

Aligned Curriculum and Collaborative Leadership: Evidence from the Midwest Child-Parent Center Expansion

Arthur Reynolds, Nicole Smerillo, Sangyoo Lee, Brandt Richardson, & Julie Vaisarova

Summary

Sustaining early learning gains requires a comprehensive and effective system of services from preschool through the school-age years. Findings from the 2017 National Assessment of Educational Progress show the urgent need to improve achievement, as only 37% of U. S. 4th graders are proficient readers.ⁱ One year of preschool will not solve this problem. Reflecting the dual importance of high-quality preschool and effective K-3 services, Child-Parent Center (CPC) P-3 is a school reform model designed to create a strong and sustainable culture of learning through 3rd grade. The six core elements are collaborative leadership, aligned curriculum, effective learning experiences, parent involvement, professional development, and continuity and stability. This Brief focuses on data from the Midwest CPC Expansion Project – a scale-up of CPC P-3 implemented across four school districts in Illinois and Minnesota from 2012 to 2017. In addition to data on student outcomes, the project yielded documentation related to program structure and implementation. In this Brief, we draw on this documentation to develop measurable indicators of two key CPC program elements – Aligned Curriculum and Collaborative Leadership. Using these indicators, we examine how the two program elements were implemented in CPC sites, and whether their implementation predicted students' school readiness skills.

Goals of the brief:

- 1) Define and operationalize key indicators of the Aligned Curriculum and Collaborative Leadership elements.
- 2) Describe CPC program environments in terms of these curriculum and leadership quality indicators.
- 3) Examine whether indicators of aligned curriculum and collaborative leadership predicts children's school readiness at the end of preschool.

What is Aligned Curriculum?

Aligned curriculum is a sequence of organized, research-based curricula and instructional practices that touch upon multiple domains of developmental characteristics within each year and across grade levels from preschool to 3rd grade.^{ii, iii} Curricula are aligned developmentally to reflect children's growth, and are aligned with prior instruction so that children's learning experiences reflect and build upon prior knowledge.^{iv} In addition to curriculum, preschool to 3rd grade alignment also highlights consistent learning environments that incorporate aligning standards, instructional strategies, and assessments.^{v, vi}

Why is it important?

For best learning experiences, children require a learning environment that is age appropriate, systematic, and coordinated – qualities that can be achieved through aligned curriculum. In particular, curriculum alignment can help children transition smoothly from grade to grade – which bolsters their learning and outcomes^{vii} – and help support the implementation of developmentally appropriate instruction. We define developmentally appropriate instruction as emphasizing the knowledge and skills known and practiced by most children of the same age. These skills are the basis of grade-level standards. The goal of instruction is for children to advance beyond their current level of functioning following a sequence in which earlier mastery builds to new knowledge and skills. Teachers tailor instruction to optimize children's readiness skills in different domains.

The goals for aligned curriculum from PreK to 3rd grade in the CPC program are as follows (see Appendix for a complete logic model):

- Provide consistent and developmentally appropriate instructional practices
- Provide clear understanding to teachers, parents, and others of how to support learning according to each stage of development
- Assess and monitor children's progress throughout the year
- Ease transitions from one grade level to another

How is Aligned Curriculum measured?

Aligned curriculum is one of the six key CPC program elements implemented in program-participating preschool classrooms. Using data from the Midwest Child-Parent Center Expansion (MCPC) project, we strove to define and measure aligned curriculum through the following five indicators: 1) Program Fidelity, 2) Curriculum Rationale, 3) Consistent Learning Experiences, 4) Comprehensive Curriculum Coverage, and 5) Cross-grade Collaboration. Specific assessment tools and definitions are outlined in Table 1.

Table 1. Definitions of five Aligned Curriculum indicators, and the data used to assess whether CPC programs sites met CPC recommendations for each indicator.

1) Program Fidelity: Program demonstrates adherence to the CPC principles of Aligned Curriculum (items 2 through 5 below), based on a holistic assessment of program functioning.	
Assessment: CPC project staff rated each site’s adherence to program guidelines on a scale of 1-5.	CPC recommendation met if... Site received a rating of 4 or 5 on the fidelity scale
2) Curriculum Rationale: Program has a strong rationale for selection of curriculum, including consideration of the school’s needs and evidence of curriculum effectiveness	
Assessment: As part of an annual curriculum plan, the CPC Head Teacher (HT) provides rationale for curriculum selection. CPC project staff rated the strength of this rationale on a scale of 0 (weak or no rationale), 1 (rationale based on anecdotal evidence and/or HT’s experience), or 2 (strong rationale including evidence from outside sources).	CPC recommendation met if... Head Teacher provided a moderate or strong rationale for curriculum selection (indicated by a rating of 1 or 2, as described under “Assessment”).
3) Consistent Learning Experiences: Program actively aligns curricula and/or teaching practices across grades Pre-K to 3 rd .	
Assessment: In the annual curriculum plan, the HT lists the curricula used and summarizes efforts to enhance curriculum alignment. CPC project staff rated each site’s plan on a scale of 0 to 2 based on the strength of evidence that a consistent curriculum was used across grades, and that learning standards and teaching practices were <i>currently</i> aligned from PreK to later grades. For more on these ratings, see Table 4 and Appendix.	CPC recommendation met if... Curriculum plan provided evidence that the site <i>currently</i> used a consistent curriculum, teaching practices, and/or learning standards across PreK and later grades (indicated by a rating of 1 or 2).
4) Comprehensive Curriculum Coverage: Program curriculum provides adequate coverage of all core instructional domains, including language/literacy, math, science, and socioemotional learning.	
Assessment: On an annual survey, teachers rate how well their class curriculum covers each instructional domain on a four-point scale from “not at all well” to “very well”	CPC recommendation met if... Teacher reported that their curriculum covered all four core instructional domains “very well.”
5) Cross-grade Collaboration: Program structure supports cross-grade collaboration between teachers.	
Assessment: On an annual survey, principals rate their support of practices that promote cross-grade collaboration (common planning time and cross-grade observations) on a four-point scale.	CPC recommendation met if... Principal’s mean rating on the three cross-grade collaboration survey items was at least 3 on a four-point scale.

How are CPC schools doing?

In Table 2, we describe the school environments experienced by CPC students during the first, preschool year of the MCPC project (2012-2013). We chose to focus on the preschool year for two reasons. First, because the preschool-to-kindergarten transition is often the primary point of mis-alignment in P-3 programs^{viii}, we determined that focusing on this transition would be the most informative. Second, because changing the culture of a school to implement curriculum alignment takes significant time and effort (see section on “Aligned Curriculum Process” below), we determined that data from the preschool year were most likely to accurately reflect the PreK-K alignment experienced by the students in the MCPC project.

Note that the *Curriculum coverage* and *Cross-grade collaboration* indicators could only be defined for a subset of classrooms in each district (67% in Saint Paul to 100% in Normal). These indicators were defined based on teacher and principal surveys, which were not submitted by all teachers and principals. The percentage of classes meeting CPC recommendations for the other three indicators was generally comparable in the full sample and the subset for which coverage and collaboration could be assessed. In Chicago, however, fidelity ratings were significantly higher for classes that had full indicator information (58.3% met the ≥ 4 recommendation) than classes for whom this information was unavailable (25% met the recommendation).

Table 2. Percent of CPC pre-K classes, by district and overall, that met CPC recommendations for each Aligned Curriculum indicator during the 2012-13 school year (Year 1 of the Midwest CPC Expansion Project).

Recommendation	Chicago (84 classes)	Saint Paul (12 classes)	Evanston (10 classes)	Normal (7 classes)	Total (113 classes)
1) High program fidelity (≥ 4)	58.3%	100%	80%	0%	61.1%
2) Strong curriculum rationale	88.1%	100%	80%	100%	91.2%
3) Evidence of consistent learning experiences	66.7%	100%	100%	100%	75.2%
4) Curriculum coverage of key domains	34.5%	66.7%	10%	28.6%	35.4%
5) Support for cross-grade collaboration	73.8%	50%	0%	0%	60.2%
Average # of recommendations met (out of 5)	3.2	4.2	2.9	2.3	3.2
Met 3 or more recommendations	81%	100%	90%	28.6%	80.5%
Met 4 or more recommendations	29.8%	83.3%	0%	0%	31%

Note. This sample represents the subset of CPC students for whom data were available for all five indicators.

We also examined in detail how teachers rated their curriculum coverage of four key instructional domains. Table 3 describes the proportion of CPC teachers in all districts who rated their curriculum coverage “very well” in each domain. Across districts, the majority of teachers rated coverage of language/literacy “very well”. In Chicago (the largest district), second-best coverage was reported for math, and fewer than 50% of teachers felt their curriculum covered science and socio-emotional learning “very well.” In the other districts, the pattern was less clear although teachers generally reported the least coverage in science. Saint Paul teachers were the most likely to rate their curriculum coverage “very well” in all four domains, followed by Normal.

Table 3. Proportion of CPC teachers, by district, who evaluated their curriculum coverage “very well” in each of four key instructional domains.

	Chicago (50 teachers)	Saint Paul (8 teachers)	Evanston (6 teachers)	Normal (5 teachers)
Language & Literacy	76%	100%	66.7%	60%
Math	60%	62.5%	33.3%	40%
Science	40%	75%	16.7%	40%
Socio-emotional Learning	46%	100%	33.3%	60%
All four domains	32%	62.5%	16.7%	40%

Is Aligned Curriculum associated with school readiness?

To assess the impacts of the Aligned Curriculum indicators on school readiness, we compare the number of indicators each child in Chicago CPCs received to a matched comparison group of preschool students in non-CPC, publicly-provided Chicago preschools. Using the impacts on the Teaching Strategies GOLD, a validated assessment completed by the teacher rating the school readiness of each child on multiple domains in three time periods during the year, we investigate the association of the number of Aligned Curriculum indicators and school readiness after the preschool year.

While CPC students outperformed the control students at all levels of AC indicators, there was no distinct pattern indicating that increasing the number of AC indicators was associated with higher rates of school readiness. This is not surprising. Several of the indicators would theoretically not impact preschool achievement, including alignment of curriculum across grades, as they are recommendations to improve the system as a whole. For example, a curriculum that is aligned between PreK and kindergarten may not influence school readiness in the PreK year, but improve performance in subsequent years. While several indicators, including fidelity ratings and teacher rationale, were consistently associated with higher school readiness in the first year, others, including principal ratings of collaboration, were negatively associated. Students in schools with high collaboration had lower baseline fall test scores than those that did not, so it is possible that in the first year, those schools required more collaboration to implement the program.

However, when investigating the impacts on kindergarten achievement (a smaller sample, n=413), there were no significant impacts of the number of indicators on achievement. The only significant association with year 2 test scores was the positive impacts of the principal rating of collaboration, a change from the PreK results.

Aligned Curriculum Process

Aligning curriculum across grades can be a difficult process, involving coordination on many levels. One CPC site in Chicago, Carver G. Wheatley school, rated low on fidelity and consistent learning experiences in the first year of the implementation. However, by the end of the MCPC grant, five years later, Wheatley had aligned the curriculum experiences across grades and scored higher on the fidelity rating. To accomplish this, staff at Wheatley worked across levels and grades to improve implementation of their curricula, including adopting new curricula and practices to ensure students in the school received consistent learning experiences from Pre-K through elementary years.

Case Study: Carver G. Wheatley CPC and Elementary

In the first year of the Midwest CPC Expansion project, the Wheatley Pre-K and Elementary grades did not have a consistent curriculum or practices across the grades. By the end of the Expansion project grant, Wheatley was implementing curriculum that was aligned across all grades, Pre-K through 3rd.

To achieve this, The Wheatley Leadership team met weekly lead by the principal, working to identify and implement a curriculum that met the needs of their students, and provided seamless transitions across grades. In these meetings, the team worked to ensure that instructional practices and pacing were consistent within and across grades.

The Wheatley Head Teacher facilitated weekly within grade meetings to ensure consistent implementation within each grade. Monthly cross-grade meetings, including the PreK, K and 1st Grade teachers were held to discuss lesson planning and expectations. Teachers would visit classrooms within and across grades for peer-review to help establish a culture of collaboration and alignment.

The principal would lead quarterly data reviews of student assessment data. These data meetings provided insight into gaps in the curricula and provided direction for further improvement of curriculum coverage and alignment.

Changes in Alignment ratings from the first year of the project to the final, fifth year

The Wheatley School alignment experience was common across Chicago CPC sites. Though several schools were closed after the first year of the project by CPS, all but one of the remaining sites improved their ratings of consistent curriculum and experiences. Only one site did not meet the recommendation for consistent learning experiences, while 67% of the schools had curricula and/or practices that spanned from PreK through third grade (i.e., scored a 2 on the consistent learning experience rating). These ratings and changes over time can be seen in Table 4. In Saint Paul, ratings of consistent curriculum experiences remained consistently high across the first and fifth years of the CPC Expansion project.

From the first to the fifth year of the Midwest CPC Expansion project, average fidelity ratings of aligned curriculum increased in Chicago from 3.6 to 4, but fell in Saint Paul from 5.0 to 4.7, and in Evanston from 3.0 to 2.2. Normal’s rating remained constant.

Table 4. Comparison of site ratings of “Consistent Learning Experiences” from Year 1 (2012-13) to Year 5 (2016-17) of the Midwest CPC Expansion project, and a summary of the evidence used to determine these ratings.

CPC Site	Year 1 Rating	Year 5 Rating	Evidence from Curriculum Plan
1	0	1	In Y1, Site 1 did not use any of the same curricula in PreK and the primary grades (although the curriculum plan mentioned future plans to align). By Y5, they reported alignment of core content standards across PreK-3 rd grade.
2	2	2	In Y1, Site 2 implemented the Everyday Math curriculum across PreK-3 rd grade, and reported that their PreK literacy curriculum was aligned to Common Core standards for subsequent grades. In Y5, they continued to report aligned math instruction across PreK-1 st grade, as well as common planning time and weekly alignment meetings.
3	0	1	In Y1, Site 3 did not use any curricula consistently across PreK and the primary grades, and the curriculum plan lacked discussion of cross-grade meetings or alignment to standards. In Y5, they reported that the PreK curriculum strove to meet kindergarten Common Core standards.
4	2	2	In Y1, Site 4 implemented the Everyday Math curriculum across PreK and the primary grades. In Y5, they continued to report math curriculum alignment between PreK and the primary grades, as well as regular vertical team meetings.
5	2	2	In Y1, Site 5 implemented the Everyday Math curriculum across PreK-3 rd grade. In Y5, they implemented the Second Step and Haggerty Phonemic Awareness curricula consistently across PreK-3 rd grade.
6	2	2	In Y1, Site 6 implemented CLI literacy curricula, Message Time Plus, and Everyday Math in all grades PreK-3 rd . In Y5, they continued to implement these curricula across PreK-3 rd grade.
7	1	1	In Y1, Site 7 reported that their PreK curriculum was aligned to kindergarten Common Core standards. In Y5, they continued to report cross-grade alignment to Common Core standards, as well as occasional vertical and horizontal meetings.
8	2	2	In Y1, Site 8 and its affiliated elementary school both implemented the Readers Theater, and PreK incorporated elements of the Lucy Calkins curriculum used in the primary grades. In Y5, Site 8 continued to report alignment between the PreK curriculum and the Lucy Caulkins curriculum used in grades K-3, as well as alignment to Common Core Standards across grades.
9	1	2	In Y1, Site 9 reported that curricula across grades were aligned to Common Core Standards. In Y5, they implemented the Haggerty Phonics curriculum across PreK-2 nd grade, and reported that the Head Teacher worked actively with PreK teachers to facilitate students’ transition to the K-5 curriculum.
10	0	2	While the Y1 Site 10 curriculum plan mentioned frequent meetings and a goal of implementing Message Time Plus across grades, there was no indication that curricula were <i>currently</i> aligned. In Y5, Site 10 reported alignment between the PreK literacy curriculum and the K-2 nd grade literacy program, as well as alignment of core standards from PreK-2 nd grade.

Links between Aligned Curriculum and Collaborative Leadership

Correlations of AC and CLT fidelity indicators were measured across years in all districts. Findings showed that having a strong collaborative leadership team in the preschool year was positively correlated with better aligned curriculum over subsequent years (preschool: 0.48*, 3rd grade: 0.45*). This is consistent with the CPC program model, which emphasizes the role of the collaborative leadership team in promoting aligned curriculum from preschool to third grade. Theoretically, having a strong collaborative leadership team in place during the preschool year should better help with subsequent grade level transitions.

Collaborative Leadership Team

What is a Collaborative Leadership Team?

A Collaborative Leadership Team (CLT) in the CPC P-3 model is made up of several key positions including the Principal, the Assistant Principal, the Head Teacher (HT), the Parent Resource Teacher (PRT), the School-Community Representative (SCR), the Parent Involvement Liaison (PIL), and the Curriculum Alignment Liaison (CIL). The responsibilities of each of these positions will be described below. The CLT seeks to promote shared vision within the Child Parent Center P-3 model in order to establish and structure the climate of the school and to promote more cohesive instructional practices. The team shares responsibilities and resources to create effective and efficient distribution of leadership responsibilities. In addition, the team seeks to build and foster effective communication among its members and between the team and other school staff. Ideally, each site implementing the CPC P-3 model has its own team. Occasionally, a team is shared across sites.

Collaborative Leadership Team Roles

Principal: Serves as the CPC P-3 champion and oversees facilitation of the entire model.

Assistant Principal: Works with principal to oversee facilitation and supports Head Teacher in implementation.

Head Teacher: In tandem with the principal and assistant principal, employs expertise in early childhood to direct the CPC P-3 program. Responsible for all aspects of planning, implementing, and supervising.

Parent Resource Teacher: Oversees the parent program and works with the School-Community Representative to assess family needs and find community resources.

School-Community Representative: With strong connections to the community and extensive knowledge of the resources available, this individual identifies and develops partnerships to strengthen delivery of services.

Parent Involvement and Curriculum Alignment Liaisons: Partner with the Head Teacher and Parent Resource Teacher to ensure that classroom activities and parent involvement opportunities align from preschool through 3rd grade. These roles are often filled by assistant principals, curriculum specialists, literacy coaches, parent coaches, or other school staff. These positions only existed in Years 3-5.

Why is it important?

Research shows that a shift from hierarchical to collaborative leadership models, where there is a strong sense of shared responsibility among school staff, is necessary for meeting the complex needs of present-day schools.^{ix} These collaborative teams have expanded reach, enabling them to accomplish more together and have greater impact than a single individual could on his or her own.^x

A strong CLT can implement many of the elements of the CPC program, which in turn may improve the early school climate which children and families experience. Positive school climate has been associated with improved outcomes for children in the elementary years^{xixii}. In the early years, indicators of positive school climate are associated with increased language and math skills in kindergarten^{xiii}. Research has also shown that parental ratings of early school climate are associated with children's social skills, school adjustment, and

achievement in first grade ^{xiv}. Additionally, parents are more likely to be involved when school climate is positive ^{xv}. A strong CLT creates an environment of strong leadership and a consistent learning environment which set the stage for a positive early school climate.

In the CPC P-3 model, the primary objective of the CLT is to ensure and implement continuity and stability within curriculum and parent involvement plans. The Team also works to ensure that all school staff members have adequate resources, including time for preparation and collaboration, to effectively meet the expectations and requirements of the CPC P-3 program. See Appendix for a complete logic model.

Table 5. Definitions of five Collaborative Leadership Team indicators, and the data used to assess whether CPC programs sites met CPC recommendations for each indicator.

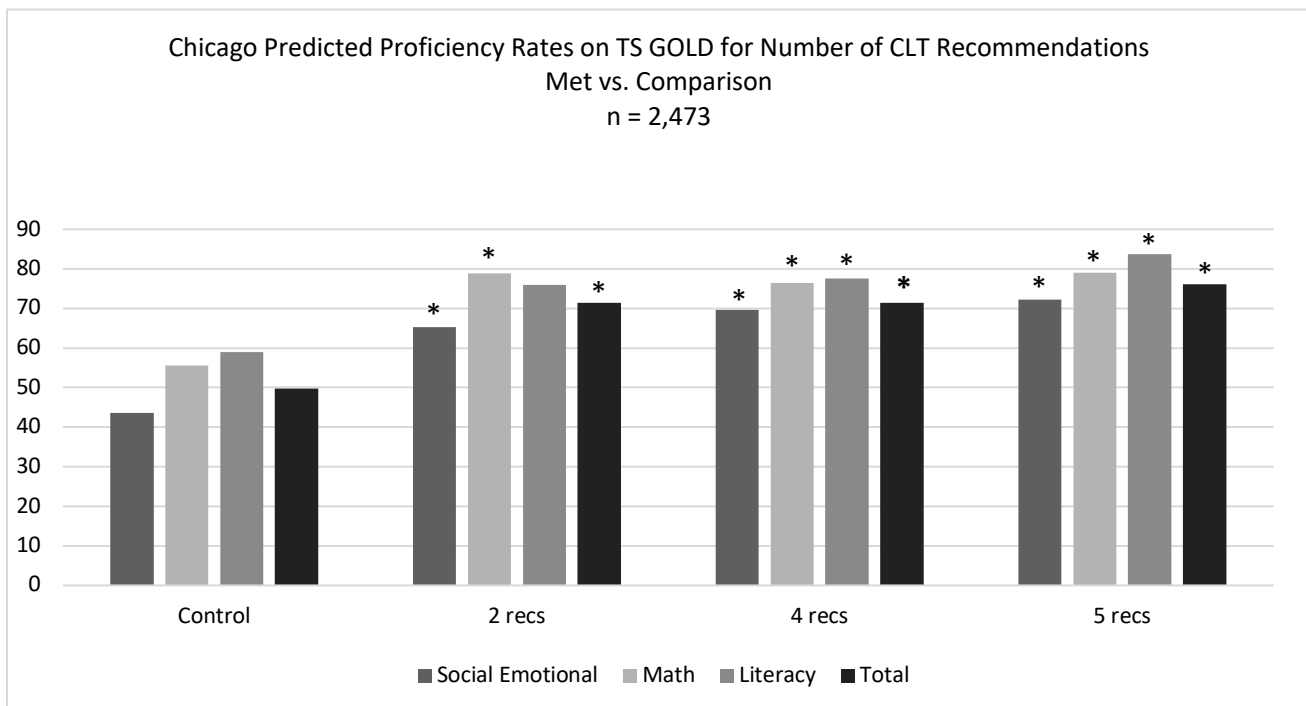
1) Program Fidelity: Program demonstrates adherence to the CPC principles of Collaborative Leadership, based on a holistic assessment of program functioning.	
Assessment: CPC project staff rated each site’s adherence to program guidelines on a scale of 1-5	CPC recommendation met if... Site scored above the district average on fidelity.
2) Complete Team: Program was served at any point during a given school year by a complete Collaborative Leadership Team. In years 1 and 2 a complete team included at least a principal, a head teacher, a parent resource teacher, and a school community representative. In years 3-5, a complete team was defined as including these positions, as well as a parent involvement liaison and a curriculum alignment liaison.	
Assessment: CPC project staff rated whether or not a complete CLT served the program at any time during the school year.	CPC recommendation met if... CPC project staff determined that a complete CLT served the school for any period of time during the school year.
3) Number of Schools Served: Number of schools served by the CLT each year.	
Assessment: Based on records, CPC project staff recorded how many schools each CLT served during each year.	CPC recommendation met if... the CLT served only one school during each school year. Time and teams were not shared between multiple school sites.
4) Head Teacher Active Leadership: Rating of how active the Head Teacher was in leading the implementation of the CPC P-3 program each year.	
Assessment: For each school year and based on notes, site visits, communications, and mentor reports, project staff rated the Head Teacher’s level of active leadership on a scale of 0-2 where 0 was low, 1 was medium, and 2 was high.	CPC recommendation met if... Head teacher was rated as a 1 or 2 on active leadership.
5) Principal Involvement in P-3 Implementation: Rating of Principal engagement and interest in the implementation of the P-3 CPC program.	
Assessment: For each school year and based on notes, site visits, communications, and mentor reports, project staff rated the principal’s involvement in the P-3 implementation on a scale of 0-2 where 0 was low involvement, 1 was medium, and 2 was high involvement.	CPC recommendation met if... Principal was rated a 1 or 2 on involvement in the implementation of the CPC P-3 Program.

Table 6. Percent of CPC pre-K students in the Chicago Public Schools whose school/classroom met CPC recommendations for each Collaborative Leadership Team indicator in Year 1.

Recommendation	All Districts n = 2,676	Chicago n = 1,724	Saint Paul n = 298	Evanston n = 573	Normal n = 81
1) CLT Fidelity rating \geq 4	78.0%	71.8%	100%	96.3%	0
2) CLT was complete	72.2%	94.8%	100%	0	0
3) CLT served only one school	67.5%	100%	0	0	100%
4) Head Teacher was an active leader	96.7%	94.8%	100%	100%	100%
5) Principal was involved in P-3 implementation	96.8%	95.1%	100%	100%	100%
Average # of recommendations met (out of 5)	4.1	4.6	4.0	3.0	3.0
Met 3 or more recommendations	95.9%	94.8%	100%	96.3%	100%
Met 4 or more recommendations	72.2%	94.8%	100%	0	0

Is the Collaborative Leadership Team associated with school readiness?

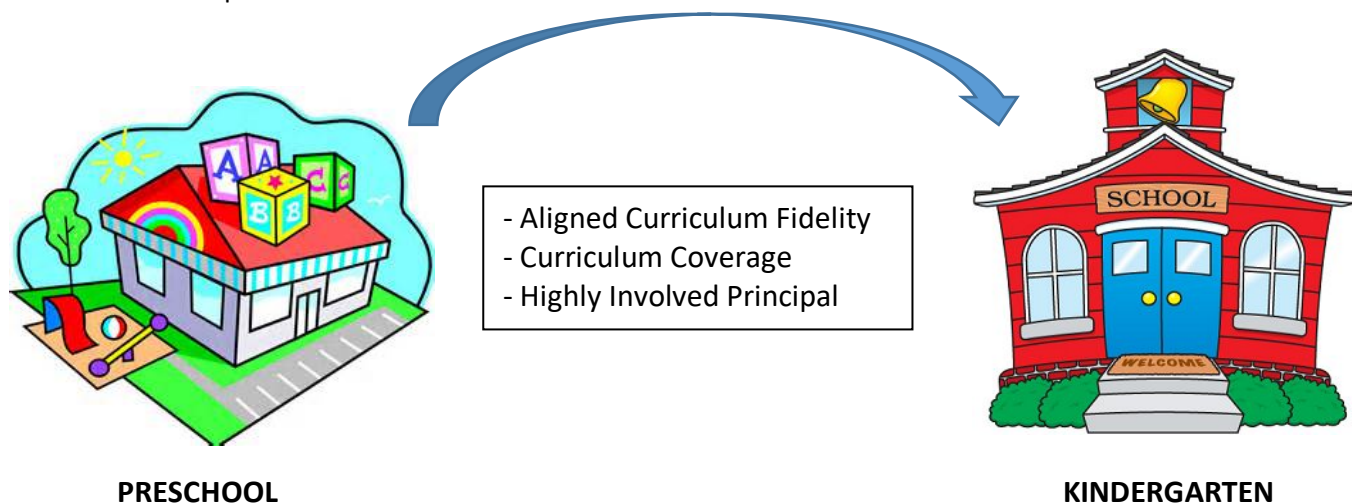
Analysis of data in the Chicago school district shows meeting two, four, or five CLT recommendations is associated with higher proficiency rates on the TS Gold in social-emotional learning, literacy, math, and total score. These associations are significant at the .05 level, with the exception of the association of two recommendations with literacy proficiency rates, which was not significant. These results indicate children in schools where the CLT is well-functioning and recommendations are met may experience improved learning outcomes.



Aligned Curriculum, Collaborative Leadership Team and Improving Continuity

As noted above, while CLT ratings are associated with school readiness in Chicago in year 1 of the implementation, there is no evidence of similar results with Aligned Curriculum. However, elements of both CLT and AC are associated with increased likelihood of a student remaining in a CPC site in the second year of the implementation.

Figure 1: Several CPC recommendations increase the likelihood that a student attends kindergarten in the same school as preschool.



While some recommendations are not significantly associated with continuing from preschool to kindergarten in the same site, like rationale and consistent learning experiences, these recommendations may not be easily observed by parents. Other factors, like curriculum coverage and principal involvement may directly relate to the climate of the school and encourage parents to continue sending their children to school.

Conclusions

- The CPC program element of Aligned Curriculum (AC) can be summarized in terms of five measurable indicators using school- and teacher- level information.
- On average, CPC preschool classrooms met program recommendations for more than half of these AC indicators, although there was variation by district.
- CPC students from Chicago schools showed greater school readiness compared to control students at all levels of number of AC indicators met. However, there was no evidence that increasing the number of AC recommendations met was associated with higher rates of school readiness.
- Curriculum plan ratings from Chicago schools showed that schools improved AC implementation over the five years of the Midwest CPC Expansion Program.
- The functioning of the CLT in the CPC programs is summarized in this brief as five indicators. While detailed data on the activities of the CLT would be useful to this analysis, that data was not collected and is therefore not available. We believe the five indicators highlighted here create a reasonable representation of the CLT at each site.
- On average, the CPCs met 4.1 of the CLT indicators with some variation by district.
- The CLT has the potential to improve outcomes for children. Meeting more recommendations resulted in better rates of school readiness. Children who attend school where the CLT is considered higher functioning may experience better learning outcomes at the end of the preschool year, putting them on track for success in kindergarten and beyond.

Future Directions

In this brief, we examined ways in which AC and CLT program elements can be measured and assessed within the CPC program, focusing on the preschool year. In order to better understand the role of these elements in promoting children's overall learning environment, further efforts and research are needed.

- Further examination of the impact of AC and CLT on subsequent grade outcomes is needed, with an emphasis on 3rd grade. This will lead to better understanding of the impact of P-3 comprehensiveness.
- Additional focus on instructional practices, and how these are influenced by school- and district-level curriculum alignment efforts, could help clarify mechanisms whereby aligned curriculum affects students.
- Detailed assessment rubrics of AC and CLT from preschool to 3rd grade should be developed. Having a standardized rubric would serve as a guide to help schools implement each element in a systematic way.
- It is important to explore ways to improve AC and CLT implementation that is consistent from preschool to 3rd grade. Understanding barriers to strong implementation is critical in delivering a successful program.
- The role of AC and CLT in combination with other CPC elements in strengthening children's learning needs to be assessed. Understanding the synergistic impact of different element combinations is important.
- Conducting case studies at the individual school level is needed, in order to better understand the program implementation process.

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Appendix

Table 1A. List of primary curricula used for preschool instruction in each MCPC project school district during the 2012-13 school year.

	Primary Curricula
Chicagoⁱ	Creative Curriculum (primarily language, but covers all domains of learning) Blueprint for Early Literacy (language/literacy) Everyday Math (mathematics)
Saint Paul	Discovering our World (district-developed curriculum covering various domains) Everyday Math (mathematics)
Evanston	Creative Curriculum (primarily language, but covers all domains of learning) Everyday Math (mathematics)
Normal	Creative Curriculum (primarily language, but covers all domains of learning)

ⁱ CPS was in transition from one language/literacy curriculum to the other, with some schools using primarily Creative, some primarily Blueprint, and some a combination.

Table 2A. Summary of evidence used to determine ratings of “Consistent Learning Experiences” for CPC sites in the Chicago Public Schools that existed in Year 1 (2012-13) or Year 5 (2016-17) of the MCPC project. Evidence for sites that existed in both Years 1 and 5 can be found in Table 4.

CPC Site	Year 1 Rating	Year 5 Rating	Evidence from Curriculum Plan
11 ^a	2	--	Implemented the Everyday Math curriculum across PreK and primary grades. Also reported that the PreK literacy curriculum was aligned with the Balanced Literacy Framework used in grades K-3.
12 ^a	--	2	Implemented the Haggerty Phonemic Awareness curriculum across PreK-2 nd grade and STEMscope across PreK-3 rd grade. Also reported holding weekly vertical meetings with the goal of supporting curriculum implementation and data-informed instruction.
13 ^b	1	--	Reported that PreK curriculum was aligned to Common Core standards and that teachers used common planning time to create linking units across grades.
14 ^b	--	2	Reported using several curricula consistently across PreK-2 nd grade, and holding meetings to help PreK teachers align instruction with the learning goals of later grades.
15 ^c	2	--	Implemented CLI literacy, Everyday Math and Second Step curricula consistently across PreK-3 rd grade.
16 ^c	--	1	Reported using consistent instructional strategies based on the Common Core standards, but did not use any curricula consistently across PreK and the primary grades.
17 ^d	0	--	Curriculum plan mentioned bi-weekly alignment meetings, but the process and goals of these meetings were unclear and there was no discussion of alignment to standards or evidence that any curricula spanned PreK and the upper grades.
18 ^d	--	2	Reported alignment of instructional strategies for reading from PreK to 3 rd grade, and implemented the Haggerty Phonemic Awareness curriculum in grades PreK-3 rd .
19 ^e	1	--	Reported that curriculum was aligned to Common Core standards across grades.
20 ^e	--	0	Reported bi-weekly vertical meetings, but their purpose (whether they supported <i>current</i> alignment) was unclear. Also reported plans to align core standards across PreK-3 rd grade, but it was unclear whether alignment was already occurring.
21	0	--	Did not use any curricula consistently across PreK and primary grades, and the curriculum plan lacked discussion of cross-grade meetings or alignment to standards.

Note. Between Years 1 and 5 of the project, a number of CPC sites were closed and students were re-located to a new site or a different site moved into the building. These pairs of sites are indicated in the table by matching superscripts.

Table 3A. Summary of evidence used to determine ratings of “Consistent Learning Experiences” for CPC sites in the Saint Paul, Evanston, and Normal school districts in Year 1 (2012-13) of the Midwest CPC Expansion project.

CPC Site	Year 1 Rating	Evidence from Curriculum Plan
22	2	Implemented the Everyday Math curriculum across PreK and primary grades. Also reported that the Early Childhood Workshop instructional framework used in PreK was aligned with the Reader’s and Writer’s Workshop curriculum for grades K-3.
23	2	Implemented the Everyday Math curriculum across PreK and primary grades. Also reported that the Early Childhood Workshop curriculum used in PreK was aligned with the Reader’s and Writer’s Workshop curriculum used in grades K-6.
24	2	Implemented the Everyday Math curriculum across PreK and primary grades. Also reported that the Early Childhood Workshop curriculum used in PreK was aligned with the Reader’s and Writer’s Workshop curriculum used in grades K-6.
25	2	Implemented the Everyday Math curriculum across PreK and primary grades. Also reported that the Early Childhood Workshop curriculum used in PreK was aligned with the Reader’s and Writer’s Workshop curriculum used in grades K-6.
26	2	Implemented the Everyday Math curriculum across PreK and primary grades. Also reported that the Early Childhood Workshop curriculum used in PreK was aligned with the Reader’s and Writer’s Workshop curriculum used in grades K-6.
27	2	Implemented the Everyday Math curriculum across PreK and primary grades. Also reported that the Early Childhood Workshop instructional framework used in PreK was aligned with the Reader’s and Writer’s Workshop curriculum for grades K-3.
28	2	Implemented the Haggerty Phonemic Awareness curriculum in grades PreK-3 rd , and reported using curricula aligned to state and Common Core standards across grades PreK to 3 rd .
29	1	Reported that PreK curriculum was aligned with state learning standards.
30	2	Implemented Everyday Math across PreK and the primary grades, and reported deliberate alignment between the PreK curriculum and the balanced literacy model used in later grades.

Logic model illustrating the role of CLT and AC elements in supporting student outcomes in the CPC program.

