I. EXECUTIVE SUMMARY

This Chelsea Achieves in Mathematics (CAM) Report describes accomplishments and outcomes for Year 4, June 2016 through June 2017. CAM is a partnership between the CAPIC Head Start (CAPIC), the Chelsea Public Schools, Early Learning Center (ELC), and the Institute of Community Inclusion at the University Of Massachusetts Boston (UMB). Early Childhood Associates, (ECA), social science research and consulting firm, is the Project Evaluator. The Project is funded through the Massachusetts Board of Higher Education's Improving Teachers Quality Grant (ITQ).

The CAM project is unique in that it brings together the Chelsea Public Schools Early Learning Center and CAPIC Head Start together into one project to implement high quality practices with two distinct curricula: Building Blocks™, at ELC and Opening the World of Learning (OWL™) at CAPIC. The project is implementing each curricula with fidelity and quality while also integrating them to align and strengthen instruction in the Public Schools and Head Start. An underlying foundational concept is that early mathematics and literacy are not mutually exclusive skills. As Doug Clements has stated, t*here's something fundamental about the thinking that kids do in a good early math program that helps in multiple areas.* Project interventions were phased in differently for ELC and Head Start, and the data collected on curriculum fidelity and coaching was tailored to each site.

The four objectives of CAM described in the Section II, Description of Project Activities, are to:

1) Implement Building Blocks-Foundations for Mathematical Thinking (Building Blocks) in ELC classrooms to fidelity
2) Implement OWL in three CAPIC Head Start classrooms beginning September 2016
3) Integrate Opening the World of Learning (OWL) and Building Blocks.
4) Increase teachers and paraprofessionals' content and pedagogical knowledge in mathematics and develop teachers' strategies in mathematics instruction.

The goal of the project is to impact teacher practices and ultimately student outcomes. The CAM Project has set specific benchmarks with regard to achieving desired teacher, classroom, and child outcomes. These include:

- Preschool classroom teachers will implement Building Blocks with 80 percent fidelity
- 80 percent of early educators will demonstrate a significant increase in their knowledge and beliefs relevant to teaching children mathematics and literacy
- 80 percent of classrooms will show gains in the Instructional Support Domain
- 80 percent of the child sample will demonstrate gains in language, literacy and mathematics

Implementation Fidelity. In Year 4 of the Grant ELC teachers implemented Building Blocks with fidelity, Coaches at ELC observed that teachers were making progress in observing, optimizing teacher understanding of activities; in differentiating instruction for kindergarten bound children; and in composition of small groups. The Curriculum Fidelity Coach at CAPIC Head Start observed those teachers to implement both Centers and Small Groups with fidelity 92 percent of the time.

Gains in Teacher Knowledge and Beliefs in Mathematics and Literacy. Teachers increased their knowledge and beliefs with regard to teaching mathematics and literacy. PD evaluations show that teachers gained understanding of math and developmental trajectories in supporting learners in construction of mathematical knowledge. Teachers rated the PD high (Mean Scores of 3.7 and 3.8 on a 4-point scale) across three sessions on Learning Trajectories, on increasing content and pedagogical

knowledge. The CAM Project Leadership Team report that Chelsea kindergarten teachers are more aware than before of the developmental progress of mathematics skills for the range of children in their classrooms. They are identifying where children are on trajectories.

The PD provided to CAPIC Head Start teachers promoted a better understanding of the purpose of Centers; enhanced the teachers' knowledge of Dialogic Reading; the importance of generating conversations; and instructed them on how to set up activities with more intentionality.

Gains in Teacher Practice. CLASS data shows improvement in teacher practices. Each of the seven classrooms with Pre/Post scores made gains in every CLASS Domain and Dimension between the Project launch in fall 2013/2014 and spring 2017, including the more challenging Instructional Support Domain, which focuses on higher order thinking and language skills.

Gains in Children's Kindergarten Readiness. At least 80 percent of the children at ELC made gains in four out of nine subtests represented by PPVT, PALS, and TEAM. Most striking at ELC is that the scores in the spring (posttest) fall within or even exceed the readiness range. While CAPIC Head Start children's scores did not reach the readiness range by the spring, the scores moved in an upward, positive direction. The CAM Project Team add that CAPIC teachers are focusing on children's readiness for kindergarten, and are assessing four areas: 1) How far can you count? (verbal memory only); 2) How many? 3) Give Me 5 (can the child produce a set of five); and 4) patterning skills.

II. DESCRIPTION OF PROJECT ACTIVITIES

The following Table summarizes the CAM Project activities, timeline, and evaluation methods and data collection. Descriptions of the activities, challenges, partners and dissemination follow.

TABLE 1: SUMMARY OF ELC PROJECT ACTIVITIES SPRING AND FALL 2016

Activity	Timeline	Evaluation Data
ELC: Implementation of Building Blocks. The Project implemented Building Blocks for participating teachers, paraprofessionals, coaches and specialists at the Chelsea Public Schools Early Learning Center (ELC) Teachers met to vertically align Building Blocks between PreK, kindergarten and first grade.	spring 2016 to spring 2017	Coaches completed 61 Coaching Logs capturing information on curriculum implementation (formative)
Targeted PD. Three-Part Learning Trajectories in Mathematics Series with Doug Clements and Webinar with Christopher Wolfe	See PD Table 4 below for details.	PD evaluations completed in fall 2016 (summative)
Coaching on Building Blocks (ELC)	• Nine coaching sessions in late fall 2016, and 53 sessions between January-June 2017 • CLASS observations at ELC May-June	• Coaching Logs (formative) • CLASS Observation and Scoring of 6 ELC classrooms (summative)
Child Assessments • Administered to a randomized sample of 25% children in 9 classrooms at ELC. • TEAM Progress monitoring meetings	fall 2016 and spring 2017 October, 2016 December 2016, and April 2017	• Peabody Picture Vocabulary IV • Phonological Awareness Literacy Screening (PALS) • TEAM

TABLE 2: SUMMARY OF CAPIC PROJECT ACTIVITIES SPRING AND FALL 2016

Activity	Timeline	Evaluation Data
CAPIC: Implementation of OWL. Implementation of OWL for participating teachers, paraprofessionals, coaches and specialists at CAPIC Head Start.	spring 2016 to spring 2017	Coaches completed 18 Curriculum Fidelity Logs with six teachers in three classrooms on OWL (formative)
PD targeted to OWL	See PD Table 5 below for details	PD evaluations completed in fall 2016 (summative)
Integration of Building Blocks into OWL. The Project implemented Building Blocks with participating teachers at CAPIC	spring 2017	Coaches completed three Curriculum Fidelity Logs for Building Blocks in May 2017. (formative)
Curriculum Fidelity Coaching on OWL	18 coaching sessions October 2016 through April 2017	• Curriculum Fidelity Logs for CAPIC (formative) • CLASS Observation and Scoring of 3 CAPIC classrooms in May and June (summative)
Child Assessments Administered to a randomized sample of 25% children in 3 classrooms at CAPIC. TEAM Progress monitoring meetings	fall 2016 and spring 2017 October, 2016 December 2016, and April 2017	• Peabody Picture Vocabulary IV • Phonological Awareness Literacy Screening (PALS) • TEAM

The CAM Project Activities are described below:

1) Curriculum Implementation

Implement Building Blocks in ELC classrooms to fidelity. Building Blocks is a National Science Foundation-funded project designed to enable all young children to build a solid foundation for mathematics. Building Blocks™ activities are sequenced using highly researched developmental paths called learning trajectories, which mirror the way children naturally develop mathematical knowledge.

CAM continued to work on implementing Building Blocks throughout Year 4 for participating teachers, paraprofessionals, coaches, and specialists in nine preschool classrooms at the Chelsea Public Schools ELC, eight of which have been participating in CAM and one of which is new to CAM. The Curriculum contains digital activities that cover a variety of topics, from counting; algebraic thinking to geometric shapes and data classification. The Grant purchased iPads for all nine ELC classrooms for children to play the Building Blocks games independently and in Small Groups. It purchased white boards for three ELC classrooms in order to demonstrate the Building Blocks software game in Whole Group. Kindergarten and first grade teachers worked with the PreK teachers at ELC to align the Building Blocks curriculum across grade levels.

Implementation of OWL in three CAPIC Head Start classrooms beginning September 2016. Three classrooms at CAPIC implemented OWL, and participated in ITQ-funded OWL trainings. OWL, which is based on research on early language and literacy and social and emotional development is a comprehensive, literacy-based curriculum that covers all domains of early learning. CAM funded the purchase of three copies of the OWL at the beginning of Year 4 for implementing OWL in these

classrooms. Implementation of OWL was supported by trainings on OWL Components, and language and literacy content and pedagogy. The Grant funded coaching sessions (about three per classroom between October and April) focused on curriculum fidelity. The coach uploaded Torsh's TALENT™ videos of CAPIC was classrooms, so that teachers could visualize different trajectories within a specific activity.

Integration of Building Blocks with OWL in spring 2017. Coaches worked with CAPIC teachers on integrating components of the Building Blocks curriculum into the OWL format. In spring 2017, the project integrated two curricula: Opening the World of Learning (OWL) and Building Blocks. This linkage aims to align Head Start instruction more closely with the Chelsea Public Schools. It also seeks to strengthen instruction in mathematics while maintaining the effectiveness of OWL for language and literacy. The CAM Project Leadership Team and teachers met to integrate OWL and Building Blocks Curricula in fall 2016.

Curriculum Implementation Challenges:

- **ELC:** According to the ELC teachers, while Building Blocks computer games are excellent, it has been difficult to get each child logged in with passwords. The Project has simplified login process this year. Lessons learned from technology challenges will help to expand Building Blocks to the Chelsea Public Schools kindergarten and to CAPIC.

- **CAPIC:** CAM Project Team have note that while OWL "is great for 4 year olds, it is not so much for 3 year olds". In spring 2017, ELC and CAPIC teachers worked together on modifying the OWL curriculum for three year olds. There have been a few challenges in implementing Building Blocks at CAPIC. The CAPIC classrooms did not have licenses for the computer program this year; and Project staff have observed that Building Blocks may be too advanced for some of the younger children at Head Start.

Partner Involvement: UMB staff collected data on curriculum implementation. ELC staff, CAPIC staff, and national experts in early childhood mathematics collaborated on implementation of Building Blocks (ELC) and OWL (CAPIC).

Dissemination Activities: Administrative staff distributed curriculum manuals, materials, and technology to classrooms at both ELC and CAPIC at the start of the year.

2) Professional Development and Coaching to increased teachers and paraprofessionals' content and pedagogical knowledge in mathematics and develop teachers' strategies in mathematics instruction

Between fall 2016 and spring 2017, CAM funded 12 targeted PD trainings on content and pedagogy in mathematics and language/literacy that reached about 200 PreK teachers, kindergarten teachers, paraprofessionals, and specialists in ELC and Head Start. Two different PD series were provided for ELC and CAPIC. PD for ELC focused on Building Blocks (mathematics) while PD for CAPIC focused on OWL (language and literacy).

TABLE 3: TIMELINE OF WHEN TRAINING WAS OFFERED TO ELC AND CAPIC
ELC = 3 Trainings; CAPIC = 10 Trainings

	Aug 2016	Sept	Oct	Nov	Dec	Jan 2017	Feb	Mar	April	May
Learning Trajectories in Mathematics with Doug Clements										
Joint (ELC and CAPIC) Webinar with Chris Wolfe										
CAPIC OWL PD										

PD in Early Mathematics: CAM once again brought to the teachers two national experts in mathematics, Doug Clements and Christopher Wolfe, for training on using developmental learning trajectories to support learners in their construction of mathematical knowledge. The public school kindergarten teachers were included in ELC's PD to deepen their knowledge of mathematical trajectories and foster vertical alignment between PreK and kindergarten.

TABLE 4: YEAR 4 PD IN EARLY MATHEMATICS

Training Title	Dates	# Participants	Hours	Participants
Geometry with Doug Clements	10/17/2016	83	6	ELC PreK and K teachers
Hands-on Follow up Coaching with Doug Clements	10/18/2016	8	1	CAPIC and ELC
Webinar with Chris Wolfe on math trajectories and using TEAM data	11/8/2016	8	1	ELC teachers and coach

- **Learning Trajectories in Early Mathematics with Doug Clements, Professor in Early Learning at the University of Denver, and follow-up coaching.** This full-day PD session led by Dr. Clements covered learning trajectories in early mathematics for 83 PreK and kindergarten educators at ELC. Topics ranged from subitizing and counting to geometry trajectories. Discussion focused on effectively using data to create flexible, small groups. As proposed, Dr. Clements provided subsequent hands-on observation and feedback to six ELC teachers. Here, participants delved deeper into possibilities presented by Choice Time; how to organize Small Groups; how to individualize instruction; and how to accommodate younger children. The TA was followed by debriefings with district administrative staff and teachers.

- **Webinar with Dr. Christopher Wolfe, Professor of Psychology and Director of Graduate Studies in Psychology, Miami University.** This interactive webinar for teachers and coaches focused on improving the understanding of math trajectories instruction and on using TEAM data to inform and differentiate instruction for children. Eight ELC teachers participated.

PD for CAPIC Teachers on OWL: CAPIC teachers participated in up to ten trainings on OWL. Coaches reported gains in teacher practice – from enhanced Dialogic Reading, richer vocabulary, concept development, and quality of feedback, to more effective Morning Meetings. The Project supplemented PD with coaching focused on curriculum fidelity. An additional 13 CAPIC classrooms participated in ITQ-funded OWL trainings this past year. Table 5 below shows PD offered, dates, number of participants, and audience. Brief descriptions of the PD follow.

TABLE 5: YEAR 4 PD FOR CAPIC HEAD START

Training Title	Dates	# Participants	Hours	Participants
OWL Curriculum	8/24/2016	26	6	CAPIC Head Start (CAPIC)
OWL Curriculum	8/25/2016	23	6	CAPIC
Centers/Small Group Time	11/16/2016	6	1	CAPIC - CAM classrooms
Planning Unit 2/Differentiation	12/14/2016	6	1	CAPIC - CAM classrooms
Diversified Learning For Developmental Stages	1/18/2017	18	2	CAPIC
Letter Recognition and SWPL	3/29/2017	6	1	CAPIC - CAM classrooms
Enhancing SWLP	5/8/2017	6	1	CAPIC - CAM classrooms
Owl Accomplishments and Moving Forward	5/9/2017	6	1	CAPIC - CAM classrooms
Supporting Readiness Skills Though Literacy	5/9/2017	14	2	CAPIC

- **Opening the World of Learning (OWL) Training**. This training included a 2.5 day orientation to OWL for early educators at CAPIC. The PD covered OWL components and how to organize materials. Participants practiced dialogic reading strategies; and learned about how the curriculum develops children's language and literacy skills through the OWL components of Centers, Let's Find Out About It, Let's Talk About It, and Small Groups. Participants developed a daily plan for providing all children with Small Group instruction in mathematics and literacy twice per week per child. The training also helped bridge instruction between Head Start and the Chelsea Public Schools by covering integration of OWL and Building Blocks curricula. PD was supplemented by coaching. Participating educators received 1.5 CEUs after attending all sessions. An average of 25 teachers attended each training.

- **Centers/Small Group Time** was a one-hour session for CAPIC teachers on implementing Centers, Small Groups, modeling, and role-playing.

- **Planning Unit 2/Differentiation** was a one-hour session that provided CAPIC teachers with an overview of OWL Unit 2, along with a focus on differentiating instruction.

- **Diversified Learning for Developmental Stages**. This two-hour session for all teachers at CAPIC covered how to provide activities that are developmentally appropriate for three-year olds, dual language learners, and children with special needs. The training is now being offered district-wide.

- **Letter Recognition & Songs, Word Play and Letters (SWPL).** The PD provided CAPIC teachers with tips on how to include OWL's SWPL component activities throughout the day.

- **Enhancing SWLP**. The PD built on the session above to focus on phonological development of young children and how to build the skills needed for reading.

- **OWL Accomplishments and Moving Forward**. This PD included a reflection on the first year of OWL implementation. The CAM team discussed PD topics on which to focus moving forward,

with a continued emphasis on providing coaching an increasingly central source of professional development.

- **Supporting Readiness Skills though Literacy**. Literacy based games to support school readiness were presented to all of the CAPIC teachers.

PD Challenges:

- CAPIC staff were invited to participate in the PD at ELC, however only the Director was able to attend due to staffing changes.

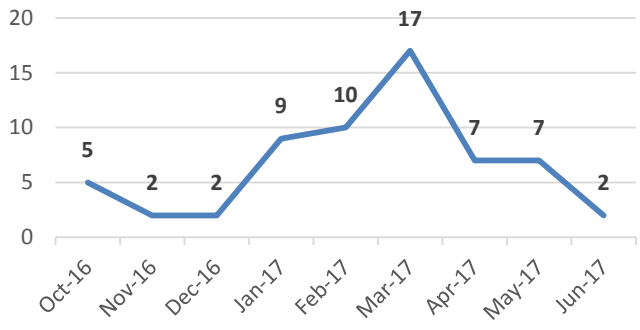
- The CAM Leadership Team note that teachers are not using TSG data to drive instruction, and so more support is needed with TSG: "The public schools currently are not looking at PreK TSG data." Therefore, the Team would like to offer PD on Teaching Strategies Gold next year.

Partner Involvement: The Chelsea Public Schools Coach has been active in planning, providing feedback, and implementing PD. All Project partners worked collaboratively to promote classroom visits and debriefing sessions with experts. CAPIC Head Start staff supported the implementation of both OWL and Building Blocks throughout the agency, including other Head Start sites in Winthrop and Revere. The Project provided space at UMB for the trainings on Building Blocks and OWL.

Dissemination Activities: Dissemination included PowerPoints, articles, activities, and resources for PD.

Coaching Activities at ELC: As proposed, each participating ELC classroom received at least two to three hours of monthly coaching targeted to curriculum fidelity of Building Blocks. Three coaches conducted a total of 61 coaching sessions with 27 different teachers at ELC from October 2016 to June 2017. As Figure 1 shows, coaching was heaviest from January through May. Coaches engaged teachers in goal setting, action planning, action, and debriefing with an emphasis on 1) observing math lessons and Small Groups for higher order thinking opportunities; and 2) developing an understanding of OWL or Building Blocks, including implementation strategies, fidelity, individualization, and planning.

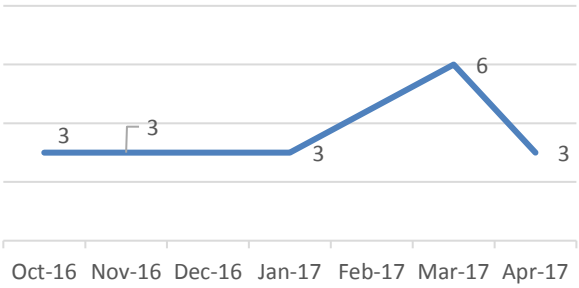
FIGURE 1: NUMBER OF COACHING SESSIONS BY MONTH AT ELC
N=61 SESSIONS



In fall 2016, CAM purchased TALENT™ for ELC teachers to upload video for the coaches. Ten videos were uploaded, which focused on children's understanding of mathematics, the teacher's intentional use of prompts, and questions and materials to support development. The coach currently has five exemplar teachers who are have signed up for one video lesson a month.

Coaching at CAPIC: Coaching at CAPIC focused on implementing OWL with fidelity. The coach captured her observations from 18 coaching sessions held between October 2016 and April 2017 on a Curriculum Fidelity Log (Figure 2). The coach provided teachers with strategies on how to run the OWL components more effectively, modeled instruction, and provided feedback on components such as Dialogic Reading. After each session, the coach debriefed with teachers and shared information with the Project Director. CAM staff report that they have started to see a shift in teachers' thinking with regard to early language and literacy. The coach used an adapted version of the Building Blocks Curriculum Fidelity Checklist with CAPIC for three additional sessions in May 2017 with the goal of more fully implementing Building Blocks at CAPIC next year.

FIGURE 2: NUMBER OF CURRICULUM FIDELITY/COACHING OBSERVATIONS ON OWL AT CAPIC - FALL 2016 TO SPRING 2017 N=18



Coaching Challenges: ELC teachers found it challenging both to get parental permission for videotaping and to use and upload video using the SWIVL and TALENT™. While CAPIC worked with UMB to garner parental consent and to support teachers in uploading the videos, CAPIC did not utilize video in Year 4.

Partner Involvement: CAPIC collaborated with UMB to hire a coach to provide onsite curriculum fidelity coaching to teaching teams. UMB and CAPIC ensured that all Coaching Logs and Curriculum Fidelity Checklists were submitted. OWL coaching that occurred at three other Head locations in Chelsea, Winthrop and Revere, was supplemented by Head Start funds.

Dissemination Activities: Coaches shared the Coaching Logs with teachers and administrators.

3) Child Assessment

Teachers collected baseline child level data in fall 2016 and spring 2017 on a random sample of 25 percent (average of four children per class) of children in ELC and CAPIC participating classrooms. Assessments included the Peabody Picture Vocabulary Test (PPVT-IV), the Phonological Awareness Language Screening (PALS), and the Tools of Early Assessment in Mathematics (TEAM). Data was analyzed in fall 2016 and at the end of the Project year in June 2017 to determine child gains. As in previous Project years, data collection required parental consent for each assessment.

The sample of children consisted of 47 ELC children in 13 classes – three extended day and ten half-day programs. The sample also consisted of ten CAPIC children enrolled in three participating classes (see Tables 6 and 7). The majority of children assessed were four years olds.

Child Data Collection Challenges: This Project period spans two school years, and so it includes two different cohorts of children. Fall 2016 data is being used as the baseline data, so the same cohort of children could be assessed again in spring 2017.

Partner Involvement: The Chelsea Public Schools collected and shared PPVT/PALs data with UMB. UMB collected and shared PPVT and PALs data with CAPIC. UMB collected and shared TEAM Data with Chelsea Public Schools and CAPIC.

Dissemination Activities: Child data is shared with individual classroom teachers to inform instruction. TEAM data analysis supported ELC teachers in individualizing instruction, especially for children whose mathematical skills need most support.

III. PARTICIPANT DATA

Tables 6 and 7 shows program participants for ELC and CAPIC Project activities respectively.

TABLE 6: ELC PARTICIPATION DATA YEAR 4

ELC Activity	Anticipated Participants	Total Participants/ Classrooms Enrolled	Total Completed
Building Blocks Implementation	• Building Blocks: 16 teachers/paras in 8 ELC classrooms • Alignment activities with ELC kindergarten teachers	18 teachers and paraprofessional in 9 ELC classrooms	18 teachers and paraprofessional in 9 ELC classrooms
Targeted Training	99 educators	• 99 educators across 3 PD offerings • 9 ELC PreK classrooms and additional ELC kindergarten classrooms	99 educators
Coaching	27 ELC teachers in nine core classrooms and additional classrooms	Same	Same
Data Collection on Children	60 children	47 ELC in 9 ELC classrooms	47 ELC in 9 ELC classrooms

TABLE 7: CAPIC HEAD START PARTICIPATION DATA YEAR 4

OWL Activity	Anticipated Participants	Total Participants/ Classrooms Enrolled	Total Completed
OWL Implementation	8 teachers/assistants in 3 participating CAPIC classrooms	6 teachers/assistants in 3 CAPIC classrooms.	6 teachers/assistants in 3 CAPIC classrooms
Targeted Training	111 educators	• 111 educators across 10 PD offerings (average of 18 per session). • 17 CAPIC classrooms (3 of which were in the CAM Project)	111 educators
Curriculum Fidelity Coaching	6 CAPIC teachers in 3 classrooms received an average of six observations each.	Same	Same
Data Collection on Children	10 children	10 CAPIC in 3 CAPIC classrooms	10 CAPIC in 3 CAPIC classrooms

IV. FORMATIVE EVALUATION ACTIVITIES AND RESULTS

A. FORMATIVE EVALUATION ACTIVITIES

Formative evaluation tools used to support project improvement include the Coaching Logs used at ELC (for Building Blocks) and the Curriculum Fidelity Logs used at CAPIC (for OWL, and on a limited basis, for Building Blocks). When applicable, observations and scores from fall and spring are compared to highlight improvements in coaching and curriculum fidelity over the year.

Coaching Logs at ELC. The Coaching Logs measure attributes of good practices in coaching within the context of the Project's focus on Building Blocks. The Logs capture coaching duration; number and types of goals set and goals met; coaching strategies; and content covered in coaching sessions with teaching teams.

Curriculum Fidelity Logs for CAPIC. The Curriculum Fidelity Logs provide a way for the coach to record observations on fidelity to the OWL curriculum (e.g. Dialogic Reading, Let's Talk About It, Morning Meeting, Centers, Small Group); and quality of OWL implementation.

The Language and Literacy Survey questioned teachers on beliefs about best practices in language and literacy; teachers' understanding of oral language acquisition in preschool children; and concepts of print awareness, reading comprehension, and phonological awareness. Thirty-three educators responded in fall 2016 to provide formative data for the Project.

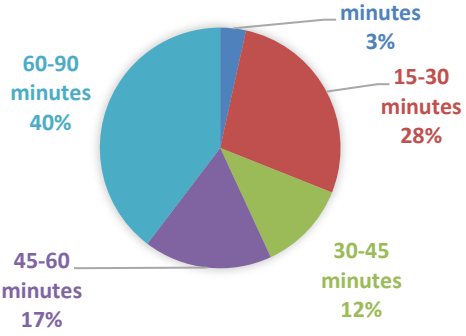
B. SUMMARY OF THE FORMATIVE EVALUATION RESULTS

COACHING AT CHELSEA PUBLIC SCHOOLS EARLY LEARNING CENTER

Coaching activities included the coaching visit/observation, a debriefing session, and the coach's completing a Coaching Log of each session. CAM implemented 61 coaching sessions with a core group of six teachers at three ELC schools (about ten sessions per teacher). Most of the sessions (87 percent) were with kindergarten teachers.

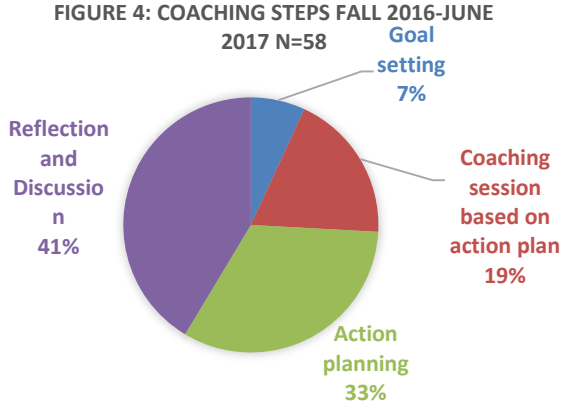
Coaching Duration: Sixty percent of the coaching sessions tended were under one hour in length. The remaining 40 percent took up to 1 ½ hours. The coaches typically met in a private meeting space or conducted an observation followed by a feedback session. Occasionally, the coach assisted the teacher in the classroom and modeled best practices.

FIGURE 3: DURATION OF COACHING SESSIONS
N=61



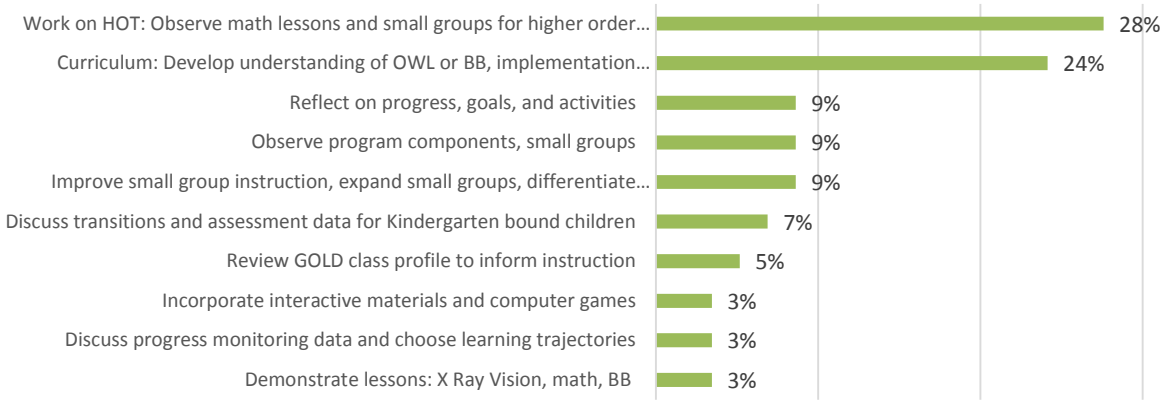
Steps in Coaching Sessions: Coaches and teachers engaged in reflection and discussion 41 percent of the time; followed by action planning 33% percent; and coaching around the action plans 19 percent of the time. Goal setting took place 7 percent of the time. Coaches engaged teachers in more reflection and discussion as the school year progressed.

FIGURE 4: COACHING STEPS FALL 2016-JUNE 2017 N=58



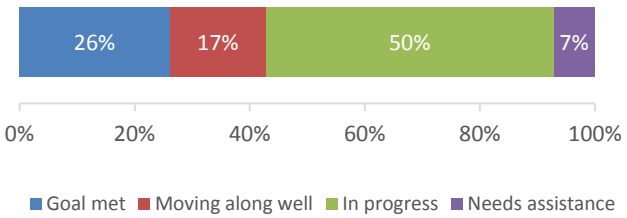
Coaching Goals: The open-ended comments logged during the entire year fall into ten categories. Over half of the goals fall into just two categories: (1) Observing math lessons and Small Groups for higher order thinking opportunities; and (2) Developing an understanding of OWL or Building Blocks curriculum, including implementation strategies, fidelity, individualization, and planning. Figure 5 shows that the coaches emphasized promoting higher order thinking skills, and on teachers' having a good understanding of the curriculum.

FIGURE 5: COACHING GOALS
N=58 COMMENTS



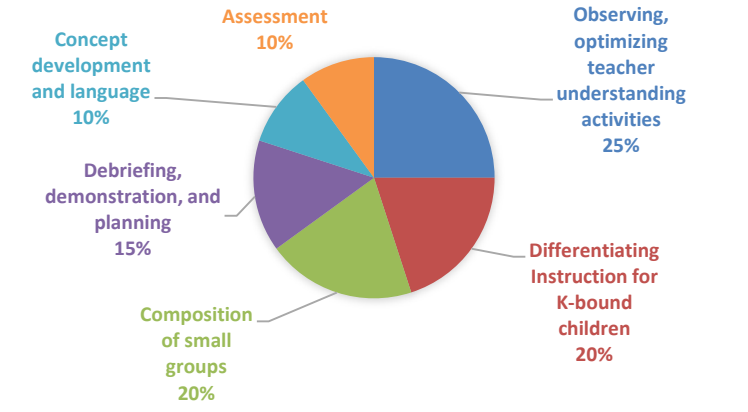
Goals Progress: When asked to comment on where they were in the goal setting process, coach comments fall into four categories: (1) Goal was met; (2) Goal is moving along well; (3) Goal is still in progress; and (4) Goal still needs assistance. If each of the coach's comments on progress is placed onto a 4-point continuum from 1=Goal is not met to 4=Goal is me, then the Mean Score across all comments would be 2.6. That is, goals on average, are "in progress".

FIGURE 6: GOALS PROGRESS N=42 COMMENTS



Coaches offered open-ended comments on where they were making the most progress. Figure 7 below shows that most progress was being made in observing, optimizing teacher understanding of activities (25% of mentions); in differentiating instruction for kindergarten bound children (20%); and composition of small groups (20%). Coaches also were making progress on debriefing/demonstration/planning; assessment; and concept development and language. The coach occasionally worked with teachers on how to use the IPads and interactive white board.

FIGURE 7: OPEN-ENDED COMMENTS ON WHERE PROGRESS TOWARD GOALS WAS BEING MADE N=20 COMMENTS



Specific comments on goals progress highlight in more detail how coaches optimized teacher understanding of the activities; differentiated instruction; worked on Small Group strategies; and fostered children's concept development:

- *The teacher, based on her analysis of the children, had devised her own version of the "pizza game". She felt doing it in a slightly different way, based on the Building Blocks goal would work for her children better. It did work, and I was proud of her initiative and understanding of the Building Blocks objectives.*

- *We are trying to bring some intentionality to instruction for kindergarten bound children. Teachers were excited to have some more challenging materials for the advanced kindergarten bound children.*

- *She has been more comfortable with one on one, but the teacher is working on including more children in the Small Group.*

- *After I observed the teacher's Small Group, we looked at end of year TEAM data to determine trajectories and plan the next day's Small Group.*

- *We discussed one group would be working on completing pattern block puzzle cards with and without lines. Another would create and use cards they made together as partner".*

- *The teacher used more "Tell me why you know that" questions in my observation of Small Groups.*

Coaching Strategies Used: The Coaching Log asked the Coaches to select from a prescribed list of 19 coaching strategies she used over the course of the sessions. The coach identified 10 out 19 coaching strategies/supports across sessions. Coaches used an average of three strategies per session. As the Figure 8 shows, the three most frequent strategies were:

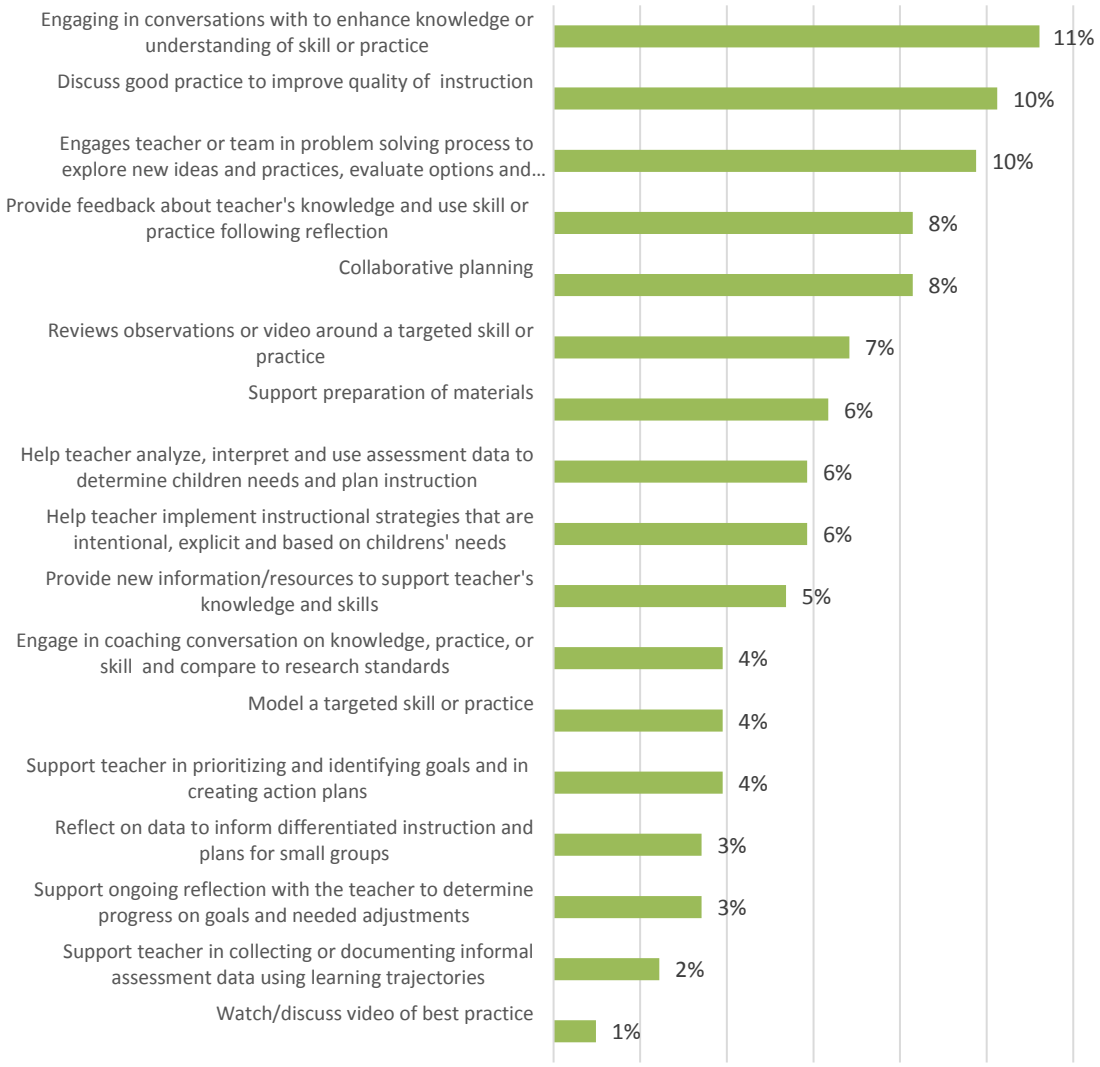
- Engaging in conversations with teacher/team to enhance knowledge or understanding of targeted skill or practice

- Discussing best practice to improve quality of instruction

- Engaging teachers/team in problem solving process to explore new ideas and practices evaluate options, and make decisions.

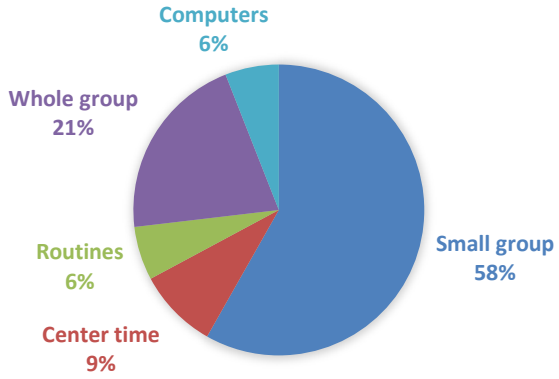
There may be potential for utilizing more coaching strategies since Coaches employ most of them less than 10 percent of the time. For example, there may be opportunity to reflect on data to differentiate instruction; to support ongoing reflection around meeting goals and adjusting activities; to support the teacher in documenting assessment data to support learning trajectories; and to utilize video more frequently.

FIGURE 8: COACHING STRATEGIES USED FALL 2016-SPRING 2017
N=205 STRATEGIES MENTIONED OVER 61 SESSIONS



Building Blocks Instructional Components Observed the Most. Coaches wanted to make sure the teachers knew about the Building Blocks program components. As Figure 9 shows, coaches prioritized the implementation of Small Group, with 58 percent of mentions. They emphasized Whole Group the next (21% of mentions). Computers, Routines, and Centers received relatively less attention.

FIGURE 9: BUILDING BLOCKS COMPONENTS OBSERVED MOST OFTEN
N=67 COMMENTS

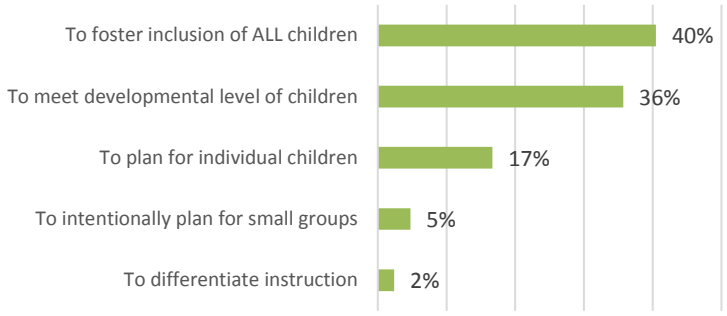


Coaching Content. Coaches most frequently covered content on identifying mathematical strategies used by children (Figure 10). The data shows opportunity to increase coverage of other content, from classroom organization to intentional use of mathematical vocabulary.

FIGURE 10: WHAT CONTENT DO YOU COVER IN COACHING?
N=50

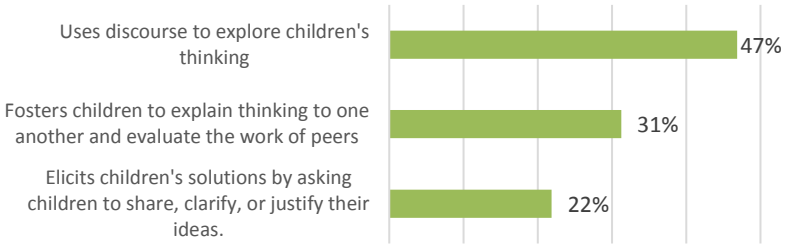
Use of Assessment Data in Coaching. When asked from a prescribed list how they use data to inform instructional decisions and practices, coaches most often report using assessment data to foster inclusion of ALL children (40% of time); followed closely by meeting the developmental needs of children (36% of the time). The data show opportunity to plan for individual children, small groups, and differentiate instruction. However, note that there is overlap in these items, and so more examination to tease out why coaches responded in the way they did may be merited.

FIGURE 11: WAYS COACH USES ASSESSMENT DATA TO INFORM INSTRUCTIONAL DECISIONS AND PRACTICES
N=42



How Coaches Build Conceptual Knowledge. Figure 12 shows the range of ways that coaches are building conceptual knowledge. When asked from a prescribed list about strategies they use to build conceptual knowledge, nearly half of the responses (47%) use discourse to explore children's thinking. Nearly one third build conceptual knowledge by helping children explain their thinking to one another and evaluate each other's work.

FIGURE 12: HOW DO YOU BUILD CONCEPTUAL KNOWLEDGE N=32



CURRICULUM FIDELITY COACHING AT CAPIC HEAD START

A key objective of CAM coaching was to implement the OWL activities with fidelity and ultimately, to integrate components of the Building Blocks curriculum into the OWL curriculum format. The coach at CAPIC used Curriculum Fidelity Logs to show the degree of fidelity to OWL among the participating CAPIC classrooms, and the quality of implementation. Eighteen Curriculum Fidelity Logs were completed by the CAPIC coach between October 2016 and April 2017. The Logs included observations of three teams of two teachers each, or a total of six teachers.

Curriculum Fidelity Logs for OWL asked the Coaches directly to denote when they observed one of the OWL Components with fidelity. The coach noted after each observation whether an aspect of OWL was observed, and whether it was observed for the amount of time specified in the Manual. Table 8 shows that the coach observed CAPIC teachers to implement both Centers and Small Groups with fidelity 92 percent of the time.[1] All classrooms were on pace with implementation, meaning that they were within two weeks of the planned schedule.

TABLE 8: OWL CURRICULUM FIDELITY AT CAPIC HEAD START FALL 2016 TO SPRING 2017 N=18

Was this aspect of the Curriculum observed?	Percentage of Time Component was Observed to be Implemented with Fidelity Fall 2016 to Spring 2017
Center - children choice blocks, dramatic play, writing, computers, books, mathematics, science, and sand/water. 60 minutes	92% said yes (N=15)
Small groups - Either Building Blocks or OWL Small Group occurs - two groups of children meet with teacher during Center time	92% said yes (N=15)

[1] The other instructional formats, including Start of Day Centers, Morning Meeting, Let's Talk About It, and Let's Find Out About It, were observed only once or twice over the course of 18 observations, and so it is not possible to reliably confirm whether these were implemented with fidelity across multiple observations.

Quality of Implementation. The Curriculum Fidelity Log used at CAPIC also asked each coach to rate – after each observation – the quality of implementation they observed for five OWL instructional formats on a 3-point scale. The Curriculum Fidelity Log describes three levels of implementation quality:

1=Evidence - consistently observed but not always ideally executed**;**
2=Solid evidence - consistently observed component and was close to ideally delivered;
3=Exemplary - the component was observed and executed ideally

The Coaches rated all of the OWL Components in the "evidence" range of implementation (from 1.2 for Dialogic Reading and Small Group Time to 1.8 for Center time). These ratings show that while the coach observed the instructional format to be implemented, they did not necessarily observe the Component to be ideally implemented. Only Center Time approaches "solid evidence" of being implemented. That is, only Center Time was observed to be implemented and "ideally delivered".

TABLE 9: COACH RATINGS OF IMPLEMENTATION QUALITY BY OWL COMPONENT
AVERAGE RATINGS FOR SCHOOL YEAR
Scale: 1=Evidence; 2= solid evidence; 3=Exemplary
N=18

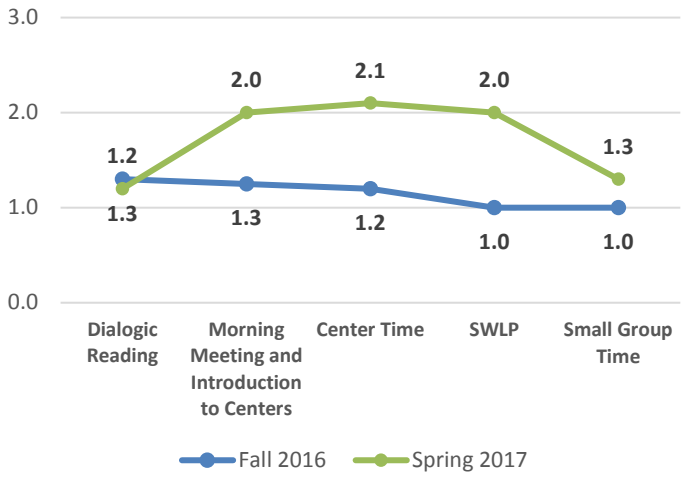
	Dialogic Reading	Morning Meeting/Introduction to Centers	Center Time	SWLP	Small Group Time
AVERAGE Fall 2016 to Spring 2017	1.2	1.5	1.8	1.5	1.2

However, in comparing the implementation quality of observations conducted in fall 2016 (October and November) with observations conducted in 2017 (January through April), average quality scores increase in the latter part of the year.

- By the spring, the coach ascribed scores of "solid evidence", e.g. components were consistently observed and close to ideally executed, for three of the OWL components: Morning Meeting and Introduction to Centers; Center Time; and SWLP.

- The higher spring scores shows that that teachers improved implementation quality over the year. However, there is a continuing need to work on the quality of Dialogic Reading and Small Group Time, which received lower ratings than the other three components in the spring.

FIGURE 13: QUALITY OF OWL IMPLEMENTATION
Fall 2016 N=6 Observations
Spring 2017 N=12 Observations



Coach Comments on OWL Curriculum Implementation. The coach provided open-ended comments on the quality of OWL implementation with regard to engaging children in Centers; the teacher's

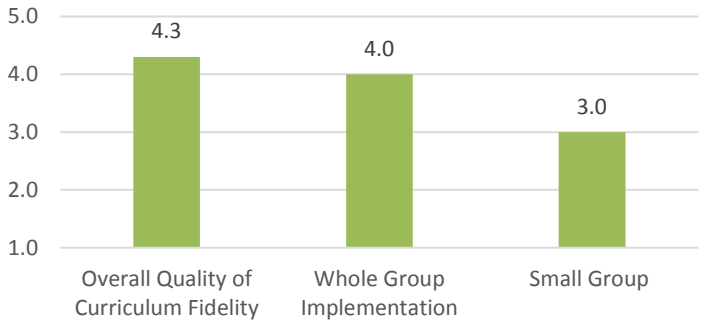
understanding of the Centers' learning value; differentiation; and Dialogic Reading. Comments are consistent with the implementation scores above in that they show evidence of good practice along with room for improvement.

- *During Small Groups, additional people were helping out with the Centers, so Small Group was uninterrupted and children performed tasks well.*
- *In another observation, an activity in Small Group needed to be adapted to the child's level.*
- *In Dialogic Reading, teachers were trying to adhere to the program. They asked questions related to real life situations, and used advanced vocabulary. While the teacher's questions did not require as much thought on the part of the children in another observation of Dialogic Reading, the teacher still used good techniques to regain the children's attention.*
- *In one Center, some children were not engaged, both teachers need to move around the room, and work was needed on the learning value of this format.*

Coach Recommendations for Improving Implementation. The coach offered strategies to improve fidelity to OWL: She recommended providing better pacing, differentiating instruction, and increasing the level of conversation in Centers and Small Groups. She suggested "changing the momentum based on the behavior of group if necessary". She highlighted how to improve transitions as the children go from breakfast to reading time. She discussed how to implement a Small Group so that the rest of the class stays engaged, how to improve assessment in Small Groups, and how to develop more letter awareness.

Building Blocks Curriculum Fidelity at CAPIC. Three observations of curriculum fidelity to Building Blocks took place at CAPIC Head Start in May 2017. The coach observed five teachers implement aspects of Building Blocks. The coach marked the quality of fidelity on a 5-point scale, with 1=strongly disagree to 5=strongly agree on three Building Blocks components: Overall Implementation, Whole Group, and Small Group (Figure 14). Attachment 1 contains more specific fidelity scores for the Building Blocks curriculum by item.

FIGURE 14: BUILDING BLOCKS FIDELITY SCORES
1=strongly disagree; 2=disagree; 3=neither agree or disagree/na; 4=agree; 5=strongly agree
N=3 Observations May 2017



- **Overall Quality (Mean Score 4.3).** The coach "agreed" that materials were presented to promote mathematical thinking, that the teachers used the curriculum's Everyday Mathematics activities to involve children in mathematical thinking, and the teacher extended activities to enhance learning.
- **Whole Group (Mean Score 4.0).** On average, the coach "agreed" that Whole Group was

implemented with fidelity. With regard to specific Whole Group activities, the coach gave higher implementation scores to:

- Displaying an understanding of mathematics concepts and vocabulary
- Setting up materials correctly
- Promoting and valuing children's effort
- Encouraging children to share and clarify ideas, and to listen and evaluate what their peers were saying.

The coach "agreed" that the teachers:

- Engaged children in mathematical thinking, involved mathematical language, and encouraged mathematical reflection in Whole Group
- Conducted activities as written in the curriculum and paced it appropriately;
- Worked with all children
- Facilitated children's response, elicited many solutions for one problem
- Helped children make connections to math ideas and real-life experiences.

LANGUAGE AND LITERACY SURVEY

Thirty-three teachers participating in CAM responded to the Language and Literacy Survey in fall 2016. Responses provide formative information on teacher's beliefs, content, and pedagogical knowledge to guide PD and coaching. (See Attachment 4 for tables showing more detailed Language and Literacy Survey data.)

Content Knowledge: The Language and Literacy Survey scores shows that the teachers are starting out with a good foundation of content knowledge. A minimum of 80% of the respondents understand factors that contribute to oral language acquisition; the alphabetic principal, factors important for decoding aspect of reading; and elements of reading comprehension. However, fewer respondents answered the questions on print awareness and phonological concepts correctly.

Child Development: The survey respondents were asked to respond to nine true or false questions related to child development in language and literacy. On average, the respondents identified 69% of the items correctly.

More than 80% of the respondents correctly identified as true or false the following items:

- Teachers should make use of books as they introduce concepts to children across the curriculum in science, history and social science and mathematics. (True)
- Preschool children differ in the level of their language development. Differences are due mostly to variations in the amount and kind of oral language heard during the first three years of life. (True)
- An important strategy for supporting language development is to make sure that children have lots of time during each day to talk with other children in various learning formats. (True)
- Teaching phonemic awareness should be delayed until an ELL student is fluent in English. (False)

Less than 50% of the respondents identified the following items correctly as true or false:

- Occasional exposure to rhymes and songs in circle time allows children to develop the phonological awareness skills they need. (False)

- All ELL children move through a similar progression of learning English. (True)
- Story Time is not the place for developing alphabet letter knowledge or phonological awareness (True)

Classroom Practices: Respondents were asked to identify whether certain classroom practices/characteristics were exemplary, basic or inadequate. On average, respondents answered 67% of answers correctly. At least 80% of the teachers correctly identified several items correctly as being exemplary, basic, or inadequate. These include: Children's learning is displayed; books are thoughtfully selected; teacher's draw of children's experiences to engage them in rich language and literacy activities; there are varied strategies to help with individual instruction; and environment print is integrated into classroom routines to facilitate children's print knowledge.

Pedagogical Knowledge: Teachers were asked about their beliefs with regard pedagogical practices that encourage language and literacy. Teachers most strongly agreed that children benefit from:

- Definitions accompanied by actions and visuals for introducing new vocabulary
- Looking at books to help the learn to read
- Write without worrying about spelling
- Regularly playing with words and make up rhymes to ending sounds
- Learning to hear a lot of words in learning to read
- Being taught to identify beginning and ending sounds in words
- Learning new words as teachers define them when reading books

V. SUMMATIVE EVALUATION ACTIVITIES AND RESULTS

A. SUMMATIVE EVALUATION ACTIVITIES

The summative evaluation activities described below provide information to determine the impact of the Project interventions in changes in teachers, classrooms, and children over time.

CLASS: CLASS data was collected to measure the impact of PD, and coaching on curriculum fidelity and best practices as they applied to the curricula. The Project Director and Early Childhood Associates collected CLASS data in spring 2017 in eight participating classrooms, which involved conducting the CLASS assessments, debriefing with teachers, and submitting written reports to the Project Director. The Observer scored classrooms on a 7-point scale, from 1=little evidence to 7=much evidence high quality classroom interactions. Gains achieved between fall 2013/2014 and spring 2017 in classroom interactions for a matched cohort of seven classrooms are presented in the next section.

PD Evaluations: An evaluation was administered after each of six PD sessions held in fall 2016: a Mathematics Learning Trajectories Series with national experts; as well as a three-part OWL PD series for CAPIC teachers. PD evaluation results highlight gains in content and practice.

Child Assessments: The PALS, PPVT-IV, and TEAM address changes in student learning outcomes. PALS is a scientifically-based phonological awareness and literacy screening that measures preschoolers' developing knowledge of important literacy fundamentals. PALS measures skills predictive of future reading success: name writing, beginning sound awareness, print and word awareness, rhyme awareness, and alphabet knowledge. PPVT measures receptive vocabulary. (See Attachment 3 for a more detailed description of the PALS instrument.) On the PPVT, total raw score was calculated for each

child, and a standardized score was also assigned to each child. The TEAM assessment measures differences in early mathematics development among young children. CAM staff met regularly throughout the year to review TEAM results and monitor progress on areas such as counting, subitizing, shapes, composing shapes, comparting and ordering, adding and subtracting, and patterning.

SUMMARY OF OUTCOME DATA COLLECTED

Outcome data is organized by changes in teacher content knowledge; changes in teacher pedagogical knowledge; changes in teacher practice; and changes in student outcomes.

Area 1: Changes in Teacher Content Knowledge

OWL PD Ratings: PD evaluations show that teachers gained an understanding of math and developmental trajectories, and intended to apply what they had learned. Ratings were consistent between the three OWL PD sessions. Participants "agreed" that their knowledge increased and that they would be applying the content (Mean Scores of 3.4 each).

TABLE 10: EVALUATION OF OWL TRAININGS – MEAN RATINGS
Rating Scale 1 = strongly disagree; 2 = disagree; 3 = agree; 4 = strongly agree

Self-Assessment	Owl Part 1 24-Aug (N=24)	Owl Part 2 25-Aug (N=20)	Owl Part 3 1-Sep (N=31)	Average
Prior to this presentation, my knowledge of the topic was adequate.	2.7	2.7	3.0	**2.8**
After this presentation: my knowledge of the topic has increased.	3.3	3.6	3.3	**3.4**
I am definitely planning to use the information learned.	3.0	3.6	3.6	**3.4**

Participant Gains from OWL PD (Open-Ended Comments): In addition to saying "everything was valuable", the participants most often said they gained a better understanding of the OWL curriculum manual; Dialogic Reading; the importance of generating conversations in class; and information on how to create a class schedule. They learned how to build children's understanding with conversation; and expanded their understanding of the purpose of Centers and other instructional formats.

TABLE 11: CAPIC TEACHER COMMENTS ON CONTENT GAINS FROM THE OWL PD N=35 COMMENTS

Content Gain	Percentage of Comments
Everything was interesting and valuable	17%
Explanation on how to read/use the OWL Manual	17%
Creating a schedule to provide structure for class	11%
Importance of conversation in the classroom	11%
Dialogic reading	11%
How to develop rhyming/phonological words	9%
Let's Talk About it; Let's Find out About it	9%
Center descriptions	9%

New books and materials	3%
Discussions	3%
Total	**100%**

Educators said they planned to implement what they learned. They would discuss with their team ways to implement the curriculum or incorporate OWL and Building Blocks into their current practices. By the third and final session, participants were able to say what they would share with more specificity. For example, they mentioned sharing information on:

- Dialogic reading
- Intentional conversations, including more self and parallel talk, vocabulary
- SWPL and Let's Talk About It activities
- Phonological awareness
- Importance of being intentional in every area
- Best practices in Small Groups
- Ideas for Centers
- Print referencing interventions

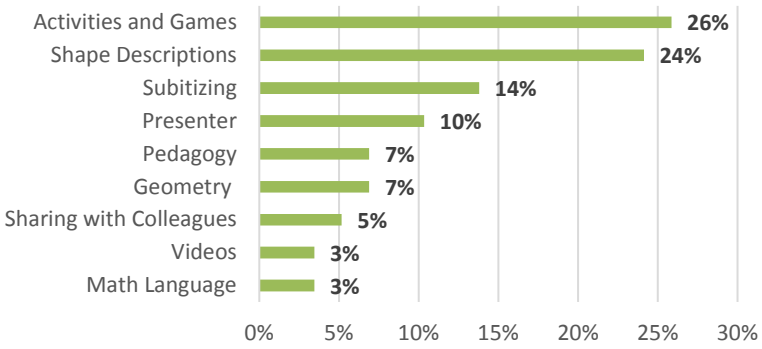
Learning Trajectories Approach to Teaching Mathematics PD Ratings: Eighty-three teachers participated in a large group PD session presented by Doug Clements in October 2016. Dr. Clements followed up on the large group session with intensive, full day hands-on TA to six public school ELC teachers. Participants approached "strong agreement" that their knowledge increased and they would be using the information learned (Mean Scores of 3.7 and 3.8)

TABLE 12: LEARNING TRAJECTORIES APPROACH TO TEACHING MATHEMATICS SELF-ASSESSMENT RATINGS
Rating Scale 1 = strongly disagree; 2 = disagree; 3 = agree; and 4 = strongly agree

Self-Assessment	17-Oct (N=83)	16-Nov (N=6)	14-Dec (N=6)	Average
Prior to this presentation, my knowledge of the topic was adequate.	3.0	3.8	3.5	**3.4**
After this presentation: my knowledge of the topic has increased.	3.7	3.8	3.5	**3.7**
I am definitely planning to use the information learned.	3.7	3.8	4.0	**3.8**

Participant Gains from Learning Trajectories PD (open-ended comments). The participants found value in learning different activities and games, the shape descriptions, and subitizing activities and concepts (Figure 15). They planned to implement the activities and games; increase use of mathematical language, including geometrical language and description of shapes. They planned to encourage the subitizing activities among peers.

FIGURE 15: PARTICIPANT GAINS FROM LEARNING TRAJECTORIES PD



Area 2: Changes in Teacher Pedagogical Knowledge[2]

Collected as formative data (see previous section)

Area 3: Changes in Teacher Practice

Changes in teacher practice are measured by CLASS data. During this Project year, certified CLASS observers scored eight classrooms at the Chelsea ELC and three at CAPIC. An average of two adults and 16 children were present. CLASS observations consisted of four, 20-minute cycles. The observers scored classroom quality during routines, meals, small group, whole group, free choice, and individual time.

CLASS Domains and Dimensions. CLASS captures teaching practices related to three Domains of Emotional Support, Classroom Organization and Instructional Support. These Domains, have ten associated Dimensions:

Domain	Dimension
Emotional Support	• Positive Climate • Negative Climate • Teacher Sensitivity • Regard for Student Perspective
Classroom Organization	• Behavior Management • Productivity • Instructional Learning Format
Instructional Support	• Concept Development • Quality Feedback • Language Modeling

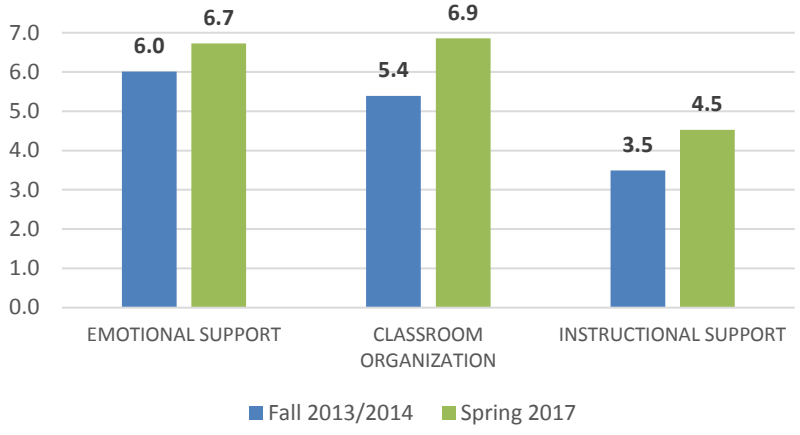
Observers provided scores for each of ten dimensions on a seven-point continuum, with descriptive anchors. Scores of 1 and 2 are characteristic of "Low-Range" where little or no indicators of good

[2] Changes in teacher pedagogical knowledge in early childhood mathematics and language and literacy will be measured by TKBS (mathematics) and Language and Literacy Surveys in Year 5 on a pre and post basis.

practice are present; Scores of 3, 4 and 5 are in the Middle Range; and 6 and 7 are in the High Range, where most or all indicators of good practice are present.

Changes in CLASS Domain Scores: To determine changes in practice, the CLASS data from spring 2017 is compared to data from the same group of teachers as early as fall 2013. CLASS scores increase in each of the three CLASS Domains among this cohort of seven teachers (Figure 16). See Attachment 2 for changes in scores by ELC classroom.

FIGURE 16: CHANGE IN AVERAGE DOMAIN SCORES
N=7 TEACHERS

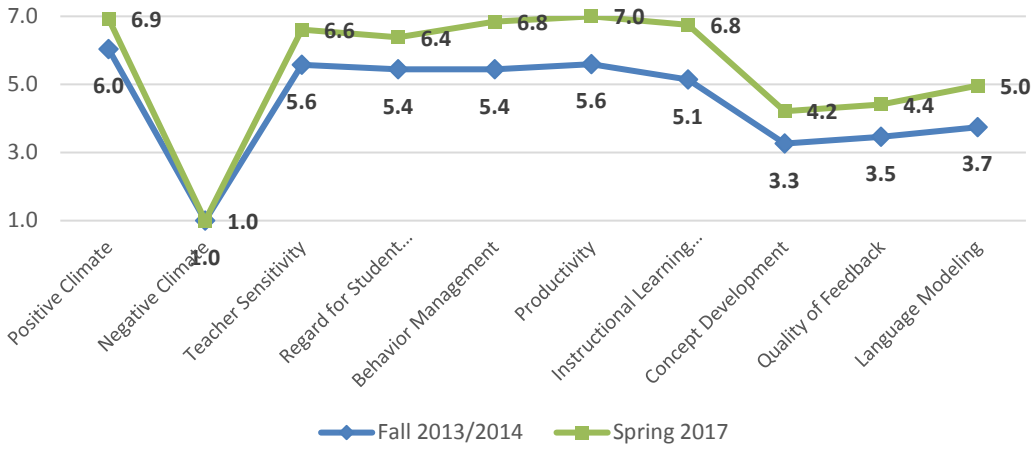


- Emotional Support increases from 6.0 in 2013 to 6.7 in 2017.
- Classroom Organization increases from 5.4 (mid-range of quality) to 6.9 (high range of quality) between 2013 and 2017.
- Instructional Support increases from 3.5 to 4.5 during this time period.

Changes in CLASS Dimension Scores. Figure 17 shows that each of the ten Dimension scores increase, with the exception of Negative Climate, which has the same low negativity scores in both periods.

- Teacher Sensitivity, Regard for Student Perspective, Behavior Management, Productivity, Instructional Learning, all increase from mid- to high-range levels of quality.

FIGURE 17: CHANGE IN AVERAGE DIMENSION SCORES
N=7 CLASSROOMS



The following CLASS observer comments from spring 2017 are representative of classroom quality.

- ***Positive Climate:*** *The teachers consistently used warm, calm and quiet voices. The language in the room was one of respect as evidenced by the use of "please" and "thank you" by the teachers and students. Children were respectful to each other. They shared materials at Center time and played cooperatively. The teachers were always in close proximity to the children and freely joined their play at Centers. There was an abundance of matched enthusiasm and enjoyment of one another.*

- ***Teacher Sensitivity:*** *The two teachers worked well together to monitor the room for children who need assistance. They addressed problems quickly. Students participated in answering questions and worked comfortably alone, in Small Groups and Whole Group. The students appeared comfortable approaching the teachers for help.*

- ***Regard for Student Perspective:*** *The teacher actively sought child perspective and offered ample opportunities for students to describe their thoughts and ideas throughout the day. During Center/choice time students decide how, where and how long to play. They are in charge of their time and activities.*

- ***Behavior Management:*** *The children in the room were very well behaved. The teacher clearly and consistently reminded students about behavior expectations. The teachers complimented students for modeling good behavior as a way to redirect a few who needed reminding of expectations.*

- ***Productivity:*** *The classroom ran like a well-oiled machine. The materials were ready. The teachers worked well together to make sure that transitions were quick. Children knew the routines of the classroom.*

- ***Instructional Learning Format:*** *The teacher actively and effectively facilitates lessons and child led activities in all contexts. Students had many opportunities to use interesting materials and lots of hands on experiences. She used engaging questions to help students focus their attention on the important parts of the book during story reading.*

- ***Concept Development:*** *The teacher asked how and why questions. Sometimes in response to reasoning out why a behavior is expected in the classroom, she asks why they do not run in the classroom; why we wash our hands before and after lunch. Children had the opportunity to analyze their day. The teacher talked*

about clouds with one student before he started painting, an exchange that connected the concept of painting clouds to real world clouds they see in the sky.

- ***Quality of Feedback:*** *The teacher offered children support with hints to scaffold their understanding. With one student the teacher persisted with her questioning to get the student to pause and think about his work after he showed it to her.*

- ***Language Modeling:*** *The teacher encouraged contingent conversation between herself and students and among students. She asked many open ended questions to facilitate conversations. She frequently followed-up on student responses by extending their comments. Continue to use self-talk throughout the day. Use unfamiliar words and define them to increase children's vocabulary.*

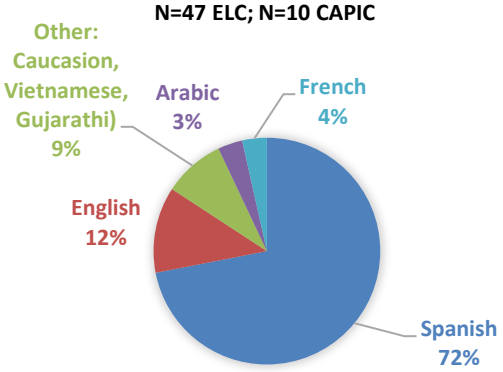
Area 4: Changes in Student Learning Outcomes

This Report includes a matched cohort of a sample of 47 children in the Chelsea Public Schools Early Learning Center and a matched cohort of ten children in CAPIC Head Start. Children were assessed in both the fall 2016 and spring 2017. The majority of children assessed were four years olds.

TABLE 13: CAM PARTICIPATING CHILDREN AGE AND GENDER
N=57

	ELC N=47 Children in 13 Classes	CAPIC N=10 Children in 3 Classes
Ages	39 P4 and 8 P3	10 P4
Gender	21 girls; 26 boys	5 girls; 5 boys

FIGURE 18: LANGUAGES SPOKEN BY CAM CHILDREN ASSESSED SPRING 2017
N=47 ELC; N=10 CAPIC



Most of the children (across both ELC and CAPIC) speak Spanish as a first language (71%), followed by children who speak English (16%).

ELC Child Gains. The children's pre-post assessment scores are compared to determine the percentage of children who made gains in each area. Close to 80 percent of the ELC children made gains on the PPVT Standard Score; and in four out of seven PALS subtests: Name Writing, Upper and Lower Case Letter Recognition, and Print/Word Awareness. At CAPIC, nearly 80 percent of the children made gains in the PALS Name Writing subtest. Between 30% and 60% made gains in the other subtests.

Table 14 shows the CAM children's pre and post-scores along with a school readiness range for PALS, the range considered necessary for children entering kindergarten. By the spring, all scores increase for ELC children with the exception of TEAM (about half of the 40 ELC children improved in the TEAM Raw Score). The ELC children are within the readiness ranges on each subtest with one exception of PALS Print/Word Awareness.

TABLE 14: PRE-POST ELC CHILD ASSESSMENT SCORES

SUBTEST	School Readiness Range	ELC Fall 2016 N=40	ELC Spring 2017 N=39
PPVT-IV Standard Scores		82	97
PALS Name Writing (NAME)	5-7	3.6	6.0
PALS Upper Case Letter Recognition (UC)	12-21	19.8	15.9
PALS Lower Case Letter Recognition (LC)	9-17	11.1	22.9
PALS Letter Sounds (LS)	4-8	11.14	18.6
PALS Beginning Sound Awareness (BS)	5-8	3.6	6.4
PALS Print/Word Awareness (PWA)	7-9	4.1	6.6
PALS Rhyming Awareness (RA)	5-7	4.0	5.6
TEAM		**50.5**	**44.1**

CAPIC Child Gains: CAPIC Head Start children are in readiness range by spring 2017 in one subtest of PALS Lower Case Letter Recognition. However, the scores in each subtest increase for the CAPIC children between fall and spring, showing a positive, upward trend in learning. Each of the four CAPIC children (100%) made improvements in TEAM.

TABLE 15: PRE-POST CAPIC HEAD START CHILD SCORES

SUBTEST	School Readiness Range	CAPIC Fall 2016 CAM N=15	CAPIC Spring 2017 N=10
PPVT-IV Standard Scores		71.8	73.6
PALS Name Writing (NAME)	5-7	4.1	4.1
PALS Upper Case Letter Recognition (UC)	12-21	7.2	10.6
PALS Lower Case Letter Recognition (LC)	9-17	9.5	20
PALS Letter Sounds (LS)	4-8	0	2
PALS Beginning Sound Awareness (BS)	5-8	2.1	3.7
PALS Print/Word Awareness (PWA)	7-9	1.9	2.7
PALS Rhyming Awareness (RA)	5-7	NA	2.4
TEAM		**7.9**	**25**

VII. DISCUSSION OF RESULTS

This discussion is organized by whether the targeted benchmarks for CAM were reached in Year 4, and identifies opportunities for improvement. The CAM Project has set specific benchmarks with regard to achieving desired teacher, classroom, and child outcomes:

- Preschool classroom teachers will implement Building Blocks with 80 percent fidelity
- 80 percent of early educators will demonstrate a significant increase in their knowledge and beliefs relevant to teaching children mathematics and literacy
- 80 percent of early educators will demonstrate significant increase in knowledge and believe relevant to teaching children mathematics
- 80 percent of classrooms will show gains in the Instructional Support Domain
- 80 percent of the child sample will demonstrate gains in language, literacy and mathematics

1) Did preschool classroom teachers implement Building Blocks with 80 percent fidelity?

- **ELC:** As proposed, CAM implemented Building Blocks in ELC classrooms. The Project continued to fund new technology, with the purchase of white boards and iPads for children to play the Building Blocks games. While it is difficult to determine the 80% benchmark was reached, the coach data from ELC classrooms shows that coaches set increasingly targeted goals with regard to fidelity and helped teachers meet more goals as the year progressed.

- **CAPIC:** CAM began to implement the Building Blocks at CAPIC in spring 2017. The coach ascribed Mean Scores in the "4" range on a 5-point scale to two Building Block components, indicating they were implemented with fidelity. The coach observed that materials were presented to promote mathematical thinking; that teachers used the curriculum's Everyday Mathematics activities to involve children in mathematical thinking; and that teachers extended activities to enhance learning. The coach observed that Whole Group also was implemented with fidelity.

  Note that with regard to OWL fidelity at CAPIC, in the spring, the coach ascribed gave high quality implementation scores for three of the OWL components: Morning Meeting/Introduction to Centers; Center Time; and SWLP. Dialogic Reading and Small Group were observed but not always ideally executed.

Opportunities at ELC:

- There is opportunity to improve the use of technology in several ways. According to teachers, it has been difficult to get passwords and each child logged on. CAM can continue to work on ways to facilitate technology use in the classroom, such as it did successfully to simplify the login process. In fall 2016 TALENT™ was introduced to create video library of best practices but few teachers are using it. Technical support should be provided to help coaches and teachers actually use it. The Leadership Team can continue to discuss ways to use TALENT™ to the Project's advantage.

- Consider revising how to better capture curriculum fidelity at ELC. There may be opportunity to simplify aspects of the Curriculum Fidelity Logs used for CAPIC and the Coaching Logs for ELC.

Opportunities at CAPIC:

- The OWL curriculum fidelity data indicate continued need to work on the quality of all components, and especially, Dialogic Reading and Small Group Time, which received lower ratings than the other three components. Continue to implement practices that better engage children in understanding; provide better pacing; differentiate instruction, and build teachers' understanding of development; and increase the level of conversation.

- Anecdotal data provides some information on how curriculum was aligned and how OWL was integrated into Building Blocks. More information could be collected on how OWL was integrated into Building Blocks in a way that strengthens instruction in Mathematics, while maintaining the effectiveness of OWL instruction in language and literacy. How can data show whether this Project objective happened? According to CAM Leadership, there also is opportunity to capture the adaptations that are happening with OWL for younger children.

2) Did 80 percent of early educators demonstrate a significant increase in their knowledge and beliefs relevant to teaching children mathematics and literacy?

- **ELC:** ELC PD evaluations show that teachers gained understanding of math and developmental trajectories on supporting learners in construction of mathematical knowledge. Across the three sessions on Learning Trajectories, participants approached "strong agreement" that their knowledge had increased after this presentation and that they would be using the information learned. CAM's Project Leadership Team report that because of CAM activities, Chelsea kindergarten teachers are more aware than before of the developmental progress of mathematics skills for the range of children in their classrooms.

- **CAPIC:** Participant evaluations of OWL PD indicate that the PD provided CAPIC teachers with a better understanding of the purpose of Centers, enhanced knowledge of Dialogic Reading, importance of generating conversations, and how to set up activities with more intentionality.

Opportunities at ELC:

- There may be more opportunity for utilizing additional coaching strategies in coaching at ELC. Strategies logged by the Coaches show that there is more opportunity to reflect on data to differentiate instruction; to support ongoing reflection around meeting goals and adjusting activities; to support the teacher in documenting assessment data to support learning trajectories; and to utilize video more frequently.

- The coaching goals were met about one-quarter of the time. How can coaching be used to accelerate achievement of goals? Were goals obtainable? Was discussion and reflection on progress as productive as it could be?

- The Language and Literacy Survey scores point to specific strengths and challenges that can be incorporated into PD and will help answer the question posed by CAM Leadership as to whether teachers are gaining knowledge about developmental progress of mathematics skills for the range of children they are teaching.

Opportunities for CAPIC

- Questions to consider are can the project discuss ways to conduct more joint PD, particularly as CAM aims to develop more horizontal alignment next year between ELC and CAPIC and more vertical alignment between Pre-K, kindergarten, and first grade. What do we want PD to focus on? What do we want to include in coaching?

3) Did 80 percent of all classrooms show gains in CLASS Instructional Support Domain?

Yes, CLASS data shows substantial improvement in teacher practices at ELC and CAPIC. Each of the seven classrooms with Pre/Post scores made gains in every CLASS Domain and Dimension between fall 2013/2014 and spring 2017, including the more challenging Instructional Support Domain. Observer comments show that while there was room for improvement in each Dimension, teachers displayed clear examples of Positive climate, teacher sensitive, regard for student perspective, behavior management, productivity, Instructional Leaning form, concept development quality feedback, and language modeling.

4) Did 80 percent of the child sample demonstrate gains in language, literacy and mathematics?

- **ELC:** By the spring, a minimum of 80 percent of the children at ELC made gains in four out of nine subtests represented by PPVT, PALS, and TEAM. All of the ELC children were within the school readiness range by spring 2017.

- **CAPIC:** While children are still outside of the school readiness ranges on the PPVT and PALS, the entire cohort at CAPIC increased their scores in every PPVT and PALS subtest by spring 2017. This movement shows a positive trend and indicates that that the CAM interventions are having an impact.

Opportunities at ELC

- The CAM leadership team noted that teachers generally are not using data to drive instruction, and they continue to need more support. The CAM Leadership Team has expressed an interest in adding PD on Teaching Strategies Gold because "the public schools are not looking at Pre-K TSG data." PD could focus more intensely on assessment practices.

Opportunities at CAPIC:

- Scores for children participating in CAPIC can inform teachers' curriculum planning so they can provide and enhance opportunities for exploration and language-based literacy instruction for all children. The child assessment data improved and continued discussion about the impact of CAM Project interventions on Head Start children will help to ensure that scores continue to move in the right direction.

ATTACHMENTS

ATTACHMENT 1
BUILDING BLOCKS FIDELITY SCORES

1=Strongly Disagree; 2=Disagree; 3=neither Agree or Disagree/NA; 4=Agree; 5=Strongly Agree
N=3 Observations May 2017

Building Blocks Curriculum Component	Mean Fidelity Score
Overall Quality of Curriculum	
Materials were presented, including specific math manipulatives and other materials that can promote mathematical thinking.	4.7
The teacher uses the curriculum's every day mathematics activities or others like them, involving children in mathematical thinking	4.0
The teacher(s) extended the activities in ways that enhanced the quality of the teaching and learning. Some examples follow. The teacher asks children sitting in a circle to find groups of 2, At one point, she remarks, "and right now two of you are inside our circle!" The teacher makes felt board characters from a book used in one of the curriculum's activities and uses these characters to illustrate the math concepts. Other staff joins in dramatizing a math problem.	4.3
Average	**4.3**
Hands On Center Activities	
Teachers posed the tasks in ways that engaged children and maintained	3.0
Task was selected by the child	3.0
The materials were set up correctly and completely	3.0
The teacher set up and introduced the Center as written in the curriculum	3.0
An adult monitored, guided and/or participated in the activities as needed	3.0
The teacher's classroom management strategies enhanced the quality of the activities and children's mathematical thinking	3.0
Average	**3.0**
Whole Group	
The teacher displayed an understanding of the mathematics concepts, using correct mathematical vocabulary as appropriate, making no significant mathematical mistakes.	4.5
The materials were set up correctly and completely, if no materials were needed) the teacher is well prepared.	4.5
The teacher began by engaging and focusing children's mathematical thinking.	4.0
The pace of the activity was appropriate for the developmental levels/needs of the children and the purpose of the activity.	4.0
The teacher conducted the activity as written in the curriculum.	4.0
The teacher's classroom management strategies enhance the quality of the activity and children's mathematical learning.	4.0
Discussion: The Whole Group activity involved mathematical language, including as appropriate to the activity, a discussion of mathematical ideas or strategies.	4.0
The teacher conducted the activity as written in the curriculum, or made positive adaptations to it (not changes that violated the spirt of the core mathematical activity).	4.0
The pace of the activity was appropriate for the developmental levels/needs of children and the purposes of the activity.	4.0
The entire activity was completed with ALL children in the group (if teacher works with some children on different days that is acceptable if evidence supports that all children did/will engage in the activity.	Yes
The teachers' management strategies enhanced the quality of the activity and children's mathematical learning	4.0

The teacher promoted and valued effort, persistence and/or concentration.	5.0
The teacher encouraged children to actively think, reason, solve problems, or reflect, as indicated in the written curriculum.	4.5
The teacher asked children to share, clarify, or justify their ideas; used a range of question types to probe and challenge children's thinking; encouraged children to explain their mathematical thinking/ideas; e.g., asked many "why?" or "how did you?" or "could you?" questions	4.5
The teacher facilitated children's responding, and elicited many solution methods for one problem; encouraged elaboration of children's responses She waited for and listened attentively to individual children, responded to errors as learning opportunities	4.0
The teacher encouraged children to listen to and evaluate others' ideas and thinking.	4.5
The teacher supported the describer's thinking; reminded children of conceptually similar problem situations. Provided background knowledge; directed group help for an individual child; assisted individual children in clarifying their own solution methods	4.0
The teacher supported the listener's understanding; asked a different child to explain a peer's method; encouraged the child to put the explanation in their own words or provide an alternate explanation.	3.5
The teacher's support gave "just enough" assistance (e.g., appropriate level of detail, not too little or too much help or information.	4.0
The teacher built on and elaborated children's mathematical ideas and strategies; re-described children's strategies, adding mathematics content and vocabulary	4.0
The teacher went beyond initial solution methods. Pushed individual children to try alternative solutions methods for one problem.	3.5
35. The teacher encouraged mathematical reflection; drew out key math ideas during and/or towards the end of the activity; helped children make connections to math ideas from other activities and/or real-life experiences	4.0
36. The teacher cultivated love of challenge; encouraged children to try a more difficult construction task or problem	3.5
Computers were set up correctly and completely (software set up correctly activities, sound appropriate)	3.0
Average	**4.0**
Small Group	
Child was "signed in" with his/her correct name.	3.0
The teacher introduced the activity, engaging and focusing children's mathematical thinking.	3.0
The teacher or adults monitored and were available to guide and help children as needed. The teacher or aid check in with children to validate understanding and are responsive to help.	3.0
The teacher's classroom management strategies enhanced the quality of the activities and children's mathematical learning.	3.0
Observations and records (including computer records) indicate that all or nearly all children will have engaged in the activities by the end of the week. Children have two 10 minute sessions on the computer weekly.	3.0
Average	**3.0**
Computers	
Goals established between coach and teaching team around curriculum fidelity	NA

ATTACHMENT 2
CLASS SCORES BY YEAR FOR 7-CLASSROOM COHORT

Teacher 1	PC	NC	TS	RSP	ES	BM	P	ILF	CO	C	QF	LM	IS
Fall 2013	7.00	7.00	7.00	6.00	6.75	7.00	7.00	5.50	6.50	5.00	5.50	5.00	5.17
	6.30	7.00	6.30	6.50	6.53	6.60	6.30	6.10	6.33	6.10	6.10	4.60	5.60
	6.25	7.00	6.50	6.50	6.56	6.50	6.50	6.25	6.42	5.50	6.00	6.25	5.92
	6.00	7.00	6.00	6.00	6.25	5.60	6.00	5.80	5.80	4.00	4.00	4.50	4.17
Spring 2017	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	5.00	5.00	6.00	5.33
Teacher 2	PC	NC	TS	RSP	ES	BM	P	ILF	CO	C	QF	LM	IS
Fall 2013	4.25	7.00	4.25	3.75	4.81	3.75	3.50	3.50	3.58	1.50	1.75	1.50	1.58
	5.75	7.00	5.50	6.00	6.06	6.25	6.25	5.50	6.00	2.00	2.50	2.00	2.17
	6.00	7.00	5.60	5.60	6.05	5.20	5.20	4.80	5.07	2.20	3.00	1.00	2.07
	7.00	7.00	5.75	6.25	6.50	5.75	6.50	5.00	5.75	3.00	3.25	4.50	3.58
Spring 2017	6.75	7.00	5.25	5.55	6.14	6.25	7.00	6.25	6.50	3.50	4.75	4.25	4.17
Teacher 3	PC	NC	TS	RSP	ES	BM	P	ILF	CO	C	QF	LM	IS
Fall 2014	5.20	7.00	4.80	4.80	5.45	4.60	4.60	4.40	4.53	2.20	2.20	2.20	2.20
	6.00	7.00	5.80	5.80	6.15	5.60	6.00	5.80	5.80	2.40	3.00	2.20	2.53
Spring 2017	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	4.50	4.25	5.50	4.75
Teacher 4	PC	NC	TS	RSP	ES	BM	P	ILF	CO	C	QF	LM	IS
Fall 2013	6.00	7.00	6.00	6.00	6.25	5.00	6.00	7.00	6.00	5.00	3.00	5.00	4.33
	7.00	7.00	6.00	6.00	6.50	6.00	7.00	6.50	6.50	3.00	4.00	5.00	4.00
	6.25	6.75	5.75	4.75	5.88	5.75	5.75	6.00	5.83	3.50	4.75	4.75	4.33
	6.50	7.00	6.00	4.25	5.94	5.75	5.50	5.50	5.58	4.75	5.50	6.00	5.42
Spring 2017	6.75	7.00	6.75	5.50	6.50	7.00	7.00	7.00	7.00	4.25	5.00	4.75	4.67
Teacher 5	PC	NC	TS	RSP	ES	BM	P	ILF	CO	C	QF	LM	IS
Fall 2013	6.80	7.00	6.25	6.80	6.71	7.00	7.00	4.60	6.20	3.40	4.00	6.20	4.53
	6.60	7.00	6.30	6.30	6.55	6.80	6.10	6.50	6.47	3.80	4.30	5.60	4.57
	7.00	7.00	5.50	5.50	6.25	7.00	7.00	5.50	6.50	3.75	4.25	5.00	4.33
	6.00	7.00	6.00	6.00	6.25	6.00	6.00	6.00	6.00	3.75	4.00	4.00	3.92
Spring 2017	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	4.25	4.25	5.25	4.58
Teacher 6	PC	NC	TS	RSP	ES	BM	P	ILF	CO	C	QF	LM	IS
Fall 2014	7.00	7.00	6.25	5.25	6.38	6.00	5.50	5.50	5.67	3.75	4.50	3.75	4.00
	6.75	7.00	6.25	5.75	6.44	6.00	6.00	6.75	6.25	4.50	5.25	4.75	4.83
Spring 2017	7.00	7.00	7.00	6.00	6.75	7.00	7.00	7.00	7.00	5.00	5.00	5.00	5.00
Teacher 7	PC	NC	TS	RSP	ES	BM	P	ILF	CO	C	QF	LM	IS
Fall 2014	6.00	7.00	4.50	5.50	5.75	4.75	5.50	5.50	5.25	2.00	3.25	2.50	2.58
	6.50	7.00	6.25	6.25	6.50	6.50	6.50	5.75	6.25	3.75	4.75	4.75	4.42
Spring 2017	7.00	7.00	6.30	6.60	6.73	6.60	7.00	6.00	6.53	3.00	2.60	4.00	3.20

CAM PRE AND POST CLASS SCORES
N=7 CLASSROOMS

Average All Teachers	PC	NC	TS	RSP	ES	BM	P	ILF	CO	C	QF	LM	IS
Fall 2013/2014	6.04	1.00	5.58	5.44	6.01	5.44	5.59	5.14	5.39	3.26	3.46	3.74	3.49
Spring 2017	6.93	1.00	6.61	6.38	6.73	6.84	7.00	6.75	6.86	4.21	4.41	4.96	4.53

ATTACHMENT 3
DESCRIPTION OF PALS

PALS-PreK is a scientifically-based phonological awareness and literacy screening that measures preschoolers' developing knowledge of important literacy fundamentals and offers guidance to teachers for tailoring instruction to children's specific needs. The assessment reflects skills that are predictive of future reading success and measures name writing ability, upper-case and lower-case alphabet recognition, letter sound and beginning sound production, print and word awareness, rhyme awareness and nursery rhyme awareness. The assessment scores indicate children's strengths and those areas that may require more direct attention. The assessment is designed to be administered to four-year-olds in the fall of PreK in order to guide instruction during the year. A second administration in the spring of PreK serves to evaluate progress.

NAME WRITING: The teacher asks the child to draw a self-portrait and to write his/her name. Name writing is scored on a developmental continuum, ranging from scribbles to the use of mixed symbols to writing the entire name correctly.

ALPHABET KNOWLEDGE: The teacher asks the child to name the 26 upper-case letters of the alphabet presented in random order. Children who know 16 or more upper-case letters also take the lower-case alphabet recognition task. Children who know 9 or more lower-case letters are also asked to produce the sounds associated with the 23 letters and 3 consonant digraphs (ch, sh, etc.)

BEGINNING SOUND AWARENESS: The teacher says the name of a picture and asks the child to produce the beginning sounds for words that start with /s/, /m/, and /b/.

PRINT AND WORD AWARENESS: The teacher reads a familiar nursery rhyme printed in a book format and asks the child to point to various text components. In this natural book-reading context children demonstrate their awareness of print concepts such as directionality and the difference between pictures, letters, and words.

RHYME AWARENESS: The teacher shows the child pictures and names the object depicted in each one. The teacher asks the child to point to the picture that rhymes with the first one presented.

NURSERY RHYME AWARENESS: The teacher recites familiar nursery rhymes, stopping before the end so the child can supply the final rhyming word.

SCORES AND EXPECTATIONS: PALS-PreK provides developmental ranges and expectations for four-year-olds in the spring of PreK. PALS-PreK is designed to guide instruction and highlight individual emergent literacy needs. The best interpretation of PALS-PreK results includes using child-level results to help meet children's specific needs and classroom-level results to guide instruction for the Whole Group. Scores from an entire classroom can inform teachers' curriculum planning so that they can provide and enhance opportunities for exploration and language-based literacy instruction for all children.

ATTACHMENT 4
LANGUAGE AND LITERACY SURVEY RAW DATA FALL 2016 (FORMATIVE)

Item	Percent of Respondents who Answered Correctly
What factors contribute to oral language acquisition in preschool children?	94%
Which of the following curriculum components are intentionally implemented daily to support language and literacy skills and development.	
Dialogic reading	85%
Introduction to centers	88%
Small group	94%
Phonological awareness - songs, words, and letter play	94%
Centers	82%
Which of the following concepts are part of print awareness developed in preschool or kindergarten?	61%
What elements of reading comprehension impact children understanding of a story?	82%
Phonological Awareness develops…from large to small components is correct answer	37%
Which of the following items is important for the decoding aspect of reading?	85%
The "alphabetic principle":	88%
Which of the following phonological awareness tasks is the hardest?	24%
Center time activities are usually scheduled to run for several days (3-5). New activity are introduced and all activities are discussed at Morning Meeting:	91%
Each of the following statements is a brief description of a language and practice that you might see or hear in a literacy early childhood environmental. Rate the following examples as exemplary, basic, or inadequate.	
Children appear to have internalized routines and rules and are engaged in purposeful activities for a majority of the day.	70%
The environment has adequate equipment that is in good repair. Interest areas are established and children sometimes engage in activities independently. There are minor disruption due to space or traffic flow	56%
Clear expectation for children's behaviors are communicated and positive behavior strategies are used redirect when necessary.	24%
Children's learning is displayed, materials are ample and in excellent condition and are assessable to promote independent use and personal purposeful selection.	91%
During centers the adults remain in close proximity to children and serve the needs of children by engaging in meaning conversations and learning following children leads and interest or support a small group activity.	74%
Materials, activities and interactions draw on a theme that have some relevance to children's learning but children's use of language and literacy skills occurs apart from center time.	34%
Flexible scheduling and grouping practices support children's initiative in pursuing interest, questions, and ideas and provide time for children to independently explore in self-directed activities	66%
Teacher draws on children's prior knowledge, backgrounds, and experiences by using children's homes and communities as a means for engaging in rich language and literacy activities that value the culture and background throughout the day.	81%
Activities are geared to the prior knowledge or personal interest of many children but some children may be exclude from participating due to background knowledge, linguistics, or abilities.	60%
Teachers explicitly and appropriately encourage participation of all children by building on similarities and difference among children as an opportunity to engage in discussion.	72%
Management talk predominates with occasional efforts to quiet children and limits children's attempts to engage in conversations.	66%
Teachers are observed using terms that accurately describe their instructional goals as they are engaging children in phonological awareness.	78%
There are opportunities for children to freely and independently access books in the book area, and they are observed doing so consistently and appropriate.	75%
Multiple genres are evident in the books available for children's use.	53%
Books read aloud appear to be selected thoughtfully, flexibly, and varied purposes that may be determined by teachers or in response to children's ideas and input.	88%
Writing is clearly differentiate from art activities.	50%
Planned and spontaneous teacher support for children's writing efforts include varied strategies to help individual instruction.	81%

Environmental print is integrated into classroom routines to facilitate children's print knowledge.	81%
To what extent do you believe that children ***1=strongly disagree;2=disagree;3=neutral;4=agree;5=strongly agree***	**Mean Agreement Score**
Should not write until their teachers show them how to form each letter correctly?	1.4
Should write without worrying about spelling.	4.2
Need to wait longer for English Language Learners to be ready to do rhyming and sounding out letters.	2.4
Should not waste time scribbling and drawing when they could be writing.	1.5
Should learn to write by watching their teachers write.	3.3
Should learn to read before learning to write.	1.8
Should look at books to help them learn to read.	4.3
With special need take longer to learn to write.	2.8
Should learn new words as teachers define them when reading books.	4.0
With special needs need are the only students that require direct explicit instruction to learn foundational skills need to become good readers.	1.5
Should not ask questions or talk about stories when teachers read to them.	1.5
Who are English Language Learners will just pick up on the skills they need to become good readers.	2.0
Must learn the meaning of words in order to become good readers and understand the sense of a story.	3.7
Benefit from definitions accompanied by actions and visuals as strategy for introducing new vocabulary.	4.5
Should learn hear a lot of words so they can learn to read.	4.1
Should have plenty of drill and practice to learn the sounds of letters.	3.3
Should learn ending sounds by circling pictures of things that rhyme on worksheets.	2.5
Should learn letter names by singing the abc song.	2.8
Should learn ending sounds in words by listening to nursery rhymes.	3.7
Should regularly play with words and making up rhymes or chants to hear ending sounds.	4.2
Should be taught to hear sounds within their environment before being taught to hear sounds in words.	3.4
Should be taught the names of each letter of the alphabet to be good readers.	3.3
Should be taught to identify beginning and ending sounds in words.	4.1
True or False:	**Percent of Respondents who Answered Correctly**
Preschool children differ in the level of their language development. These differences are due mostly to variations in the amount and kind of oral language heard during the first three years of life.	97%
An important strategy for supporting language development is make sure that children have lots of time during each day to talk with other children in various learning formats.	97%
Occasional exposure to rhymes and songs in circle time allows children to develop the phonological awareness skills they need.	49%
Story Time is not the place for developing alphabet letter knowledge or phonological awareness	27%
After completing a dialogic reading the focus is more on inferential questions than on factual/literal questions in the discussion that follows a story reading	64%
Teaching phonemic awareness should be delayed until an ELL student is fluent in English	88%
All ELL children move through a similar progression of learning English.	36%
We must first teach children to see/notice very small physical differences in things if we want them to succeed in learning alphabet letter names.	67%
Teachers should make use of books as they introduce key ideas and concepts to children across the curriculum in science, history and social science and mathematics.	100%