differed at each time (for example, they were distracted during the second assessment but not during the first) or that they were guessing during either assessment.

When we shift to the correlations between the winter and spring CPAA scores, we see changes in which children scored higher or lower. The literacy concept correlations are low to moderate (0.27 to 0.36) with the exception of writing; that correlation is 0.66. For mathematics, concepts are moderately correlated and typically higher than literacy (0.36 to 0.48). The level of correlation can be explained, in part, by the fact that some children received lower ratings in the spring than in the winter. If children are in fact guessing on the assessment, that could play a role as well. Alternatively, the degree to which skills addressed in the classroom align with skills assessed in the CPAA could differ in the winter and spring. The CPAA draws on different item banks in the fall, winter, and spring.

RQ3: Do messages from each assessment about the level of children’s skills match or differ?

In the previous section, we determined that both the CPAA and DRDP are sensitive to children’s progress over the year, although in both cases some children receive lower ratings in the spring and over-time correlations for each measure are somewhat lower than what would be expected. In this section, we address the alignment of messages about children’s skills from the two assessments for the conceptually aligned constructs shown in Tables IV.2 and IV.3.

We first examined the alignment of the winter CPAA and spring DRDP (comparison 3). Because these two assessments took place only a month apart, we can reasonably expect that messages about children’s skills match to at least some degree for conceptually aligned constructs. However, it is important to keep in mind the differences between the two assessments outlined in Table IV.4. We present both the percentage of children receiving the same scores for aligned constructs for the two assessments and correlations that consider the rank order of all children. Correlations provide information on how a child is ranked relative to all other children, whereas the match for an individual child captures the evidence a teacher is likely to consider in planning. We then examine whether the final assessment point for each tool (that is, the final data from that tool about school readiness)—March for the DRDP and May for the CPAA—gives teachers consistent messages about children’s skills (comparison 4).

Comparison 3: Winter (February) CPAA versus spring (March) DRDP. We first present whether the scores for a given child matched on the two assessment tools (Table IV.6).¹⁰ We categorize scores as matching (that is, a score of 1 on both, 2 on both, 3 on both, or 4 on both), being higher on the CPAA, or being higher on the DRDP. During the middle of the program year, 32 to 45 percent of children had matched ratings on the conceptually aligned DRDP and CPAA constructs. For three of the analysis constructs, higher DRDP scores were more likely than higher CPAA scores or matched scores: listening comprehension (47 to 52 percent had higher DRDP ratings), phonological awareness (40 percent), and mathematical reasoning (39 to 40 percent). For three other analysis constructs, matched scores were more frequent than either tool having a higher rating: alphabet knowledge (46 percent were matched), measurement and geometry (41 percent), and number operations (42 percent). For the print knowledge construct, children had matched scores or higher DRDP ratings at the same rate (37 percent). Although never the most frequent pattern, 17 to 36 percent of children had higher CPAA than DRDP ratings.

Table IV.6. Alignment of Winter (February) CPAA and Spring (March) DRDP Literacy and Mathematics Constructs

Construct	Percentage of Children		
	CPAA and DRDP Levels Match	CPAA Higher	DRDP Higher
Literacy			
Listening comprehension			
LLD1	31.5	16.9	51.7
LLD2	31.5	21.4	47.2
LLD6	32.6	19.1	48.3
Phonological awareness	35.6	21.8	40.2
Alphabet knowledge	45.5	30.7	22.7
Print knowledge	37.1	23.6	37.1
Mathematics			
Measurement and geometry			
MATH4	40.5	31.5	28.1
MATH5	40.5	22.5	37.1
Number operations			
MATH1	41.6	20.2	38.2
MATH2	42.1	29.6	27.3
Mathematical reasoning			
MATH3	25.3	35.6	39.1
MATH6	33.0	27.3	39.8

Source: Milpitas Unified School District, Child Development Center assessment data records

Note: Construct categories may not sum to 100 percent if children were noted as “not yet at the first level” by the teacher on the DRDP but the CPAA assigned a score of 2 (“approaching expectations”) or higher. For example, for phonological awareness, 2.3 percent of children were noted by teachers as “unable to rate” but received a score of 2 (“approach expectations”) or higher on the CPAA.

The number of children for a given construct ranges from 87 to 89.

CPAA = Children’s Progress Academic Assessment; DRDP = Desired Results Developmental Profile

¹⁰ If the teacher rated the child as “not yet at the first level,” one may expect that the skills have not been demonstrated sufficiently to meet expectations. Therefore, we considered a DRDP rating of “not yet at the first level” as a match to a CPAA score of “below expectations.”

We also examined the match in scores for the subgroup of ELL children; this analysis included 27 to 28 children depending on the construct (Table A.7). During the middle of the program year, 21 to 57 percent of children who are ELLs had DRDP and CPAA scores that matched. When comparing to patterns in the full sample of children, notable differences include the following:

- ELL children matched in their mathematical reasoning scores on the CPAA and DRDP (37 to 57 percent) more often than having DRDP ratings higher than their CPAA ratings (18 to 23 percent). The reverse was true in the full sample.
- Compared to having matched scores or higher DRDP scores, ELL children had higher CPAA scores for alphabet knowledge (44 percent), print knowledge (36 percent), measurement (MATH4; 43 percent), and number sense of quantity and counting (MATH1; 41 percent). Note that 4 to 7 percent of ELL children received a score of approaching expectations or higher on the CPAA although teachers noted them as “not yet at the first level” for the DRDP.
- For the phonological awareness construct, ELL children most frequently had matching DRDP and CPAA scores (41 percent), whereas in the full sample a higher DRDP rating was most common.

We next examined correlations between DRDP and CPAA scores. Among the conceptually aligned constructs, which children are ranked the highest or lowest differs by assessment tool; CPAA–DRDP correlations are low to moderate.¹¹ For aligned literacy constructs, all correlations were low (0.12 to 0.29) with the exception of alphabet knowledge (moderate at 0.56). As a reminder, the CPAA concept that addresses alphabet knowledge is writing (assessing standards for letter ID and letter-sound single letter). Mathematics constructs are moderately aligned for the DRDP and CPAA (0.30 to 0.46), except for mathematical reasoning, which is low (0.09 to 0.20).

Overall, correlations were lower than expected for conceptually aligned constructs. This could indicate that there is less alignment than what assessment materials would lead us to believe, or that one of the assessments is not adequately addressing the construct. For the CPAA, this would result if the items were not relevant to the construct being assessed (which is unlikely), or if children were unable to demonstrate what they know in the CPAA format (for example, uncomfortable or distracted when on the computer). It is also important to keep in mind that the CPAA is adaptive and that not all dimensions of each concept addressed by the CPAA are addressed at each time point (thus, the CPAA may be addressing different aspects of the construct than what the teacher considers in her DRDP ratings). For the DRDP, this could result if teachers were collecting and/or considering evidence in evaluating the developmental levels for each measure that is not consistent with what the DRDP is actually trying to measure.

Comparison 4: Spring status on the DRDP and CPAA. The spring administrations of the DRDP and CPAA provide teachers with information that can be used in completing preschool-to-kindergarten transition forms at the end of the program year. In our final analysis, we examined

¹¹ We also calculated the correlations between the fall DRDP and winter CPAA and between the spring DRDP and spring CPAA. We find that the correlations are lower as compared to the winter CPAA–spring DRDP assessments, except for listening comprehension at both fall–winter and spring–spring comparisons (but still in the low range) and mathematical reasoning at the fall–winter comparison, with moderate correlations. These differences over time may reflect the varying level of difficulty of the items in the CPAA item banks and the length of time between assessments being longer.

whether children achieved proficiency of the measured skills on one or both tools in the full sample, for ELL children, and by child age. For both tools, we consider the top two ratings (building and integrating for the DRDP, at and exceeding expectations for the CPAA) as indicative of proficiency. Overall, the majority of children demonstrated readiness on at least one of the assessment tools, with a substantial proportion achieving that level on both the CPAA and DRDP (Table IV.7).

Beginning with literacy, 73 to 88 percent of children demonstrated proficiency for the analysis constructs on at least one assessment. Thirty-one to 45 percent of children demonstrated proficiency on most constructs on both the DRDP and CPAA; for alphabet knowledge, 61 percent did so. Despite the fact that the spring DRDP occurred two months earlier than the spring CPAA, for this group, proficiency was more likely to be evident through the DRDP, except in the case of phonological awareness.

Patterns are similar for mathematics constructs, where 70 to 94 percent of children demonstrated proficiency on at least one assessment. Between 36 and 56 percent of children demonstrated proficiency on both the DRDP and CPAA. In half of six comparisons, more children showed proficiency only on the DRDP, and in half only on the CPAA.

Table IV.7. Proficiency Across Spring (March) DRDP and Spring (May) CPAA Literacy and Mathematics Constructs

Construct	Percentage of Children Demonstrating Proficiency			
	Neither Tool	DRDP Only	CPAA Only	Both Tools
Literacy				
Listening comprehension				
LLD1	17.2	24.7	12.9	45.2
LLD2	21.5	20.4	17.2	40.9
LLD6	19.4	22.6	17.2	40.9
Phonological awareness	26.9	19.4	22.6	31.2
Alphabet knowledge	11.8	18.3	8.6	61.3
Print knowledge	12.9	26.9	16.1	44.1
Mathematics				
Measurement and geometry				
MATH4	17.0	14.9	22.3	45.7
MATH5	6.4	25.5	11.7	56.4
Number operations				
MATH1	13.8	36.2	1.1	48.9
MATH2	30.1	19.4	15.1	35.5
Mathematical reasoning				
MATH3	10.8	15.1	26.9	47.3
MATH6	7.5	18.1	19.2	55.3

Source: Milpitas Unified School District, Child Development Center assessment data records

The number of children for a given construct ranges from 78 to 94.

CPAA = Children's Progress Academic Assessment; DRDP = Desired Results Developmental Profile

Among children who are ELLs (27 to 32 children included in the analysis, depending on the construct), in most cases the majority of children (52 to 88 percent) demonstrated readiness on at least one of the assessment tools (Table A.8). Unlike the full sample of children, proficiency was typically identified on only one of the assessment tools. Also in comparison to the full sample of

children, a larger percentage of children were likely to be identified as not having achieved proficiency on either tool for each construct (13 to 53 percent, with most greater than 25 percent). When proficiency was evident on only one tool, the specific tool varied across the constructs. More ELLs showed proficiency on the DRDP but not on the CPAA for listening comprehension and number operations. A reverse pattern was evident for phonological awareness and mathematical reasoning.

We also examined readiness separately for 3- and 4-year-olds (24 and 70 children, respectively, in each group; Tables A.9 and A.10). Not surprisingly, more 4-year-olds than 3-year-olds showed proficiency on both tools, except for mathematical reasoning, where more 3-year-olds showed proficiency on both assessment tools. For 4-year-olds, 36 to 65 percent showed proficiency on both assessment tools as compared to 17 to 62 percent of 3-year-olds (typically under 40 percent). When children were proficient on only one assessment tool, there was no consistent pattern in terms of whether it was the CPAA or the DRDP.

E. Summary and Implications

In this section we summarize key findings regarding the four comparisons presented in this chapter. We then consider implications.

1. Summary

Comparisons 1 and 2: DRDP and CPAA over time. Both the DRDP and CPAA are sensitive to children’s progress over the year. For the DRDP, the vast majority of children had a higher rating in the spring than fall. For the CPAA, the vast majority of children had either the same rating in the spring as winter (indicating they made enough progress to maintain the same trajectory) or had a higher rating in the spring. For both assessments, some children received lower ratings later in the year as compared to earlier in the year, and over-time correlations for each measure are somewhat lower than what would be expected.

Comparison 3: Alignment of the winter (February) CPAA versus spring (March) DRDP. Across the literacy and mathematics constructs addressed, one-quarter to one-half of children with data on both the DRDP and CPAA (about 70 percent of the sample) had the same rating for the spring DRDP and the winter CPAA. In most cases, children had a higher rating on one assessment than on the other, and it was typically the DRDP (that is, teacher ratings were higher than the direct assessment for 9 of 12 literacy and mathematics comparisons). In one of the six literacy comparisons and two of the six mathematics comparisons, the CPAA score was higher. It is important to keep in mind that for these analyses, we defined a winter level of “meeting expectations” on the CPAA as equal to “building” on the DRDP and a winter level of “exceeding expectations” on the CPAA as equal to “integrating” on the DRDP. Thus, it is possible that if comparisons were based on CPAA spring expectations for performance, the disparity would have been even greater. In other words, because spring CPAA items would have been even harder than winter CPAA items, the percentage of children with matched scores might have been lower and/or the DRDP would have been higher for a larger percentage of children. However, it is difficult to say for certain without knowing the exact level of difficulty of the CPAA items children received at either time. It is also important to keep in mind that the CPAA is adaptive (children can get easier or harder items at each assessment point, with implications for scores) and that not all dimensions of each concept addressed by the CPAA are addressed at each time point (thus the CPAA may be addressing different aspects of the construct than what the teacher considers in her DRDP ratings). In terms of correlations, all were

lower than expected for conceptually aligned constructs, showing that children are not rank ordered the same way by the two tools.

Comparison 4: Assessing proficiency with the spring (March) DRDP and (May) CPAA.

Overall, the majority of children demonstrated readiness on at least one of the assessment tools, with a substantial proportion achieving that level on both the CPAA and DRDP. Among children who are ELLs, in most cases the majority demonstrated readiness on at least one of the assessment tools, but a smaller proportion demonstrated mastery through both tools, as compared to the full sample. Not surprisingly, more children who entered the program as 4-year-olds than those who entered as 3-year-olds showed proficiency on both tools for all but one construct.

2. Implications

Overall, the CPAA and DRDP ratings align clearly for only a subset of children. In order to maximize the value of these multiple sources of evidence on children's development, teachers need an opportunity to understand when we can expect alignment. Doing so requires a deeper understanding of the CPAA and what it assesses as well as awareness of the subset of instances in which alignment is likely. Teachers may also benefit from considering whether they are using the most appropriate evidence in making DRDP ratings. Overall, helping teachers in these areas will ensure assessments are being completed in a way that results in information teachers can productively use for individualization and classroom instruction.

Support for understanding CPAA content and scores. Relative to the DRDP, the CPAA poses challenges to teachers because they cannot see the breadth of what is addressed, because item banks are not available to teachers for review. It may also not be clear to teachers what skills are addressed in the fall, winter, and spring assessments in comparison to what they emphasize in their classrooms, as CPAA items change over time. It is possible that the CPAA introduces concepts in the assessment that teachers have not yet fully addressed in the classroom, with implications for children's scores and alignment with teachers' DRDP ratings. There may be additional materials from the developer that could assist in this process. In addition to understanding assessment content, teachers need support in understanding what CPAA scores mean. Unlike the DRDP, CPAA scores indicate whether children are on the right path toward meeting end-of-year expectations. This score does not necessarily give teachers a clear picture of what skills children already have. Reviewing individual child reports that briefly summarize the types of items addressed by a child could help shed light on both scores and content. This process could also help teachers consider why children receive lower ratings over time.

Work with teachers to understand conceptual alignment of the CPAA and DRDP and how to use the tools together. This analysis showed that the CPAA and DRDP do not always align in expected ways. Teachers need an opportunity to review the ways in which the content of the two assessments does align. When reviewing CPAA results, individual reports can be examined alongside DRDP measures to strengthen understanding of alignment. This can also support teachers in understanding how the assessments complement one another. It would be helpful to consider the time between assessments; children will continue to progress during even brief windows of time between assessments.

Give teachers an opportunity to observe students completing the CPAA. If given the opportunity to observe their students completing the CPAA, teachers can assess whether children are engaged in the assessment or guessing (both of which concerns were raised during the qualitative interviews). For example, is a child always picking the same option in a multiple choice? Are

students paying attention to the screen or their surroundings? Do some children seem to struggle with the computer? These observations might also help shed light on why some children receive lower ratings in the spring and why a large proportion of children are missing CPAA data. For the latter group, were they unable to manage the equipment, did they answer too many items incorrectly in the practice, or did the assessment time out due to perseveration on particular items? Answers to these questions could help teachers individualize in ways that go beyond support for completing the CPAA.

Consider whether DRDP ratings are being used consistently and whether evidence is used appropriately. Above, we noted that a lack of alignment between the CPAA and DRDP ratings could relate to a lack of alignment in what each assesses or to inappropriate evidence being applied when developing DRDP ratings for some measures. Because either could be at issue, it would be valuable for teachers to consider with supervisors whether appropriate evidence is gathered for the DRDP and whether the same skills are being addressed in multiple contexts.

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APPENDIX A

TABLES OF RESULTS PRESENTED IN CHAPTER IV

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Table A.1. Fall DRDP Ratings in Literacy and Mathematics

	Not Yet at First Level	Exploring	Developing	Building	Integrating
Literacy					
LLD1: Comprehension of meaning	7.7	44.2	35.6	12.5	0.0
LLD2: Following increasingly complex instructions	3.9	41.4	32.7	20.2	1.9
LLD3: Expression of self through language	8.6	40.0	40.0	10.5	1.0
LLD4: Language in conversation	9.6	33.7	41.4	12.5	2.9
LLD5: Interest in literacy	2.9	42.3	44.2	10.6	0.0
LLD6: Comprehension of age-appropriate text presented by adults	8.7	49.0	33.7	6.7	1.9
LLD7: Concepts about print	6.7	49.0	26.9	16.4	1.0
LLD8: Phonological awareness	6.7	61.9	25.7	5.7	0.0
LLD9: Letter and word knowledge	14.4	28.9	36.5	16.4	3.9
LLD10: Emergent writing	5.8	27.9	43.3	16.4	6.7
Mathematics					
MATH1: Number sense of quantity and counting	9.6	27.9	29.8	12.5	20.2
MATH2: Number sense of mathematical operations	17.3	44.2	24.0	13.5	1.0
MATH3: Classification	5.8	43.3	35.6	14.4	1.0
MATH4: Measurement	15.4	46.2	30.8	7.7	0.0
MATH5: Shapes	3.9	40.8	33.0	21.4	1.0
MATH6: Patterning	16.4	41.4	27.9	12.5	1.9

Source: Assessment data from Milpitas Unified School District, Child Development Center records

N = 105

DRDP = Desired Results Developmental Profile

Table A.2. Spring DRDP Ratings in Literacy and Mathematics

	Not Yet at First Level	Exploring	Developing	Building	Integrating
Literacy					
LLD1: Comprehension of meaning	0.0	11.0	29.1	35.4	24.4
LLD2: Following increasingly complex instructions	0.0	13.4	34.7	33.1	18.9
LLD3: Expression of self through language	4.8	11.1	29.4	32.5	22.2
LLD4: Language in conversation	4.7	8.7	27.6	37.8	21.3
LLD5: Interest in literacy	0.0	11.1	20.6	43.7	24.6
LLD6: Comprehension of age-appropriate text presented by adults	0.0	11.0	36.2	35.4	17.3
LLD7: Concepts about print	1.6	15.8	24.4	34.7	23.6
LLD8: Phonological awareness	4.0	11.1	45.2	30.2	9.5
LLD9: Letter and word knowledge	2.4	10.4	20.0	38.4	28.8
LLD10: Emergent writing	0.0	5.6	21.6	47.2	25.6
Mathematics					
MATH1: Number sense of quantity and counting	0.0	7.9	15.8	42.5	33.9
MATH2: Number sense of mathematical operations	0.9	15.2	37.6	25.6	20.8
MATH3: Classification	0.8	8.7	37.3	28.6	24.6
MATH4: Measurement	0.8	12.7	36.5	27.8	22.2
MATH5: Shapes	0.0	11.1	20.6	38.1	30.2
MATH6: Patterning	0.0	13.5	24.6	34.9	27.0

Source: Assessment data from Milpitas Unified School District, Child Development Center records

N = 127

DRDP = Desired Results Developmental Profile

Table A.3. Change in DRDP Ratings in Literacy and Mathematics

	Spring Rating as Compared to Fall Rating			
	First Rated in Spring ^a	Lower Rating	Same Rating	Higher Rating
Literacy				
LLD1: Comprehension of meaning	8.1	1.0	10.1	80.8
LLD2: Following increasingly complex instructions	4.0	0.0	26.3	69.7
LLD3: Expression of self through language	4.0	0.0	18.2	77.8
LLD4: Language in conversation	6.1	3.0	19.2	71.7
LLD5: Interest in literacy	3.1	0.0	11.2	85.7
LLD6: Comprehension of age-appropriate text presented by adults	9.1	1.0	12.1	77.8
LLD7: Concepts about print	6.1	3.0	15.2	75.8
LLD8: Phonological awareness	6.1	9.1	17.2	67.7
LLD9: Letter and word knowledge	13.4	2.1	16.5	68.0
LLD10: Emergent writing	6.2	2.1	21.7	70.1
Mathematics				
MATH1: Number sense of quantity and counting	10.0	4.0	31.0	55.0
MATH2: Number sense of mathematical operations	15.2	6.1	13.1	65.7
MATH3: Classification	5.1	3.0	20.2	71.7
MATH4: Measurement	14.1	0.0	15.2	70.7
MATH5: Shapes	3.1	4.1	15.3	77.6
MATH6: Patterning	16.2	1.0	22.2	60.6

Source: Assessment data from Milpitas Unified School District, Child Development Center records

^a As compared to being “not yet at first level” in the fall

N = 100

DRDP = Desired Results Developmental Profile

Table A.4. Fall CPAA Scores in Literacy and Mathematics

	Below Expectations	Approaching Expectations	Meets Expectations	Exceeds Expectations
Literacy				
Listening	26.3	28.4	33.7	11.6
Phonemic awareness	39.8	16.1	32.3	11.8
Writing	18.1	14.9	3.2	63.8
Reading	13.7	26.3	36.8	23.2
Mathematics				
Measurement	8.5	20.2	44.7	26.6
Numeracy	11.7	25.5	29.8	33.0
Patterns	8.6	32.3	26.9	32.3

Source: Assessment data from Milpitas Unified School District, Child Development Center records

N = 95

CPAA = Children's Progress Academic Assessment

Table A.5. Spring CPAA Scores in Literacy and Mathematics

	Below Expectations	Approaching Expectations	Meets Expectations	Exceeds Expectations
Literacy				
Listening	17.5	24.7	33.0	24.7
Phonemic awareness	18.6	27.8	39.2	14.4
Writing	15.5	16.5	15.5	52.6
Reading	7.2	33.0	29.9	29.9
Mathematics				
Measurement	14.3	17.4	32.7	35.7
Numeracy	11.2	39.8	36.7	12.2
Patterns	3.1	22.5	19.4	55.1

Source: Assessment data from Milpitas Unified School District, Child Development Center records

N = 98

CPAA = Children's Progress Academic Assessment

Table A.6. Change in CPAA Ratings in Literacy and Mathematics

	Spring Rating as Compared to Fall Rating		
	Lower Rating	Same Rating	Higher Rating
Literacy			
Listening	22.7	37.5	39.8
Phonemic awareness	19.8	43.0	37.2
Writing	21.8	63.2	14.9
Reading	25.0	45.5	29.6
Mathematics			
Measurement	18.4	56.3	25.3
Numeracy	34.5	51.7	13.8
Patterns	10.5	50.0	39.5

Source: Assessment data from Milpitas Unified School District, Child Development Center records

N = 87

CPAA = Children's Progress Academic Assessment

Table A.7. Alignment of Winter CPAA and Spring DRDP Literacy and Mathematics Constructs, for English-Language Learners

Construct	Percentage of Children		
	CPAA and DRDP Levels Match	CPAA Higher	DRDP Higher
Literacy			
Listening comprehension			
LLD1	32.1	21.4	46.4
LLD2	35.7	21.4	42.9
LLD6	32.1	28.6	39.3
Phonological awareness	40.7	29.6	22.2
Alphabet knowledge	29.6	44.4	22.2
Print knowledge	35.7	35.7	21.4
Mathematics			
Measurement and geometry			
MATH4	28.6	42.9	28.6
MATH5	50.0	28.6	21.4
Number operations			
MATH1	21.4	32.1	46.4
MATH2	42.9	32.1	21.4
Mathematical reasoning			
MATH3	37.0	40.7	22.2
MATH6	57.1	25.0	17.9

Source: Assessment data from Milpitas Unified School District, Child Development Center records

Note: Construct categories may not sum to 100 percent if children were noted as “not yet at the first level” by the teacher on the DRDP, but the CPAA assigned a score of 2 (“approaching expectations”) or higher. For example, for phonological awareness, 7.5 percent of children were noted by teachers as “not yet at the first level” but received a score of 2 (“approaching expectations”) or higher on the CPAA.

The number of children for a given construct ranges from 27 to 28.

CPAA = Children's Progress Academic Assessment; DRDP = Desired Results Developmental Profile

Table A.8. Proficiency Across Spring DRDP and Spring CPAA Literacy and Mathematics Constructs, for English-Language Learners

Construct	Percentage of Children Demonstrating Proficiency			
	Neither Tool	DRDP Only	CPAA Only	Both Tools
Literacy				
Listening comprehension				
LLD1	29.0	35.5	16.1	19.4
LLD2	38.7	25.8	16.1	19.4
LLD6	41.9	22.6	22.6	12.9
Phonological awareness	48.4	16.1	29.0	6.5
Alphabet knowledge	22.6	16.1	9.7	51.6
Print knowledge	19.4	19.4	25.8	35.5
Mathematics				
Measurement and geometry				
MATH4	28.1	9.4	34.4	28.1
MATH5	12.5	25.0	21.9	40.6
Number operations				
MATH1	28.1	43.8	0.0	28.1
MATH2	53.1	18.8	15.6	12.5
Mathematical reasoning				
MATH3	25.8	9.7	32.3	32.3
MATH6	18.8	15.6	25.0	40.6

Source: Assessment data from Milpitas Unified School District, Child Development Center records

The number of children for a given construct ranges from 27 to 32.

CPAA = Children's Progress Academic Assessment; DRDP = Desired Results Developmental Profile

Table A.9. Proficiency Across Spring DRDP and Spring CPAA Literacy and Mathematics Constructs, for 3-Year-Olds

Construct	Percentage of Children Demonstrating Proficiency			
	Neither Tool	DRDP Only	CPAA Only	Both Tools
Literacy				
Listening comprehension				
LLD1	16.7	41.7	8.3	33.3
LLD2	20.8	37.5	16.7	25.0
LLD6	25.0	33.3	16.7	25.0
Phonological awareness	29.2	20.8	33.3	16.7
Alphabet knowledge	12.5	20.8	16.7	50.0
Print knowledge	8.3	29.2	25.0	37.5
Mathematics				
Measurement and geometry				
MATH4	20.8	20.8	25.0	33.3
MATH5	4.2	37.5	12.5	45.8
Number operations				
MATH1	12.5	45.8	4.2	37.5
MATH2	37.5	20.8	16.7	25.0
Mathematical reasoning				
MATH3	12.5	8.3	29.2	50.0
MATH6	12.5	8.3	16.7	62.5

Source: Assessment data from Milpitas Unified School District, Child Development Center records

N = 24

CPAA = Children's Progress Academic Assessment; DRDP = Desired Results Developmental Profile

Table A.10. Proficiency Across Spring DRDP and Spring CPAA Literacy and Mathematics Constructs, for 4-Year-Olds

Construct	Percentage of Children Demonstrating Proficiency			
	Neither Tool	DRDP Only	CPAA Only	Both Tools
Literacy				
Listening comprehension				
LLD1	17.4	18.8	14.5	49.3
LLD2	21.7	14.5	17.4	46.4
LLD6	17.4	18.8	17.4	46.4
Phonological awareness	26.1	18.8	18.8	36.2
Alphabet knowledge	11.6	17.4	5.8	65.2
Print knowledge	14.5	26.1	13.0	46.4
Mathematics				
Measurement and geometry				
MATH4	15.7	12.9	21.5	50.0
MATH5	7.1	21.4	11.4	60.0
Number operations				
MATH1	14.3	32.9	0.0	52.9
MATH2	27.5	18.8	14.5	39.1
Mathematical reasoning				
MATH3	10.1	17.4	26.1	46.4
MATH6	5.7	21.4	20.0	52.9

Source: Assessment data from Milpitas Unified School District, Child Development Center records

The number of children for a given construct ranges from 69 to 70.

CPAA = Children's Progress Academic Assessment; DRDP = Desired Results Developmental Profile

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