

Defining Preschool Program Quality: A Summary of Indicators from Three Frameworks

A substantial body of research has indicated that high-quality preschool programs can have positive effects on children’s academic and socioemotional functioning – particularly for children who are at risk for poor outcomes due to socioeconomic disadvantage. A variety of characteristics have been proposed to contribute to preschool program quality, including class size, duration of services, teacher preparation, choice of curriculum, and parent engagement. However, there is not yet a clear consensus about the relative importance of these various elements, and different frameworks often emphasize different elements as the key to providing a high-quality preschool program. In this document, we compare three such frameworks – developed by the Child-Parent Center (CPC) program, the Gates Foundation, and the National Institute for Early Education Research (NIEER) – and summarize our efforts to develop measurable indicators of their core elements. The aim is to eventually link these elements to child outcomes and analyze their relative contribution to program effectiveness.

To define and assess program quality indicators proposed by the three frameworks, we relied on data from the Midwest Child-Parent Center (CPC) Expansion Project. The MCPC project is a scale-up of the CPC P-3 program that was implemented across several districts in Illinois and Minnesota from 2012 to 2017, and yielded data related to both child outcomes and program structure and implementation. In our definitions, we specifically focused on data collected during the first year of the project (2012-13) – when the lead cohort of students followed throughout the project were in preschool.

The following four pages (tables 2-5) outline the elements of each program quality frameworks, and summarize how these were defined and assessed in terms of measurable indicators using MCPC project data. Each table presents the percentage of CPC preschool students in the MCPC project who experienced a school/classroom environment that – based on our definition – successfully implemented each element. The table below (Table 1) provides an overall summary of these findings, summarizing the percentage of students in the first year of the MCPC project who experienced different numbers of program quality elements.

Next Steps:

- We will assess the extent to which our metrics of program quality account for student achievement and learning gains in the MCPC dataset (using data from both CPC and comparison group students).
- We note that there are common elements across the three program quality frameworks as well as differences (see Table 2). Based on the evidence, some elements may benefit from modification.
- We aim to define the metrics in a way that can be applied to different programs, contexts, and data sets.

Table 1. Percentage of CPC students in the first year of the MCPC project (2012-13) whose site/classroom successfully implemented different numbers of program quality elements. Total students = 2,041.

Number of elements successfully implemented	CPC Indicators (out of 21)	Gates Elements (out of 15)	NIEER Benchmarks (out of 10)
6	0%	0%	1.1%
7	0%	0%	0.9%
8	0%	0%	18.8%
9	0%	0%	0%
10	0.9%	7.9%	79.2%
11	3.7%	21.3%	
12	1.8%	52.2%	
13	21.6%	16.9%	
14	21.4%	1.7%	
15	21.8%	0%	
16	10.6%		
17	15.1%		
18	3.1%		

Note. No CPC site/classroom met recommendations for more than 18 CPC indicators, or fewer than six NIEER benchmarks.

Table 2. Crosswalk showing the conceptual overlap between three frameworks for defining preschool program quality.

CPC Elements	Gates Foundation 15 Elements	NIEER: New Benchmarks (2017)
<p>Effective Learning Experiences</p> <ul style="list-style-type: none"> • Small class size • Full day instruction • Teacher education (B.A.) • Balance of child- and teacher-driven instruction • Task-oriented instruction 	<p>Education and compensation: Teachers earn a B.A. and early learning credential, and are compensated at the same level as K-3 teachers</p> <p>Adult-child ratios: Maximum class size of 22, and adult:child ratio between 2:15 and 2:22</p> <p>Two adults in the classroom</p> <p>Teacher-child interactions focused on learning: Teachers use structured activities and play</p> <p>Learning Time: 6-6.5 hours/day, 180 -205 days/year</p> <p>Support for DLLs: Bilingual teachers & specialists</p> <p>Support for students with special needs: Early intervention</p>	<p>Teacher education: Bachelor’s degree</p> <p>Teacher specialized training: Specialized training in early childhood education/child development</p> <p>Assistant teacher degree: CDA or equivalent</p> <p>Maximum class size: 20</p> <p>Minimum staff-child ratio: 1:10</p>
<p>Parent Involvement and Engagement</p> <ul style="list-style-type: none"> • Parent resource room in center or school • Parent resource teacher and SCR outreach worker • Ample, diverse opportunities for PI • PI opportunities address parent needs 		<p>Screenings and referrals: Vision, hearing, and health screenings and referrals</p>
<p>Aligned Curriculum and Practices</p> <ul style="list-style-type: none"> • Consistent learning experiences from preschool to 3rd grade • Curriculum covers core instructional domains • Cross-grade collaboration 	<p>Age-appropriate learning standards: Goals for academic and social-emotional learning align w/ the expectations of kindergarten and beyond</p> <p>Proven curriculum: Research-based curriculum that is aligned w/ cognitive and social-emotional goals and teachers’ professional development</p> <p>Formative assessments: Classroom-based assessments designed to help teachers & administrators improve outcomes</p> <p>Data-driven decision making: Program uses data to inform action and improve outcomes for children, as part of a cycle of continuous improvement</p>	<p>Comprehensive early learning and development standards that are... horizontally and vertically aligned, supported (by PD and/or resources), and culturally sensitive</p> <p>Supports for curriculum implementation: State policies provide guidance for curriculum selection and supports for implementation</p>
<p>Professional Development</p> <ul style="list-style-type: none"> • In-person and online coaching • Site mentors provide regular support • Teachers complete online PD modules 	<p>Professional development: Ongoing coaching focused on improving teacher-child interactions</p>	<p>Staff professional development: At least 15 hours/year of PD, individualized PD plans, and coaching for lead and assistant teachers</p>
<p>Collaborative Leadership Team (CLT)</p> <ul style="list-style-type: none"> • Complete CLT at any point during year • Head Teacher provides active leadership • Principal is highly engaged in implementation of CPC P-3 program 	<p>Strong leadership: Educators create a culture of high expectations, public commitment, and communicate importance of quality to parents</p> <p>Integrated systems: Learning goals, curriculum, PD, formative assessments, and data are tied together and are mutually reinforcing</p>	<p>Continuous quality improvement system: Structured classroom observation; program improvement plan</p>
<p>Continuity and stability</p> <ul style="list-style-type: none"> • Guaranteed enrollment policy • Consistent leadership team across years • At least 80% retention of students 	<p>Public commitment: Support from elected officials, courts, policy environment to sustain public commitment to high-quality pre-K</p>	

Note. Some elements may span multiple categories, or not have a clear counterpart, in the other frameworks. They have been grouped based on the closest conceptual overlap.

Table 3. Indicators used to define the six CPC elements, and percentage of CPC PreK students whose site/class met recommendations for each indicator during the 2012-13 year.		
Indicator	CPC recommendation met if...	% CPC Students
Effective Learning Experiences		
Small class size	Class size was \leq 17	60.8%
Full day instruction	Programming was provided for 6+ hours/day	20% ⁱ
Teacher education	Teachers had at least a bachelor's degree	100%
Balance of child- and teacher-driven instruction	On the Classroom Activity Report, teachers indicated that 35 to 65% of time was spent on child-initiated activities	80%
Task-oriented instruction	Teachers scored above the district mean on one or both scales of the Classroom Learning and Activities Checklist	70.7%
Aligned Curriculum		
Consistent learning experiences P to 3	Curriculum plan showed evidence of consistent curriculum, practices, or learning standards from PreK to upper grades	69.8%
Curriculum covers core domains	Teachers reported that curriculum covered language, math, science, and socioemotional learning "very well"	40.9%
Cross-grade collaboration	Principal self-reported strong support of practices promoting cross-grade collaboration (mean score of 3+ out of 4)	44.7%
Collaborative Leadership Team (CLT)		
Complete CLT	A complete CLT (including a principal, head teacher, and PRT) was in place at any point during the school year	100%
Head Teacher provides active leadership	Head teacher was rated as medium or high in active leadership by project staff	95.6%
Highly engaged principal	Principal's involvement in implementation of the CPC program was rated medium or high by project staff	95.9%
Continuity and Stability		
Guaranteed enrollment policy	Students were guaranteed continuous enrollment in the same site (or affiliated elementary school)	90.4%
Consistent leadership team	Key leadership team members (principal, HT, and PRT) stayed in their roles from one year to the next	40.5%
At least 80% retention rate	At least 80% of students were retained in the site from one year to the next (retention rates ranged from 52 to 75%)	11.2%
Professional Development (PD)		
In-person and online coaching support	Erikson PD program was implemented with "high" or "very high" fidelity (as rated by Erikson facilitators).	43.2%
Site mentors support Head Teachers	Mentor logs reported at least one mentor visit per semester (two over the course of the school year)	84.5%
Review of online PD modules	At least two Erikson PD modules were implemented at the site (approximately 5 hours of PD, on average)	100%
Parent Involvement (PI)		
Parent resource room	School/site provided a dedicated parent resource room	96.4%
PRT and SCR outreach worker present	PRT and SCR were both in place for at least six months out of the school year	95.6%
Ample, diverse opportunities for PI	PI logs provided evidence that the site facilitated at least one event per month (on average) in each of six categories	66.2%
PI opportunities address parent needs	PI logs provided evidence of at least one event/month (on avg.) in each category identified in the needs assessment	70.8%

ⁱⁱ Districts participating in the MCPC project did not operate under a full-day PreK schedule, and space/budget limitations prevented broader implementation of full-day programming. In the second year of the project, availability of full-day programming was increased in response to the finding that full-day PreK was linked to higher school readiness scores.

Table 4. Measurement of Gates Foundation 15 Elements, and percentage of CPC PreK students whose site/class met each recommendation during the 2012-13 year.		
Element and Definition	Recommendation met by CPC classrooms if...	% CPC students
Education and compensation: Teachers earn a B.A. and early learning credential, and are compensated at the same level as K-3 teachers	Teacher had at least a bachelor's degree, AND... ...was licensed in a state that required training in early learning <u>or</u> reported other specialized training (e.g., a B.A. in early childhood education), ANDwas employed by a district <u>or</u> received compensation comparable to district teachers.	98.6%
Adult-child ratios: Maximum class size of 22, and adult:child ratio between 2:15 and 2:22	Class size did not exceed 22 AND adult:child ratio did not exceed 2:22.	100%
Two adults in the classroom	Two adults were consistently present in the classroom (e.g., a teacher and teaching aide)	100%
Teacher-child interactions focused on learning: Teachers use structured activities and play	On the Classroom Activity Report, teacher indicated a balance of child-initiated and teacher-directed activities (in line with the CPC definition, 35 to 65% of class time was child-initiated).	80%
Formative assessments: Classroom-based assessments designed to help teachers & administrators improve outcomes	Program implemented some form of systematic assessment to monitor student progress. (All CPC classes met this recommendation by implementing the TS GOLD or IGDI/PALS.)	100%
Learning Time: 6-6.5 hours/day, 180 -205 days/year	Programming was provided for six or more hours per day.	20%
Support for DLLs: Bilingual teachers & specialists	Program was affiliated with a school district (which would routinely provide these services) <u>or</u> showed other evidence that DLL and/or special education support was provided.	98.6%
Support for students with special needs: Early intervention		100%
Age-appropriate learning standards: Goals for academic and social-emotional learning align w/ the expectations of kindergarten and beyond	Program learning standards were aligned with state or national learning standards <u>and</u> these standards addressed both academic and socioemotional domains.	100%
Proven curriculum: Research-based curriculum that is aligned with cognitive and social-emotional goals and teachers' professional development	For at least one primary curriculum used at the site, CPC project staff were able to find independently gathered evidence (i.e., not from the publisher) that the curriculum was linked to improved outcomes for <i>preschoolers</i> .	32.7%
Data-driven decision making: Program uses data to inform action and improve outcomes for children, as part of a cycle of continuous improvement	Principal reported that teachers were expected – to a “moderate” or “great” extent (score of 3 or higher on a four-point scale) – to use student data to strengthen classroom practice and set goals for individual children	37.8%
Professional development: Ongoing coaching focused on improving teacher-child interactions	Teachers at the site participated in PD provided by the Erikson Institute (3-4 modules, completed between September and June) <u>and</u> received individualized support from CPC mentors.	100%
Integrated systems: Learning goals, curriculum, professional development, formative assessments, and data are tied together and are mutually reinforcing	Site demonstrated excellent fidelity of implementation (indicated by a rating of at least 3.5 on a five-point scale) for the Aligned Curriculum, Professional Development, <u>and</u> Collaborative Leadership CPC program elements	24.6%
Strong leadership: Educators create a culture of high expectations, public commitment, and communicate importance of quality to parents	Site's head teacher was rated medium/high in active leadership, and principal was rated medium/high on involvement in implementation of the CPC program, by project staff	91.5%
Public commitment: Support from elected officials, courts, policy environment to sustain public commitment to high-quality pre-K	Site was located in a state that provided publicly-funded PreK services and a school district that demonstrated commitment to high-quality PreK above and beyond the provision of basic services (e.g., was willing to support implementation of an experimental program like CPC).	100%

Table 5. Measurement of NIEER (2017) updated benchmarks, and percentage of CPC PreK students whose site/class met each benchmark during the 2012-13 year.

Benchmark	Benchmark met by CPC classrooms if...	% CPC students
Teacher education: Bachelor's degree	Teacher had at least a bachelor's degree	100%
Teacher specialized training: Specialized training in early childhood education/child development	Teacher was licensed in a state that required specialized training in early childhood <u>or</u> reported other specialized training (e.g., a B.A. in early childhood education)	99.1%
Assistant teacher degree: CDA or equivalent	Assistant teacher/teaching aide had at least a CDA	100%
Maximum class size: 20	Class size did not exceed 20. Because all CPC classrooms had two adults (teacher and aide), any class with 20 or fewer students also met the ratio recommendation	93.7%
Minimum staff-child ratio: 1:10		93.7%
Screenings and referrals: Vision, hearing, and health screenings and referrals	NIEER's most recent preschool yearbook (2016) indicated that screenings and referrals were routinely provided in the state where the site was located	100%
Comprehensive early learning and development standards that are... horizontally and vertically aligned, supported (by PD and/or resources), and culturally sensitive	NIEER's most recent preschool yearbook (2016) indicated that state early learning standards in the state where the site was located met this benchmark	100%
Supports for curriculum implementation: State policies provide guidance for curriculum selection and supports for implementation	NIEER's most recent preschool yearbook (2016) indicated that the state-level infrastructure for curriculum approval and supports met this benchmark, in the state where the site was located	100%
Staff professional development: At least 15 hours/year of PD, individualized PD plans, and coaching for lead and assistant teachers	Teachers at the site completed at least 15 hours of professional development, including both PD provided by the Erikson Institute as part of the CPC program and other PD planned and provided by the principal or district.	100%
Continuous quality improvement system: Structured classroom observation; program improvement plan	Site received feedback on classroom functioning via program monitoring tools (Classroom Activity Report and Classroom Learning and Activities Checklist) <u>AND</u> received support from a CPC mentor to help implement improvements	84.5%