

RESEARCH REPORT



NIEER



Quality in Early Childhood Care and Education Programs in Indiana

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Abstract

The National Institute for Early Education Research (NIEER) conducted a landscape evaluation of early childhood programs in Indiana (IN) between the spring of 2021 and the summer of 2022. The evaluation focused on understanding program components, quality, and children’s learning and development across a variety of programs in the state. Commissioned by Early Learning Indiana (ELI), with generous support from Lilly Endowment Inc., this study aims to provide Indiana programs and policymakers with research-based information on the quality of early childhood programs, and the learning and development status of young children birth to five in the state.

This Research Report discusses differences observed in program quality by program type, Paths to Quality (PTQ) star level, and geographic region from March 2021 through July 2022. Throughout this period, programs continued to experience interruptions or quarantines due to the COVID-19 pandemic (including the Omicron and Delta variants of COVID-19).

The study found that despite the intervening impact of the pandemic on operations, the results of independent assessments of quality over two time periods from 2021 to 2022 were stable. Children in this sample experienced environments that on average were warm, caring, and supportive. However, findings indicate low levels of language and instructional support observed over time for all age groups. Average quality for infants and toddlers is similar to the findings of limited studies of other programs across the country, but average quality for preschoolers in Indiana lags behind high-quality programs serving children ages three to five across the country.

The report discusses the implications of these findings for policymakers and funders in Indiana as they seek to strengthen the early care and education system in order to improve the school readiness of young children. The findings can provide important data to the Indiana Early Learning Advisory Committee as they implement the recommendations in the 2022 report, *A Roadmap to Modernize Indiana’s Early Learning System*.ⁱ

Acknowledgments

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About NIEER

The National Institute for Early Education Research (NIEER) at the Graduate School of Education, Rutgers University, New Brunswick, NJ, conducts and disseminates independent research and analysis to inform early childhood education policy.

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Key Takeaways

Findings on Program Quality

- Despite the intervening impact of the pandemic on operations, the results of independent assessments of quality over two time periods from 2021 to 2022 were stable.
- Children in this sample experienced environments that on average were warm, caring, and supportive.
- However, findings indicate low levels of language and instructional support observed over time for all age groups.
- Average quality for infants and toddlers is similar to the findings of limited studies of other programs across the country, but average quality for preschoolers in Indiana lags behind high-quality programs serving children ages three to five across the country.

Implications for policymakers in Indiana

Efforts to improve quality in early care and education programs in Indiana should focus on the following:

- Enhance infant teachers' skills to support early language and cognitive development.
- Increase toddler teachers' acumen in facilitating instruction and modeling language.
- Enhance preschool teachers' skills in strategies to facilitate instruction, scaffolding learning, and application of knowledge to new concepts, with an emphasis on language development and content (i.e., math).
- Increase effective use and adoption of research-based curricula.
- Increase the availability of developmentally appropriate materials in classrooms.

To ensure educators have sustained support to implement quality enhancements and improve quality over time, the quality improvement system (i.e., Paths to Quality) should be redesigned and enhanced to achieve these goals.

Introduction

The National Institute for Early Education Research (NIEER) conducted a landscape evaluation of early childhood programs in Indiana (IN) between the spring of 2021 and the summer of 2022. The evaluation focused on understanding program components, quality, and children's learning and development across a variety of programs in the state. Commissioned by Early Learning Indiana (ELI), this study aims to provide Indiana programs and policymakers with research-based information on the quality of early childhood programs, and the learning and development status of young children birth to five in the state. This evaluation of Indiana's early care and education (ECE) system is a multi-site study encompassing several components to provide the first-ever independent assessment of this scale of the quality of early care and education

programs of various auspices and to assess the developmental growth of children in those programs.

This research report on the quality of early care and education programs in Indiana discusses differences observed in program quality by program type, Paths to Quality (PTQ) star level, and geographic region. The report uses data on program quality collected across two time points between March 2021 through July 2022. Throughout this period, programs continued to experience interruptions or quarantines due to the COVID-19 pandemic (including the Omicron and Delta variants of COVID-19). Forthcoming Research Notes will report findings and policy implications related to the developmental status of children.

This report discusses the implications of these findings for policymakers and funders in Indiana as they seek to strengthen the early care and education system in order to improve school readiness of young children. The full report of the study, *Evaluation of Early Childhood Programs and Child Development in Indiana*, and an accompanying Research Brief, *The Developmental Status of Young Children in Indiana*,ⁱⁱ discusses the implications of these findings for policymakers and funders. Together, the two briefs can provide important information about the developmental status of children and classroom quality in the state to the Indiana Early Learning Advisory Committee as they implement the recommendations in the 2022 report, *A Roadmap to Modernize Indiana's Early Learning System*.ⁱⁱⁱ

Context of Indiana's Early Care and Education System

Indiana is one of many states that are examining the latest research and best practices to improve the quality of ECE programs in the state. Paths to Quality (PTQ),^{iv} Indiana's Quality Rating and Improvement System (QRIS), was launched statewide in 2008 as a voluntary system for licensed child care homes and centers, as well as unlicensed/registered family ministries. Evaluations of PTQ have found that participation in PTQ has steadily increased over the years. However, improvement in quality ratings is generally stagnant, with about one-half of providers remaining at the same quality level over the two years of the study.^v While Indiana is currently engaged in a redesign of PTQ, the state does not collect information on program quality through a standard observational tool.^{vi} Thus, this study sought to provide Indiana policymakers with independent observational and survey landscape data on the quality of a sample of early childhood programs in the state.

According to ELI's Closing the Gap report:^{vii}

- Throughout Indiana, 46.1% of all early learning capacity qualifies as high quality.
- However, the percentage of children in Indiana who can be served through high-quality capacity is 25.7%.
- Over four-fifths of Indiana counties have less than 25% of the high-quality capacity required to serve area children.

- More than one-fourth of counties have high-quality capacity to serve less than 10% of local children.

Legislation passed in 2022 charged the Indiana Early Learning Advisory Committee (ELAC) with producing a report, including recommendations for the Governor and the Legislative Council, to strengthen the early learning system and ensure young children in Indiana, especially vulnerable children, “have access to early learning opportunities capable of preparing them with the foundational skills required to thrive in kindergarten and beyond.” The report identified a number of actions for state agencies and policymakers in four key priority areas, one of which is “to improve the overall quality of the early care and education programs.”^{viii} In this context, this study aims to provide a landscape on current quality that could potentially serve to inform initiatives to improve quality in the state.

Study Design

We conducted independent assessments on multiple dimensions of program quality and selected program characteristics through administrator surveys and program observations between the spring and fall of 2021, and again in the spring of 2022. This research brief summarizes the key findings in relation to a sub-set of the research questions related to the observed quality of infant, toddler, and preschool classrooms in Indiana. These are:

1. What is the observed quality of children’s classroom experiences across two observations in the study period?
2. Are there any observed changes in quality between 2021 and 2022?
3. Are there differences in the quality experienced by children in relation to program characteristics?

The sample included 321 classrooms in 201 programs across all program types, including center-licensed, home-licensed, LEA, and ministry programs (48 of which were home-based providers and 29 of which were Building Blocks programs^{ix}). The sample included all PTQ ratings. However, more than 60% of the sample were rated 3 and 4, and about 13% were not rated. Most programs (78%) were in low-income communities, 44% were in urban locations, and 35% were in rural locations. Classroom quality was observed twice in each classroom using the CLASS Infant, Toddler, or Pre-K observation tool, depending on classroom composition.^x

In both 2021 and 2022, classroom quality was measured using The Classroom Assessment Scoring System (CLASS). The CLASS captures teacher-child interactions and classroom processes.^{xi} The CLASS Infant observational tool measures indicators of the responsiveness of caregiving between teachers and children in infant-toddler classrooms (i.e., most children younger than 15 months). Trained observers rate teachers on behaviors such as responsiveness to children’s verbal and non-verbal cues, facilitation of language, and emotional connection. The CLASS Toddler tool (appropriate for use with children 12-36 months) assesses two domains related to teacher’s emotional and behavioral support and how teachers engage children to take an active role in learning, including the use of play and facilitation of language. The CLASS Pre-K tool measures indicators of teachers’ emotional support of children, classroom organization,

and instructional support. On all three tools, observers assign scores on a 7-point Likert-type scale. Scores of 1-2 indicate low quality, scores of 3-5 are in the moderate range, and scores of 6-7 indicate high quality.^{xiii}

Observers also used an accompanying checklist developed by NIEER that assesses features of the classroom environment (e.g., furniture, room organization, health, and safety). Results are reported first for observed quality in infant, toddler, and preschool classrooms. Findings are then presented and the variations in observed quality of classrooms analyzed according to the programs' PTQ ratings, their urban, mid-size, and rural county location, and their program type.

Observed quality is low to average in Indiana ECE classrooms. Average CLASS scores for the sample of Indiana early childhood classrooms for all domains and dimensions for the two time points of observation indicate that the observed quality in this sample of Indiana early care and education programs is generally low in areas related to learning and instructional support and average on areas related to emotional support. This pattern of findings (e.g., lower scores on indicators of instructional support) is consistent with findings of observed quality in other studies conducted nationally. Specifically, it was found:

- CLASS Infant ratings for programs observed showed an average rating of 4.84 for responsive caregiving (RC), with minimum scores of 2.42 and a maximum score of 6.43.
- Classrooms rated with the CLASS Toddler were an average 5.69 for Emotional and Behavior Support (EBS), and 3.25 for Engaged Support for Learning (ESL), with minimum scores observed at 2.95 and 1.00 and maximum scores at 6.76 and 5.87, respectively.
- CLASS Pre-K average scores were rated on average 5.80 for Emotional Support (ES) (minimum of 2.58 and maximum of 7.00), 5.16 for Classroom Organization (CO) (minimum of 1.44 and maximum of 6.73), and 2.78 for Instructional Support (IS) (minimum of 1.00 and maximum of 5.33).

Across the different age groups, results point to lower-than-average scores on the sub-components and domains that relate to supports for language, learning, and overall instructional. Specifically, for infants, “facilitated exploration” and “early language supports” scored lowest. Similarly, in toddler classrooms, all the domains in “engaged supports for learning” scored lower. For preschoolers, all the domains in “instructional support” scored lower. See Figures 1 and 2 below.

Figure 1. CLASS Infant and Toddler average scores in 2021 and 2022

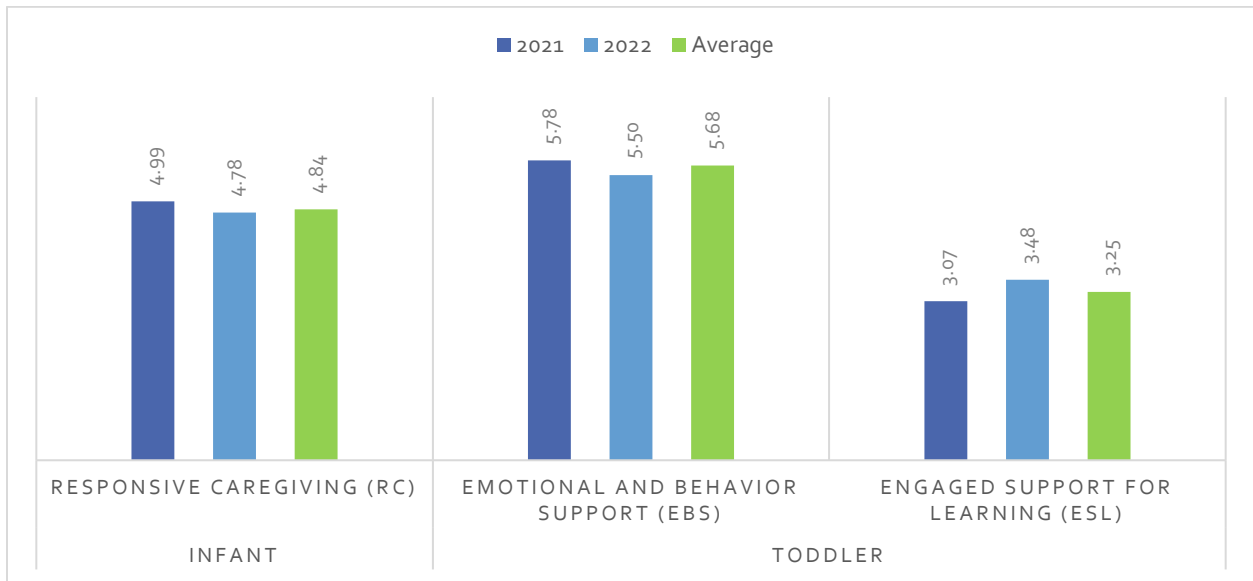
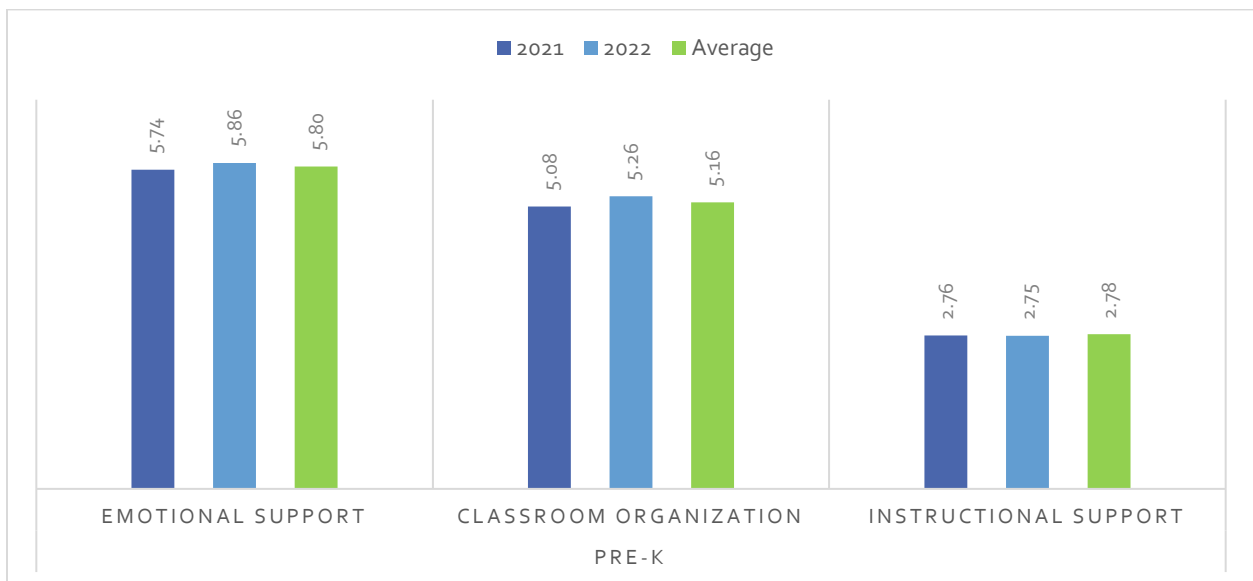


Figure 2. CLASS Pre-K average scores in 2021 and 2022



Classrooms could use more developmentally appropriate materials. Findings from the environmental checklist conducted in 2021 indicate that most classrooms were in good condition, sufficient for group size, and age-appropriate. Data indicates that programs serving infants/toddlers and preschoolers with PTQ ratings of 3 and 4 had a higher prevalence of developmentally appropriate materials and environments. Urban centers also showed a higher prevalence of developmentally appropriate materials. This was also the case for center-licensed and LEA programs. However, access to developmentally appropriate materials such as blocks, play centers, child-related and child-developed displays, and book reading was low. Programs

show a need for further age-appropriate art materials, soft furniture, bookracks and shelving units, easels, sand/water tables, workbenches, and other materials that support several types of dramatic play.

Lower rated programs are less likely to use a research-based curriculum. Program administrators completed a survey that included questions on the use of curricula. About 14% of all programs stated they did not use a formal curriculum. This was most commonly reported for programs rated 0 or unrated (25%) and programs rated 1 or 2 (25.4%). Additional findings include:

- 32.2% of programs reported using Creative Curriculum; 43.4% of 4-rated programs reported using this, while only 9.4% of 0 and unrated programs reported using this curriculum.
- PTQ 3- and 4-rated programs that reported no use of a formal curriculum was low, at 4.9% and 9.3%, respectively.

Measures of classroom quality were mostly stable across the two time periods of assessment. Having assessed the classroom quality twice in each classroom, we are also able to assess overall stability in average domain scores across the sample. Given the impact that the COVID-19 pandemic was still having through 2021 on child care and education services across the nation, a second data collection in 2022 allowed for an increased understanding of the degree of which areas of concern flagged in the first report (Nores, et. al, 2022) may have been due to the pandemic, or whether these continued to be of concern about a year later. There was some degree of stability of scores across these two points in time for both the infant and toddler measure, except for emotional behavioral support being lower on the second observation in 2022 (after the pandemic) and engaged support for learning higher at the second observation. A similar pattern of stability in scores across both time periods was found the CLASS pre-K measure.

A few differences were found in quality experienced by children per program characteristics. There are some differences in the quality of programs by program type and PTQ rating. We explored differences in CLASS scores by selected program-level characteristics. That is, by program type, PTQ ratings, and urbanicity. Key findings include:

- *In infant classrooms*, licensed home-based programs and particularly ministry programs scored slightly higher than center-based and other^{xiii} programs across 2021 and 2022.
 - Additionally, classrooms with PTQ ratings of 1 and 2 tended to score lower on average for the CLASS Infants (relative to those with PTQ ratings 3 or 4), and all scores were below 5 (good quality).
- *In toddler classrooms*, all program types scored similarly in the EBS, but ministry programs scored slightly higher in the ESL. Classrooms with ratings of 1 and 2 tended to score lower in the EBS and ESL domains of the CLASS relative to classrooms in programs with PTQ ratings of 3 and 4. However, these were not as different from classrooms in non-rated centers on the ESL domain.

- Meanwhile, classrooms rated 4 scored the highest in the ESL domain. Finally, programs located in urban areas tended to score lower in both domains of the CLASS Toddler.
- *In preschool classrooms*, LEA classrooms scored higher on all domains of the CLASS Pre-K as compared to center-licensed and ministry-based programs, especially in the CLASS Classroom Organization (CO) domain.
 - Regarding the PTQ ratings, most programs scored similarly in the CLASS Emotional Support (ES) and CO domains. However, higher-rated programs (PTQ ratings of 3 and 4) scored higher in the Instructional Support (IS) domain, although their average score was still under 3.
 - Differences by urbanicity were minimal.

The most significant differences were found for pre-K classrooms sponsored by LEAs and for home-based providers. We conducted additional analyses to determine the statistical significance of these differences in CLASS scores across various program types and settings. Results showed the following:

- *Difference by program type:* For pre-K classrooms, LEA programs had significantly higher scores across all domains of the CLASS tool, with this effect being sustained in the CO domain even after controlling for program rating, urbanicity, and poverty.
- *Differences by levels of instructional support:* Programs rated 1 and 2 had significantly lower scores in the IS domain and home-based licensed programs had significantly lower scores in the IS domain. In contrast, programs rated 4 had significantly higher scores in both Toddler domains, and this was also observed in Pre-K ES and IS even after controlling for program type and urbanicity.

Conclusion

What we know from research on quality programs. High-quality child care or preschool programs that provide a nurturing and stimulating environment, involve parents, have a well-designed curriculum, promote positive child-teacher interactions, and support children's language and literacy development, as well as their health and nutrition when necessary, are more likely to have positive outcomes for children's development. Two factors emerge from this study as needing critical attention: the quality of teacher-child interactions and the learning environments, including access to developmentally appropriate materials and research-based curriculums. An effort on strengthening quality should therefore be focused on these two.^{xiv} Evidence suggests that children's experiences with positive and stimulating interactions are important contributors (at the center level) to children's gains in language, literacy, mathematics, and socio-emotional skills.^{xv}

What we found for Indiana's early childhood programs. Data collected through classroom observations indicate that classrooms are in general caring and warm environments. Some low-

scoring classrooms present in the sample could benefit from directly addressing these aspects of child care and education processes. However, the data indicated that a substantial portion of classrooms that we would like to see for Indiana's young children scored at inadequate levels of quality for aspects related to classroom management and facilitation, as well as language and child scaffolding.

The key takeaways from these measures of observed quality are:

- For infants, 47% of classrooms were rated at or above 5 in Responsive Caregiving. This means that more than half of the sample is scoring below average on responsive caregiving of infants.
- For toddlers, 85% of classrooms scored above 5 in Emotional and Behavioral Support, and 54% of classrooms were rated at or above 3 in Engaged Support for Learning. This means that most toddlers are receiving good quality supports for emotional and behavioral development, but a little less than half are not receiving adequate supports for learning.
- For preschool-aged children, 85% of classrooms were rated at or above 5 on Emotional Support, and 61% were rated at or above 5 on Classroom Organization. However, just 38% of classrooms scored above 3 on Instructional Support for preschool-aged children. That is, most preschoolers, or about two-thirds, are not experiencing sufficient instructional supports for learning, and many are not experiencing classrooms that are well-organized to support their learning.

What Indiana policymakers can do. In order to positively impact the learning and life trajectories of young children in Indiana, particularly those most vulnerable, it is essential to provide all educators with the necessary tools for success. This includes enriched, culturally responsive curriculum and instructional resources, effective assessments to measure and drive progress for classrooms and children, and actionable data for continuous improvement.

Based on the findings of this study, we observed that while teachers are doing well in setting up a warm and caring environment and building emotional connections with young children, they could use more support in strategies that enhance early language development and scaffold their learning. Therefore, the following recommendations are suggested:

- Enhance infant teachers' skills to support early language development and cognitive development.
- Increase toddler teachers' acumen in facilitating instruction and modeling language.
- Enhance pre-K teachers' skills in strategies to facilitate instruction, scaffolding learning, and application of knowledge to new concepts, with an emphasis on language development and content (i.e., math).
- Increase the effective use of research-based curricula.
- Increase the availability of developmentally appropriate materials in classrooms.

To ensure teachers and other staff receive sustained and tailored support for QI, Indiana will need to revise and align the system of QI for these indicators. Furthermore, as Indiana ELAC considers revisions to PTQ, the findings suggest the following system enhancements:

- Conduct annual or bi-annual independent assessments of quality with one or more standardized measures (possibly stratified by PTQ rating).
- Build a robust data system that can collect, analyze, and use data frequently to target resources and training to programs and individual educators as needed.
- Invest in a select “few” QI interventions (e.g., curriculum, coaching) with strong research-based evidence, targeted to different sectors and program types.
- Conduct a longitudinal evaluation (spanning over four or more years) of PTQ program participants and children in order to determine how quality levels change over time and the impacts on children from infancy through early elementary.

Endnotes

ⁱ Indiana Early Learning Advisory Council (2022). A Roadmap to Modernize Indiana’s Early Learning System: 2022 Recommendations of the Early Learning Advisory Committee.

<https://www.in.gov/fssa/carefinder/files/ELAC-Recommendations-2022.pdf>

ⁱⁱ See <https://nieer.org/evaluation-of-early-childhood-programs-and-child-development-in-indiana-from-2021-2022>

ⁱⁱⁱ Indiana Early Learning Advisory Council (2022). A Roadmap to Modernize Indiana’s Early Learning System: 2022 Recommendations of the Early Learning Advisory Committee.

<https://www.in.gov/fssa/carefinder/files/ELAC-Recommendations-2022.pdf>

^{iv} Paths to Quality (2017). <http://childcareindiana.org/professionals/>

^v Paths to Quality, Evaluation Brief #1: Key Findings.

https://www.in.gov/fssa/pathstoquality/files/PTQ_EvaluationBrief-1.pdf ; Paths to Quality Evaluation and Technical Supports Resources. <https://www.in.gov/fssa/pathstoquality/4087.htm>

^{vi} Build Initiative Quality Compendium Observational Tools. <https://qualitycompendium.org/top-ten/observational-tools>

^{vii} Closing the Gap, Executive. <https://earlylearningin.org/closing-the-gap/>

^{viii} <https://www.in.gov/fssa/carefinder/files/ELAC-Meeting-August-22.pdf>

^{ix} Previously known as Community Coordinated Childcare (4C) programs.

^x Building Blocks of Indiana independently completed and provided CLASS scores for 10 infant, 24 toddler, and 61 pre-K classrooms; NIEER observed 226 classrooms. These scores are included in this report and in Table 1. These programs were only observed once.

^{xi} The protocol used required that at least four children were present, and at least half of the children’s ages aligned with the CLASS tool used (e.g., at least half of the children were ages birth – 18 months to be observed with CLASS Infant). In classrooms with an approximately even split of children (e.g., an FCC home with three pre-K children and three infants), two CLASS tools were used, rotating cycles between the two as recommended by the developer. Given the smaller size of FCCs, we required at least two children present.

^{xii} Further information on the measures used in the study can be found in the full report, Nores, M., Harmeyer, E., Connors-Tadros, L., Li, Z. & Contreras, C. (2023) *Evaluation of the Early Childhood*

Programs and Child Development in Indiana. Report 2. New Brunswick, NJ: National Institute for Early Education Research.

^{xiii} Programs noted as “other” are those that are not classified by the Paths to Quality QRIS (i.e., school-based programs).

^{xiv} T. J. Sabol, S. L. Soliday Hong, R. C. Pianta, M. R. Burchinal (2013) Can Rating Pre-K Programs Predict Children's Learning?, *Science*, 23 Aug 2013: 341(6148), 845-846, <https://fpg.unc.edu/node/6240>

^{xv} Yoshikawa, H., Weiland, C., Brooks-Gunn, J., Burchinal, M. R., Espinosa, L. M., Gormley, W. T., Ludwig, J., Magnuson, K. A., & Zaslow, M. J. (2013). *Investing in our future: The evidence base on preschool education (Vol. 9)*. Society for Research in Child Development and Foundation for Child Development; Carr, R. C., Mokra, I. L., Vernon-Feagans, L., & Burchinal, M. R. (2019). Cumulative classroom quality during pre-kindergarten and kindergarten and children's language, literacy, and mathematics skills. *Early Childhood Research Quarterly*, 47, 218-228. Perlman, M., Falenchuk, O., Fletcher, B., McMullen, E., Beyene, J., & Shah, P. S. (2016). A systematic review and meta-analysis of a measure of staff/child interaction quality (the classroom assessment scoring system) in early childhood education and care settings and child outcomes. *PloS one*, 11(12), e0167660; Pianta, R. C., Hamre, B. K., & Nguyen, T. (2020). Measuring and improving quality in early care and education. *Early Childhood Research Quarterly*, 51, 285-287; Pianta, R. C., Whittaker, J. E., Vitiello, V., Ruzek, E., Ansari, A., Hofkens, T., & DeCoster, J. (2020). Children's school readiness skills across the pre-K year: Associations with teacher-student interactions, teacher practices, and exposure to academic content. *Journal of Applied Developmental Psychology*, 66, 101084.