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STRENGTHENING SOCIAL AND EMOTIONAL HEALTH

Rochester Early Childhood Assessment Partnership
2021-2022 Twenty-Fifth Annual Report

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Children's Institute is a recognized leader in programs, research, and evaluations supporting children's social and emotional health. Our partner COMET Informatics offers a data support system that provides informed decision-making, organizational quality improvements, and improved outcomes for children and youth. Children's Institute (EIN 23-7102632) is a 501(c)(3) non-profit organization.

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INTRODUCTION

Preface

Botanic gardens exist in part to display rarities of the natural world, such as the century plant or the Agave ocahui. This novel plant blooms once after 25+ years – and only after this period of growth is it ready to seed another generation. Brain scientists remind us that it takes a similar amount of time, a quarter-life, for the child and adolescent brain to mature. That is, at approximately 25 years the human brain gets to the point that fast-identifying pattern capacity and action gives way to a strong ability to plan and prioritize –while holding impulsivity at bay – to get to one's goals. When something gets to be twenty-five years old, it is recognized in the natural world for bearing wisdom in action that conveys beauty and success for future generations.

In Rochester, universal pre-K (UPK) became operational in the 1998-99 school year, after public hearings of the RCSD UPK plan was submitted to the Board of Education in February 1998. Fast forward to present time – and this fall 2022 marks the start of the 25th school year of universal pre-K in Rochester. The 2021-22 school year completed the 24th year of Rochester's UPK system. Throughout this time, pre-K or formal early education programming stands as one of the most robust and lasting interventions to support long-term success of Rochester's youngest children. It remains in Rochester as it started: uniquely offered by both community-based agencies and school-buildings – a bipartite system across the City of Rochester to meet the varied goals of families.

UPK also remains steadfast in its purpose to support every child's growth and development through access to high quality early learning. This consistency our pre-K system maintains is paramount – as each birth year faces community conditions others may not have. For instance, the last pre-COVID-19 birth cohort graces pre-K classrooms this fall 2022. The Rochester Early Childhood Assessment Partnership (RECAP) is a critical component of creating this consistently robust system – blooming yearly to point to where we need to plan and prioritize. RECAP works to respond to the ever-changing realities of growing up in Rochester in order to maintain a strong early education system responsive to children's needs. Over the years RECAP has responded, for instance, to demonstrate the predictive validity of early screening, the retrospective and prospective effectiveness of pre-K, and the ability to move the needle on classroom quality to achieve a nationally high-performing system. The stewards of RECAP have consistently produced these studies built upon rigorous measurement and assessment methods.

RECAP's mission, to observe needs of the pre-K system and promote timely response, is important as ever as a new post-COVID-19 generation starts their formal early learning this coming fall 2023. With RECAP at the foreground of this community system since its inception – it remains a means to convey success for the future. As public health challenges continue on the community front – external realities affect the capacity of the system. While this year's report shows UPK classroom quality remains remarkably high, other differences are now observed that we must seek to address. For instance, there are smaller absolute developmental gains observed among four-

year-olds at year's end (compared to the last pre-COVID-19 cohort of 2018-19). However, a remarkable "catch up" among three-year-olds was observed in 2021-22. Yet, attendance is much lower than in prior years. As attendance is linked with student outcomes, you will read in this year's report that Kindergarten readiness is lower than prior years - with approximately 44% of children displaying readiness (note readiness was 50-57% at the last COR administration pre-COVID-19, depending on dosage of PreK).

RECAP isn't a "check-box" assessment system – but is uniquely responsive to the situation faced by programs, parents and children to help the system adapt to changing realities – in real time. This year's report also furthers a critical tradition of participatory engagement in improvement directions and accompanying research. During 2021-22, family-engagement specialists (i.e., "caring connectors") led a successful improvement initiative centered on family engagement and attendance. They also designed and conducted the paired evaluation (facilitated by RECAP's research scientists) in the spring of 2022 – that helps us to know this and achieve this collective learning.

RECAP beyond its 25th year will be essential to combat persistent system challenges such as ongoing staff shortages, and helping families, and programs work to 'bounce back' after COVID-19 – and to help children thrive despite their continued confrontation of such persistent challenges of poverty, neighborhood violence, and systemic/institutionalized racism in our city. As we turn the page of 25 years, we do so knowing now the challenge is not just Kindergarten readiness – but now also pre-K readiness. As we know, pre-K systems will need to adapt to the "next" COVID-19 world due to the evolving form of this pandemic – and RECAP stands ready to bloom again.

Ann Marie White, Ed.D.
Executive Director
Children's Institute

Acknowledgements

RECAP (Rochester Early Childhood Assessment Partnership) is made possible through valuable contributions from Rochester community members including parents and families, early childhood education program staff, funders, policymakers, and volunteers. The RECAP Assessment Team is grateful to its partners who meet with us twice monthly, year-round, to plan and implement the program. This team works collaboratively to improve the RECAP system to meet the needs of young children, families, and early childhood education programs.

Financial support for RECAP is provided by Rochester Area Community Foundation, Rochester's Child Fund of the Rochester Area Community Foundation, and Rochester City School District (RCSD). We are further grateful for our *Digital Uniting Caring Connection* donors, who made this new program possible: ESL Charitable Foundation, Rochester Area Community Foundation, and the Community Crises Fund launched by United Way of Greater Rochester and the Finger Lakes with Rochester Area Community Foundation. This program provided support for digital access and now family engagement for prekindergarten families in the RCSD prekindergarten program in both schools and community-based organizations.

Participating community based organizations (many of which are also members of the Early Childhood Education Quality Council) include: Action for a Better Community's Early Education Division, Asbury Day Care Center, Baden Street Clinton and Charles House Centers, Caring and Sharing Child Care Center, Community Child Care Center, Community Place of Greater Rochester, Creative Beginnings Child Care, Friendship Children's Center, Generations Child Care Centers, Ibero Early Childhood Services, Little Hearts Child Care, Oregon Leopold Day Care Center, Richard M. Guon Child Care Center at Monroe Community College, Rochester Childfirst Network, St. Paul's Child Care Center, Volunteers of America Children's Center, and the YMCA Child Care Center. Rochester City School District programs included: the Florence S. Brown pre-K Center at School No. 33, Rochester City School District Montessori Academy, Rochester City School District Rochester Early Childhood Education Center, and 25 Rochester City School District prekindergarten sites in elementary schools.

We thank teachers, adult family educators, paraprofessionals, family service coordinators, center directors, and school administrators who contribute their expertise and numerous hours of work to RECAP. We extend our gratitude to thousands of parents and other caregivers who share essential feedback regarding prekindergarten programs and experiences with program staff routinely. Families are an indispensable component in the comprehensive RECAP model.

The RECAP Advisory Council, chaired by Nancy Kaplan, Coordinator of Rochester's Child, plays an instrumental role by providing feedback and advice regarding assessment goals, needs of children and families, and effective use of RECAP data to inform early childhood policymaking in Rochester. We are grateful to the Advisory Council for its wisdom and for advising our team

how best to enrich the relevance of RECAP in community-wide decision-making on behalf of children, families, and programs.

We also extend thanks to our partners at COMET®. COMET® is a web-based system that supports and promotes our use of "real-time" data to inform the Rochester community on child outcomes as well as storing data for longitudinal analyses.

Authorship statement*:* Erinn B. Duprey conducted analysis and drafted the report, Kathleen Embt conducted analysis and wrote the Family Survey chapter; Joseph McFall, Lauri Strano, and Ann Marie White revised the report; David Peele managed data, provided feedback on the writing, and provided input on interpreting analyses; Andrew McGowan and Robin Hooper provided critical feedback on the report contents and recommendations; Linda Murray and Genemarie Van Wagner provided information on the ECERS-3 and classroom observations; Geri Cone provided continuous support for data analytics and editing the technical report; Kim Avery provided essential input on pre-K screening via the GROW program; Renae Whittington analyzed qualitative data and developed tables for the Caring Connectors Year 2 analysis; Ann Marie White provided guidance to the analytic design.

Executive Summary

Student Outcomes

Social emotional. The Teacher-Child Rating Scale short-form (T-CRS-sf) was used to assess social and emotional adjustment. On average, 3- and 4-year-old students showed growth in all areas. The biggest area of growth for both grades was assertiveness, while the smallest area of growth was behavior control for 4-year-olds and task orientation for 3-year-olds. There were some variations for gender and ethnicity. In comparisons to pre-COVID-19 scores, results were mixed: there were some consistent deficits in behavior control in the 2021-22 cohort compared to 2018-19, but also significantly higher scores on interpersonal skills in 2021-22 compared to 2018-19.

Academic. The Child Observation Record (COR Advantage or COR+) revealed normal growth in several areas of development, with an overall effect size (i.e., Time 1 to Time 3 change) of d = 1.69 and d = 1.96 for 3- and 4-year-old students. Time 3 (spring) results showed that 43.6% of pre-K-4 students were kindergarten ready. This is a decline from prior years.

We found that several fall instruments significantly predicted kindergarten readiness, including subscales of the COR+ (physical development had a negative impact while math and science-technology had a positive impact) and the Brigance (academic-cognitive subscale had a positive impact).

Screening. The Brigance Early Childhood Screen was used in Fall for the majority of students, and any time a student entered programming (RCSD has rolling registration and enrollment). There were 23.1% and 28.2% of pre-K-3 and pre-K-4 students, respectively, who fell in the 'Determine need for formal evaluation' category. On the other hand, 10.6% and 10.9% of pre-K-3 and pre-K-4 students, respectively, fell in the 'Academically talented' category.

Attendance. Among pre-K-3 students in RCSD school sites, the average attendance was 70.2%, and was 70.5% for pre-K-4 students. Attendance was historically lower compared to previous years. For example, in 2016-17 there were 36% of pre-K-4 students who attended 90% or more days, while in 2021-22 there were only 15.1% who attended 90% or more days at RCSD school-based sites. Attendance was associated with a spectrum of other outcomes. Students who attended more had higher scores on all COR+ subscales. We also found a significant impact of attendance on kindergarten readiness, whereas the rate of readiness was 37.4% among students who attended less than 80% of school days but was 54.1% among students who attended 90% or more days.

Bilingual classrooms. This was the first year we examined student outcomes in bilingual classrooms for English language learners. Scores on the overall COR+ were not significantly different between students enrolled in bilingual and non-bilingual classrooms. On the English Language Learning (ELL) subscale of the COR+, there were two primary differences: students in

the bilingual classrooms had significantly lower scores starting off (Time 1), but then showed a higher rate of growth on the ELL subscale compared to the non-bilingual classroom.

Program Quality

ECERS-3: Findings showed remarkable stability on the ECERS-3 (an observational measure of program quality) compared to prior years. Overall, the pre-K system achieved a score of 5.4, which is the same as the score in the previous ECERS-3 administration prior to COVID, and reflects "good" program quality as per the measure developers. Program quality ratings were consistent between pre-K-3 and pre-K-4 classrooms. The highest subscale-scores were on 'Interaction' and 'Program Structure', and the lowest were 'Learning Activities' and 'Space and Furnishings'. Teachers with more experience received better scores on the ECERS-3. Overall, these findings reveal the resilience of the pre-K system and the positive impact of continuous improvement and professional development via RECAP and the Rochester early education system.

Family Engagement

Family survey results: Results from the family survey reveal several significant findings. Overall, most parents responded that they had an excellent relationship with their child's teacher. Overall, the lowest score was in the areas of "Practices - Communication", and the highest in the area of "Attitudes -Respect". Parents overall feel valued and respected but there may be some challenges with communication. On the Family and Teacher Relationship Quality (FTRQ) measure, there were significantly lower scores than in years past on several subscales, signifying a possible decrease in family-teacher relationship quality.

Caring Connectors: In Year 2 of our Caring Connectors intervention, we supported our family engagement partners in developing a series of webinars for families to promote education on the power of play and importance of pre-K attendance. Results showed that the webinar improved parents' attitudes and beliefs about pre-K play, and this was associated with attitudes on attendance. There is also evidence that the attendance of children whose parents participated in the intervention was higher than children whose parents did not participate.

Introduction to RECAP

The Rochester Early Childhood Assessment Partnership (RECAP) is a community-wide assessment partnership that is dedicated to improving the quality of early childhood education in Rochester. RECAP translates data into practical information for families, educators, and policy makers through community collaboration, technical assistance, and professional development. The model of RECAP is "continuous improvement" – in other words, continuously using data to inform decision making and practice in our pre-K system. RECAP has provided reliable information on early childhood care and education in Rochester for more than three decades. As such, RECAP is an essential partner within Rochester's pre-K-12 educational system.

The services and activities provided by RECAP include:

- Professional development for teachers, paraprofessionals, family service professionals, and program administrators in the use of child screening measures, assessments, program quality rating scales, web-based data information system use (COMET®), and report interpretation.
- Efficient and user-friendly data collection, processing, analysis, and reports that provide rapid feedback at the child, parent, classroom, grade, program, and system levels.
- Twice monthly review and planning Assessment Team meetings with staff from community-based organizations including, for instance: Action for a Better Community (ABC) Head Start, Rochester City School District (RCSD) Department of Early Childhood, ROC the Future, The Children's Agenda, SUNY Buffalo, Volunteers of America Child Care Center, and independent consultants to analyze and synthesize information, recommend changes, and monitor the systematic quality of early education in Rochester.
- Community Advisory Group meetings to facilitate partnership with the local community, families, professionals, and other stakeholders.
- Presentations of aggregate outcomes for pre-K-3 and pre-K-4 to support informed decision-making for practices and policies in support of children, families, and programs.
- Additional resource development to help respond and adapt to conditions that may affect school readiness (e.g., the COVID-19 pandemic). RECAP explored and developed new approaches towards the goal of greater equity in digital access among families with prekindergarten aged children: RECAP initiated a "caring connector" response to close the gap for the pre-K digital divide in 2020-21, and now in 2021-22 - it maintained an emphasis on family engagement in learning through play and attendance "boosts" led by caring connectors in the pre-K system. RECAP helps expand and improve capacity for addressing needs identified in its continuous improvement, assessment, and partnership efforts. In response to the pandemic, RECAP expanded to employ participatory evaluation practices to determine what was important to assess regarding parent prekindergarten experiences.

A core aspect of the RECAP system is our rigorous assessment methods using reliable and valid measures to assess program quality, family engagement, and student outcomes.

In the 2021-22 school year, we again deployed the Early Childhood Environment Rating Scale – Third Edition (ECERS-3) to measure overall quality and teacher-child interactions. The ECERS-3 is an observational measurement tool administered by independent observers in most classrooms.

In keeping with national trends, state requirements, and local needs for screening early in the school year, the Brigance Early Childhood Screen III (Brigance III) was administered by teachers within the first 90 days of the school year. Additionally, the Child Observation Record - Advantage (COR-Advantage or COR+) was used to measure levels of students' competencies and needs in multiple domains (including physical, social-emotional, and academic). The COR+ is a standards-based, developmentally appropriate instrument. It is completed by teachers three times yearly (fall, early winter and spring). Teachers are trained to record and score their observations of children's skills. We also utilized the Teacher-Child Rating Scale short-form (T-CRS-sf; the Short Form was first implemented in 2019), which measures social and emotional skills and is completed by teachers in fall and spring.

Family perspectives on Rochester's early education programs were measured with the *2021-22 Universal pre-K Family Survey*, which represents RECAP's and the Office of Early Childhood's latest work in gaining families' perspectives. Previously used survey questions - many drawn from the U.S. Department of Health and Human Services - along with new questions associated with the impact of the COVID-19 pandemic, as well as questions associated with their children's health, were included.

Table 1 below summarizes the measurement tools used and total number of assessments completed during the 2021-2022 school year.

Table 1. RECAP Variables, Measures, Numbers Assessed, and Method of Assessment

RECAP 2021-22 Variables, Measures, Number Assessed and Methods					
Variables	**Measures**	**Units**	***N***		**Method**
Classroom Environment Quality	ECERS-3	Classrooms	177		Classroom Observation by Independent Observer
Academic, Motor, and Social	COR Advantage (COR+)	Students	*Pre-K-3* Fall: 984 Winter: 967 Spring: 989	*Pre-K-4* Fall: 1,406 Winter: 1,379 Spring: 1,357	Teacher Observation
School, Emotional, and Behavioral Adjustment	Teacher-Child Rating Scale-short form (T-CRS-sf)	Students	*Pre-K-3* Fall: 750 Spring: 788	*Pre-K-4* Fall: 1,183 Spring: 1,150	Teacher Observation
Academic Skills, Physical Development, and Health	Brigance Early Childhood Screen III	Students	*Pre-K-3*: 772	*Pre-K-4*: 1,194	Child Direct Performance, Teacher Observation
Family Perspective	Family and Teacher Relationship Quality (FTRQ) – Family Questionnaire and RECAP Family Survey	Caregivers of pre-K students	274 Paper: 129 Electronic: 145		Family Survey

Student demographics. The Rochester pre-K system currently consists of approximately 180 classrooms, 30 RCSD schools, 17 Community-Based Organizations (CBOs) at 24 sites, or a total of 54 Universal pre-K sites across Rochester. However, this does represent a decline since prior to when the pandemic began, after which enrollment numbers dropped. See Tables 2 and 3 below for RECAP students demographics for pre-K-3 and pre-K-4, respectively. These tables represent student enrollment at the end of academic year 2021-2022. It should also be noted that official New York State Education Department Basic Education Data and Statistic (i.e., BEDS) enrollment numbers, which are taken earlier in the year, are 1,067 for pre-K-3 and 1,551 for pre-K-4 (total pre-K: 2,655). Pre-K registration and enrollment is rolling throughout the year and thus changes in enrollment numbers throughout the year are common.

Table 2. RECAP Pre-K-3 Student Demographics ($N = 1,471$)

		Percent	*N*
Gender	Male	51.4%	756
	Female	48.6%	715
Race	Black/African American	61.7%	907
	White	25.1%	369
	Multiracial	9.2%	136
	Asian	2.6%	38
	American Indian or Alaska Native	0.9%	13
	Native Hawaiian / Other Pacific Islander	0.5%	7
	Unknown	0.1%	1
Ethnicity	Latino	29.6%	435
	Non-Latino	70.4%	1036
Disability	Student with a Disability	17.8%	262

Table 3. RECAP Pre-K-4 Student Demographics ($N = 1,689$)

		Percent	*N*
Gender	Male	51.0%	861
	Female	49.0%	828
Race	Black/African American	60.9%	1029
	White	25.4%	429
	Multiracial	10.5%	177
	Asian	2.1%	35
	American Indian or Alaska Native	0.6%	10
	Native Hawaiian / Other Pacific Islander	0.5%	8
	Unknown	0.1%	1
Ethnicity	Latino	31.2%	527
	Non-Latino	68.8%	1162
Disability	Student with a Disability	19.8%	335

PROGRAM QUALITY – ECERS-3

RECAP evaluates the quality of pre-kindergarten classroom environments in the Rochester City School District using the Early Childhood Environment Rating Scale, 3rd edition (ECERS-3; Harms, Clifford, & Cryer, 2015). Training is provided by RECAP instructors to teachers, paraprofessionals, technical support staff, directors and administrators to learn about the ECERS-3 and its quality indicators, the classroom observation process and interpretation of feedback reports. RECAP trainers have had extensive, in-depth ECERS-3 education and are reliable observers as per RECAP and ECERS-3 standards. This training plays an instrumental role in the success of Rochester's early education continuous improvement processes.

The ECERS-3 consists of 35 items on a 7-point scale, with 1 indicating "Inadequate" quality and 7 representing "Excellent" quality. The 35 items are organized in six subscales: Space and Furnishings, Personal Care Routines, Language and Literacy, Learning Activities, Interactions, and Program Structure. An average score is calculated for each of the six subscales, and a total score is calculated which is the average of all subscales. Note that two items are allowed to be missing (i.e., scored N/A), thus the total score denominator ranges from 33-35.

Historically, pre-kindergarten classrooms in RECAP on average achieve at least "good" (≥ 5.0) quality on the ECERS-R total score, with many performing in the excellent range (6.2-7.0) for multiple consecutive years.

COVID-19 procedures: ECERS observations were not conducted in all classrooms in 2019-20 (due to the COVID-19 shutdown and a pivot to virtual schooling) and none were conducted in 2020-21. Thus, the 2021-22 ECERS data is the first full assessment of pre-K classroom quality since 2018-19.

Reliability: All classroom observations are systematically checked for reliability. In the 2021-22 school year there were 13 observers who were trained to reliability. A total of 208 observations were completed which includes 30 co-observations to ascertain reliability between raters. Inter-rater reliability was calculated for each pair using the Krippendorff's alpha statistic and the R "irr" package. There was a total of 11 pairs consisting of different observers. Reliability alphas ranged from .66 to .96, with an average of .85. This shows that raters on average had excellent reliability.

ECERS-3 Aggregate Results

There was a total of 177 classrooms observed in the 2021-22 school year. All classrooms were observed except for bilingual classrooms and most self-contained classrooms (these were not assigned to be observed).

On average, the aggregate ECERS-3 performance in 2021-22 remained relatively consistent with results prior to COVID. Overall, the ECERS-3 total score was 5.43 (standard deviation = .84). ECERS-3 aggregate results, broken down by subscale, are in Table 3.

Table 3. ECERS-3 Aggregate Results

Variable	*N*	Mean	*SD*
Space and Furnishings	177	4.89	0.98
Routines	177	5.15	1.12
Language and Literacy	177	5.50	1.01
Learning Activities	177	4.67	1.12
Interaction	177	6.22	1.01
Program Structure	177	6.17	1.08
Total	177	5.43	0.84

ECERS-3 Results Separated by Grade

Table 4 shows the ECERS-3 results by grade. There were 72 pre-K-3 classrooms, 87 pre-K-4 classrooms, and 12 classrooms that were integrated special education classrooms serving more than one grade. There were an additional six mixed-grade classrooms that were not included in the analysis below. These integrated classrooms follow the Montessori model and are not special education classrooms, but cannot be categorized into either pre-K-3, pre-K-4, or Integrated as shown below.

The only significant difference between grades on any ECERS-3 subscale was in the category of Learning Activities. In this subscale, pre-K-3 classrooms had significantly lower scores compared to the other grades, $F = 3.54$, $p < .01$.

Table 4. ECERS-3 Results by Grade

	Pre-K-3			Pre-K-4			Integrated/Mixed Grade		
Subscale	***N***	**Mean**	***SD***	***N***	**Mean**	***SD***	***N***	**Mean**	***SD***
Space & Furnishings	72	4.80	0.92	87	5.00	0.98	12	5.31	1.00
Routines	72	5.03	1.15	87	5.29	1.07	12	5.42	1.20
Language & Literacy	72	5.44	0.9	87	5.70	0.87	12	5.45	1.19
Learning Activities	72	4.51	0.96	87	4.93	1.02	12	4.93	1.21
Interaction	72	6.24	0.81	87	6.35	0.92	12	6.22	1.17
Program Structure	72	6.18	1.01	87	6.30	0.95	12	6.08	1.14
Total	72	5.37	0.72	87	5.60	0.76	12	5.57	0.90

In Figure 1 we show these results broken down by grade category.

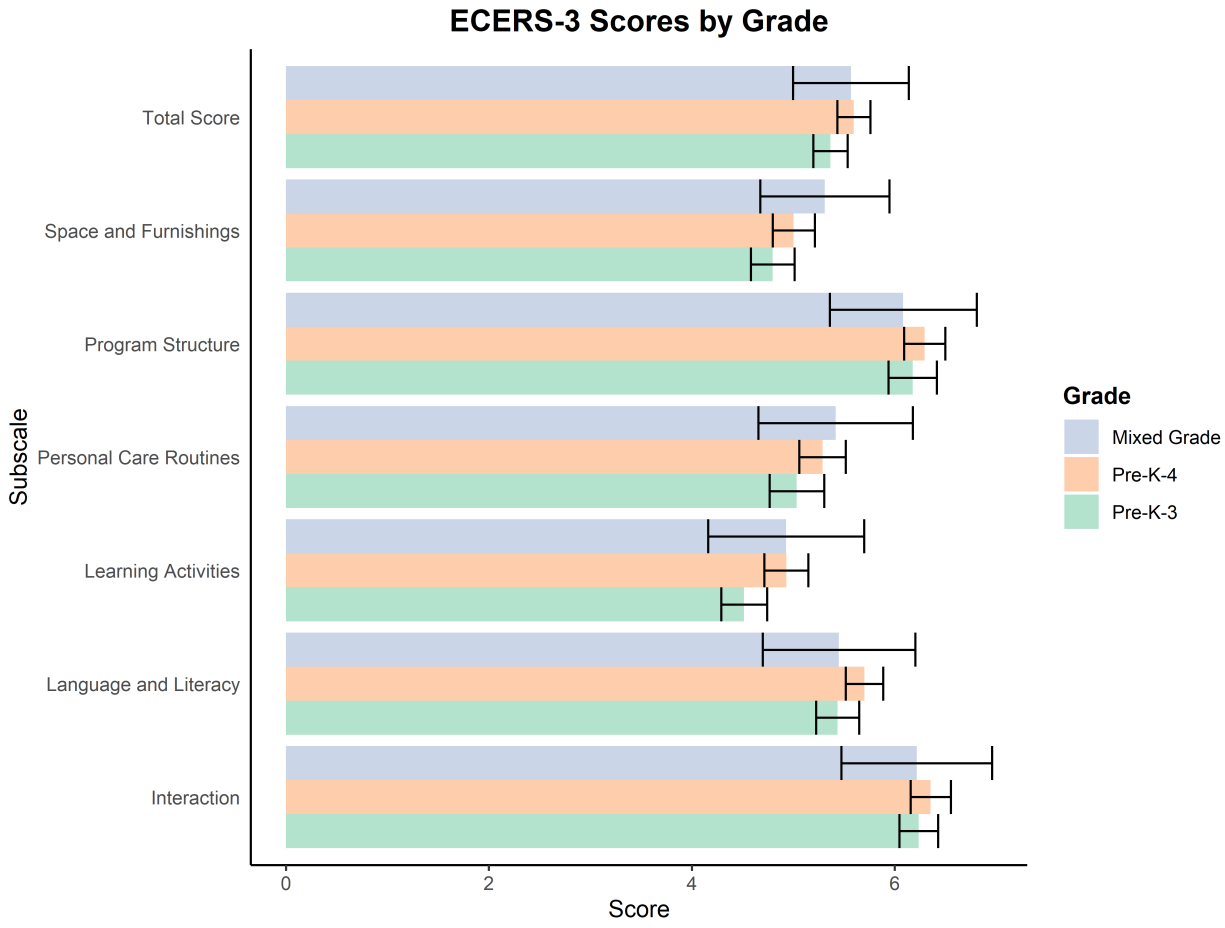


Figure 1. ECERS results for pre-K-3, pre-K-4, and integrated classrooms. Note that the black error bars indicate the 95% confidence intervals – in other words, the margin of error.

ECERS-3 Aggregate Results Compared to Prior Years of Administration

Figure 2 depicts scores in 2021-22 compared to the three previous years of program-wide administration. In this figure, note that we have placed a reference line at a score of 5. Scores that are 5 and above are interpreted as "good" scores. As can be seen in this figure, ECERS-3 scores in the current year are strikingly similar to prior years of administration. Within the past four years of administration, the aggregate ECERS total score has only varied by 0.1.

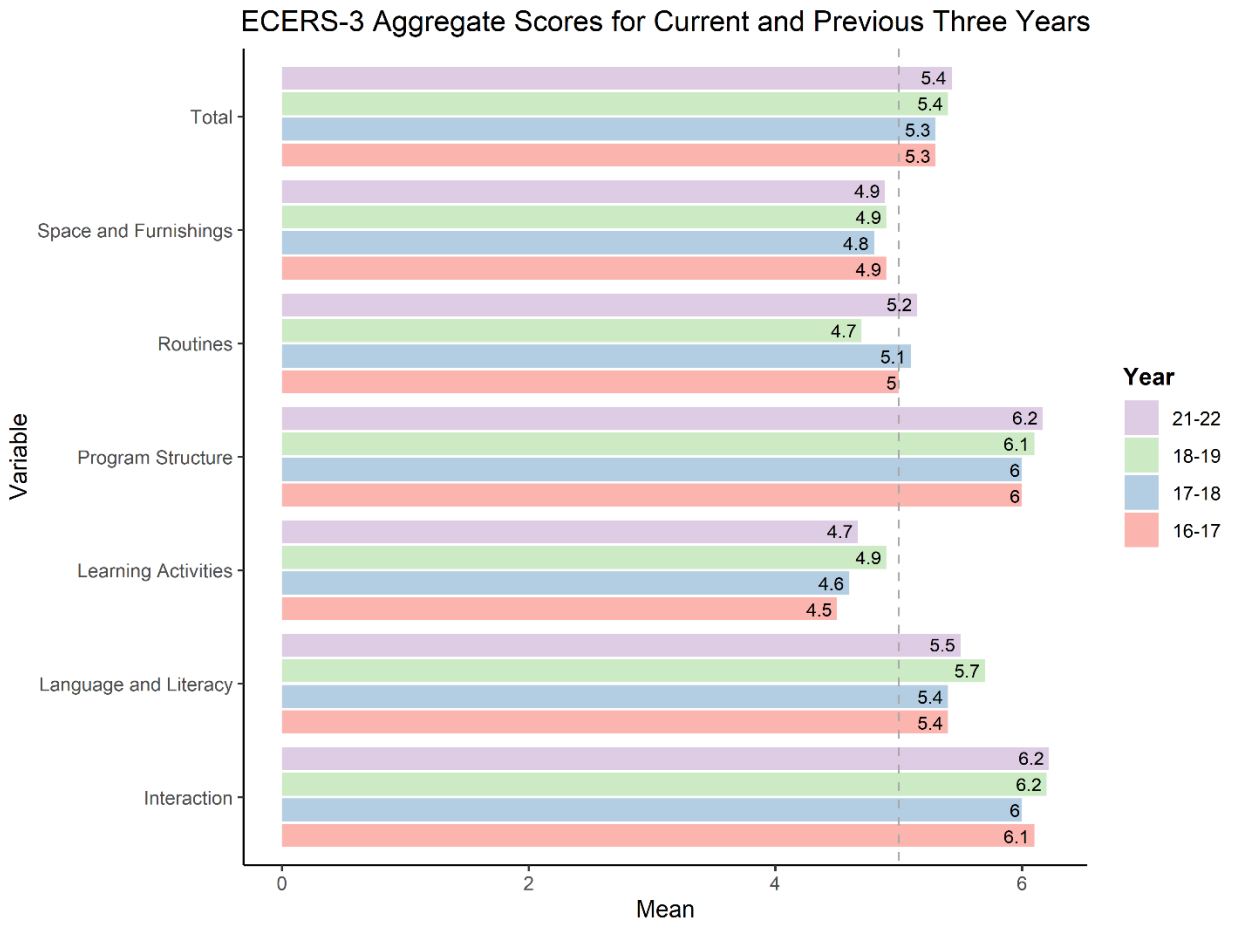


Figure 2. ECERS-3 scores for current and previous three years.

Comparisons with Other Locations

See Figure 3 for comparisons between RCSD ECERS-3 scores with other urban locations and/or study sites. We obtained results from the Seattle Preschool Program (SPP; Nores et al., 2019) reflecting the 2018-2019 school year. SPP is a four-year independent evaluation partnership of the City of Seattle's preschool program. The Early et al., 2018 study was a study of the ECERS-3 factor structure and validity that was implemented across three states in the 2015-16 academic year. This is not a nationally representative sample but does present, to date, the best large-scale study of the ECERS-3. In all comparison sites, ECERS-3 observations were conducted by independent, trained, and reliable observers. To our knowledge, there are no other published ECERS-3 results since the COVID-19 pandemic.

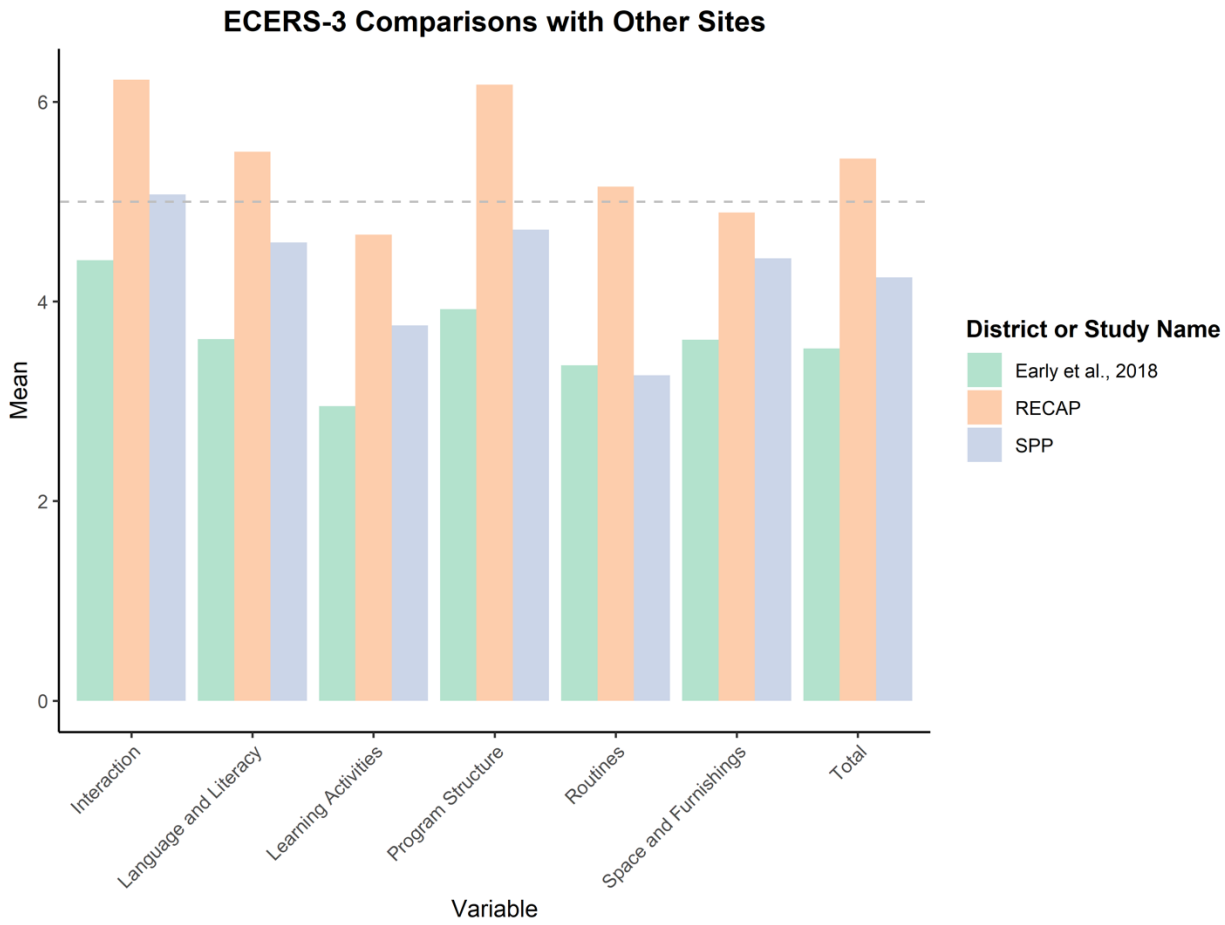


Figure 3. ECERS-3 comparisons with other sites. SPP = Seattle Preschool Program results, 2018-2019. The Early et al. study assessed the validity of the ECERS-3 by collecting data from three states (Georgia, Pennsylvania, Washington) in the 2015-16 schoolyear.

ECERS-3 Scores and Associations with Teacher RECAP Experience

Classroom scores on the ECERS-3 vary depending on teacher experience in the RECAP system, due to our continued focus on ECERS-based professional development based on the ECERS. In 2021-22, there were approximately 30% of pre-K teachers who were new to the prekindergarten system. Thus, we compared ECERS-3 scores between teachers who were newer to the system (<5 years of experience) versus more experienced teachers with five or more years of experience.

Results (Table 5) showed that teachers who had five or more years of experience as a pre-K teachers in the RECAP system had significantly higher scores on several ECERS-3 subscales (space and furnishings, routines, language and literacy, learning activities) as well as the total score.

Table 5. ECERS-3 Scores by Teacher Experience

	<5 Years of Experience			5+ Years of Experience			
Variable	**N**	**Mean**	**SD**	**N**	**Mean**	**SD**	***t*-value**
Space & Furnishings	104	4.74	0.97	69	5.13	0.98	-2.59*
Routines	104	4.92	1.13	69	5.49	1.03	-3.36***
Language & Literacy	104	5.29	0.98	69	5.80	0.99	-3.34***
Learning Activities	104	4.45	1.07	69	4.99	1.16	-3.12**
Interaction	104	6.11	1.08	69	6.38	0.92	-1.67
Program Structure	104	6.06	1.17	69	6.36	0.94	-1.81
Total	104	5.26	0.84	69	5.69	0.80	-3.30***

Note. *$p < .05$, **$p < .01$, ***$p < .001$

Summary and Recommendations

Overall, both the pre-K-3 and pre-K-4 classrooms were classified as "good" as defined by the ECERS-3 observation tool, with total ECERS-3 scores of 5.37 (*SD* = .72) and 5.60 (*SD* = .76), respectively. Integrated/mixed grade classrooms overall had a total score of 5.57 (*SD* = .90).

Notably, classroom quality according to our ECERS-3 observations was consistent with scores prior to the pandemic. This is evidence of the adaptability and resilience of our Rochester pre-K system, and particularly of teachers and school administrators who have worked tirelessly to ensure that students are receiving a high-quality pre-K education.

In the 2021-22 school year, the ECERS-3 subscales with the highest scores were Interaction and Program Structure. The Interaction subscale rates the quality of supervision, individualized teaching and learning, staff-child interaction, peer interactions, and discipline. These teacher-child and peer-to-peer interactions are critical for children developing the necessary social and emotional skills to advance to kindergarten. The Program Structure subscale rates quality during transitions and waiting times, free play, and whole-group activities for play and learning. These qualities of the classroom environment are important for both establishing routines and facilitating a variety of learning and play opportunities for children.

On the other hand, the lowest ECERS-3 scores were in the Learning Activities subscale. On average, classrooms scored below a 5 on these, indicating a need for further professional development in this subscale. The Learning Activities subscale includes items addressing accessibility (in terms of physical access and time allotted to access) to a minimum number of learning materials. This may have been influenced by COVID-19 classroom restrictions (e.g., fewer materials in the classroom) and other COVID-related classroom habits that varied by site.

Lastly, results showed that teachers with 5+ years of experience in RECAP had significantly higher scores on most subscales of the ECERS-3, except for Interaction and Program Structure. In these two subscales, both newer and more experienced teachers had excellent scores (> 6), on average. The biggest statistical differences between new and experienced teachers were in the Language

and Literacy subscale and the Routines subscale. This may be evidence of how pre-K professional development benefits teachers in this area and is particularly important given historically lower scores in language and literacy among our pre-K students.

References

Early, D. M., Sideris, J., Neitzel, J., LaForett, D. R., & Nehler, C. G. (2018). Factor structure and validity of the Early Childhood Environment Rating Scale–Third Edition (ECERS-3). *Early Childhood Research Quarterly*, *44*, 242-256.

Harms, T., Clifford, R.M., & Cryer, D. (2015). *Early Childhood Environment Rating Scale* (3rd ed.). New York, NY: Teachers College Press.

Nores, M., Barnett, W.S., Jung, K., Joseph, G. & Bachman, L. (2019). Year 4 report: Seattle Preschool Program evaluation. New Brunswick, NJ: National Institute for Early Education Research & Seattle, WA: Cultivate Learning.

PRE-K STUDENT OUTCOMES: SOCIAL EMOTIONAL ADJUSTMENT

The focus of RECAP has always been on the *whole child*, and thus measurement of social and emotional adjustment and growth over the school year has been a centerpiece of RECAP. Long before the New York State Education Department mandated social-emotional screening (starting in 2007, or nine years after the inception of UPK), RECAP has consistently moved beyond the minimum requirements – to the benefit of UPK policymakers and many others. Social and emotional adjustment among pre-K children in the RECAP system is measured via the Teacher-Child Rating Scale (T-CRS), short-form version (i.e., TCRS-sf; Weber et al., 2017). The T-CRS was first published in 1979 by Primary Mental Health Project (PMHP, now Children's Institute). The T-CRS has strong evidence of predictive validity and reliability. The short-form version of the instrument was developed to reduce teachers' workload in completing student assessments (we realized a 22% reduction in teachers' work, over the previous version), while still maintaining the high validity and reliability of the long-form version of the T-CRS.

The T-CRS and T-CRS-sf have four validated and reliable sub-scales related to classroom adjustment:

- *Task Orientation*, which is comparable to executive functioning. Individual items include "self-starter," "works well without adult supervision," and "organized".
- *Behavior Control* assesses students in items including "accepts imposed limits" and "tolerates frustration".
- *Assertive Social Skills* (Assertiveness) assesses students with items including "Defends own views under group pressure," and "comfortable as a leader".
- *Peer Sociability* (Peer Social Skills) includes items such as "well-liked by classmates" and "classmates like to sit near child".

T-CRS-sf Results for Pre-K-3

Results for three-year-olds are shown in Table 6. Chronbach's alpha coefficients for both fall and spring ranged from .84 to .91, indicating excellent reliability. There were significant pre-post improvements on all sub scales, with small to moderate effect sizes. The largest change from pre- to post- was in assertive social skills (d = .35, a moderate effect).

Table 6. T-CRS-sf Reliability, Descriptive Statistics, and Pre-Post Change, Pre-K-3

		Fall			Spring				
Subscale	*N*	α	*M*	*SD*	*α*	*M*	*SD*	*t*	*d*
Task Orientation	569	0.86	12.89	3.58	0.84	13.18	3.50	-2.40*	0.10
Behavior control	570	0.91	11.77	3.93	0.91	12.21	4.02	-3.43***	0.14
Assertiveness	569	0.90	13.00	4.07	0.89	14.03	3.80	-8.23***	0.35
Peer Social skills	569	0.88	15.07	3.01	0.85	15.73	2.85	-6.62***	0.28

Notes: Chronbach's alpha (a) measures the internal consistency of the measure (i.e., reliability). "*d"* indicates Cohen's d, a measure of effect size. The denominator (i.e., standardizer) used for calculating *d* is the standard deviation of the difference scores. *$p < .05$, ***$p < .001$.

T-CRS-sf Results for Pre-K-4

Results for four-year-olds are shown in Table 7. Chronbach's alpha coefficients for both fall and spring ranged from .86 to .91, indicating excellent reliability. There were significant pre-post improvements on all sub scales, with small to moderate effect sizes. Similar to pre-K-3 students, the largest change from pre- to post- was in assertive social skills ($d = .36$, a moderate effect).

Table 7. T-CRS-sf Reliability, Descriptive Statistics, and Pre-Post Change, Pre-K-4

		Fall			Spring				
Subscale	*N*	α	*M*	*SD*	*α*	*M*	*SD*	*t*	*d*
Task Orientation	888	0.88	12.94	3.89	0.86	13.44	3.91	-5.22***	0.18
Behavior control	888	0.91	12.59	3.96	0.91	13.01	4.03	-4.06***	0.14
Assertiveness	888	0.89	14.17	3.85	0.87	15.12	3.64	-10.65***	0.36
Peer Social Skills	886	0.89	15.46	3.14	0.89	16.01	3.12	-6.35***	0.21

Notes: Chronbach's alpha (a) measures the internal consistency of the measure (i.e., reliability). "*d"* indicates Cohen's *d*, a measure of effect size. The denominator (i.e., standardizer) used for calculating *d* is the standard deviation of the difference scores. *$p < .05$, ***$p < .001$.

Disaggregation by Gender, Race, and Ethnicity[1]

We disaggregated T-CRS-sf scores by student characteristics (gender, race, and ethnicity), in order to better inform service provisions for pre-K children. See the statistical supplement for more details. Note that we are currently performing analyses to test measurement invariance by demographic groups; thus these results should be interpreted with caution. Overall findings showed that gender matters more for social emotional adjustment rather than race or ethnicity. This is consistent with previous years' results.

Differences by gender: There were significant differences by participant gender on all subscales and at all time points, for students in both pre-K-3 and pre-K-4. On all subscales, girls scored significantly higher than boys, $p < .001$. Girls consistently have higher scores despite race or ethnicity.

Differences by race and ethnicity: Among pre-K-3 students, there was one significant group difference by race (i.e., Black, White, Multiracial, Asian, and Other) in scores on Behavior Control at T2 (spring), F (4, 784) = 3.144, $p < .01$. A post hoc test[2] revealed there were significant differences between Black and Asian students ($p < .01$), Multiracial and Asian students ($p < .05$), and White and Asian students ($p < .05$), with the latter performing better, on average, on the behavioral control subscale. There were no significant group differences on any other subscale in either fall or spring by participants' ethnicity (i.e., Latino or Other).

Among pre-K-4 students, there was a significant difference by race on task orientation at T2 (spring), F (4, 1,144) = 2.76, $p < .05$. A post hoc test[3] revealed there were significant differences between White and Black students, and White and Multiracial students, with White students having significantly higher scores on task orientation at T2 ($p < .05$ and $p < .01$, respectively).

See Figures 4 and 5 for pre-K-3 and pre-K-4 scores on the T-CRS-sf by ethnicity (Latino versus non-Latino) and gender.

[1] Note that there may be minor errors in how students are categorized by race and ethnicity depending on registration processes. However, this is unlikely to have made an impact on the results presented here.

[2] Using Tukey's method for correction of multiple comparisons. This is a common statistical test used when comparing multiple groups in order to correct for possible error (specifically, false positives/ Type I error).

[3] Using Tukey's method for correction of multiple comparisons.

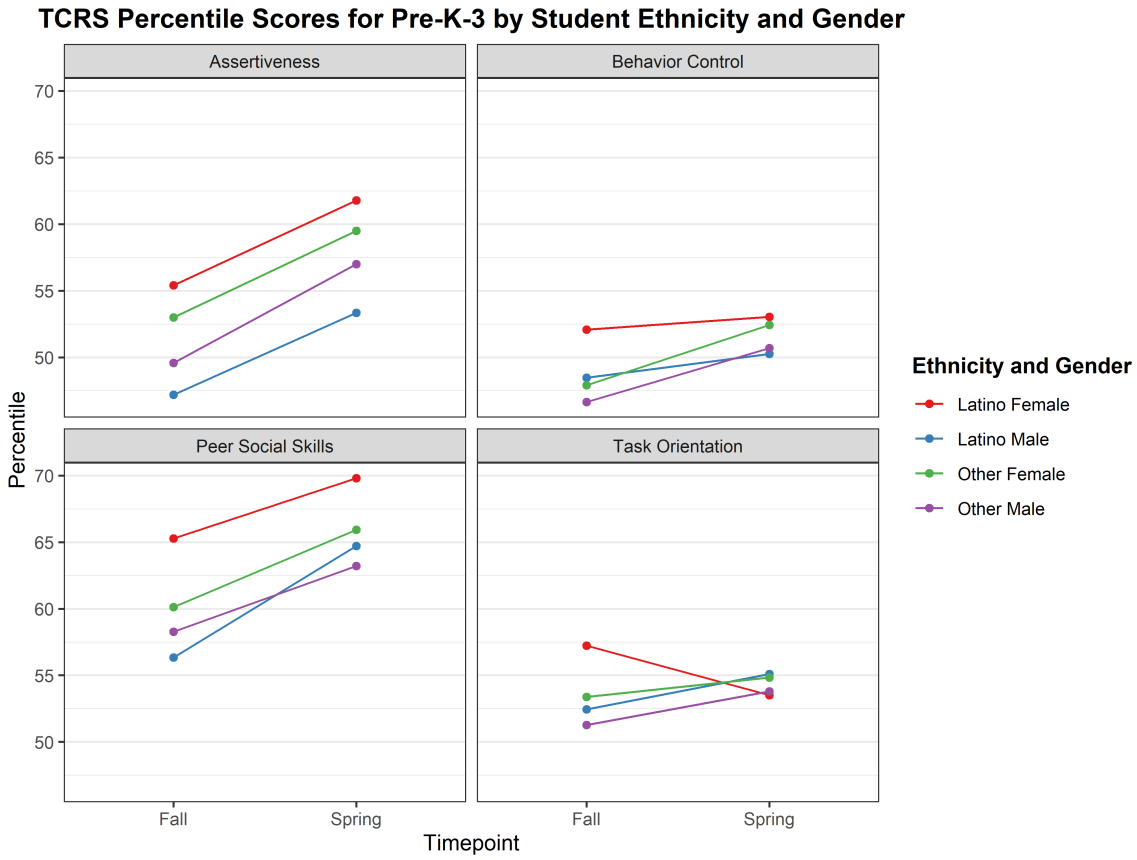


Figure 4. T-CRS-sf pre- and post-test scores by ethnicity and gender. Population sizes for each group were: Latino Female $N = 189$ (14.5%), Latino Male $N = 189$ (14.5%), Other Female $N = 445$ (34.2%), Other Male $N = 479$ (36.8%).

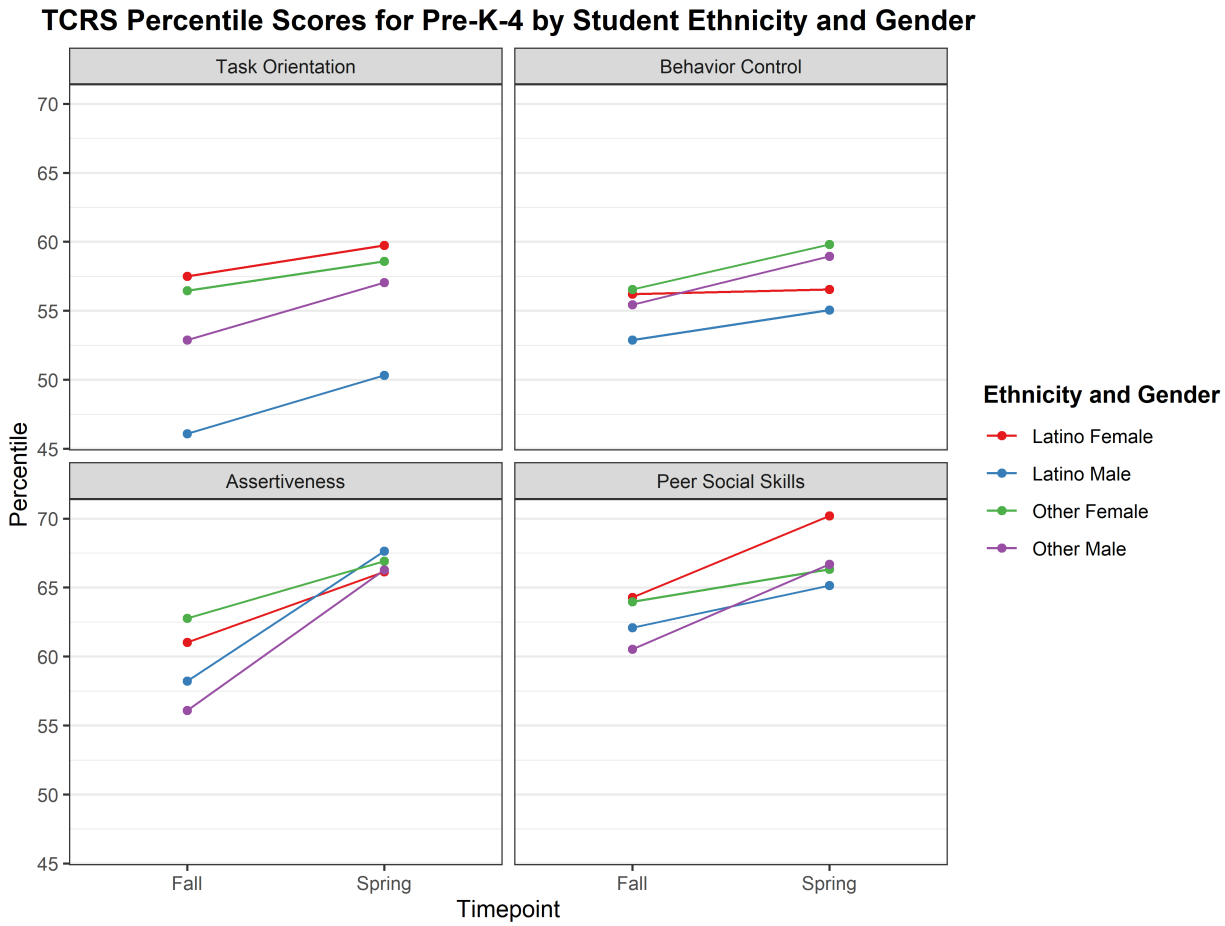


Figure 5. T-CRS pre- and post-test scores by ethnicity and gender. Population sizes for each group were: Latino Female N = 295 (16.0%), Latino Male N = 291 (15.8%), Other Female N = 627 (33.9%), Other Male N = 634 (34.3%).

These figures show several notable trends. First, we see that girls tend to score better on all T-CRS-sf subscales in both pre-K-3 and pre-K-4, regardless of ethnicity, particularly in fall. Second, there is a troubling trend in pre-K-3 wherein Latina three-year-olds have, on average, a decline in task orientation over time. As this is the first year conducting this analysis, we will re-examine this in future years.

A major limitation to note is that the T-CRS-sf has not been tested for invariance by race, ethnicity, and gender. Work is currently underway to do so. However, note that the figures above do use percentile score, which was normed accounting for gender and locale (e.g., urban).

Bilingual Classrooms

History: Our pre-K Bilingual classrooms represent a 15-year evolution, dating back to the Bilingual Work Group, circa 2007. Since that time the pre-K Bilingual component has undergone several changes in selection criteria, driven by changes in New York State Education regulations. As a result, the characteristics of pre-K Bilingual pupils have changed somewhat. Starting in 2017, districts have been required to utilize the Emergent Multilingual Learners (EMLs) Language Profile to place students in Bilingual classrooms. This assessment is completed by parents at registration, and students are defined as bilingual based on having at least one family member who is dominant in another language. As a result of this assessment and definition of bilingual status, English dominant pupils are often placed in Bilingual classrooms.

Results: Below is a descriptive analysis of differences in social emotional development for bilingual classrooms. The analysis is purely descriptive, meaning that no inferences can be drawn regarding causality (i.e., we cannot infer that being in a bilingual classroom or not caused any of the social emotional changes seen below).

There were four bilingual pre-K-4 classrooms in the 2021-2022 academic year with a total of 59 students.

Students in the bilingual classrooms had scores significantly different compared to students in general education classrooms on two T-CRS-sf subscales. First, they scored significantly higher on behavior control in fall/pre-test ($M = 13.38$, $SD = 4.34$) compared to other children ($M = 12.50$, SD = 3.90), $p < .05$. Second, they scored significantly lower on assertiveness in spring/post-test ($M = 13.78$, SD = 4.10) compared to other children ($M = 15.00$, $SD = 3.56$), $p < .01$.

It is important to note that this analysis is descriptive and not causal. In other words, the methods and analysis do not allow us to attribute differences in social emotional skill development to classroom placement. For example, it is possible that students who are placed in bilingual and general education classrooms have different characteristics from each other. It is impossible at this time to determine whether placement in bilingual classrooms influenced social emotional development in pre-K.

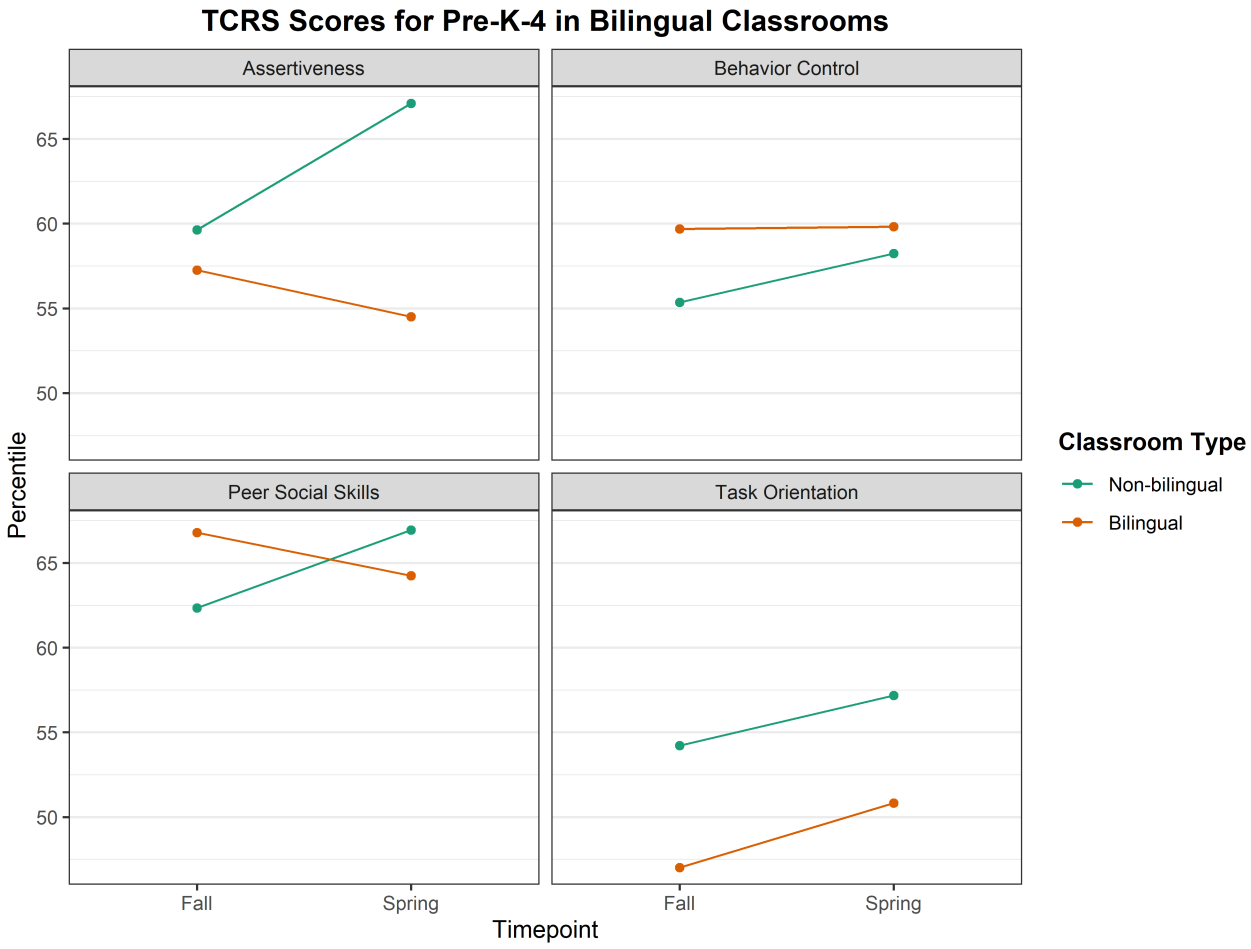


Figure 6. T-CRS-sf scores for fall and spring by subscale by classroom type (bilingual versus non-bilingual).

Comparisons with Pre-COVID-19 Results

We investigated differences in T-CRS-sf scores between the most recent pre-COVID-19 administration (2018-2019) and the 2021-2022 school year.

A repeated measure ANOVA was used to estimate differences in social-emotional growth between the two years.

Among 3-year-olds, there were no significant effects of Time*Year on aspects of social and emotional adjustment. This means that the growth in task orientation, behavior control, assertiveness, and peer social skills was not significantly different between the 2018-19 and 2021-22 cohort.

Table 8. Pre-K-3 Repeated Measures ANOVA Comparing 2018-19 and 2021-22

	Measure	*F*	Sig.	Partial Eta Squared
Time	Task orientation	17.99	<.001***	0.01
	Behavior control	10.16	0.001**	0.01
	Assertiveness	197.30	<.001***	0.13
	Peer social skills	63.63	<.001***	0.05
Time* Year	Task orientation	0.26	0.613	0.00
	Behavior control	3.39	0.066	0.00
	Assertiveness	2.21	0.137	0.00
	Peer social skills	2.90	0.089	0.00

Alternatively, among pre-K-4 students, there was a significant Time*Year effect on assertiveness. This means that the average growth in assertiveness from fall to spring was different between the 2018-19 and 2021-22 cohorts. Specifically, the average level of assertiveness at Time 1 (Fall) was significantly higher in 2021-22 compared to 2018-19, but the growth in assertiveness was overall lower so that by Time 2, there were no significant differences in assertiveness between the two cohorts.

Table 9. Pre-K-4 Repeated Measures ANOVA Comparing 2018-19 and 2021-22

	Measure	*F*	Sig.	Partial Eta Squared
Time	Task orientation	77.39	<.001***	0.03
	Behavior control	55.98	<.001***	0.02
	Assertiveness	342.90	<.001***	0.13
	Peer social skills	136.11	<.001***	0.06
Time* Year	Task orientation	0.68	0.411	0.00
	Behavior control	0.95	0.33	0.00
	Assertiveness	6.86	0.009**	0.00
	Peer social skills	3.59	0.058	0.00

We also used independent samples t-tests to investigate differences between cohorts at each of the time points (fall and spring). See Tables 10 and 11 for results for pre-K-3 and pre-K-4, respectively.

Among pre-K-3 students, fall scores on behavior control were significantly higher in 2018-19 than in 2021-2022. Alternatively, the 2021-22 cohort had significantly higher peer social skills at both fall and spring assessment time points compared to the 2018-19 cohort.

Table 10. Comparisons Between 2018-19 & 2021-22 T-CRS-sf Scores, Fall & Spring, Pre-K-3

	2018-19			2021-22			
FALL	*N*	*M*	*SD*	*N*	*M*	*SD*	*t*
Task orientation	984	12.82	3.58	750	12.83	3.71	-0.08
Behavior control	984	12.19	3.66	750	11.58	3.98	3.27**
Assertiveness	984	13.00	3.67	748	13.01	4.15	-0.07
Peer social skills	984	14.83	2.97	750	15.16	3.18	-2.25*
SPRING	*N*	*M*	*SD*	*N*	*M*	*SD*	*t*
Task orientation	961	13.04	3.59	787	13.03	3.68	0.05
Behavior control	961	12.17	3.79	788	12.06	4.07	0.59
Assertiveness	961	14.08	3.66	788	13.92	3.95	0.89
Peer social skills	961	15.20	3.14	786	15.75	2.88	-3.78***

Findings were different for pre-K-4 students (see Table 11 below). The 2021-22 cohort had higher scores on assertiveness and peer social skills compared to 2018-19, but this gap between cohorts closed by spring. However, the 2021-22 cohort had significantly lower scores on spring task orientation and behavior control compared to the 2018-19 cohort, although this difference did not show in the fall.

Table 11. Comparisons Between 2018-19 & 2021-22 T-CRS-sf Scores, Fall & Spring, Pre-K-4

	2018-19			2021-22			
FALL	*N*	*M*	*SD*	*N*	*M*	*SD*	*t*
Task orientation	1796	13.24	3.83	1181	12.97	3.87	1.86
Behavior control	1796	12.73	3.87	1183	12.54	3.93	1.31
Assertiveness	1796	13.74	3.60	1182	14.09	3.80	-2.51*
Peer social skills	1796	15.16	2.99	1183	15.45	3.15	-2.53*
SPRING	*N*	*M*	*SD*	*N*	*M*	*SD*	*t*
Task orientation	1646	13.84	3.92	1149	13.40	3.90	2.93**
Behavior control	1646	13.31	4.07	1147	12.90	3.99	2.65**
Assertiveness	1646	14.98	3.43	1150	14.96	3.59	0.15
Peer social skills	1646	15.91	2.99	1145	15.95	3.14	-0.36

Associations with COR+ and Brigance

We investigated bivariate associations between the T-CRS-sf, COR+, and Brigance Early Childhood Screen to further establish the validity of the T-CRS-sf. The full results, including correlation tables, can be found in the Statistical Supplement of this report.

All subscales of the T-CRS-sf correlated significantly with all COR+ subscales and the total score, for both pre-K-3 and pre-K-4 students. Assertiveness had the largest correlations with most COR+ subscales, and had a medium-sized correlation with the total COR+, $r = .51$.

In spring, findings were similar to fall. That is, there were significant associations between all T-CRS-sf subscales and all COR+ subscales and the total score for both pre-K-3 and pre-K-4 students. There was one exception to this, which was the association between T-CRS-sf Behavior Control and COR Social Studies among pre-K-4 students, $r = .06$. In general, associations between social emotional skills and COR+ scores were smaller among pre-K-4 students in spring compared with pre-K-3 students in spring and pre-K-4 students in fall.

There were also significant associations between all T-CRS-sf subscales and Brigance Early Childhood Screen subscales, including the total Brigance score. Assertiveness had the highest association with the Brigance for both pre-K-3 and pre-K-4 students.

Summary and Recommendations

There are several notable findings on social and emotional development via the T-CRS short form. First, our results contribute to evidence of the reliability and validity of the T-CRS-sf. The T-CRS-sf showed excellent internal consistency. We also showed additional evidence of construct validity by correlating the T-CRS-sf with COR+ and Brigance Early Childhood Screens.

On average, 3- and 4-year-olds showed growth in all aspects of social and emotional development. The biggest area of growth was in assertiveness, and the smallest area of growth was behavior control for 4-year-olds and task orientation for 3-year-olds. This is consistent with prior years, wherein assertiveness is historically the highest area of growth and task orientation the lowest area. It is possible that the task orientation subscale is not accurately capturing the developmental progress for 3-year-olds[4].

Additionally, results from this years' analyses show that social and emotional development varied by gender and race/ethnicity. Girls had, on average, higher social and emotional scores than boys. There were several concerning trends based on this analysis – perhaps the most concerning being the declines in task orientation among 3-year-old Latinas. Further analysis showed that this trend was not due to outliers. This may indicate that special attention should be paid to the social emotional development among Latina pre-K children. Bolstering these skills may help contribute to closing education disparities among this group.

In the 2020-2021 RECAP report we reported that there were no differences in average scores between the pre-COVID fall 2019 cohort and the post-COVID fall 2021 cohort. Unfortunately, due to there being no administration of the T-CRS-sf in spring 2020, we were unable to compare this years' growth in social emotional adjustment with the 2019-20 cohort. However, we were able

[4] In Universal pre-K prior to the addition of three-year-olds (1998-2015, four-year-olds only), we observed that the Task Orientation subscale on four-year-olds was robust and useful for teachers, principals and the leadership. Once pre-K 3 became operational (commencing in January 2016), the construct of Task Orientation became an area of some concern. The expectations of three-year-olds in items such as "self-starter," "works without adult supervision" and "completes assignments" and other items may simply be not as applicable or as sensible a measure as with older students. Work is currently being done to assess the validity of the T-CRS-sf subscales for younger students.

to compare the current cohort (2021-22) with the 2018-19 cohort, who did have a full administration schedule on the T-CRS. Results overall were mixed – there were some consistent deficits in behavior control among both 3- and 4-year-olds, but also significantly higher scores in social skills (both assertiveness and peer social skills) in 2021-22 compared to 2018-19.

Recommendations: Based on our findings we have several recommendations. First, there needs to be a continued focus on social and emotional development and specifically training and implementation of the Pyramid Model (Hemmeter et al., 2016). The Pyramid Model is an implementation framework for promoting social and emotional development among young children. There is also preliminary evidence that there needs to be more focus on supporting Latina girls in preschool settings. We recommend professional development tools and techniques that focus on culturally appropriate social and emotional learning curriculum for this subgroup.

References

Hemmeter, M. L., Snyder, P. A., Fox, L., & Algina, J. (2016). Evaluating the implementation of the Pyramid Model for promoting social-emotional competence in early childhood classrooms. Topics in Early Childhood Special Education, 36(3), 133-146.

Weber, M. R., Lotyczewski, B. S., Montes, G., Hightower, A. D., & Allan, M. (2017). Examining the factorial structure of the T-CRS 2.1. Journal of Psychoeducational Assessment, 35(3), 336-341.

STUDENT OUTCOMES: CHILD OBSERVATION RECORD (COR+)

RECAP has used the Child Observation Record (now called COR-Advantage, or COR+) for evaluating pre-K child outcomes for nearly two decades. The COR+ assessment is published by HighScope, a nationally recognized institution in pre-K curriculum and assessment. HighScope, the Rochester City School District (RCSD), and RECAP have a decades long relationship, with RCSD currently using HighScope curriculum and the accompanying COR+ assessment to evaluate pre-K student academic performance. Consequently, our assessment methods are aligned with the curriculum – a key consideration for an effective instructional program.

Below we present a description of the measurement instrument and summary of results for the 2021-22 academic year.

Description of the COR+

The COR Advantage is a validated and reliable instrument that assesses early childhood development in eight categories:

- Approaches to Learning
- Social and Emotional Development
- Physical Development and Health
- Language, Literacy, and Communication
- Mathematics
- Creative Arts
- Science and Technology
- Social Studies

All categories are scored from 0 (lowest achievement) to 7 (highest achievement). Teachers complete the COR+ at three time points, in Fall, Winter, and Spring. A total COR+ score is calculated that is the average of all eight content areas. Additionally, a *kindergarten readiness score* is computed based on children's category and total scores. This is a dichotomous score (0, 1), wherein students who have an overall COR+ score ≥ 4.00, and every category score ≥ 3.75, categorized as kindergarten ready (1), and all other students are categorized as not kindergarten ready (0).

COR+ Results for Pre-K-3 and Pre-K-4

The COR+ was analyzed by examining descriptive statistics and change scores between T1 (fall) and T3 (spring). Additionally, we used growth curve modeling (adjusting for clustered data) to examine change in COR+ scores over time, and to investigate differences between girls and boys, controlling for student race.

Below, Tables 12 and 13 display T1 (fall), T2 (winter), and T3 (spring) results for the COR+. Overall, there were large effect sizes for all categories and for the total COR+ score, which indicates that children developed over the pre-K academic year in the expected manner. For both pre-K-3 and pre-K-4 students, as in prior years, the highest scores were on Physical Development and Health, while the lowest scores were in Language, Literacy, and Communication, and Mathematics.

In Figure 7 and 8, we display results from the growth curve modeling analysis that show change over time in COR+ scores across its various categories.

Table 12. COR+ Results, Pre-K-3

	COR T1			***COR T2***			***COR T3***				
	N	**Mean**	***SD***	***N***	**Mean**	***SD***	**N**	**Mean**	***SD***	***d***	***p***
Approaches to Learning	977	2.26	0.80	947	2.83	0.85	975	3.44	0.96	1.39	<.001
Social & Emotional Development	979	2.27	0.85	967	2.93	0.89	973	3.52	1.00	1.39	<.001
Physical Development and Health	984	2.78	0.76	941	3.36	0.79	989	3.89	0.87	1.41	<.001
Language, Literacy, & Comm.	970	2.09	0.70	962	2.64	0.76	967	3.17	0.79	1.48	<.001
Mathematics	937	2.11	0.74	935	2.65	0.71	953	3.22	0.82	1.42	<.001
Creative Arts	975	2.19	0.79	927	2.89	0.86	973	3.63	0.92	1.76	<.001
Science and Technology	957	2.12	0.77	893	2.69	0.78	976	3.45	0.88	1.66	<.001
Social Studies	968	2.20	0.78	927	2.71	0.83	972	3.41	0.96	1.43	<.001
Overall COR	964	2.26	0.68	919	2.83	0.72	954	3.47	0.81	1.68	<.001

Table 13. COR+ Results, Pre-K-4

	COR T1			***COR T2***			***COR T3***				
	N	**Mean**	***SD***	***N***	**Mean**	***SD***	**N**	**Mean**	***SD***	***d***	***p***
Approaches to Learning	1390	2.90	0.76	1367	3.59	0.80	1357	4.25	0.94	1.66	<.001
Social & Emotional Development	1391	2.94	0.80	1379	3.67	0.84	1347	4.33	0.96	1.59	<.001
Physical Development and Health	1406	3.33	0.80	1373	4.09	0.81	1353	4.77	0.93	1.69	<.001
Language, Literacy, & Comm.	1382	2.77	0.69	1352	3.43	0.73	1341	4.00	0.87	1.61	<.001
Mathematics	1353	2.69	0.68	1317	3.47	0.79	1311	4.15	0.93	1.87	<.001
Creative Arts	1386	2.94	0.83	1310	3.76	0.88	1321	4.40	0.89	1.76	<.001
Science and Technology	1351	2.77	0.79	1334	3.54	0.84	1334	4.29	0.95	1.80	<.001
Social Studies	1373	2.86	0.76	1341	3.58	0.87	1347	4.22	1.02	1.60	<.001
Overall COR	1374	2.91	0.65	1336	3.64	0.71	1329	4.30	0.83	1.96	<.001

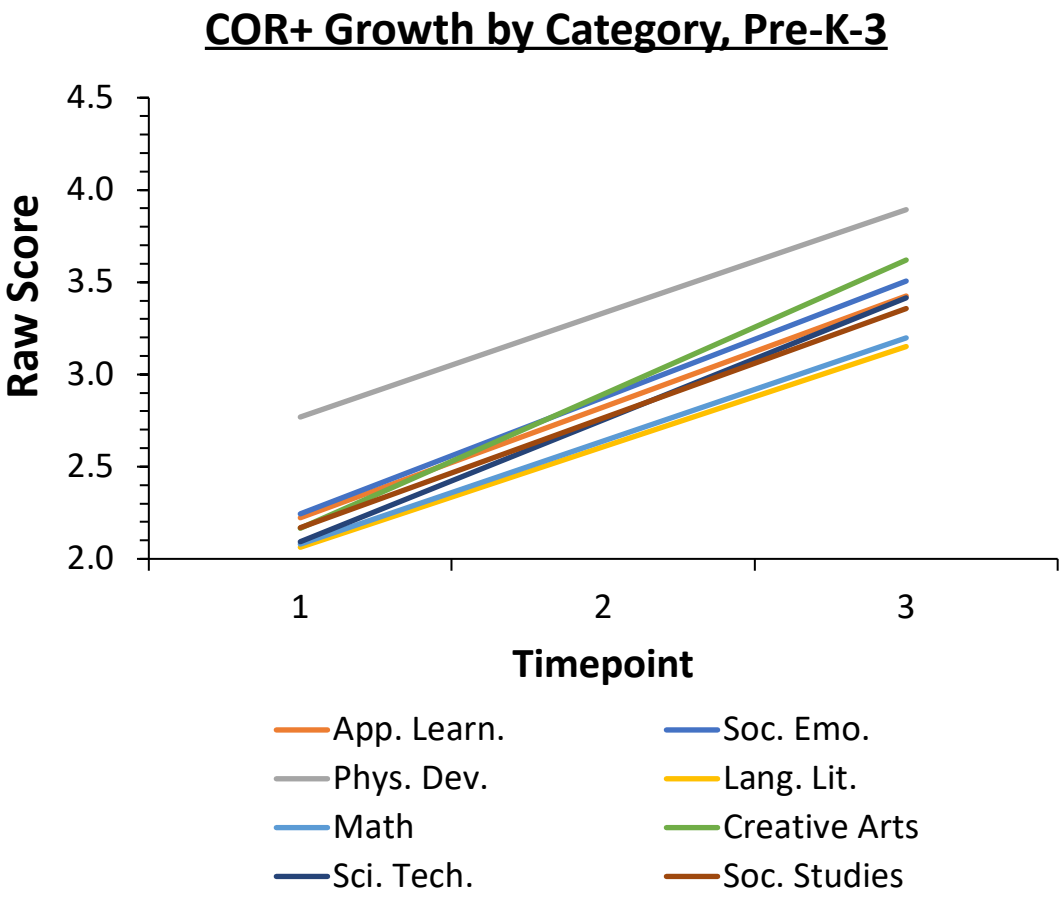


Figure 7. Growth in COR subscales for Pre-K-3 via a growth modeling approach.

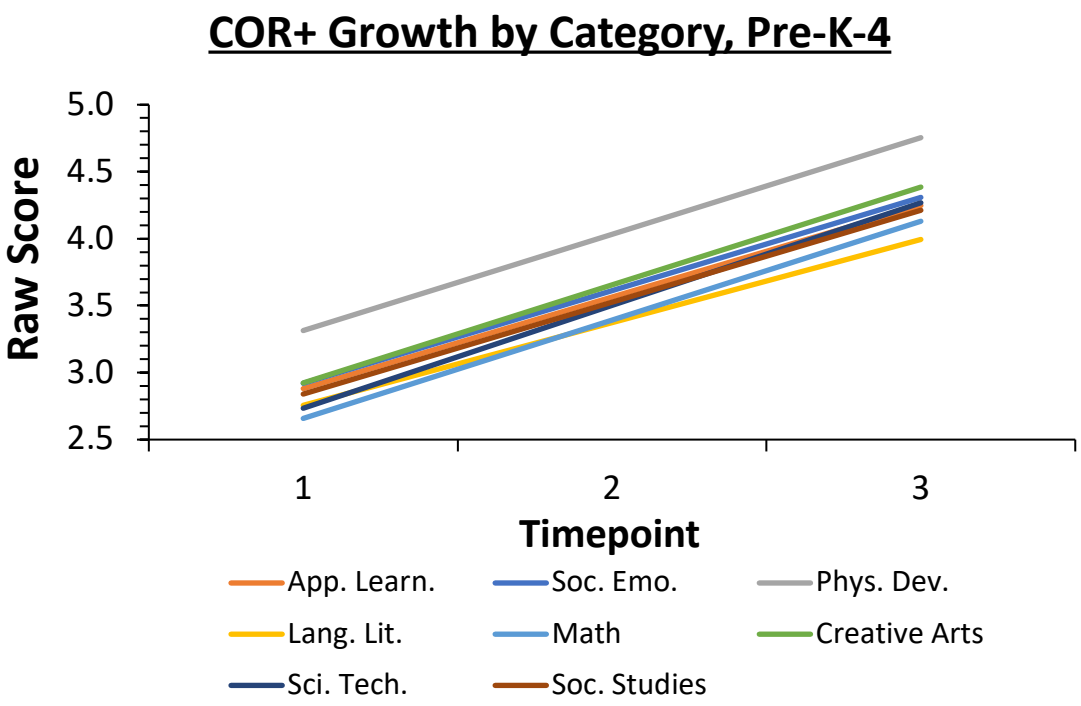


Figure 8. Growth in COR subscales for pre-K-4 via a growth modeling approach.

Demographic Differences by Gender, Race, and Ethnicity

Differences by gender: There were significant differences by participant gender on most all categories and time points, wherein girls scored significantly higher than boys, $p < .001$. See Figure 9, which displays the COR overall score for pre-K-3 and pre-K-4 by gender.

There were a few notable exceptions where boys and girls were not different, and these occurred in pre-K-3 only: Time 1 Science and Technology; Time 2 Science and Technology; Time 2 Social Studies; Time 3 Math; and Time 3 Science and Technology.

Figure 9 below shows the different growth trajectories on the COR Overall score between boys and girls, accounting for differences in race.

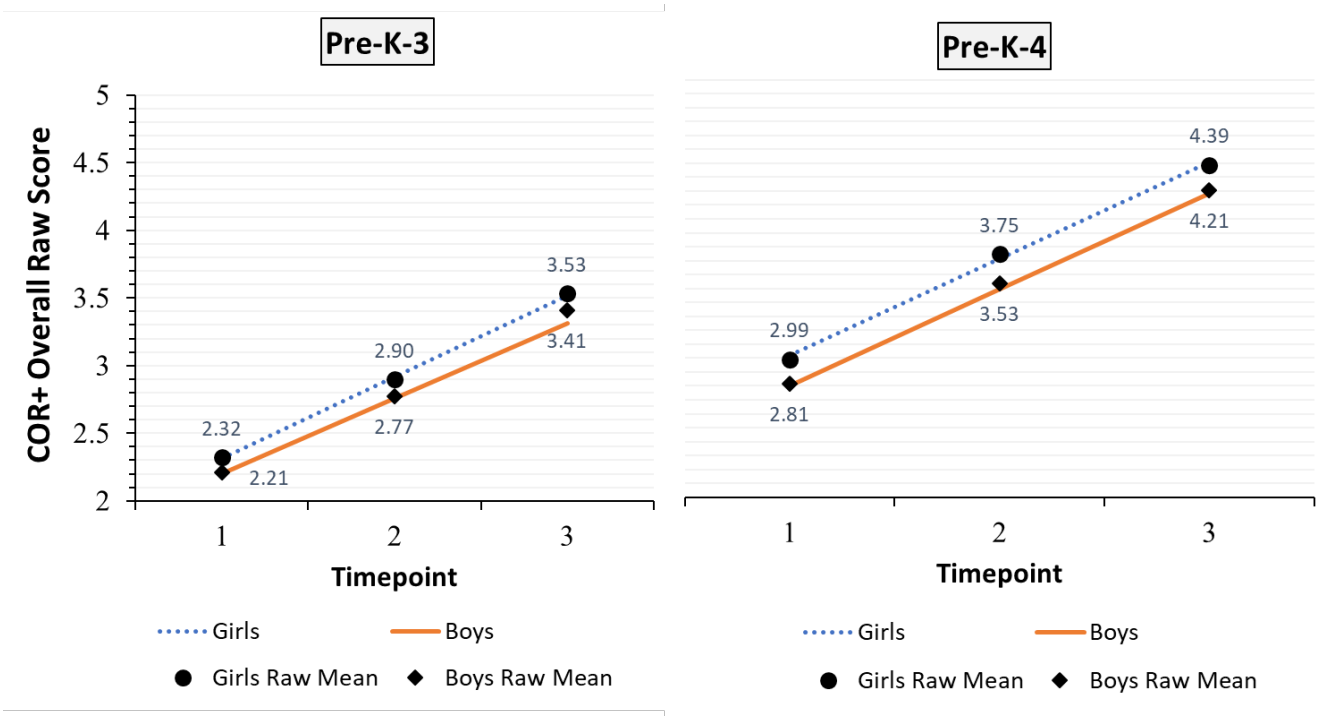


Figure 9. Gender differences in COR+ scores for pre-K-3 and pre-K-4. Note that this graph shows the effect of gender, controlling for race. Girls had statistically significantly higher scores on the COR+ for both grades and at all three time points.

Mean differences by gender, race and ethnicity: See the statistical supplement for disaggregated analyses by race and ethnicity on average scores across the COR+.

Kindergarten Readiness

The COR+ assessment derives a "kindergarten readiness" score from the seven categories and total COR+ scale. To determine a child as kindergarten ready, they must score ≥3.75 on all seven categories and a total score ≥ 4.00. In spring of the 2021-2022 academic year, 43.6% of children were defined as kindergarten ready according to the standards of the COR+ instrument.

Table 14. Effect of Dosage of Programming on Kindergarten Readiness

Student Type	K- Ready	Not Ready	Total	% Ready
Attended Pre-K-3 and Pre-K-4	262	328	590	44.4%
Attended Pre-K-4 Only	308	405	713	43.2%
Total	574	744	1318	43.6%

There was a slight difference in kindergarten readiness between pre-K-4 children who had attended pre-K-3 the year prior (44.4% kindergarten ready at T3) and those who did not attend pre-K-3 (43.2% kindergarten ready at T3). However, this difference was not statistically significant.

Historically, and in this years' data, COR+ scores are weakest in the area of *Language, Literacy, and Communication*. Thus, we sought to determine whether the percentage of kindergarten readiness in the RCSD pre-K population was largely attributed to scores in this category. Results showed that, without using the Language, Literacy, and Communication category to compute kindergarten readiness (i.e., without the rule that students must have a score of at least a 3.75 in this domain), the percentage did increase slightly to 47.2%, but the magnitude of the increase was not large.

Gender and kindergarten readiness: Findings from a chi-square test showed that girls had a higher percentage of kindergarten readiness in spring compared to boys ($p < .001$). Specifically, 47.9% of all girls were kindergarten ready whereas only 39.0% of boys were kindergarten ready in spring.

Comparisons with Prior Year Scores

In Tables 15 and 16, results are displayed that compare 2021-22 scores with 2018-2019, the most recent year that the COR was completed (note there were gaps in assessment years due to the COVID-19 pandemic).

For pre-K-3, scores were generally higher in 2021-22 compared to 2018-2019, and these differences were significant in several categories (Social and Emotional Development; Language, Literacy, and Communication; Mathematics; Science and Technology; Social Studies) and on the overall COR score (albeit with a small effect size, $d = -.09$). Additionally, the average of change scores from Time 1 to Time 3 (i.e., M_{change}) was higher for all areas in 2021-2022 compared to 2018-2019.

Table 15. COR+ Results for 2018-2019 and 2021-2022, Pre-K-3, and Differences Between Cohorts

	2018-2019			*2021-2022*				
TIME 3 - SPRING	**N**	***M***	***SD***	**N**	***M***	***SD***	***d***	***p***
Approaches to Learning	1117	3.4	0.9	975	3.44	0.96	-0.04	*ns*
Social & Emotional Development	1115	3.4	0.9	973	3.52	1.00	-0.13	< .01
Physical Development and Health	1102	3.9	0.7	989	3.89	0.87	0.01	*ns*
Language, Literacy, & Comm.	1085	3.1	0.7	967	3.17	0.79	-0.09	< .05
Mathematics	1053	3.1	0.7	953	3.22	0.82	-0.16	< .001
Creative Arts	1076	3.6	0.9	973	3.63	0.92	-0.03	ns
Science and Technology	1056	3.3	0.7	976	3.45	0.88	-0.19	< .001
Social Studies	1095	3.3	0.9	972	3.41	0.96	-0.12	< .01
Overall COR	1073	3.4	0.7	954	3.47	0.81	-0.09	< .05

	2018-2019			*2021-2022*		
TIME 1 – TIME 3 CHANGE	***N***	M_{change}	***d***	***N***	M_{change}	***d***
Approaches to Learning	925	1.0	1.4	832	1.20	1.39
Social & Emotional Development	930	1.1	1.4	833	1.25	1.39
Physical Development and Health	922	1.0	1.3	848	1.11	1.41
Language, Literacy, & Comm.	908	0.9	1.5	821	1.09	1.48
Mathematics	856	1.0	1.4	791	1.10	1.42
Creative Arts	876	1.2	1.5	829	1.46	1.76
Science and Technology	850	1.1	1.4	819	1.34	1.66
Social Studies	883	1.0	1.4	823	1.22	1.43
Overall COR	874	1.0	1.7	804	1.22	1.68

Note: The Time 3 significance values are drawn from a t-test for independent samples. Note that the Cohen's *d* in the upper part of the table refers to the difference between the two independent cohorts, whereas the Cohen's *d* in the lower part of the table refers to the with-in group effect from fall to spring. *ns* = non-significant.

Below, in Table 16, the COR+ results are shown for the 2018-2019 and 2021-2022 cohorts. In contrast with the pre-K-3 cohorts, COR+ scores at Time 3 were generally lower in 2021-22 compared to the 2018-2019 cohort. The average of change scores from Time 1 to Time 3 (i.e., M_{change}) was comparable for 2018-2019 to 2021-2022.

Table 16. COR+ Results for 2018-2019 and 2021-2022, Pre-K-4, and Differences Between Cohorts

	2018-2019			***2021-2022***				
TIME 3	**N**	**Mean**	***SD***	***N***	**Mean**	***SD***	***d***	***p***
Approaches to Learning	1773	4.3	0.9	1357	4.25	0.94	0.05	ns
Social & Emotional Development	1792	4.3	0.9	1347	4.33	0.96	-0.03	ns
Physical Development and Health	1772	5.0	0.9	1353	4.77	0.93	0.25	< .001
Language, Literacy, & Comm.	1764	4.1	0.8	1341	4.00	0.87	0.12	< .01
Mathematics	1695	4.3	0.9	1311	4.15	0.93	0.16	< .001
Creative Arts	1681	4.6	0.9	1321	4.40	0.89	0.22	< .001
Science and Technology	1681	4.4	1.0	1334	4.29	0.95	0.11	< .01
Social Studies	1695	4.3	1.0	1347	4.22	1.02	0.08	< .05
Overall COR	1684	4.4	0.8	1329	4.30	0.83	0.12	< .001

	2018-2019			***2021-2022***		
TIME 1 – TIME 3 CHANGE	***N***	***M change***	***d***	***N***	***M change***	***d***
Approaches to Learning	1597	1.3	1.9	1209	1.39	1.66
Social & Emotional Development	1608	1.3	1.9	1207	1.39	1.59
Physical Development and Health	1617	1.5	2.1	1228	1.45	1.69
Language, Literacy, & Comm.	1602	1.2	2.0	1207	1.25	1.61
Mathematics	1507	1.4	2.3	1159	1.50	1.87
Creative Arts	1508	1.4	2.0	1193	1.48	1.76
Science and Technology	1449	1.5	2.1	1178	1.57	1.8
Social Studies	1486	1.4	2.0	1202	1.42	1.6
Overall COR	1499	1.4	2.3	1190	1.43	1.96

Note: The Time 3 significance values are drawn from a t-test for independent samples. Note that the Cohen's *d* in the upper part of the table refers to the difference between the two independent cohorts, whereas the Cohen's *d* in the lower part of the table refers to the with-in group effect from fall to spring. *ns* = non-significant.

Associations with Other Student Measures

Associations with the T-CRS. As shown in the chapter 'Student Outcomes: Social and Emotional Development', the COR+ categories and overall score correlated with several aspects of social and emotional development (i.e., task orientation, behavior control, assertiveness, and peer social skills), with assertiveness having the largest correlations with the COR+ among both pre-K-3 and pre-K-4 students.

Associations with the Brigance Early Childhood Screen. Correlations between the COR+ and the Brigance can be viewed in the Statistical Supplement.

A repeated measures ANOVA was conducted to determine whether change in COR+ scores over time differed by categorical screening status on the Brigance (i.e., determine need for formal evaluation; monitor closely; functioning in normal range; possibly talented and may need enhanced work). See Table 17. Results showed that the COR overall score varied significantly by Brigance screening status in the expected directions (i.e., the highest COR+ scores were in the 'talented' group while the lowest were in the 'determine need for formal evaluation' group).

Table 17. Repeated measures ANOVA, COR+ (overall score) by Brigance Screening Status, Pre-K-3

Source	SS	*df*	*F*	*p*	η
Time (within)	193.00	2	820.70	<.001	0.53
Brigance screening (between)	158.32	4	35.86	<.001	0.16
Time*Screening	3.57	8	3.80	<.001	0.02

A follow-up analysis showed that COR+ scores varied significantly between the 'determine need for formal evaluation' group and the 'functioning in normal range' and 'possibly talented' groups. There was not a significant difference in COR+ overall scores between the 'determine need for formal evaluation' and 'monitor closely' groups. There also was not a significant difference in scores between the 'monitor closely' and 'functioning in normal range' groups.

Table 18. Repeated measures ANOVA, COR+ (overall score) by Brigance Screening Status, Pre-K-4

Source	SS	*df*	*F*	*p*	η
Time (within)	555.32	2	2053.85	<.001	0.64
Brigance screening (between)	123.20	4	26.47	<.001	0.09
Time*Screening	6.22	8	5.75	<.001	0.02

Post-hoc analysis showed that COR+ scores varied significantly between all groups with the exception of 'determine need for formal evaluation' and 'monitor closely' groups. **Overall, these analyses support the validity of our measures.**

Outcomes for Bilingual Classroom Students

COR+ scores on all categories, along with the English Language Learning Category, were examined for students who were enrolled in pre-K-4 bilingual classrooms.

Differences between students enrolled in bilingual classrooms and other pre-K-4 students: As expected, significantly more students enrolled in bilingual classrooms spoke Spanish at home compared to other languages, χ^2 (10, N = 1578) = 440.36, $p < .001$. There were a lower percentage of students in bilingual classrooms who identified as 'Black or African American' and a higher-than-expected percentage of students who identified as 'Other', or as 'Two or More Races', c^2 (7, N = 1578) = 205.24, $p < .001$. In regard to ethnicity, there was a higher percentage of students in bilingual classrooms who identified as Hispanic or Latino compared to Not Hispanic or Latino, or Other Ethnicity, χ^2 (3, N = 1578) = 184.86, $p < .001$. There was not a significant difference in IEP status between students in bilingual and non-bilingual classes.

Differences between students enrolled in bilingual classrooms and other pre-K-4 Spanish-speaking students: Among 4-year-old Spanish-speaking students, there was a higher percentage in bilingual classrooms who identified as 'Other Race', and a lower percentage who identified as 'Two or More Races' or 'White', χ^2 (4, N = 118) = 13.87, $p < .01$. There were no significant differences by ethnicity nor IEP status.

Differences in COR+ Overall and ELL scores: An unconditional growth model was estimated to establish the intercepts (i.e., starting points in fall) and slope (i.e., change in scores over time) of COR+ overall and ELL scores. In the overall COR+ scores, there were no meaningful differences in slope nor intercept. There were however differences between groups on the English Language Learning category of the COR+, which indicated that students in bilingual classrooms had lower scores at all time points compared to students in regular classrooms (see Figure 10). However, we also found that students in the bilingual classrooms had a greater rate of change in their ELL scores (slope = .84, signifying that there was an average score improvement of .84 at each time point) compared to ELL students who were not enrolled in bilingual classrooms (slope = .55; signifying that there was an average score improvement of .55 at each time point).

In sum, we found minimal differences between overall COR scores. While students in bilingual classes started with lower scores on English Language Learning, they showed a greater rate of growth compared to students in non-bilingual classrooms.

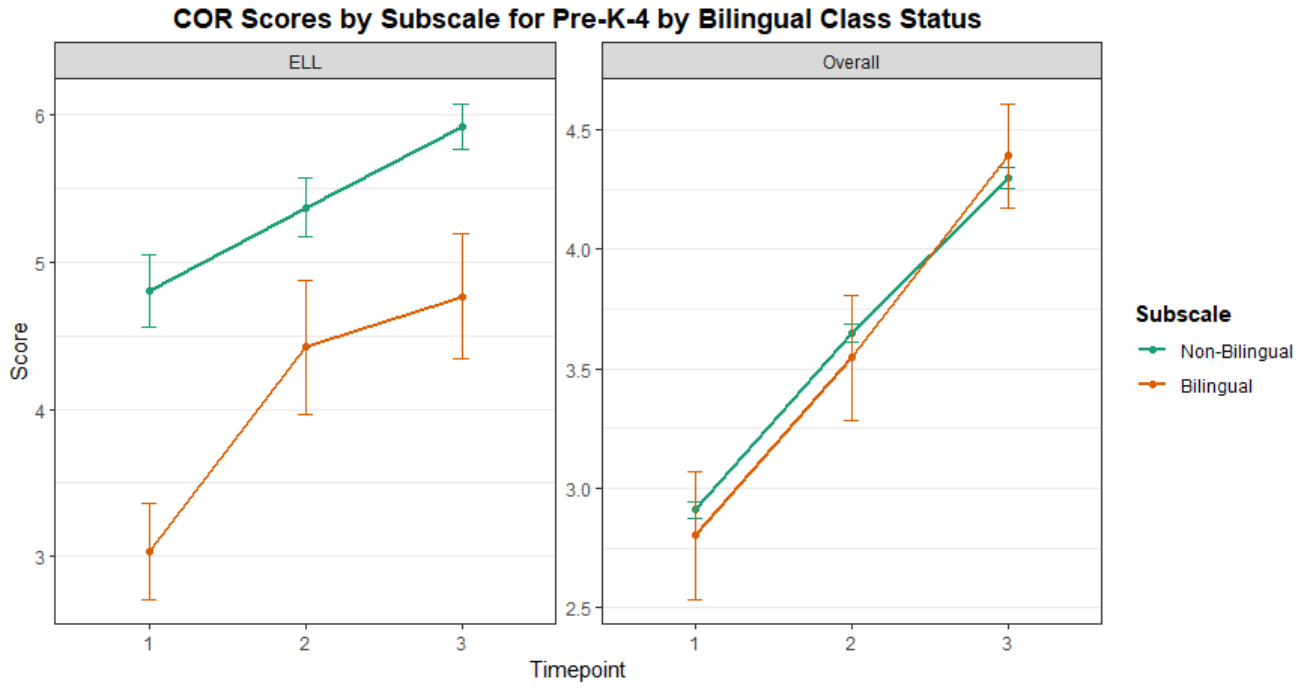


Figure 10. Overall COR and ELL scores for pre-K-4 students enrolled in bilingual and regular classrooms. Note that error bars represent the 95% confidence interval. Error bars that do not overlap indicate a significant difference between groups.

Predictors of Pre-K-4 Kindergarten Readiness

We used a structural equation modeling framework to examine predictors of pre-K-4 students' kindergarten readiness in spring. Predictors included all categories of the COR+ and Brigance from the fall administration.

More details on the analysis are included in the Statistical Supplement. See Figure 11 below.

Results: The model showed that the fall COR+ and Brigance explained 44% of the variation in kindergarten readiness at Time 3 (spring; R^2 = .44). Below, the bolded lines represent the significant predictors of spring kindergarten readiness. There was a negative association between COR+ Physical Development & Health and kindergarten readiness, such that students who were rated as having higher levels of gross and fine motor skills were less likely to be kindergarten ready in spring, p < .001. There were also positive associations between two other categories of the COR+ and kindergarten readiness: Mathematics and Science & Technology. Children who had higher scores on these categories in fall were more likely to be kindergarten ready in spring.
On Brigance, there was one significant predictor. The academic-cognitive subscale of Brigance (3, 4, and 5) significantly predicted kindergarten readiness, in spring, p <.001. Lastly, there was a significant effect of sex, whereas girls were more likely to be kindergarten ready compared to boys.

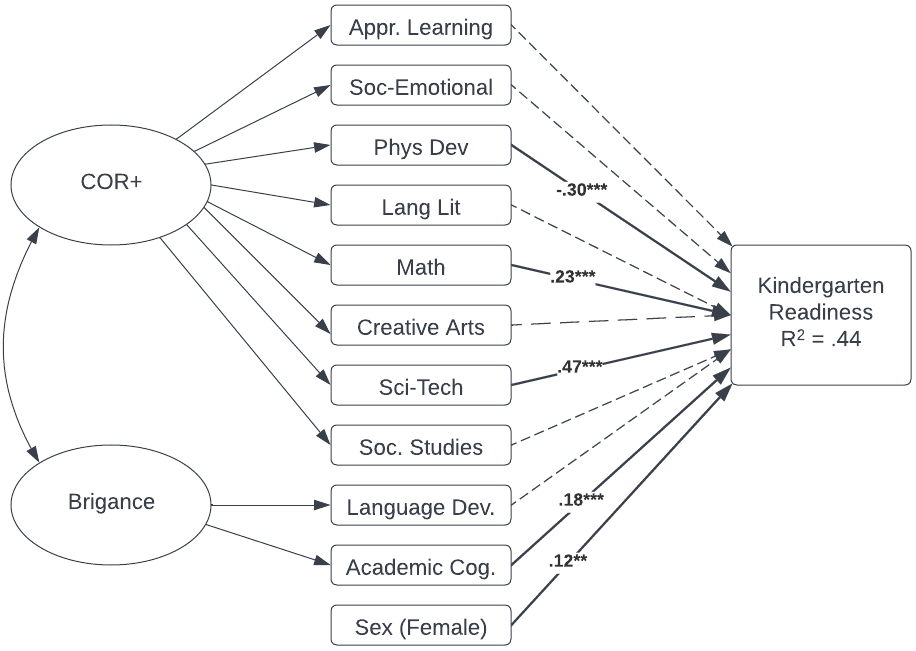


Figure 11. Structural equation model testing predictors of kindergarten readiness among pre-K-4 children, $N = 1{,}247$. Fit was satisfactory: CFI = .96, RMSEA = .07.

Summary and Recommendations

Overall, children in pre-K-3 and pre-K-4 showed expected growth in the areas assessed by the COR+ tool. Three-year-old pre-k pupils' growth closely resembles previous years' high growth patterns; they arrived and left pre-k at approximately pre-COVID-19 levels.

When comparing the most recent pre-COVID-19 scores, 2018-19 and 2021-22, results were different by grade. For 3-year-olds, data indicated that COR+ scores were significantly higher in 2021-22 than in 2018-19 on several categories: Social and Emotional Development; Language, Literacy, and Communication; Mathematics; Science and Technology; and Social Studies. On the other hand, for 4-year-olds, this year's scores were significantly lower than pre-COVID-19 in 2018-19. Specifically, the 2021-22 cohort had lower scores on all categories except for Approaches to Learning and Social and Emotional Development. These deviations are somewhat expected due to the disruptions in schooling, families, and the uptick in trauma brought on by the COVID-19 pandemic. Other studies have also found decreases in academic scores in the grade school years (U.S. D.O.E., 2022).

In addition to decreases in average scores across the COR+, we found that only 43.6% of students were kindergarten ready in spring, in accordance with the HighScope. In the last full administrative year of COR+ before COVID-19, the readiness level among 4-year-olds who completed 1-year of pre-K was 50% and the readiness level among those who completed 2-years of pre-K was 57%. Additionally, there was not a significant effect of dosage (i.e., one versus two years of pre-K) this

year on kindergarten readiness, although this has been found in prior years. Importantly, we did find an effect of gender, whereas significantly more girls were kindergarten ready than boys.

Another important finding was in the bilingual classrooms. This year marked the first year that RECAP investigated outcomes in bilingual versus general education (i.e., non-bilingual) classrooms. Results were promising – showing that overall COR+ scores did not differ, and, despite having lower levels of English proficiency in fall, students in bilingual classrooms showed faster rates of growth than English language learners in general education classrooms.

Lastly, we conducted an analysis to investigate fall predictors of kindergarten readiness among pre-K-4 students. When controlling for the effects of all variables (i.e., in a multivariate analysis), there were still several significant predictors: COR+ Physical Development and Health (in a negative direction), COR+ Mathematics, COR+ Science and Technology, and Brigance Academic/cCgnitive subscales. Sex was also a significant predictor as expected, with girls showing higher rates of kindergarten readiness.

References

U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2020 and 2022 Long-Term Trend (LTT) Reading and Mathematics Assessments.

PRE-K SCREENINGS

Brigance© Early Childhood Screen

Areas assessed by Brigance III include *Language Development, Academic and Cognitive Skills,* and *Physical Development and Health.* An overall score for Brigance III is calculated out of a possible 100 points. Based on this total score, there are two cut-off scores: one for determining the 'at risk' category, and another cutoff for determining the 'talented' category. The total score is used in conjunction with a calculated "At Risk" score, which is derived from a subset of Brigance III items which differ depending on student age and is used to derive the "In Need of Further Evaluation" category. Based on these criteria, a level is assigned to each student:

- **Determine need for formal evaluation**: students who are at high risk and may need further evaluation for developmental delays
- **Monitor closely**: students who should be monitored closely
- **Functioning in normal range**: students who are functioning in a normal developmental range
- **Possibly talented and may need enhanced work**: students who are possibly talented and may need enhanced work and additional stimulation

In 2021-22, teachers administered Brigance to 772 pre-K-3 students and 1,194 pre-K-4 students. The Brigance is administered within the first 90 days of a student's entry into pre-K, most commonly between September and November.

Results for Pre-K-3 and Pre-K-4

Overall, 25.5% of pre-K-3 children were identified as *at risk* (i.e., either scoring 'determine need for formal evaluation' or 'monitor closely'). There was a higher percentage of 4-year-olds, 32.0%, who scored in the *at-risk* range. On the other hand, there were nearly 11% of students in both grades who were identified as possibly academically talented and in need of enhanced work. This represents an increase from previous years. See Table 19 for all results.

Table 19. 2021-22 Pre-K-3 and Pre-K-4 Brigance Screening Status Outcomes

Screening Status	**Pre-K-3** (*n* = 772)		**Pre-K-4** (*n* = 1,194)	
	Count	Percent	Count	Percent
Determine need for formal evaluation	178	23.06%	337	28.22%
Monitor closely	19	2.46%	45	3.77%
Functioning in normal range	493	63.86%	682	57.12%
Possibly talented and may need enhanced work	82	10.62%	130	10.89%

Get Ready to GROW Screenings

The Get Ready to GROW (GROW) initiative of Children's Institute conducted **946** pre-K-3 and pre-K-4 comprehensive screenings for Rochester City School District (RCSD) students at community-based organizations. GROW uses comprehensive state-of-the-art instruments to screen children in multiple areas including vision, hearing, dental, BMI, physical development (motor skills), speech/language, cognitive functioning, and social/emotional.

Below (see Table 20) we present results (total screened and percentage referred for follow-up) for vision (using SPOT technology), hearing (using Pure Tone hearing screening, otoacoustic emissions [OAE] screening, or tympanometry screening), dental (assessed via a visual inspection for tooth decay – 'lift the lip'), BMI (height and weight), motor skills (using the DIAL – Developmental Indicators for the Assessment of Learning), language (using the Preschool Language Scale [PLS-5]), and socio-emotional (using the Ages and Stages Questionnaire Social-Emotional [ASQ:SE]). The total screened and percentage referred for follow-up are shown in the table below.

Table 20. Get Ready to GROW Screenings for 3- and 4-Year-Old Children in RCSD

	***N* (total screened)**	**# Follow Up or Referral**	**% Follow Up or Referral**
Vision	562	111	19.8
Hearing	551	65	11.8
Dental	507	65	12.8
BMI	502	172	34.3
Motor	764	317	41.5
Speech/Language	876	400	45.7
Socio-Emotional	5	1	20.0

Discussion

These pre-K GROW screenings indicate that children have higher rates of problems than in previous years. For example, nearly 46% of children were referred for speech and language problems, and almost 42% were referred for possible motor delays.

Despite this, on the Brigance Screening, we saw higher than typical scores for both three- and four-year-olds, including more students in the "Possibly talented" category (approximately 11% for both pre-K-3 and pre-K-4 students).

Attendance

Overall Averages

Below we report attendance rates broken down by pre-K-3 and pre-K-4. Attendance categories were created in two ways: First, categorizing by 80%, 80-90%, and 90%+ attendance; and second, by using a 60% cut-off. Attendance patterns were similar for pre-K-3 and pre-K-4 students.

Attendance summary statistics were available in 2021-2022 only for students enrolled in RCSD school sites, as opposed to community-based sites (CBOs). Thus, the descriptive statistics below may not be representative for students enrolled in CBOs.

Table 21. 2021-2022 School-based Attendance Descriptive Statistics, Pre-K-3 and Pre-K-4

Attendance Category	**Pre-K-3 (*N, %*)**	**Pre-K-4 (*N, %*)**
<80%	316, 56.7%	480, 59.0%
80-90%	154, 27.6%	211, 25.9%
90% +	87, 15.6%	123, 15.1%
Attendance Category	**Pre-K-3 (*N, %*)**	**Pre-K-4 (*N, %*)**
<60%	141, 25.3%	205, 25.2%
60% +	416, 74.7%	609, 74.8%
Attendance Averages	***M* (*SD*)**	***M* (*SD*)**
Days Present	114.10 (46.13)	116.63 (43.93)
Days Absent	42.77 (31.31)	44.89 (32.89)
Days Absent, Excused	10.45 (10.62)	9.44 (10.66)
Days Absent, Unexcused	32.33 (29.45)	35.45 (32.52)
Present Percentage	70.2% (22.8%)	70.5% (21.8%)

Historical perspective: As seen above, the average attendance for 3- and 4-year-old children in the 2021-22 school year was approximately 70.2% and 70.5% of total days, respectively. Further, only 15.6% to 15.1% of pre-K students attended 90% or more of the school year. This is a significant decline from prior years; for example, in 2016-17, there were 36% of pre-K-4 students who attended 90% or more days, and 29% of pre-K-3 students who attended 90% or more days (although these estimates included both school-based sites *and* CBOs).

This overall decline in attendance may be due to the lingering effects of the COVID-19 pandemic, including, but not limited to quarantines and other safety precautions, stress and anxiety about exposure to the virus, staff shortages, and other impacts to families that could prevent attendance (e.g., job instability that affects transportation). Attendance in early education has been shown to relate to long-term academic and behavioral outcomes in peer-reviewed reports (Romero & Lee, 2007). Prior RECAP reports have also found that better attendance is linked with school readiness and other improved academic outcomes (see, for example, Infurna et al., 2017).

Associations with Other Outcomes

See Tables 22 and 23 for ANOVAs for COR+ and T-CRS-sf outcomes by attendance group. Overall, results show that performance on the COR+ at T3 (spring) varied by child attendance, with higher mean scores for those students attending 90% or more of days and the lowest scores for those students attending less than 80% of days. There were no group differences on Time 1 to Time 3 change for pre-K-3 students, but there was for pre-K-4 students. This indicates that attendance did relate to overall academic growth for 4-year-olds. There were fewer significant differences for social and emotional adjustment, measured by the T-CRS. One exception is the area of Assertiveness, wherein pre-K-4 students who attended more days were rated as more assertive in spring.

Table 22. Attendance and Associations with Other Outcomes, Pre-K-3

		<80%		80%-90%		90%+		
	N	***M***	***SD***	***M***	***SD***	***M***	***SD***	***F***
COR								
App. to Learning	388	3.17	0.95	3.32	0.85	3.61	1.02	5.53**
Social-Emotional	385	3.27	1.07	3.44	0.90	3.82	1.05	7.08***
Phys. Health & Dev.	395	3.57	0.84	3.89	0.72	3.98	0.93	9.58***
Lang & Literacy	385	2.93	0.81	3.14	0.72	3.47	1.05	10.46***
Math	379	2.93	0.83	3.18	0.73	3.42	1.06	9.11***
Creative Arts	389	3.30	0.98	3.65	0.79	3.85	1.05	10.81***
Science & Tech.	388	3.19	0.94	3.35	0.79	3.53	1.19	3.38*
Soc. Studies	390	3.05	0.94	3.21	0.87	3.60	1.20	8.05***
Overall	379	3.17	0.84	3.41	0.65	3.66	0.99	9.81***
T1-T3 Change	309	1.12	0.53	1.16	0.48	1.24	0.46	1.16
T-CRS-sf Percentiles								
Task Orientation	316	52.12	30.01	52.93	31.90	57.72	30.93	0.70
Behavior Control	317	47.49	31.66	50.12	34.61	50.52	37.11	0.27
Assertiveness	317	51.79	32.76	56.25	31.88	62.93	28.83	2.62
Peer Social Skills	316	57.66	31.06	64.73	29.72	63.74	29.38	1.91

Table 23. Attendance and Associations with Other Outcomes, Pre-K-4

		<80%		80%-90%		90%+		
	N	***M***	***SD***	***M***	***SD***	***M***	***SD***	***F***
COR								
Approaches to Learning	577	4.12	0.99	4.32	0.89	4.48	0.92	5.81**
Social-Emotional	572	4.16	0.97	4.46	0.89	4.64	0.83	12.31***
Phys. Health & Dev.	573	4.59	0.89	4.80	0.85	4.84	0.96	4.82**
Lang & Literacy	569	3.83	0.90	4.18	0.85	4.44	0.94	19.70***
Math	550	3.86	0.96	4.19	0.84	4.37	0.94	13.10***
Creative Arts	548	4.26	0.83	4.45	0.74	4.50	0.79	4.64*
Science & Tech.	559	4.07	0.97	4.32	0.89	4.42	0.97	6.59**
Soc. Studies	572	4.01	0.95	4.22	0.93	4.46	1.04	8.56***
Overall	558	4.11	0.83	4.37	0.73	4.50	0.80	11.15***
T1-T3 Change	507	1.44	0.63	1.56	0.53	1.69	0.79	5.73**
T-CRS-sf Percentiles								
Task Orientation	508	56.50	32.54	58.96	32.60	61.87	31.70	0.91
Behavior Control	508	58.38	32.36	58.25	33.50	62.68	34.33	0.56
Assertiveness	508	63.63	31.09	69.76	28.43	71.59	30.67	3.17*
Peer Social Skills	507	62.22	32.51	66.81	30.28	67.69	31.23	1.49

Attendance and Kindergarten Readiness: A chi-square test showed pre-K-4 kindergarten readiness in spring was significantly associated with yearly attendance percentage. See Table 24. Among students who attended less than 80% of the year, 37.4% were rated as kindergarten ready (i.e., according to the COR+ standards), while among students who attended 90% or more of the year, 54.1% were rated as kindergarten ready. This was a significant difference, $\chi^2 = 9.15$, $p = .010$.

Table 24. Effect of Attendance on Kindergarten Readiness in Spring of Pre-K-4

Attendance	K- Ready	Not Ready	Total	% Ready
<80%	119	199	318	37.4%
80-90%	71	81	152	46.7%
90% +	46	39	85	54.1%

References

Infurna, C.J., Hightower, A.D., Embt, K., Van Wagner, G., Strano, L., Lotyczewski, B.S., Montes, G., MacGowan, A., Dangler, P., Hooper, R., Boyle, R., Lubecki, L., Breitung, D., Valdez, D., Perez, I., & Peelle, D. (2017). Rochester Early Childhood Assessment Partnership 2016-2017 twentieth annual report. Children's Institute Technical Report T17-011.

Romero, M. and Lee, Y.S. (2007). A national portrait of chronic absenteeism in the early grades. Report. National Center for Children in Poverty.

FAMILY ENGAGEMENT: FAMILY SURVEY RESULTS

RECAP has been developing, collecting and analyzing parent and family surveys since the beginning of UPK in 1998-99, and numerous improvements have been made over 23 years. The 2021-22 UPK Family Survey represents RECAP's latest work in gaining families' perspectives on the design and measurement of this area. Previous, established survey questions – many drawn from the U.S. Department of Health and Human Services – along with new questions associated to the impact of the COVID-19 pandemic, as well as children's health, were included in this new survey.

Development of the 2021-22 Universal Pre-K Family Survey

The 2021-22 school year marked the first time, since the COVID-19 shutdown in March 2020, that families of pre-K students were surveyed. We used this opportunity to amend the questions that are Rochester City School District-specific to better document families' situations. Accordingly, a small RECAP team convened for final construction of this new survey section. This team developed questions that address the issues related to the pandemic. We consulted with members of our pediatric community in formulating questions on health. We included questions on technologies supporting students and families. Finally, we continued to include the statistically validated questions from the nationally developed Family and Teacher Relationship Quality questionnaire (FTRQ) discussed in greater detail below.

Administration Procedures

As the world changed with the global pandemic, people became more comfortable with and more reliant on technology, at an accelerated pace. These details, along with greater access to technology spearheaded by RCSD tablet distribution, led our committee to make the family survey accessible electronically for the first time. In the past, all surveys were hard copy scannable bubble sheets, preprinted with the students' names, RCSD student identification number, and classroom information. The paper forms were sent to classroom teachers for distribution and collection and delivered to Children's Institute for processing and analyzing. In May 2022, a two-fold approach was utilized. The newly organized family survey was converted to electronic and hard copy versions, both of which were translated into Spanish.

RCSD assumed responsibilities for electronic and hard copy distribution. The District's Office of Early Childhood Education and Office of Communications distributed the electronic survey by sending a Microsoft Forms link (created by Children's Institute) to the email addresses of parents and families of pre-K 3 and pre-K 4 students on two separate occasions. There were 3,558 email communications that were sent to families inviting them to complete the survey. Some families received more than one email due to family configuration. A total of 3,283 emails were received

by families with a 7.7% "bounce back" rate. This survey link was also posted on RCSD's digital sharing platform, SeeSaw. Some families either lacked the technologies for completing the online survey or preferred to submit a hard copy version. For these reasons and in the interest of equity, the Office of Early Childhood distributed printed hard copy surveys, one for each student. Approximately 2,700 paper forms were distributed , both in schools and in Community-Based Organizations (CBOs).

The ***FTRQ–Family*** was distributed and collected as a one-time survey between May 4th and June 23rd, at the same time of year as previous post-tests. The survey was estimated to take approximately 10-15 minutes to complete. The time commitment and the assurance of survey anonymity was communicated to respondents in the directions, although anonymity when a hard copy was submitted may have been limited.

The number of electronic surveys submitted via Microsoft Forms was 145 (8 were Spanish) and the number of paper hard copies collected was 129 (none were Spanish), for a total of 274 surveys. This was a large numerical decrease from previous years' post-test sample sizes. Although other distribution platforms for the electronic survey were discussed, respondents indicated they had either accessed the link via the email sent to them (93.1%, *n*=135) or via the link posted to SeeSaw (6.9%, *n*=10). Overall, 2.9% (*n*=8) of respondents preferred to complete the survey in Spanish. The surveys were evenly split between respondent-identified program type with 52.3% of respondents from RCSD School-Based sites and 47.7% from Community-Based organizations. Of note, one singular CBO accounted for a large percentage of the returned surveys, which may have skewed results (27.3% of all surveys and 57.1% of CBO surveys).

Description of the Family and Teacher Relationship Quality Measure

In previous years, RECAP used three of five questionnaires developed by Kim et al, 2015: FTPRQ – Parent, FTPRQ – Provider/Teacher, and FTPRQ – Director. RECAP changed the titles to ***Family and Teacher Relationship Quality*** (***FTRQ***): ***FTRQ–Family***, ***FTRQ–Teacher***, and ***FTRQ–Director***. Since the COVID-19 pandemic shut down schools in March 2020, the FTRQ measures have not been utilized. The ***FTRQ–Family*** was reinstituted in May 2022 as a post measure. It was decided not to distribute the ***FTRQ–Teacher*** and ***FTRQ–Director*** at this time.

For a more in-depth history of RECAP's adoption of these measures, see the Rochester Early Childhood Assessment Partnership Twentieth and Twenty-First Annual Reports (Infurna et al, 2017; Infurna et al, 2018).

The ***FTRQ–Family*** asks caretakers general questions about how they interact with their children's teachers. It assesses three constructs and eight subscales which describe family and teacher relationship quality from the family perspective. The ***FTRQ–Family*** contains 25 questions rated on a 1-4 Likert scale, with 4 being the most desirable score. Of note, respondent scores were

computed only if more than 90% of questions within the construct or subscale were answered. If this criterion was met, missing scores were imputed using mean substitution. Excluding a respondent in one subscale or construct did not prevent that respondent from being included in a different subscale or construct.

In addition, RECAP retained the question, "On a scale of 1 to 5, where 1 is the worst you can imagine and 5 is the best you can imagine, how would you describe your relationship with your child's teacher?" from the FTPRQ – Parent long form. After the FTRQ questions were posed, information was gathered at the request of RCSD to gather information about specific RCSD initiatives. Those RCSD-specific questions will be considered after the FTRQ section is discussed.

The ***FTRQ–Family*** instrument assesses three constructs: ***Knowledge***, ***Practices***, and ***Attitudes***, containing eight subscales, which describe family and teacher relationship quality from the family perspective. The constructs and subscales are defined by Kim et al., (2015):

The ***Knowledge*** construct includes 1 subscale: ***Family-specific Knowledge***, which is defined as "knowledge and an understanding of families' cultures; the context in which they live; situations that affect them; and their abilities, needs, and goals".

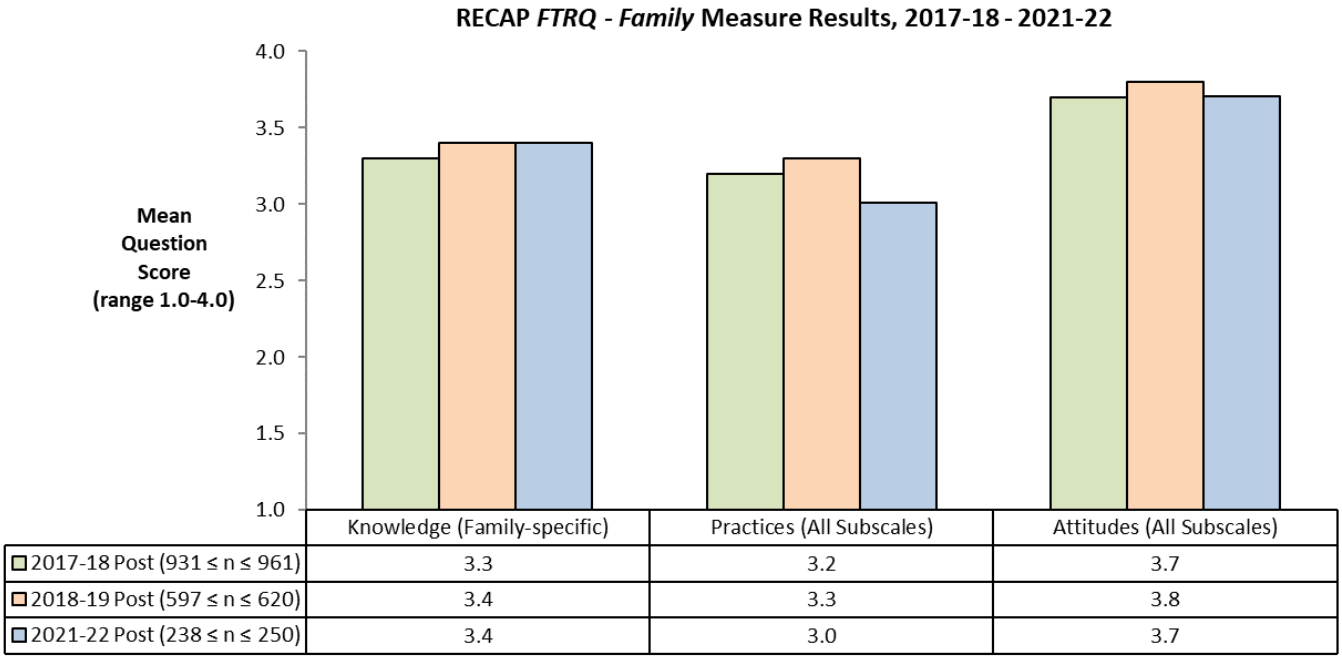
The ***Practices*** construct includes 4 subscales: ***Collaboration***, ***Responsiveness***, ***Communication***, and ***Family-focused Concern***. The ***Collaboration*** subscale addresses collaboration and engagement between families and teachers "through joint goal setting, decision-making, and following up on this decision-making process through the development of action plans". The ***Responsiveness*** subscale is defined as engaging "in sensitive, flexible, and responsive support of families' identified needs and goals". The ***Communication*** subscale is defined as promoting "positive, two-way communication that is responsive to families' preferences" and teachers' personal boundaries. The ***Family-focused Concern*** subscale is defined as "communication that demonstrates interest in the family as a unit".

The ***Attitudes*** construct includes 3 subscales: ***Commitment***, ***Understanding Context***, and ***Respect***. The ***Commitment*** subscale is defined as "sensitivity to the needs of children, parents, and families; intrinsic motivation, or viewing work as "more than a job;" and being sincere, honest, encouraging, accessible, and consistent in interactions" with families and children. The ***Understanding Context*** subscale is defined as "having an appreciation for the broader context in which children's development and families' lives are situated and viewing the family as a unit, rather than focusing on the individual child". The ***Respect*** subscale is defined as "valuing the child and the family; being non-judgmental courteous/welcoming, and non-discriminatory; being accepting of divergent opinions of families (e.g., on managing children's behavior/how to socialize children); and being considerate and patient with families when trying to elicit changes in their behavior".

Results of the Family and Teacher Relationship Quality Family Measure

The pre-test distribution was not completed in November 2021. Results reported for 2021-22 are based on the single collection in May 2022, with comparisons made to past post-tests.

Figures 12 and 13 present the mean construct and subscale scores, respectively, for post-tests in 2017-18, 2018-19, and 2021-22

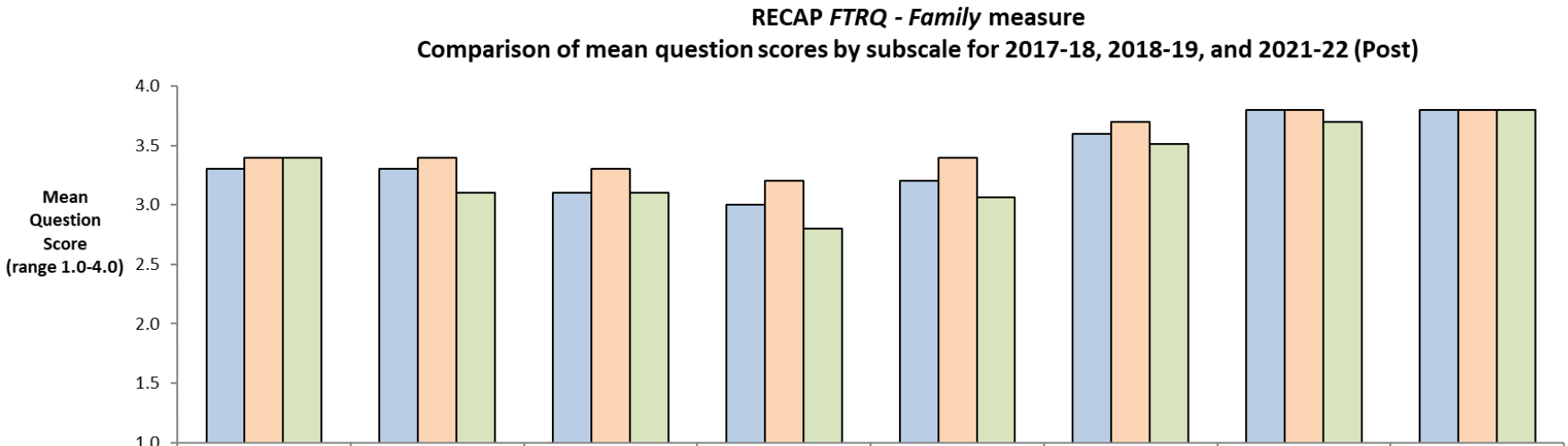


	Knowledge (Family-specific)	Practices (All Subscales)	Attitudes (All Subscales)
2017-18 Post (931 ≤ n ≤ 961)	3.3	3.2	3.7
2018-19 Post (597 ≤ n ≤ 620)	3.4	3.3	3.8
2021-22 Post (238 ≤ n ≤ 250)	3.4	3.0	3.7

Figure 12. ***FTRQ–Family*** comparison of construct means for post-tests in 2017-18, 2018-19, and 2021-22

Comparison of means[5] from spring 2018-19 and spring 2021-22 showed no significant difference in ***Knowledge***, but significant differences in ***Practices*** and ***Attitudes*** ($p < .001$ for both tests).

[5] Comparison of means between two groups were conducted by using a Mann-Whitney U test, a nonparametric test of mean differences, with an online calculator available via Statistics Kingdom.



	Knowledge/ Family-specific	Practices/ Collaboration	Practices/ Responsiveness	Practices/ Communication	Practices/ Family-focused Concern	Attitudes/ Commitment	Attitudes/ Understanding Context	Attitudes/ Respect
2017-18 Post (929 ≤ n ≤ 961)	3.3	3.3	3.1	3.0	3.2	3.6	3.8	3.8
2018-19 Post (595 ≤ n ≤ 613)	3.4	3.4	3.3	3.2	3.4	3.7	3.8	3.8
2021-22 Post (234 ≤ n ≤ 254)	3.4	3.1	3.1	2.8	3.1	3.5	3.7	3.8

Figure 13. ***FTRQ – Family*** comparison of subscale means for post-tests in 2017-18, 2018-19, and 2021-22

Comparison of means from spring 2018-19 and spring 2021-22 showed no significant difference in the ***Knowledge/Family-specific Knowledge***, ***Attitudes/Understanding Context***, or ***Attitudes/ Respect*** subscales. There were significant differences found in all other subscales. Table 25 reports all subscales and their corresponding *p*-values:

Table 25. ***FTRQ–Family*** Comparison of Subscale Means for Post-Tests in 2018-19, and 2021-22 and Corresponding *p*-values

Construct/Subscale	*p*-value
Knowledge/Family-specific Knowledge	0.36
Practices/Collaboration	< .001*
Practices/Responsiveness	< .05*
Practices/Communication	< .001*
Practices/Family-focused Concern	< .001*
Attitudes/Commitment	< .001*
Attitudes/Understanding Context	0.10
Attitudes/Respect	0.18

Note. *Denotes statistical significance.

Caretakers were asked how they would quantify their relationship with their child's teacher. "On a scale of 1 to 5, where 1 is the worst you can imagine and 5 is the best you can imagine, how would you describe your relationship with your child's teacher?" Figure 14 shows the response means for spring distribution of the ***FTRQ–Family*** in 2017-18, 2018-19, and 2021-22.

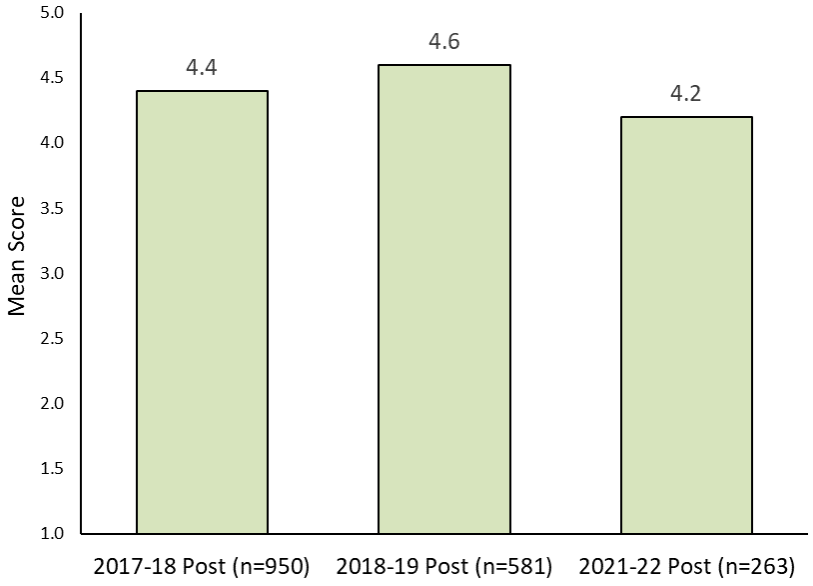


Figure 14. ***FTRQ–Family*** comparison of score means for caregiver-reported family and teacher relationship quality in the spring of 2017-18, 2018-19, and 2021-22 academic years

A statistical significance was found between the May 2019 and May 2022 administration of this relationship quality question, $p < .001$.

The mean score reflects elevated relationship quality ($M = 4.2$, with 54.8% endorsing the highest score). Results are reported in Table 26 below.

Table 26. Frequency Distribution and Mean of Caregiver-Reported Teacher and Family Relationship Quality

On a scale of 1 to 5, where 1 is the worst you can imagine and 5 is the best you can imagine, how would you describe your relationship with your child's teacher? (*n* = 263)						
	1 (Worst)	**2**	**3**	**4**	**5 (Best)**	**Mean Score**
%	1.9%	3.0%	18.3%	22.1%	54.8%	4.2
n	5	8	48	58	144	263

A statistical test revealed a significant difference between May 2022 samples, electronic *(M* = 4.1) versus paper ($M = 4.4$), $p < .01$.

Results of RCSD-specific Questions

Throughout the fall, winter, and spring of the 2021-22 academic year, the FTRQ committee (a subset of RECAP's Assessment Team) added and refined questions directly related to family experiences inside and out of the RCSD environment. These RCSD-specific questions were asked after the ***FTRQ–Family*** portion of the family survey. These questions were used to gather information about RCSD initiatives regarding school relationships, books, technology, and the health and wellbeing of families. Results of the questions are displayed below.

See Table 27 for information on how families found out about the pre-K program.

Table 27. Source of Information on RCSD Pre-K

How did you find out about our Pre-K program? Select all that apply. (*n* = 254)	**%**	***n***
Print ad	7.5%	19
Bus ad	3.5%	9
Sign on vehicle other than a bus	2.0%	5
TV	9.1%	23
WDKX	5.1%	13
The Beat 105.5	0.8%	2
PODER 97.1	0.0%	0
La Mega 97.5	0.0%	0
Social media (Facebook, Twitter, Instagram, etc.)	3.1%	8
Relative	25.2%	64
Friend	27.2%	69
Neighbor	5.9%	15
Lawn sign	2.8%	7

Family School Communication

Communication between education professionals and families is very important. Tables 28 and 29 below show how respondents answered questions about this topic.

Table 28. Frequency of Information Sharing and Number of Program Personnel with Whom Families are Communicating

How many times has your preschool offered you information or materials to help your child or your family? (*n* = 271)					
	Never/ None	**1**	**2**	**3**	**More than 3**
%	7.0%	7.4%	12.5%	13.7%	59.4%
n	19	20	34	37	161
How many preschool staff do you feel comfortable talking with about your concerns? (*n*=245)					
	Never/ None	**1**	**2**	**3**	**More than 3**
%	3.3%	8.2%	23.7%	15.1%	49.8%
n	8	20	58	37	122

We were able to compare results about family-school communication, specifically the number of staff parents feel comfortable speaking with about their concerns, with results gathered in May 2019.

Table 29. Comparison with Results from May 2019

How many preschool staff do you feel comfortable talking with about your concerns? (*n* = 584)					
	Never/ None	**1**	**2**	**3**	**More than 3**
%	5.1%	7.2%	16.4%	20.9%	50.3%
n	30	42	96	122	294

There was not a significant difference between samples from May 2022 and May 2019.

At Home Literacy

There is an emphasis in preschool on families reading books to, and looking at books, with their children. Table 30 reports how often families participate in this activity.

Table 30. How Often Families Look at Books with their Children

How often do you look at books with your child? (*n* = 269)					
	Almost never	**Monthly**	**1-2 times a week**	**3-4 times a week**	**Daily**
%	0.7%	3.0%	21.6%	30.1%	44.6%
n	2	8	58	81	120

A related question was asked in November 2019. Table 31 below displays results. While not directly comparable (question phrasing is different and November was a pre-test, May was a post-test), it does report families' activity regarding the use of books with their children before the COVID-19 pandemic began.

Table 31. How Often Families Read to their Children

[May 2019] How often do you read to your child? (*n* = 617)					
	Almost never	**Monthly**	**1-2 times a week**	**3-4 times a week**	**Daily**
%	0.6%	4.2%	28.5%	34.0%	32.6%
n	4	26	176	210	201

Technology

When COVID-19 closed schools and community programs in March 2020, tablets and free internet access were offered to every child's family in pre-K 3 and pre-K 4. This distribution continued in 2021-22, so questions were added to the RCSD-specific section of the survey. Results are in Tables 32 and 33 below.

Table 32. Description of Families' Technological Experiences

How well are your family's technological needs (internet, phone, computer, training, etc.) being met? (*n* = 270)						
	Very well	**Good**	**Just OK**	**Somewhat difficult**	**Definitely difficult**	**We do not have internet**
%	60.7%	25.6%	8.5%	3.3%	0.7%	1.1%
n	164	69	23	9	2	3

Table 33. Frequency of SeeSaw Usage

How often do you use SeeSaw to help with your child's preschool education? (*n* = 267)						
	Several times a day	**Daily**	**Several times a week**	**Weekly**	**Less than weekly**	**Never**
%	7.1%	7.1%	15.7%	13.9%	37.5%	18.7%
n	19	19	42	37	100	50

Child Health

Emergency room visits: Parents were asked, "How many Emergency Room visits has your child had in the past year?" (n = 264). Most parents said "None" (70.1%, n = 185), 16.7% (n = 44) said "1 visit", 9.1% (n = 24) said "2 visits", and 4.2% (n = 11) said "3 or more visits".

See Table 34 for data on recent doctor and dental visits. Most parents reported that their child visited a doctor and dentist in the last year. However, 12.1% of families reported that their child did not receive care from a dentist.

Table 34. Recent Medical Visits

When was the last time your child saw a doctor? (not an emergency room doctor) (n = 270)						
	Never	**More than two years ago**	**More than one year ago**	**Within the past year**	**Within the past six months**	**Unsure**
%	0.7%	1.9%	1.5%	28.1%	66.7%	1.1%
n	2	5	4	76	180	3
When was the last time your child saw a dentist? (n = 224)						
	Never	**More than two years ago**	**More than one year ago**	**Within the past year**	**Within the past six months**	**Unsure**
%	12.1%	0.9%	12.1%	19.2%	53.1%	2.7%
n	27	2	27	43	119	6

Concerns about child's health. Parents were asked, "Do you have concerns about your child's health?" (n = 270). Most parents said "No" (93.3%, n = 252).

COVID-19 vaccines. Parents were asked, "When COVID-19 vaccines for children become available, do you plan on your child being vaccinated?" (n = 269). There were 27.1% of parents who said "No" (n = 73), 40.5% who said "Yes" (n = 109), and 32.3% who said, "Not Sure" (n = 87).

Child Experiences

Child adjustment. Parents were asked, "Overall, how well is your child adjusting to school this year?" (n = 271). There were 69.9% (n = 184) who responded "Excellent", 26.2% (n = 71) who responded "Good", 4.8% (n = 13) who responded "Fair", and 1.1% (n = 3) who responded "Poor".

Program description. Parents were asked what words best describe their child's pre-K experience (they were allowed to select all words that applied). Results are below.

Table 35. Children's Experiences in Pre-K

Which words best describe your child's preschool experiences so far this school year? Select all that apply. (*n*=270)							
	Educational	**Social**	**Supportive**	**Comforting**	**Joyful**	**Frustrating**	**Unhappy**
%	82.2%	72.6%	71.9%	63.0%	72.6%	11.5%	4.1%
n	222	196	194	170	196	31	11

Loss of a family member. Parents were asked, "Has your child experienced the loss of a close family member?" (*n* = 268). More than 28% of families (28.4%) reported their child had lost a close family member.

Family needs. Parents were asked, "Are there areas your family has needs?" (*n* = 243). Families were allowed to select more than one option. See Table 36 below.

Table 36. Family Areas of Need (*n* = 243)

Need	%	*n*
No needs	72.8%	177
Food	4.5%	11
A more stable place to live	5.8%	14
Clothing	3.7%	9
Healthcare	1.2%	3
Child care	16.0%	39
Reliable transportation	8.2%	20
Parental employment	3.7%	9
Someone to talk with about my needs	4.9%	12

Qualitative Responses from Family Survey

The family survey included the opportunity to submit comments on both the electronic and hard copy versions. Even though the sample size of electronic and paper hard copy surveys was roughly the same, many more comments were submitted in the electronic version. The electronic version comments were more descriptive and more evenly distributed between positive and negative verbiage. A deidentified selection of comments are found here across several themes.

Positive Feedback about Teachers and Schools:

"[Teacher] and her para are wonderful. My child is a loner and he adores both of them. He respects them and both of them took the time to figure him out very patiently. They understand him. They are the best."

"Wonderfully supportive, accepting, and empowering. My child has learned and grown so much this year."

"My child has been blessed to be a part of such a loving and caring pre-kindergarten program!"

"The [School-Based classroom] PreK experience has been beneficial to our child and to our family. We are grateful we have access to this free experience for our child; we would not be able to afford a 5-day-a-week full-day program."

"We truly love our sons teachers and school. They are so warm and welcoming to our son. He truly enjoys going every day and he is thriving."

"[Teacher] was amazing the entire school year. She keeps you informed on your child's progress and day, and is very open-minded!"

"She has thrived in the environment her teachers have created at school. She is excited to go to school every day - where she feels safe, loved, and happy. [Teacher] is truly a magical person with so much love, we will miss her greatly next year."

"[CBO] was truthfully our third choice on the lottery and it turned out to be our best choice. They've been amazing this year. Thanks to all who made it a terrific experience."

Suggestions for Improvements for Families

"It is hard to transport my child every day to school. RCSD must do better and give free transportation to pre-K, 3 & 4."

"An expansion of after-school care programs would make a big difference to our family. We strongly considered switching to a CBO program for next year (pre-K) solely based on the aftercare availability, but decided not to because we didn't want to give our child another transition."

"I have a hard time with the school hours. I think it should match [upper grade] hours or like a 15-20 min difference. I have four kids and all goes to different schools. So it would be nice if they could get the times closer together."

"My son has the ability to learn with kids ages 4-5; [his birthday makes him one of the oldest in his class], and this prevents him from being moved up. Socially, he gets along well with kindergarten aged children and is working on reading and gross motor skills. I wish he had more time to work on reading."

Difficulties with Communication

"I feel that the teachers care about my child and teach a wonderful range of social emotional and school readiness skills. I feel that they are nurturing and caring to the kids. COVID-19 had made it difficult to communicate as much since we don't go back to the classroom, however I feel supported and feel that I know how my child is doing and what he is learning."

"The questions about my relationship with my child's teacher are difficult to answer since I almost never see the teachers in person due to COVID-19 policies. Which I totally understand but it's also disappointing to read these questions and think about how much better our communication with the teaching staff would be if we actually spoke with them every day at pickup and drop-off. Also

communication with RCSD in general has been poor - this survey is the first time I've received any communication directly from RCSD other than responses to messages initiated by me."

"Overall we love RCSD pre-k. I have felt disappointed that we don't have more opportunities to talk with the teacher about his performance at school, needs and strengths, etc. I have also sent some emails to the teacher and administrator that I did not receive responses to. I wish there were parent-teacher conferences for pre-k as there are with older grades. I would like more individualized communication regarding my child."

"Both my child and I truly enjoyed their experience my only concern is the need of parent teacher conference to make the connection between home and school and parent and teacher a stronger bond."

"I would like to know about my child's progress socially and what areas he needs to work on."

Discussion

There were several notable findings. A positive finding was that 96.1% of families rated their child as having "good" or "excellent" adjustment to school. Additionally, parents described their child's pre-K experiences as educational (82.2%), social (72.6%), and supportive (71.9%).

When asked about having unmet needs, 72.8% of families reported "none". However, of parents and family members who reported needs, the greatest need reported was childcare, with 16.0% of family members, *or one family in six,* reporting this need.

Another notable finding was that parents reported that 28.4% of children experienced the loss of a close family member. This is a notable proportion of our young children losing close family members.

Limitations: There are several limitations of our Family Survey findings that must be noted. First, there was a smaller than normal sample size, and it is possible that parents who took part in the Family Survey this year are not a representative sample of the pre-K family population (i.e., selection bias). Additionally, we only administered the post-test, and thus we could not make any comparisons between fall and spring scores. We do not know whether attitudes on parent-teacher and parent-school communication and engagement, and satisfaction with the pre-K system, changed from fall to spring. Last, we offered two primary modes to complete the surveys – on paper and electronically. There were some significant differences in scores; and families who completed the survey online had lower scores. It is possible these differences were due to self-selection bias.

References:

Embt, K. (2020). *2019-20 RECAP Annual Report: Family Perspectives*. Rochester, NY: Children's Institute.

Infurna, C. J., Hightower, A. D., Embt, K., Van Wagner, G., Strano, L., Lotyczewski, B. S., Montes, G., MacGowan, A., Dangler, P., Hooper, R., Boyle, R., Lubecki, L., Breitung, D., Valdez, D., Perez, I., Peelle, D. (2017). *Rochester Early Childhood Assessment Partnership 2016-2017 Twentieth Annual Report.* Rochester, NY: Children's Institute.

Infurna, C. J., Hightower, A. D., Embt, K., Van Wagner, G., Strano, L., Lotyczewski, B. S., Montes, G., MacGowan, A., Hooper, R., Boyle, R., Lubecki, L., Peelle, D. (2018). *Rochester Early Childhood Assessment Partnership 2017-2018 Twenty-First Annual Report.* Rochester, NY: Children's Institute.

Infurna, C. J., Embt, K., Hightower, A. D., Van Wagner, G., Strano, L., Lotyczewski, B. S., Montes, G., MacGowan, A., Hooper, R., Boyle, R., Lubecki, L., Peelle, D., Perez, I., Iadarola, S., Townsend, S. (2019). *Rochester Early Childhood Assessment Partnership 2018-2019 Twenty-Second Annual Report.* Rochester, NY: Children's Institute.

Kim, K., Porter, T., Atkinson, V., Rui, N., Ramos, M., Brown, E., Guman, L., Forry, N., and Nord, C. (2015). *Family and Provide/Teacher Relationship Quality Measures: Updated User's Manual.* OPRE Report 2014-65. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Statistics Kingdom. Retrieved September 15 & September 16, 2022 from http://www.statskingdom.com/170median_mann_whitney.html.

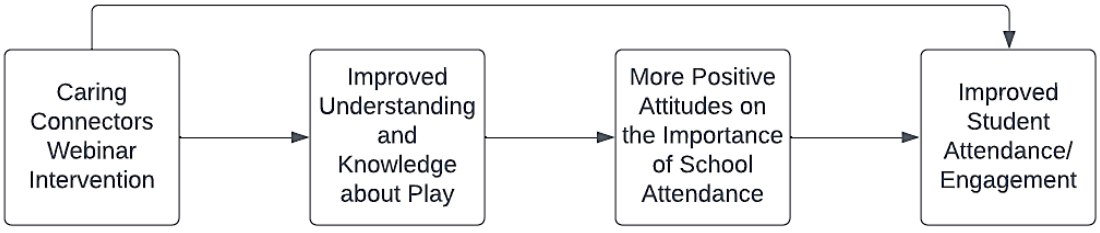
FAMILY ENGAGEMENT: THE CARING CONNECTORS PROGRAM

Caring Connectors Background

The *Caring Connectors* program was developed in Spring 2020 to address the digital access crisis and to support engagement with families of pre-K aged children in the city of Rochester. In Year 1 of this program (2020-21), over 319 families participated throughout school-based and community-based sites. Devices (WiFi and tablets) were distributed to families in need of them, and family engagement specialists worked with families to enhance digital literacy and promote connectedness. In Year 1 of the intervention, we found that attendance rates were higher for children of families who participated in the program (see Duprey et al., 2021).

In Year 2 of the Caring Connectors program (2021-22), we partnered with family engagement specialists (i.e., our "Caring Connectors") to co-develop and implement a series of webinars in spring 2022. The goal of webinars was to educate parents about the importance of play for pre-K children, to improve attendance of pre-K children, and to facilitate engagement with pre-K parents (both among each other and between families and schools). The four webinar topics included "The Importance of Play", "Meaningful Media Play", "Attendance Matters!", and "Planned Play-Why it Matters!".

The conceptual model for our intervention is shown below. Through the webinar series, we hoped that parents would gain an improved understanding and knowledge about play, which would lead to more positive attitudes on the importance of school attendance, and ultimately a shift in behavior that would result in higher levels of pre-K attendance. We also hypothesized that participating in the webinar series could directly lead to better student attendance via other unknown mediators. Our evaluation plan was designed to address each of these changes in attitudes, knowledge, and behaviors.



Evaluation Results

Sample demographics: Approximately 89% of attendees were mothers or stepmothers; 9% were fathers or stepfathers, and 2% had another relationship with the pre-K child (e.g., sister). 87% of attendees cared for another child under age 18 in the household. Additionally, 66% spoke English most in the home, followed by English and Spanish equally (19%), Spanish (9%), and Other (6%).

Table 37. Reasons for Attending the Webinar ($N = 55$)

	Not Important	***Important***	***Most Important***
I am looking for ways to help my child's behavior	3.6%	47.3%	45.5%
I am looking for more ways to communicate with my child	1.8%	32.7%	61.8%
Another parent recommended this to me	26.4%	60.4%	13.2%
I am interested in ways to support my child's learning	0%	13.2%	**86.8%**
My child's teacher recommended this to me	5.7%	37.7%	56.6%
I like that I get paid to attend	46.2%	44.2%	9.6%

Will parents have improved understanding and knowledge of play after attending the Caring Connectors webinar intervention?

A sum score was calculated from four items ("Play is an important part of learning"; "Play is the most important part of pre-K"; "My child's job during pre-K is to play"; "Play prepares my child for kindergarten"). The four items were measured at both pre-test and post-test and were on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*). The resulting measure had excellent reliability (pre-test a = .77; post-test a = .83). High scores on this sum score represented more positive beliefs about the importance of pre-K play.

Findings showed that parents' understanding and knowledge about play in pre-K improved from pre-test to post-test ($t = -5.31$ *(df* $= 18$), $p < .001$) (See Figure 15).

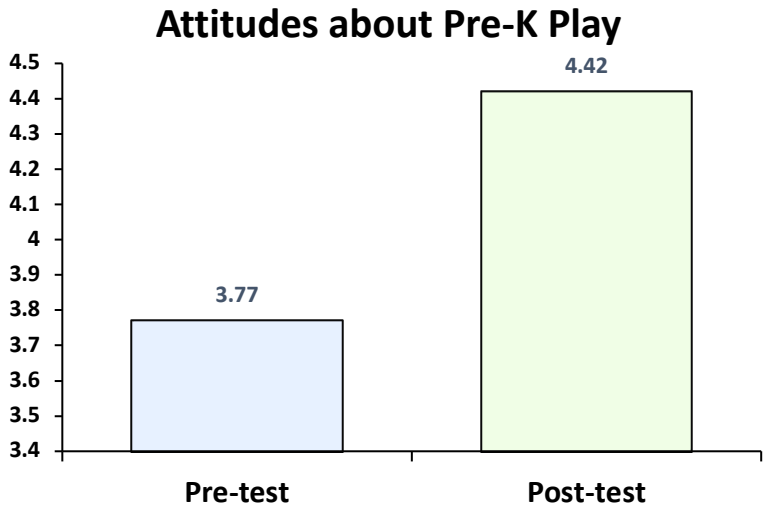


Figure 15. Change in attitudes about pre-K play ($N = 19$).

Is understanding and knowledge about play associated with attitudes on school attendance?

We also found that parents understanding and knowledge about play at Time 1 (pre-test) was significantly associated with items on attitudes about attendance at T1: "*A routine for daily attendance is best*", $r = .29$, $p < .05$; and "*Attendance is important for my child's development*", $r = .29$, $p < .05$.

In sum, at pre-test, parents who had a better understanding of pre-K play were also more likely to value pre-K attendance.

Will families who participate in the Caring Connectors webinar intervention have higher percentage averages at year end compared to those who do not attend?

Attendance data was available for one pre-K agency. In this site, there were 15 students who had at least one parent attend at least one Caring Connectors webinar, and 57 students whose parents did not participate in the webinars. Figure 1 depicts the differences over time in attendance between the two groups. On average, the attendance was higher for children whose parents/caregivers attended these webinars. It should also be noted that this difference seemed to emerge in early April, just prior to the webinar series beginning (and when webinar recruitment was underway), and that this difference seemed to remain and diverge even further throughout the school year.

It is possible that the difference in attendance between Caring Connectors and non-Caring Connectors participants was due to the intervention. However, this difference may also have been due to other factors. For example, it is possible that families who prioritize and value school attendance were more likely to attend the webinar series.

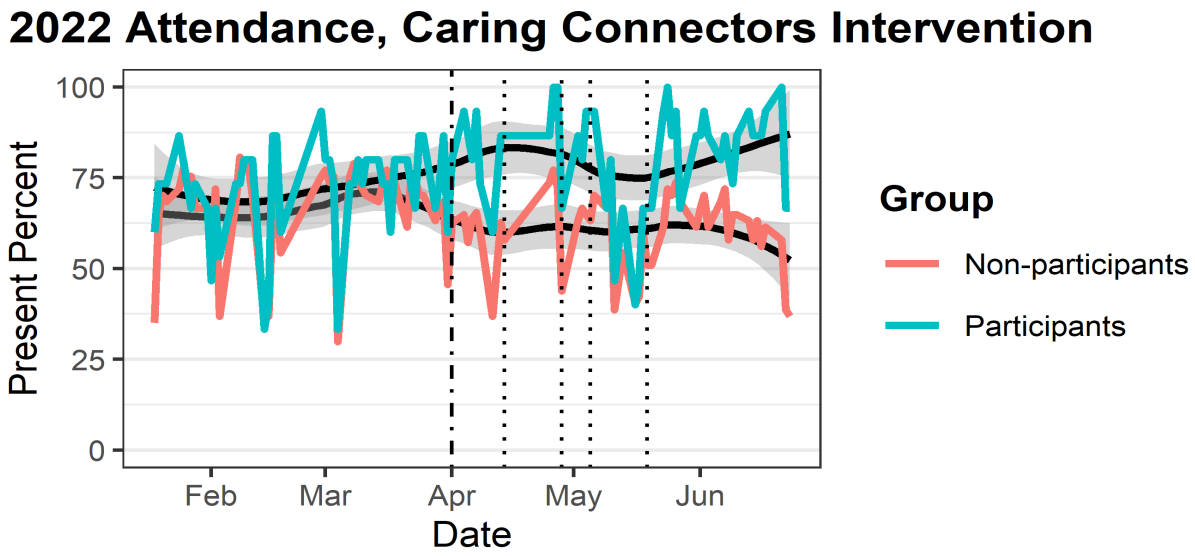


Figure 16. Spring 2022 attendance with differences shown between families who attended Caring Connectors webinars and non-participants. There were 15 participants and 57 non-participants in this school district. The vertical dotted lines represent the times when the webinars were offered. The first dashed-dotted line represents when recruitment began for families.

Focus Group Results

Two focus groups took place, one with teachers (N = 10) and one with parents of pre-K children (N = 5; including 2 pre-K-3 parents, 2 pre-K-4 parents, and a parent of a student in both pre-K-3 and pre-K-4). Groups lasted approximately one hour and were co-facilitated by one Children's Institute evaluator and one pre-K family engagement partner.

Below, we describe the major themes that emerged from the focus groups, drawing comparisons between the teacher and family groups. In the tables below, we color coded parent and teacher focus groups' individual themes by frequency. Due to the different number of participants in each focus group, frequency codes differed by group. Common themes were those discussed by at least half of participants (for parents, 3+; for teachers, 5+); variable themes were those discussed by 2 parents and/or 2-4 teachers; and rare themes were those discussed by only 1 parent or 1 teacher in each group. In the center of each table we display the common themes that were found in both parent and teacher groups (i.e., consensus between parents and teachers). Note there are some conflicting themes due to different participant viewpoints. Quotes are provided below each table.

= Common = Variable = Rare

Theme 1: Family Engagement		
PARENTS	**COMMON THEMES**	**TEACHERS**
Difficulty communicating with teacher	Lack of engagement between parents and teachers	Lack of parent and family engagement
Teacher is improving communication and engagement	COVID-19 restrictions have negatively impacted the connection between families and schools.	COVID-19 limitations impact relationships and family engagement
Parent wishes to know more about curriculum and activities	Parents and teachers feel connected to one another.	Methods of staying connected to families and updating them on their child's learning
Texting or other ways to communicate with teachers would help	Both parents and teachers are using different methods and strategies to stay connected with each other.	Importance of establishing connections
Communication during drop off or pick up times is important		Alternative methods of engagement
Parents wish they had more connection with other pre-K parents and families		Feeling connected to families
Does not feel connected		
Lack of connection due to not being allowed in the physical classroom space		
Parent feels connected		

"... parents not allowed in the building has been extremely difficult for me and for the families. You know, they've never seen the classroom that their children are in. Sure, you know, I've Zoomed from the classroom and showed it to them, but it's not the same as walking in the door and being in the classrooms." – Pre-K Teacher

"I do a monthly activity where... like this month they had to go on a nature walk. I gave them four, um, parks they can go to and what they- the kids needed to do on the walk. And the parents loved it. Because they never even thought about doing anything like that and we had some good things" – Pre-K Teacher

"I really have been working hard to stay connected with the families and, uh, I created a Google Voice account and I try to send texts and pictures out to the parents at least once or twice a week. And I feel like sending them a text message is a better form of connecting and communicating with them, even more so than Seesaw, because they seem to answer right away and they love seeing the pictures from their children" – Pre-K Teacher

Theme 2: Curriculum and Play		
PARENTS	**COMMON THEMES**	**TEACHERS**
Curriculum consists of learning/academic activities	Families need resources to continue their learning outside of school	COVID-19 restriction impacts on play
Curriculum is play-based	Play serves as an important method of learning interpersonal skills and achieving developmental goals	Play as an important way to develop problem-solving skills
Knowing more about the curriculum could help parents engage with children at home	Lack of understanding of the academic side of the play-based curriculum by parents	Lack of universal COVID-19 regulations for the district
Children learn about themselves and others through play		Unrealistic expectations from families
Children learn interpersonal skills through play		Addressing family fears about their child in comparison to other students
Parents don't know about curriculum or activities unless they are proactive and ask the teacher		Addressing student's physical needs for play
		Play as an important way to achieve developmental milestones in multiple domains

"You know, he'll learn, he'll tell me, "Oh, I learned this song," or "I read this book," but other than that, I cannot, whatever he's learning, and I know he's learning, I know. But whatever's he's learning or whatever they're doing in classroom, I don't know honestly. I can't help him more to develop new skills that he's, you know, with reading or with, you know, sounding out words and, you know, identifying the letters." – Pre-K Parent

"I talk about what the play is accomplishing. So, we're not just playing with Play-Doh 'cause Play-Doh's fun. We're actually developing our small muscles that are needed for writing. And, um, you know, I explain to them how coloring with a marker is easier, but to use a pencil is harder. So we start our school year out with markers and transition to pencils as the year progresses, 'cause it's harder to write with a pencil than it is a marker." – Pre-K Teacher

Theme 3: Pre-K to K Transition		
PARENTS	**COMMON THEMES**	**TEACHERS**
Pre-K helps prepare kids for kindergarten by building interpersonal skills including assertiveness	Pre-K serves as an important place to help kids with the foundational skills they need to succeed as they progress socially and academically.	Staff understanding of pre-K curriculum and importance
Pre-K helps prepare kids for kindergarten by learning how to cope with separation from caregiver	Pre-K helps identify students with learning challenges and early intervention to address these issues is crucial.	Building connections between Kindergarten and Pre-K teachers to make the transition easier for students
Pre-K helps prepare kids for kindergarten by building routines	Easy transition to Kindergarten is an important goal for both teachers and parents.	Earlier intervention to address student delays or issues
Pre-K helps prepare kids for kindergarten with academics	Teachers need better support to provide better support to parents and students.	Need for more teachers for the adult to child ratio
Parents feel comfortable about their child going to kindergarten		
Parent receives feedback from teacher about child's kindergarten readiness		
Pre-K can help identify learning issues or if a child needs additional supports		
Support from teachers is needed for a smooth kindergarten transition		
Children should attend pre-K before kindergarten		

"Gigantic piece that we're missing, there needs to be an acceptance, a recognition, from the Rochester City School District that pre-K is part of the district. Because we need gym time, we need, um, to be included in everything that happens in the school. We need the principal to recognize pre-K is a classroom in the school and we are classroom teachers. That we're part of the whole system. That whole piece is ignored." – Pre-K Teacher

"I would say, um, the teacher's support. I know that the teachers are already helping them and guiding them, but having, um... they're the only ones right now that know what this child need, you know, although if I don't ask. You know, um, family support. Just so that it can be easier for the child to, you know, have that transition." – Pre-K Parent

"We were short help all the time. We had a lot of people out. I know we can't help that, but we were helping each other out. So my concern is that next year we're gonna go back up to 18. Um, this year we could help each other out because since enrollment was lower, not all the children showed up, then we can help each other cover for the class. And I'm very concerned about that. Um, having 18 three-year-olds and then just two adults in the room. That's what I'm concerned about meeting our needs for the children." – Pre-K Teacher

Theme 4: Attendance		
PARENTS	**COMMON THEMES**	**TEACHERS**
Attendance is important to maintain routines and provide structure	The implementation of routines is crucial for their continued school readiness.	Major lack of attendance for some students
Some out of school time is also valuable, for example vacations	There's a need for better communication and tracking systems to keep parents and teacher connecting about student's attendance.	Importance of attendance and establishing routines
Parents have a nightly or morning routine to help with attendance		Need for better communication about attendance
Parent has a back-up plan for getting children to school		Lack of district wide attendance
Support with transportation would help with attendance. This includes transportation costs and support when there are appointments or conflicts with school drop-off.		Establishing attendance tracking systems for parents
Parents need more social support and this would help with attendance		Relationship building is important for attendance
Attendance is important to promote a child's learning		Connecting with parents about child's absence (and its impact on learning) is helpful

"... attendance is very important. And it gives them structure. It gives them an idea of how, of a routine of how things are supposed to be coming forward as they grow older into the coming, uh, grades, as they, you know, move into their school year." – Pre-K Parent

"I do also believe that if you aren't in school for reasons like traveling, or family things, I think that it's, that's priceless. You know, we, we try to travel a lot, as much as we can afford, and, uh, and so, my daughter misses quite a bit, but I think she's gaining, you know, education in a lot of

other ways, just by seeing different places, different cultures, different, um, just different scenery than she's used to here, day in and day out." -Pre-K Parent

"...In the past, before COVID hit, we used to have the parents [send] absent notes when they came back. And you would give that to the parents and the parents would be like, "Oh my goodness. My child actually has missed this many days?" – Pre-K Teacher

Theme 5: COVID-19 Challenges		
PARENTS	**COMMON THEMES**	**TEACHERS**
Child struggles with mental health or missed friends during COVID	Better and less distracting technological supports should be provided to continue learning at home.	Lack of universal COVID-19 regulations for the district
Parent struggled with mental health during COVID	COVID-19 serves as a catalyst for the strain on many relationships between students, peers, parents and teachers.	Strained relationship with students
The tablet was difficult to use because of distractions	Hard to explain COVID-19 protocols to students without universal set of regulations for the district.	Lack of technology supports for learning
Child enjoyed using the tablet for class		Need for better communication systems
Parent offering hands-on learning activities helped child and family cope with COVID		COVID-19 regulations limit family relationship building
Child did not understand COVID-19 precautions, ex. Extra testing		Students should have less screen time
Parent struggled financially during COVID		
Some extra supports were utilized during COVID, including screenings or parent mental health resources		

"*And as far as technology… The parents have tremendous difficulties with them. We sent them all home, so we don't have any tablets at school. So our technology, we used to have six iPads per classroom. They took our iPads away. So we have very limited technology in our classrooms. And we had Chromeboxes, which were...A tabletop computer. Which we can't set up, because we don't have any space. So our kids have almost no access to technology and they're gonna go to kindergarten and get their own Chromebox-Chromebook and have never used a mouse before. So that's a- a real challenge. And now what little bit they have been able to use the tablets, we gotta collect them by Friday. So that means no Seesaw for students*

for the rest of the school year. I have a little girl that tested positive today. She has no technology. She can't do Seesaw at home or join our class through Zoom, because she has no technology." – Pre-K Teacher

"... during the COVID, we used a tablet, the one that they also gave us. Um, but he's more of like, he wants, he watching, like, cartoons and stuff, instead of learning. So, I had to take it away, and do actual things with him, come on." – Pre-K Parent

"... the big COVID thing is that its different based on the school you're at. While there should be one set of rules for the district, there is not. And, um, my principal is a rule follower, which I appreciate. And she's very careful on what it is. You know, you're supposed to do this, this, this, A, B, and C, and that's what we do. My kids, like I said earlier, are still socially distanced, they're still, you know, sitting in a spot, at the same spot, every day. So that's the one part about COVID." – Pre-K Teacher

Theme 6: Technology Use		
PARENTS	**COMMON THEMES**	**TEACHERS**
Parent tries not to use much technology with child	Technology as a way to continue learning at home.	Need for technology to advance learning while at home
The CC-provided tablet was used primarily during remote learning		

"*I have to give kudos to the district and to early childhood for the take home kits that we've been giving out to... those materials that they give us to give to the families to keep are- have been incredible. And, um, even the things they gave us for the classroom, like everybody get- got their own sandbox in the beginning of the school year. Those kinds of things have been absolutely incredible and I hope that some of that will continue when we get into the, um, life... living with COVID. You know? I hope we get to keep giving them things like that to take home."* – Pre-K Teacher

Conclusions and Recommendations

In conclusion, we found preliminary evidence that a school partner-driven intervention to increase family engagement was effective in increasing child attendance and positive parent/family attitudes on play. Additionally, parents and teachers revealed critical insight on their knowledge, attitudes, and beliefs about play, attendance, and family-school communication and engagement.

Given findings earlier in the report on decreases in attendance, and significant associations between attendance and important student outcomes, we believe it is important to continue this or similar interventions that have potential to increase engagement and attendance.

Plans for Year 3 of the Caring Connectors intervention are underway, and details will be forthcoming in the next annual RECAP report.

CONCLUSIONS AND RECOMMENDATIONS

The conclusions from the 2021-2022 annual RECAP evaluation year are numerous and are provided at length in each of the individual chapters of the report. The results of our evaluation and the well-being of students, families, and classrooms in the Rochester pre-K system can be framed with the concept of *resilience.* Resilience is defined as an individual or system (i.e., the pre-K system) successfully adapting after significant adversity. Indeed, our community and the children in it underwent significant adversity during the COVID-19 pandemic. Despite this, there are several findings that spotlight potential resilience among our children and schools. Importantly, *classroom quality maintained its excellent rating* via the ECERS-3 completed by independent and reliable classroom observers. This is particularly notable given the fact that approximately 30% of pre-K teachers were new to the prekindergarten system. Additionally, evidence of differences in social and emotional skills between pre-COVID-19 (i.e., 2018-2019) and post-COVID-19 (i.e., 2021-2022) cohorts are mixed and inconclusive.

There are also several findings that spotlight the need for continued growth and support to foster resilient outcomes. For instance, kindergarten readiness among our four-year-old students dropped to 44%. That is, according to the COR+ assessment, only 44% of these children were found to be kindergarten ready in the spring of the pre-K-4 year. Additionally, we found that, compared to the 2018-19 cohort, the 2021-22 cohort had significantly lower scores across most subscales of the COR+ assessment. Alternatively, we did not find these differences among 3-year-olds, which may either signify greater resilience in this grade or, more likely, bias caused by differences in populations (for example, it is possible that the 2021-22 cohort of three-year-olds had fewer psychosocial risk factors than 2018-19 three-year-olds). On attendance, we similarly found room for improvement, with only 41-43-% of pre-K students attending 80% or more days. Importantly, attendance was linked with student outcomes including kindergarten readiness. Last, it is important to note that we saw some differences in social-emotional growth between boys and girls from different ethnic groups. This analysis revealed the urgency of prioritizing social-emotional development among Latina girls.

RECAP can be thought of as well as a resilient system that is interwoven with aspects of continuous improvement via professional development and community-based evaluation methods. The continuation of support for RECAP (with funding and other support) means an investment in the resilience and wellbeing of our young children and families. This is particularly important this year, as the pre-K system is still facing several hurdles, including high rates of teacher attrition and turnover. However, the strength and resilience of the RECAP system can be seen with our consistent scores in classroom quality – maintaining a 'good' score despite the hurdles brought by COVID-19; continuation of RCSD Early Childhood Education Department leadership; and the maintenance and continued improvement of RECAP assessment processes. However, consistency

of support is needed to maintain a quality system. Notably, New York State Education Department pre-K per-pupil funding has not increased since 2011.

Based on our conclusions, we have several recommendations for the pre-K system to continue to improve resilient outcomes for children, families, early childhood education centers, and schools:

- Continued focus on social and emotional learning via the Pyramid Model of implementation.
- The continued investment in bilingual classrooms – targeted programs which have been adapted to meet the needs of the specific demographics of RSCD families.
- Continued focus on professional development, which is a hallmark of the RECAP system. We encourage professional development that is focused on improving family communication; working with children on specific academic domains including Language, Literacy, & Communication, and Mathematics; and strategies for enhancing attendance.
- Similarly, based on our ECERS-3 results, we recommend focused professional development on classroom quality to improve scores relating to Learning Activities and Space and Furnishings (with the acknowledgement that some of the deficits in these areas relating to accessibility of materials may have been due to COVID-19 precautions).
- Continued funding and implementation of Caring Connectors to improve attendance and play-centering via family engagement.
- Implementation of strategies to improve kindergarten readiness. Based on the findings of the report, we suggest emphasizing attendance, particularly as we found that students with higher attendance were significantly more likely to be kindergarten ready in spring of their pre-K-4 year. There also should be an emphasis on preparing boys, who had significantly lower rates of kindergarten readiness compared to pre-K girls.
- Support for recruitment and retention of staffing, including support for a teacher pipeline. We note that the turnover from early 2020 to mid-2022 has been enormous, with between 1/4 and 1/3 of elementary principals leaving the district. Additionally, approximately 30% of lead teachers turned over in 2021-2022. These high attrition and turnover rates will likely continue for the foreseeable future.

Looking ahead, we are also pleased to report that RCSD recently received a mental health grant via the NYS Office of Mental Health to deliver trauma-informed social-emotional and mental health services beginning in 2022-23. This effort is informed by RECAP's results.