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Teaching Strategies' Creative Curriculum Implementation and Ecosystem Engagement Study (CCIEE): Technical Report 2

March 2026

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Grateful acknowledgment is made to the districts, schools and classrooms that participated in this study. In addition, the authors would like to thank Facundo Luna Mallea for his invaluable research analyses support for this report and to Julie Macleod for her coordination work throughout data collection. This work would not be possible without the partnership with Teaching Strategies, which provided a grant to support the work but also worked closely with the research team to track all intervention and sample aspects relevant to the research.

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Suggested citation: Harmeyer, E. & Nores, M. (2026). Teaching Strategies' Creative Curriculum Implementation and Ecosystem Engagement Study (CCIEE): Technical Report 2. New Brunswick, NJ: National Institute for Early Education Research.

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Key Findings

- ✓ Most teachers report *The Creative Curriculum* was easy to implement, engaging, and helped teach academic skills.
- ✓ Teachers in the treatment group were more likely to receive curriculum-related PD monthly at baseline and follow-up.
- ✓ Training from *Teaching Strategies*® was generally well received, with teachers in the treatment group reporting higher satisfaction and perceived utility of the PD.
- ✓ Time constraints were the most frequently cited barrier to fully engaging in PD or implementing strategies, especially among treatment group teachers.
- ✓ Teachers most frequently used Teaching Guides for lesson planning, Intentional Teaching Cards™ for small group differentiation, and Mighty Minutes® for transitions.
- ✓ Book Discussion Cards were commonly used during read-alouds to facilitate student engagement and comprehension.
- ✓ Teachers report using multiple strategies to communicate with families.
- ✓ Coaches used live observations and verbal feedback most frequently. Treatment coaches leaned more on verbal feedback, while control coaches were more likely to use peer observation and video-based strategies.
- ✓ All coaches used the Creative Curriculum Fidelity Checklist and assessment tools like ECERS-3 and TSG.
- ✓ Coaches provided a range of supports, but "on-the-fly" coaching and modeling in classrooms were particularly frequent strategies.
- ✓ Treatment group teachers reported higher levels of personal accomplishment and energy, and lower levels of emotional exhaustion compared to control group teachers at follow-up.
- ✓ The ability of coaches to engage in coaching activities appears diluted, as their role requires them to engage in other things such as assisting in the classroom.
- ✓ Parents of children in the treatment group reported significantly higher frequencies of engaging their children in math and language activities at home.

Introduction

The National Institute for Early Education Research (NIEER) conducted a Randomized Controlled Trial (RCT) of the *Teaching Strategies*® ecosystem from 2021 through 2024. This study focused on understanding the impact of implementing the ecosystem with coaches and teachers in the New Jersey preschool program (for full details on the study, see Nores et al., 2025). For the purposes of this study, teachers and coaches were randomized to a professional development and coaching plan implemented by *Teaching Strategies*® that involved providing teachers with professional development to support engagement with the ecosystem, including *The Creative Curriculum*® and *GOLD*®, and supporting coaches with their coaching skills to bolster teacher use of the ecosystem. The sessions included learning about the components of the new Teaching Strategies ecosystem solution, examining the foundations of curriculum and assessment, learning how Teaching Strategies solutions aid teachers in carrying out effective practices in the classroom and beyond, creating developmentally appropriate and meaningful experiences for children in their care, implementing formative assessment and reflecting on the teaching and assessment cycle, responsive planning, implementing the ecosystem to fidelity, and more.

This technical report provides a summary of the surveys that were administered to teachers and coaches throughout the study: This includes two surveys administered to teachers in the first school year of the study (2021-2022) and a follow-up survey administered toward the end of year three (2023-2024). Coaches were also provided with a survey in year three. In addition, data from teachers who were part of a group of classrooms representing "practices as usual" across New Jersey (defined as a synthetic control group) were also surveyed.

Teaching Strategies' Creative Curriculum Implementation and Ecosystem Engagement Study (CCIEE)

The Teaching Strategies Ecosystem

The *Teaching Strategies*® ecosystem is a comprehensive, research-based digital solution designed to support high-quality early childhood education by combining curriculum, assessment, professional development, and family engagement into a cohesive, connected system. It is grounded in two overarching theories of change—that these resources must be integrated into an end-to-end ECE system and that the effectiveness of these components is mediated by the behavior of the adults in the system. The ecosystem is built to empower administrators, educators, and families to drive positive learning outcomes for young children.

The five components of the ecosystem include:

1. Comprehensive and integrated approach. The ecosystem provides an end-to-end solution, ensuring that all essential components of early learning—curriculum, formative and summative assessment, teacher support, and family engagement—are seamlessly connected.
2. Research-based, practice-proven. Rooted in evidence-based practices, the ecosystem incorporates high-quality curriculum (*The Creative Curriculum*), authentic assessment (*GOLD*), professional development, and coaching to enhance instructional effectiveness.

3. Empowering educators. Teachers receive ongoing professional development and coaching, enabling them to implement developmentally appropriate and culturally responsive teaching practices with fidelity.
4. Family engagement at the core. The ecosystem fosters strong family-school partnerships through in-platform family sharing and add-on tools like *ReadyRosie*®, helping families actively participate in their child's learning journey.
5. Actionable data reporting. Built-in assessment and analytics provide educators and administrators with actionable insights to drive informed instructional decisions and measure program effectiveness.

Rather than treating early childhood education as separate, disconnected components, Teaching Strategies integrates all components into one unified system. This approach aims to ensure that curriculum implementation is supported by strong assessment practices, professional learning is aligned with real classroom needs, and families are engaged as partners in their child's development. Through this ecosystem, Teaching Strategies aims to support early learning programs build sustainable, high-quality education systems that prepare children for success in school and beyond. For further details on the ecosystem components and theory of change, see Technical Report 1 (Nores et al., 2025).

Coach and Teacher survey components

This report focuses on the experiences of teachers and coaches. Teachers were surveyed on their experience and qualifications, some curriculum fidelity components, parent engagement, the amount of training and professional development they received, and demographics. The coach surveys requested information on experience and qualifications, typical interaction and coaching strategies used with teachers, practice and modeling strategies used with teachers, and coaching goals. Coaches also reflected on their successes in areas such as assessment and curriculum implementation. The study design and components are described in Technical Report 1 (Nores et al., 2025).

Study Procedures

Teacher surveys were distributed in the winter of 2022 and collected throughout the rest of the school year, and again in the spring of 2024 and collected through the remainder of the school year. A 70% (n=123) response rate was attained at baseline and 90% (n=156) at follow-up. Teachers received a gift card of $50 for completing these surveys at each time point.[1] Of note, the winter 2022 baseline survey was administered to teachers in the treatment group after they had already started to receive some professional development on the ecosystem.

Sample characteristics

At baseline, there were 9 coaches assigned to the teachers (5 in the control group; 4 in the treatment group). One treatment coach from this initial group retired at the end of year two. At

[1] There were 177 teachers at baseline and 174 at follow up, with some churn in teachers, as reported in Nores et al. (2025).

follow-up, many schools had multiple coaches working in larger schools, and in total, 13 coaches were assigned to the teachers (8 in the control group; 5 in the treatment group).

Teachers in the study were highly experienced and well-credentialed. Teachers in the treatment group had significantly more experience than control group teachers ($p < .01$) but were otherwise demographically comparable. Table 1 reports teacher characteristics for the control and treatment groups (taking into account churn between pre and post-test and bringing in information at post-test for teachers that did not respond to the baseline surveys) for the 125 teachers in the study. Baseline and post-test demographics are included in Appendix A.

Table 1. Teacher characteristics by Control vs. Treatment groups.

Variable	Control				Treatment				P-value
	N	Mean/ Percent	SD	95% CI	N	Mean/ Percent	SD	95% CI	
Female	55	87.30%			57	91.94%			0.328
Male	2	3.17%			3	4.84%			
Missing	6	9.52%			2	3.23%			
Teaching experience (years)	56	6.21	6.10	4.58-7.85	61	11.18	8.89	8.90-13.45	0.001***
Missing	7				1				0.331
Race/ethnicity	63				62				0.012**
Black, African, or African American	23	36.51%			10	16.13%			
Hispanic/Latino	15	23.81%			22	35.48%			
White	10	15.87%			21	33.87%			
Asian, Multi-racial & Other	9	14.29%			6	9.68%			
Missing	6	9.52%			3	4.84%			
Education	63				62				0.427
Associate degree (2 year)	1	1.59%			1	1.61%			
Bachelor's degree (4 year)	31	49.21%			33	53.23%			
Master's degree	22	34.92%			25	40.32%			
Doctorate degree	1	1.59%			1	1.61%			
Missing	8	12.70%			2	3.23%			

Notes: P-values for chi-squared tests of independence. Notes: P-values for chi-squared tests of independence. The table includes demographics for all classrooms, regardless of the data collection time-point, as the baseline response rate was lower. For teachers without post-test data, but retained throughout the study, pre-test survey demographic data is used. Closed classrooms are not included, although results are similarly aligned. ***p<0.01, **p<0.05, *p<0.1

Coach groups were also quite comparable. Average years of experience as a coach was 7.7 years at baseline (7.8 in the control group and 7.5 in the treatment group). Their experience in early childhood was on average 19 years (17.8 in the control group and 20.5 in the treatment group), which shows comparable tenure and commitment to the field. At follow-up, average coach experience was 11 years (13 in the control group and 9 in the treatment group). Experience in early childhood was on average 20.8 years (20.4 in the control group and 21.3 in the treatment group).

Teacher Surveys

Baseline Surveys

A total of 123 teachers responded to the survey at baseline across the two study groups and the comparison "practice as usual" synthetic group. These teachers had an average of 9.4 years in

their current role, and the majority (98.4%) were female. The breakdown of baseline differences between treatment and control group are reported in Table A.1.

In year 1 of the study, the majority of teachers in the sample across all three groups reported having completed 12 to 23 (39.0%) or 24 to 50 (35.8%) hours in early childhood education in the past 12 months. This breakdown by treatment and control groups follows in Table 2.

Table 2. Training hours in early childhood education reported for the past 12 months, Control vs. Treatment.

	Control		Treatment	
	Freq.	Percent	Freq.	Percent
None	0	0.00	0	0.00
Less than 12 hours	2	5.13	3	6.66
12 to 23 hours	17	43.59	17	36.96
24 to 50 hours	13	33.33	20	44.44
51 to 75 hours	4	10.26	3	6.67
More than 75 hours	3	7.69	2	4.44
Total	39	100	45	100

Note: Synthetic is excluded. Pearson chi2(4) = 1.61, Pr = 0.807.

The districts selected for the study were using Creative Curriculum. In the "business as usual" or "synthetic' group, teachers identified a few other curricula in use in their classrooms, including High Scope, Tools of the Mind, and what teachers in one district defined as a school-created curriculum (typically a version of one of the other curricula adapted for the district, in accordance with the state preschool requirements and layered over one of the other curricula).

Table 3. What curricula are being used in your preschool classroom? (Full sample)

	Freq.	Percent
High/Scope	9	7.31
Tools of the Mind	4	3.30
Creative Curriculum	106	86.2
School-Created Curriculum	2	1.62
Other	15	12.3

Note: Categories are not mutually exclusive. N= 123.

The majority of teachers (88.5%) identified that their curriculum had an associated child assessment tool that they used in their classroom, with most respondents identifying Teaching Strategies *GOLD* as the formative assessment tool utilized alongside their curriculum (75.7%). The remaining 11.5% reported using a separate tool or not knowing. All groups looked similar in their responses to this question. In terms of other assessment tools, most teachers identified that their school used a variety of other mechanisms to assess children, including child find/screening (66.7%), progress monitoring for program/curriculum goals (69.10%), informing curriculum/ instruction (60.2%) and progress monitoring for IEP goals (49.6%).

Teachers were also asked to report on their perceptions of the curriculum they use, and when using *The Creative Curriculum*, which aspects of the curriculum they used and how often (Table 4). Most teachers agreed or strongly agreed with the statement that the curriculum they currently use is easy for them to implement (88.9%). Most teachers also agreed/strongly agreed

that their curriculum teaches their students academic skills (84.6%) and is engaging for them (87.5%). Teachers did not hold a strong perception that their curriculum meets the needs of students with special needs (53.9% of teachers agreed/strongly agreed with this statement), and fewer agreed/strongly agreed that it meets the needs of English Language Learners (76.8%). There were some differences in responses to these questions as a function of treatment or control group: For example, teachers in the treatment group were significantly more likely to agree that their curriculum teaches students to control emotions and behaviors, and that it is engaging for students.[2] Some further differences emerged in relation to the synthetic group, also in favor of the treatment group (Appendix Table A.3).

Table 4. How accurately do the following statements describe the curriculum you currently use? Control vs. Treatment.

	Control			Treatment			
	Obs.	Mean	Std. dev	Obs.	Mean	Std. dev	P-value
Is easy for me to implement	30	4.33	0.96	36	4.47	0.70	0.499
Is at the right level for the majority of my students	30	3.97	0.93	36	4.14	0.80	0.421
Teaches my students to control emotions and behaviors	30	3.87	0.90	36	4.33	0.76	0.025**
Teaches my students' academic skills	30	4.10	1.06	36	4.47	0.61	0.079*
Is engaging for my students	30	4.10	0.84	36	4.44	0.61	0.059*
Provides differentiated materials to meet the needs of all of my students	30	3.97	1.03	36	4.25	0.69	0.189
Meets the needs of students with special needs	29	3.45	1.15	36	3.78	0.87	0.193
Meets the needs of English Language Learners (ELLs)	29	3.93	1.07	36	4.19	0.71	0.238

Note: Synthetic is excluded. Mean values are calculated based on the following Likert Scale: Strongly disagree=1, Disagree=2, Neither agree nor disagree=3, Agree=4, Strongly Agree=5. Excluded 'Don't know'. ***p<0.01, **p<0.05, *p<0.1. N=66.

Most teachers reported that they receive professional development related to their curriculum usage monthly (39.1%) or a few times per year (44.8%), with very few respondents denoting that never receive professional development (0.95%), once upon hiring (4.8%) or do so only annually (10.5%). There were some differences by group: Teachers in the treatment group were significantly more likely to denote that they received this professional development monthly than both control and synthetic teachers (see Table 5). As noted, treated teachers had already begun their professional learning experiences with Teaching Strategies at the time of taking this survey.

[2] Because this survey was administered in the winter of 2022, after teachers in the treatment group had started to receive some professional development on the curriculum, it is feasible that some of these differences emerged as teachers participated in these learning experiences. However, PD take up was slow as reported in Nores et al. (2025).

Table 5. How often do you receive training and/or professional development that is related to your curriculum usage? Control vs. Treatment

	Control		Treatment		Synthetic	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Monthly	10	33.33	26	72.22	5	12.82
A few times a year	16	53.33	11	27.78	21	53.85
Annually	3	10	0	0.00	8	20.51
Once upon hiring	1	3.33	0	0.00	4	10.26
Never			0	0.00	1	2.56
Total	30	100	36	100.00	39	100.00

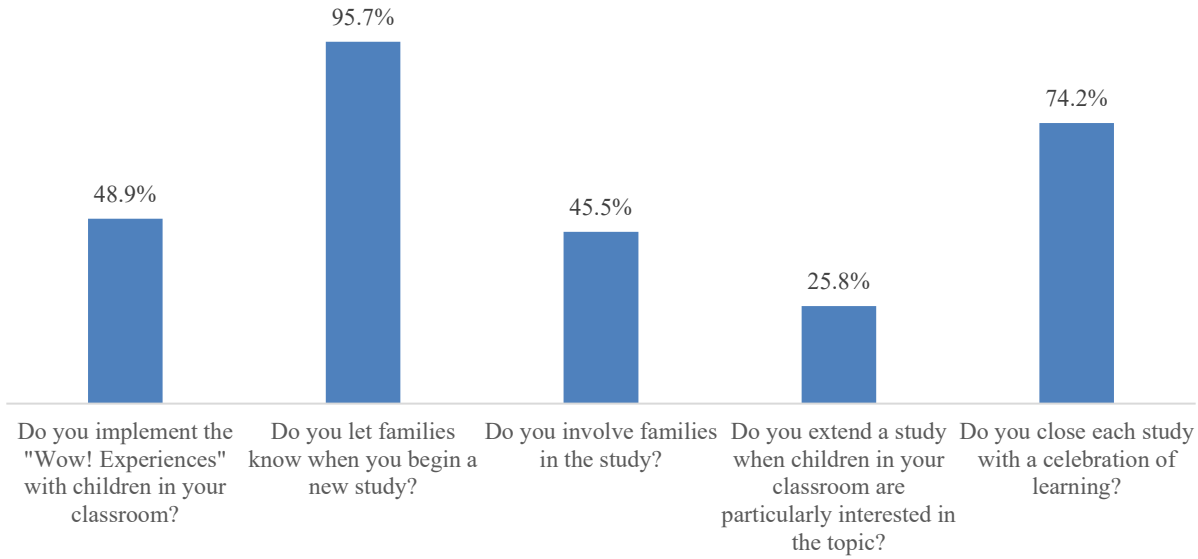
Note: Comparison between Control vs Treatment, Pearson chi2(3) = 12.05, Pr = 0.007. Comparison Synthetic vs. Treatment, Pearson chi2(4) = 31.059, Pr = 0.000.

Finally, at baseline, teachers who used *The Creative Curriculum* were asked to reflect on which aspects of their curriculum they used most often, and how. We asked teachers if they implement studies (e.g., Balls study, Buildings study, Trees study, Wheels study, etc.)—all respondents who answered this question confirmed they use studies. As a follow up, we asked teachers to describe how they prepare to start a study, if applicable. The most common response was that teachers prepare materials or gather new materials (54.4% of respondents). Teachers mentioned different methods for this—from reaching out to parents, to reading through the book list and preparing to swap out centers. Teachers also reported that they review the teaching guide and begin preparing lessons (35.4%) and send out a parent letter (30.4%). Other strategies included voting with students or gauging their interest in the upcoming study (16.5%), using a KWL chart/web of ideas or other study introduction (19.0%), and planning with other teachers (3.80%). Many teachers reported they engage in multiple of these strategies. For instance, one teacher wrote:

> *"Send home the Family letter, review the preparation information of the new study, purchase, or request materials to support the learning environment. If possible, create learning opportunities outside of the classroom or have guest visitors available to support the new study."*

About 96% of responding teachers reported that they inform families "often" or "always" when they start a new study (Figure 1; Appendix Table A.4). A quarter of teachers reported engaging in extending a study when children are particularly interested in a topic (25.8%). Approximately half of teachers reported using "Wow! Experiences" with children (48.9%) and involving families in a study (45.5%). Around three-fourths (74.2%) included a celebration of learning at the end of a study. Table 6 reports some differences between the treatment and control groups. Most notably, teachers in the treatment group were significantly more likely to extend a study when children are particularly interested in a topic.

Figure 1. Use of Creative Curriculum. Full sample



Note: Sample includes only those who use the Creative Curriculum (N=89). Figure shows the percentage of teachers who agree/strongly agree with each statement.

Table 6. Use of Creative Curriculum: **Control vs. Treatment**

	Control			Treatment			P-value
	Obs.	Mean	Std. Dev	Obs.	Mean	Std. Dev	
Do you implement the "Wow! Experiences" with children in your classroom?	30	2.90	0.84	36	2.86	0.83	0.852
Do you let families know when you begin a new study?	30	3.93	0.25	37	3.81	0.52	0.241
Do you involve families in the study?	28	2.68	0.94	34	3.00	0.98	0.198
Do you extend a study when children in your classroom are particularly interested in the topic?	30	1.97	0.72	37	2.54	0.90	0.006***
Do you close each study with a celebration of learning?	30	3.57	0.90	37	3.38	0.92	0.404

Note: Sample includes only those who use the Creative Curriculum in the treatment and control groups (N=67). Mean values are calculated based on the following Likert Scale: Never=1, Sometimes=2, Often=3 and Always=4. ***p<0.01, **p<0.05, *p<0.1. N=67.

Teacher baseline practices in their own words

Finally, in the baseline surveys we asked teachers to describe some of their practices, including how they communicate with parents and use different elements of the curriculum. First, we asked teachers to describe: *"What do you typically share with parents/caregivers about their child's learning and progress?"* We coded these open-ended responses (n=123) and identified several common themes. The most common response described sharing with parents their children's

academic and social-emotional progress, either through assessments or report cards, with 87% of teachers describing these aspects in their responses. For example, one teacher noted:

> *"I formally meet with parents of my students four times in the school year. During this time I share the Family Conference Form from Teaching Strategies GOLD assessment tool. I use the Family Conference Form to share detailed information about where their child is in their learning and development that specifically highlights their strengths. I then speak to parents about areas of their learning and development that we are or will be working towards. I provided resources for families to assist with their child's learning and development such as TS GOLD Learning Games which has related objectives that ties into areas that were addressed."*

Other common responses included sharing concerns/areas for improvement (21.1%) and student portfolios/pictures of work/completed work (11.4%). Teachers also shared that they gave families ideas for supporting children at home (8.1%) and daily activities taking place in the classroom (8.1%)[3]. Many teachers reported using available ecosystem resources to engage families. As one teacher noted: *"I share activities located in teaching strategies, When we have parent teacher conferences parents are able to see the family report."* We also asked teachers to describe how they include parents in the children's achievements and how they plan to support them. The majority of teachers (62.8%) responded that communication was key, through *ClassDojo*, email, text messaging, or at pick up and drop off.

Teachers also noted that they made efforts to invite parents to volunteer and/or complete demonstrations in class (11.6%), connected them with activities to support their children at home (either through *ReadyRosie* or other mechanisms; 39.7%), and through sharing their children's progress, either with report cards or discussion of goals/accomplishments (31.4%). Other themes that emerged included communicating with conferences (19.8%), photo updates of children (15.7%), and newsletters (10.7%). Many teachers had multiple strategies. One teacher noted:

> *"Meet parents every marking period. Talk about the child's progress and next steps. Plan through Studies, provide the family letters of each study and shows what vocabulary and topics we will talk about. Family members help to collect the materials for studies. Invite parents as visitors to talk about their experiences of the topics."*

We were also interested in learning how teachers know that children are making progress in language development. While most teachers identified one or more ways in which they do this, the most common response was the use of *The Creative Curriculum* (e.g., objectives 37 and 38), the use of *GOLD* and the color bands provided with this tool, or the use of the Snapshot Report/Development and Learning Report provided in *SmartTeach* (47.2%). Other common responses included observations (31.7%) and collecting other types of assessment data (e.g.,

[3] Percentages on qualitative responses do not add up to 100% as many teachers described multiple strategies or usages of the curriculum, and thus had responses coded for multiple themes.

outside of a tool provided by the curriculum, 24.4%). Many teachers also reported they talk with children (20.3%) or provide other opportunities for them to talk, such as during large group time, so that children can express language (9.7%). As with prior open-ended questions, teachers provided responses largely indicative of holding many strategies for assessing, and that they lean heavily on the curriculum and provided assessment tools to gather child information. A teacher noted:

> *"In our Teaching Strategies Gold assessment, children are placed on a color band. After I talk with the child and take anecdotal notes, I will place them on the corresponding color band area. I will assess language a few times before each scoring period. I can check to see how the child develops by running an individual child report to see progress."*

In the second set of baseline surveys, teachers were asked more specifically whether they used *The Creative Curriculum*; if so, we asked them to elaborate how they used different components of the curriculum. When asked how they use Teaching Guides, the majority of teachers (70.9%) noted that they used these to plan their daily activities/lesson plans. Most teachers noted these were incredibly helpful in planning how their days looked, with one teacher stating: *"I use teaching guides daily, it is a support because these guides are complete and detailed plans to investigate, explore and have experiences to promote development and learning."* However, some teachers did not find these as useful for daily planning: *"I only use them for the question of the day"* and "*The teaching guides are helpful for lesson planning, however they don't give enough support for labs or HOTS [higher order thinking skills]*."

Other themes identified in the use of Teaching Guides included planning for or implementing the current study (27.9%), communicating/informing parents about current classroom activities, and preparing materials (8.1%). As with other questions about teaching practices and curriculum, teachers noted various uses for the Teaching Guides. One teacher stated:

> *"I use the Teaching Guides from The Creative Curriculum to plan my daily instruction. The Teaching Guides provide me with what I need to carry out each component of the day. I use the guide to prepare all curriculum resources along with support materials prior to the delivery of the lessons.*
>
> *The guide is a tredmouds [sic] resource that assists me with guidance during a study. At the start of a study, I send out the study newsletter to families from the teaching guide. I also include an additional letter that may include a family project and/or other opportunities for family involvement throughout the duration of the study as suggested from the guide."*

Teachers were also asked to describe how they used Intentional Teaching Cards™. Most teachers (77.0%) reflected that these were most useful to planning and implementation of small groups. Other common themes in these responses involved using the cards to differentiate instruction (13.8%) and to scaffold instruction for students (6.9%). As one teacher noted:

> *"The ITC cards also provide me guidance when teaching activities for my students. They provide the primary objective along with other objectives related. They also specify how to reach all students while engaging them with scaffolding. I engage them at their level prepared to move up or down the sequence."*

Teachers were also asked how they used the Mighty Minutes®. Most teachers (81.6%) reported that they use these for transition time or as a way to "fill time" between activities. Others reported using them during large group time (25.3%), small group time (6.9%) and morning meeting (16.1%). As one teacher reflected, these provide opportunities for children to learn during times of transition:

> *"I use Mighty Minutes anytime and anywhere everyday I use it as a transition between different activities, also in Music and Movement activities. They are very effective in inspiring learning through songs, rhymes and games."*

Finally, teachers shared how they use the Book Discussion Cards in a variety of ways to support instruction. The most common theme amongst the responses was that teachers used them during stories/read-alouds, with 72.4% of teachers noting they used them in some capacity during read-alouds. One teacher noted: *"I use them to guide important read Aloud books so that the students become familiar with text, reading format and the importance of reading."* Another common usage for Book Discussion Cards was to ask questions during the read-alouds, with 37.9% of teachers identifying this as an important use of the cards. Teachers often reflected that these questions help guide the conversations:

> *"Book Discussion Cards are used for specific stories. There are certain targets to ask children during the first, second, and third read alouds. I use the book discussion cards when the lesson calls for it. I am able to ask specific questions regarding the story that help guide student responses. I lead but allow the students to be a part of the conversation."*

A few teachers (6.9%) noted that they used Book Discussion Cards only on occasion, rarely, or not at all. There were varied reasons for this. For example, a teacher mentioned perceiving the associated books as too difficult for their students, and another that their district did not allow use of those books. A teacher noted: *"I rarely use them, as I don't have access to some of the books, other books are banned in the district (fairy tales and folk tales with violence), and some books are not particularly engaging for the children."* Other common uses for the Book Discussion Cards included to plan for/before the read-aloud (19.5%), to support vocabulary/learning new words (26.4%) and after the story (10.3%).

End of Study Surveys

During the final year of the study (school year 2023-2024), we provided teachers with a survey with similar questions to those asked in the first year, with 157 responding to the survey. At this point in the study, Teachers reported an average of 9.2 years in their current role,[4] 35 hours of training in ECE, and the majority (95.5%) were female. There were some differences by group at post-test, with teachers in the treatment group holding more years of teaching experience (11.21 years on average) than the control group (Appendix Tables A.5 and A.6). In terms of total training hours in early childhood completed during the past 12 months, groups again looked similar, with the majority having completed 12 to 23 hours (33.76%) and 24 to 50 hours (38.22%). There were no significant differences between treatment, control, or synthetic groups in terms of these hours (See Appendix Tables A.7 and A.8). Characteristics of the full sample are included in Table 7.

Table 7. Approximately how many total training hours in early childhood education have you completed during the past 12 months? Full sample

	Freq.	Percent
None	2	1.27
Less than 12 hours	12	7.64
12 to 23 hours	53	33.76
24 to 50 hours	60	38.22
51 to 75 hours	14	8.92
More than 75 hours	16	10.19
Total	157	100

Most of the teachers at follow-up reported holding a bachelor's degree (55.41%) or master's degree (42.04%) as their highest level of education, which are quite high rates for the early childhood field (Table A.9). There were no significant differences between groups in terms of these credentials (Tables A.10 & A.11). Finally, in year 3, the racial background of teachers looked somewhat different at follow-up in the three groups. The full sample included 24.2% of teachers who identified as Black/African-American, 27.5% that identified as Hispanic/Latino, 40.52% who identified as White, 1.31% who identified as Asian, 3.27% who identified as Multi-Racial, and 3.27% who identified as Other (the full sample breakdown is shown in Appendix Tables A.9, A.10 & A.11). The treatment group only showed differences in race/ethnicity relative to the synthetic group (Appendix Table A.11) with around 75% of the synthetic group identifying as White.

We asked teachers at follow-up to provide more information about their assessment practices and processes used. As at baseline, most teachers reported using an assessment tool associated with their curriculum (90.4%), and of those teachers, the majority (75.9%) reported using *GOLD* (Table 8). The most commonly reported preschool child assessment tools/processes

[4] These percentages differ from those in technical report 1, as these include all teachers across the control, treatment and synthetic groups, and because data missing in the year 1 survey was complemented with data from this survey for analyses in Nores et al. (2025).

included Child Find/Screening (70.7%) and informing curriculum/instruction (61.8%). There were no statistically significant differences across groups (Appendix Tables A.12. – A.15.).

Table 8. Does your preschool curriculum have an associated child assessment tool that you use? For those using an associated assessment tool, which do they use? Full Sample

	Freq.	Percent
Use of an associated assessment tool		
Yes	141	90.38
No, we use a separate tool	13	8.33
Unknown	2	1.28
Total	156	100
Assessment tool used		
Teaching Strategy Gold (TSG)	104	75.91
Other	33	24.09
Total	137	100
*Preschool child assessment tools and/or processes does your school/site use**		
Child Find/Screening	111	70.70
Informing curriculum/instruction	97	61.78
Progress monitoring for IEP goals	85	54.14
Progress monitoring for program/curriculum goals	85	54.14
All of the above	50	31.85

Note: One respondent said 'yes' but did not give any raw response; this was categorized that as Other. *Categories are not mutually exclusive. N=157.

At follow-up we also asked teachers questions about the curriculum, including implementation and their perceptions on how it meets the needs of their students. The majority of teachers agreed/strongly agreed with the statement that curriculum is easy to implement (95.21%), and most (90.48%) agreed or strongly agreed that it was engaging for students. Similar to the responses at baseline, teachers were not as likely to agree/strongly agree that the curriculum meets the needs of students with special needs (62.59%). No statistically significant differences were noted between any of the groups on these questions; the responses of the full sample are included in Table 9 (Appendix Tables A.16. and A.17. for full sample and synthetic differences).

Table 9. How accurately do the following statements describe the curriculum you currently use? Control vs. Treatment (follow-up)

	Control			Treatment			P-value
	Obs.	Mean	Std. dev	Obs.	Mean	Std. dev	
Is easy for me to implement	51	4.31	0.95	56	4.29	0.91	0.876
Is at the right level for the majority of my students	53	3.93	0.99	54	4.00	1.16	0.728
Teaches my students to control emotions and behaviors	52	4.08	0.97	55	4.13	1.06	0.798
Teaches my students' academic skills	51	4.33	0.79	55	4.24	0.90	0.559
Is engaging for my students	52	4.27	0.66	56	4.23	0.87	0.805
Provides differentiated materials to meet the needs of all of my students	55	4.02	1.02	55	4.02	1.01	0.996
Meets the needs of students with special needs	48	3.56	1.25	53	3.83	1.01	0.244
Meets the needs of English Language Learners (ELLs)	51	4.02	0.95	56	4.00	1.03	0.919

Note: Synthetic is excluded. Mean values are calculated based on the following Likert Scale: Strongly disagree=1, Disagree=2, Neither agree nor disagree=3, Agree=4, Strongly Agree=5. Excluded 'Don't know'. ***p<0.01, **p<0.05, *p<0.1. N=66.

We also asked teachers how frequently they receive training and professional development on the usage of the curriculum. The most common responses for the full sample were monthly (43.8%) and a few times a year (44.5%). As expected, there were differences as a function of group; teachers in the treatment group were significantly more likely than those in the control or synthetic group to identify receiving these trainings monthly. The breakdown of these results is in Table 10.

Table 10. How often do you receive training and/or professional development that is related to your curriculum usage?

	Full sample		Control		Treatment		Synthetic	
	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
Monthly	64	43.84	20	38.46	37	66.07	7	18.42
A few times a year	65	44.52	25	48.08	17	30.36	23	60.53
Annually	14	9.59	6	11.54	1	1.79	7	18.42
Once upon hiring	2	1.37	0	0	1	1.79	1	2.63
Never	1	0.68	1	1.92	0	0.00	0	0.00
Total	146	100	52	100	56	100	38	100

Note: Control vs. Treatment, Pearson chi2(3) = 12.034, Pr = 0.017. Synthetic vs. Treatment, Pearson chi2(3) = 23.261, Pr = 0.000.

Finally, we asked teachers to reflect on certain aspects of the curriculum and how often they used these. Nearly all teachers (98.5%) reported that they used studies in their classroom, and of the 119 that reported doing so, teachers reported preparing studies by gathering materials (62.7%) whether on their own, by reaching out to families for materials or some combination. Teachers also reported sending parents a letter or newsletter about the changing study (41.5%) and reading through the materials provided to start planning (31.4%). Introducing the study to

children was also mentioned although teachers reported doing so in different ways: some took a vote/gauged whether or not students would be interested in the study before selecting it (21.2%), and others used a KWL chart, learning web, or introduced the chosen study to students as a way to prepare to start a new study (28.0%). As one teacher noted: *"I prepare by thinking about the interests of the students. I make sure to read the guide, send home letters about the new study, and use the guide to create or buy materials needed for the study."* Many teachers described more than one strategy; all but one respondent described at least one strategy for preparing for a new study. Teachers described more strategies for starting a study at post-test than at pre-test, with a greater proportion of teachers at post-test describing that they prepare materials, send letters to parents, gauge student interest, introduce the study to students, and plan with other teachers beforehand than did in the pre-test survey.

Most teachers (96.3%) reported informing families when starting a new study often/always and that they often/always close each study with a celebration (82.0%). A small percentage of teachers reported extending a study when children in a classroom are interested in a topic (35.6%) or involving families in a study (54.6%). While there were no significant differences between the treatment and control group on these responses, there were some between the synthetic comparison group and the treatment group. These responses are shown in Table 11.

Table 11. Use of Creative Curriculum. Full sample of Creative Curriculum using districts

	Control			Treatment			P-value C vs. T	Synthetic			P-value S vs. T
	Obs.	Mean	Std. Dev	Obs.	Mean	Std. Dev		Obs.	Mean	Std. Dev	
Implement the "Wow! Experiences" with children in your classroom	48	2.98	1.03	55	2.84	0.79	0.389	22	2.50	0.80	0.096*
Let families know when you begin a new study	53	3.89	0.51	56	3.84	0.42	0.593	25	3.76	0.72	0.535
Involve families in the study	53	3.00	0.90	55	2.82	1.04	0.333	24	2.13	0.85	0.005***
Extend a study when children in your classroom are particularly interested	53	2.23	0.99	55	2.33	0.96	0.593	25	2.12	1.13	0.401
Close each study with a celebration of learning	53	3.53	0.72	55	3.44	0.76	0.522	25	3.04	0.9	0.049**

Note: Mean values are calculated based on the following Likert Scale: Never=1, Sometimes=2, Often=3 and Always=4. ***p<0.01, **p<0.05, *p<0.1. Includes 25 teachers from the synthetic group that also reported using Creative Curriculum.

Table 6. Use of Creative Curriculum: **Control vs. Treatment**

	Control			Treatment			P-value
	Obs.	Mean	Std. Dev	Obs.	Mean	Std. Dev	
Do you implement the "Wow! Experiences" with children in your classroom?	30	2.90	0.84	36	2.86	0.83	0.852
Do you let families know when you begin a new study?	30	3.93	0.25	37	3.81	0.52	0.241
Do you involve families in the study?	28	2.68	0.94	34	3.00	0.98	0.198
Do you extend a study when children in your classroom are particularly interested in the topic?	30	1.97	0.72	37	2.54	0.90	0.006***
Do you close each study with a celebration of learning?	30	3.57	0.90	37	3.38	0.92	0.404

Note: Sample includes only those who use the Creative Curriculum in the treatment and control groups (N=67). Mean values are calculated based on the following Likert Scale: Never=1, Sometimes=2, Often=3 and Always=4. ***p<0.01, **p<0.05, *p<0.1. N=67.

As we did in the first surveys, we asked teachers open-ended questions to reflect on how they use components of the curriculum and to reflect on how they know children in the classroom are learning. Selected summaries of these questions are included here.

When asked how they use Book Discussion Cards, most teachers reflected that they use these during the read-alouds, with many teachers describing that they helped them orient children to the story or check their comprehension. One teacher wrote:

> *"I use book discussion cards to guide my approach to read-alouds and to target areas that the students and I may have overlooked; using the cards as a base, I try to let the students lead the discussions and work as a facilitator."*

Other common usages for the Book Discussion Cards included in prepping the lesson for the read-aloud/before reading the book with students (22.4%), providing questions for students to respond to (40.0%) and to introduce vocabulary (23.2%). A small number of teachers mentioned using the cards after the read-aloud (6.40%) or not using them or using them sparingly (4.8%). One of these teachers wrote:

> *"I do not typically use these cards because my students are not yet ready to attend to a majority of the books that accompany the cards. While reading a story we typically focus on the simple vocabulary that the students are being exposed to."*

Teachers reported using Teaching Guides in a few different ways. More than half of teachers (52.4%) mentioned using these in their lesson plans, either to help structure them or as

something they submit with lesson plans. A teacher noted: *"Teaching guides are used to explore the topics and add them to lesson plans as the template for my peronalized* [sic] *plans."* Teachers also mentioned that the Teaching Guides were helpful in plotting out daily activities/instruction (36.3%) and in orienting them to the current study or to introduce the study to students (23.4%). A few teachers noted that they used the Question of the Day within the Teaching Guides (3.2%). Teachers reported many uses for the Teaching Guides, for example: *"I use the teaching guides to navigate through the study we are currently in. I use them for my daily lesson plans and to help guide instruction."*

Mighty Minutes were used by the majority of teachers as a transition activity or to fill time between activities (79.0%), with teachers noting that *"We use mighty minutes transitions throughout the day daily for students to have fun."* Teachers also reported that Mighty Minutes were useful in whole group times (28.2%), with a smaller number using them during small group time (7.3%) or Morning Meeting (6.4%). A small group of teachers described that Mighty Minutes were helpful in reinforcing skills (12.9%). One teacher noted:

> *"I use Mighty Minutes as a of getting the children engage during Transition Time. Every minute is a learning opportunity for children to learn concepts or develop skills through songs and games."*

Finally, some teachers used Mighty Minutes as a form of assessment (4.0%), during music and movement time (5.6%), or as an activity they could utilize throughout the day as part of their daily lesson plan/routine (10.5%).

Teachers reported using Intentional Teaching Cards most frequently to support their work with small groups and differentiating instruction for children at different levels (71.0%). One teacher noted: *"I use these to introduce and reinforce skills in small groups or individually. They also provide the progression of learning so I knew where they are starting and what I need to provide to get them to the next level"* Other common usages of the Intentional Teaching Cards included to help students acquire specific skills, objectives, or learn specific content areas (20.2%), to assess/observe student progress (12.1%), to help with lesson planning (11.3%), and in whole groups (7.3%). Few teachers reported N/A or not using them often (2.4%). At large, teachers were flexible in their usage of the Intentional Teaching Cards and reported multiple purposes. For example:

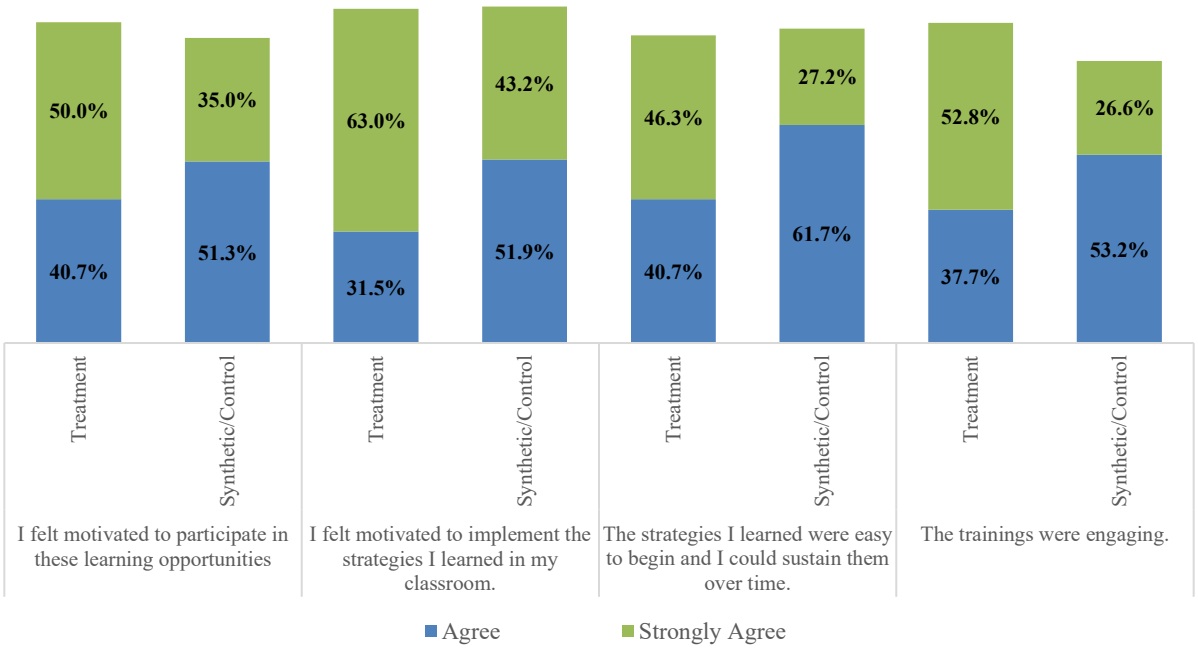
> *"I use it according to the planned study, these experiences support socio-emotional, physical, language, cognitive, literacy and math development, Generally used in small group but many are appropriate for large group or individual experience."*

Experiences with the trainings

We asked teachers at follow-up to describe their experiences with the learning opportunities provided by Teaching Strategies over the course of the study. As shown in Figure 2, teachers overwhelmingly felt positive about professional development experiences offered by Teaching

Strategies. There were some significant differences in perceptions of these learning experiences. Specifically, teachers in the treatment group were more likely to view these learning experiences favorably than teachers in the control group, agreeing at a higher rate that the strategies were easy to begin; that the trainings were engaging; that the trainings helped them improve practice; that they have been a valuable professional development opportunity for them; and that the trainings provided them with knowledge they will use in the future (Figure 2, Appendix Tables A.18, A.19).

Figure 2. How accurately do the following statements describe your learning experience with Teaching Strategies this year? Full sample



Teachers also responded to questions about challenges with the learning experiences provided by Teaching Strategies – specifically, what may have limited their opportunities to engage in the learning experiences with teaching strategies. As shown in Table 17, teachers most commonly felt challenged by the load of curricular and assessment requirements they had to fulfill, with nearly half (44.4%) of teachers agreeing or strongly agreeing that these requirements limited their capacity to participate in and utilize the learning experiences. Very few teachers, however, identified an absence of support from their coach as impacting their ability to engage—just one teacher out of 132 strongly agreed with this statement, and 10 agreed/strongly agreed. There were no differences between treatment and control groups in these perceptions of the learning experiences (Table A.20).

Table 12. Which of the following have limited your capacity to participate in and utilize the learning experiences provided by Teaching Strategies? Full sample

	Obs.	Mean	Std. dev	% Agree & Strongly Agree
Lack of resources and materials.	136	2.55	1.09	19.86
Insufficient time to plan and meet with coaches.	135	2.90	1.15	37.77
A mismatch in language with children and/or coaches.	134	2.19	0.99	11.94
The absence of support from my coach.	134	1.99	0.91	7.47
The absence of support from leadership at my school/center.	132	2.16	1.02	11.36
The load of curricular and assessment requirements I am expected to fulfill.	135	3.19	1.18	44.44

Note: Mean values are calculated based on the following Likert Scale: Strongly disagree=1, Disagree=2, Neither agree nor disagree=3, Agree=4, Strongly Agree=5. N=136.

We also asked teachers to elaborate on the challenges they have had, if any, in participating in the learning opportunities provided by Teaching Strategies. Written responses revealed that time was a big challenge for the 84 teachers who responded to this question,[5] with 34.5% reflecting that a lack of time hindered their ability to fully participate. As one teacher wrote: *"no time during the school day to fully study and plan implementation of TS suggestions. I often take huge amounts of work home to complete."* When breaking these responses into the treatment and control groups, time was a big factor, but more so for the treatment group, with 43.2% noting that time was a challenge, compared to 29.7% in the control group. Across all responses, 31% indicated no challenges in participating in the learning opportunities, with the difference between the treatment and control group emerging in the opposite direction, as 27% of teachers in the treatment group noted no challenges compared to 16.2% in the control group. There were also issues with assessment data/documentation (34.5%), issues with student behavior and IEPs (9.5%), feeling exhausted (2.38%), or a language barrier (2.38%). Other challenges came up for 14.3% of respondents. Lack of coaching did not come up for any teachers in the treatment group, while some in the control group noted this challenge, with one teacher describing: *"lack of coaching/mentorship within my first 3 years and the increase of challenging behaviors in the classroom."*

Finally, we asked teachers to elaborate on the challenges they had in implementing the tools and strategies introduced by the learning opportunities with Teaching Strategies. The 65[6] teachers who responded to this question provided mixed feedback regarding their challenges in implementing the strategies. Many teachers wrote identified they had no challenges, with 32.3% of teachers responding with some version of this. The next most common response regarding implementation challenges dealt with time, either time to plan the strategies or time to implement all elements of the curriculum, identified by 29.2% of respondents. As one teacher noted: *"although everything is laid out in the lesson plans, it is too much to correctly implement. I find myself picking and choosing from what is offered based on: available time/supplies and teaching style."* Teachers also identified challenges with the read-alouds (6.2%) and meeting the needs of individual students—either because they are on different levels, or because children have

[5] Five "N/A" responses were excluded.
[6] Nine "N/A" responses were excluded.

behavioral or other challenges that make it hard to implement strategies (10.8%). An additional 10.8% of teachers described other challenges that did not fit these categories.

Professional Experience

We asked teachers at follow-up to rate a series of statements expressing positive and negative experiences in their professional environment, using the Maslach Burnout Inventory for Education (MBI-ES; Maslach et al., 1997). The Personal Accomplishment subscale, shown in Table 13, assesses educators' feelings of competence and successful achievement in one's work with students. The teachers in the sample reported all these feelings of personal accomplishment occurring for them on average at least once per week or multiple times per week. These most commonly included easily creating a relaxed environment with students (92.0% reported experiencing this a few times a week or every day) and dealing effectively with the problems of students (93.96% experienced a few times a week or every day). Personal accomplishment subscale scores were significantly higher for the treatment than the control group, as were responses to items about feeling exhilarated when working with students and feeling energetic. The breakdown of these responses for the treatment and control group is shown in Appendix Table A.21.

Table 13: Please rate the following statements with how often they occur. Full sample

	Obs.	Mean	Std. Dev	% A few times a week & Everyday
I can easily understand how my students feel about things	147	5.37	1.27	86.40
I deal very effectively with the problems of my students	149	5.57	0.97	93.96
I feel I'm positively influencing other people's lives through my work	148	5.17	1.37	79.73
I feel very energetic	149	4.62	1.44	70.47
I can easily create a relaxed atmosphere with my students	150	5.51	1.00	92.00
I feel exhilarated after working closely with my students	149	4.69	1.77	72.49
I have accomplished many worthwhile things in this job	150	5.18	1.28	82.00
In my work, I deal with emotional problems very calmly	149	5.38	1.09	89.93
Personal accomplishment subscale	151	5.19	0.77	

Note: Mean values are calculated based on the following Likert Scale: Never=0, A few times a year or less=1, Once a month or less=2, A few times a month=3, Once a week=4, A few times a week=5, Everyday=6. N=151. Lower scores on the personal accomplishment scale indicate higher levels of burnout.

The other two scales of the MBI-ES are included in Tables 14 and 15. Table 14 reports the emotional exhaustion subscale, which outlines feelings of being emotionally overextended and exhausted by one's work. Table 15 shows the depersonalization subscale, which outlines an unfeeling and impersonal response toward students. Teachers experienced exhaustion and depersonalization at somewhat different rates. For example, none of the teachers identified that they do not really care what happens to students (an indicator of depersonalization), while 34.7% identified that they feel used up at the end of the workday a few times a week or every day. Average scores on the depersonalization subscale were much lower (0.37) than on the emotional exhaustion subscale (1.96).

Table 14: Please rate the following statements with how often they occur. Full sample

	Obs.	Mean	Std. Dev	% A few times a week & Everyday
I feel emotionally drained from my work	150	2.95	1.91	30.66
I feel used up at the end of the workday	150	3.10	2.03	34.67
I feel fatigued when I get up in the morning and have to face another day on the job	150	2.46	2.02	24.66
Working with people all day is really a strain for me	149	0.81	1.38	3.35
I feel burned out from my work	148	2.45	1.91	20.27
I feel frustrated by my job	148	2.11	1.73	11.49
I feel I'm working too hard on my job	147	2.47	2.00	22.45
Working with people directly puts too much stress on me	149	0.56	1.12	2.68
I feel like I'm at the end of my rope	150	0.82	1.44	6.00
Emotional exhaustion subscale	150	1.96	1.34	

Note: Mean values are calculated based on the following Likert Scale: Never=0, A few times a year or less=1, Once a month or less=2, A few times a month=3, Once a week=4, A few times a week=5, Everyday=6. N=150.

There were some significant differences between the treatment and control group on responses related to exhaustion/fatigue. Teachers in the treatment group were less likely to report feeling fatigued day-to-day and were more likely to report feeling energetic. In addition, teachers in the treatment group were significantly more likely to report feeling exhilarated after working closely with students on a more frequent basis than teachers in the control group. Group differences in the exhaustion and depersonalization subscale are included in Tables A.22 and A.23.

Table 15: Please rate the following statements with how often they occur. Full sample

	Obs.	Mean	Std. Dev	% A few times a week & Everyday
I feel I treat some students as if they were impersonal objects	149	0.20	0.73	0.67
I've become more callous toward people since I took this job	147	0.68	1.42	4.76
I worry that this job is hardening me emotionally	149	0.72	1.24	2.01
I don't really care what happens to some students	149	0.07	0.45	0.00
I feel students blame me for some of their problems	150	0.21	0.80	0.67
Depersonalization subscale	150	0.37	0.59	

Note: Mean values are calculated based on the following Likert Scale: Never=0, A few times a year or less=1, Once a month or less=2, A few times a month=3, Once a week=4, A few times a week=5 Everyday=6. N=150.

Coach Surveys and Reflections

Coach characteristics

We administered a survey at follow-up to all treatment and control coaches on their experiences in early childhood education, coaching, and for those in the treatment group, with the intervention. Of the 13 coaches working with teachers at follow-up,[7] 10 completed the survey (5 in the treatment group, and 5 in the control group). Findings from this survey are discussed.

The coaches who completed the survey had worked an average of 22.6 years in early childhood (range: 19-28). All of the respondents were female; 40% identified as Latina, 30% as Black/African American, and 30% as White. The majority of coaches (90%) identified a master's degree as their highest level of educational completion, although the areas of study differed, with the highest number (40%) identifying Early Childhood Education as their area of study. Finally, the coaches had an average of 9 years of experience as a coach (range: 0.75-18), and an average of 6.8 years (range: 0.75-18.25) experience in their current role.[8]

Table 16. Coach qualifications and years of experience

Qualifications		
Highest Level of Education	**N**	**Percent**
Bachelor's degree	1	10%
Master's degree	9	90%
Degree Area of Study		
Early Childhood Education	4	40%
Educational/School Leadership	2	20%
Education	1	10%
ESL & Bilingual Leadership Curriculum	1	10%
Biology	1	10%
Human Ecology	1	10%
Years of Experience	**Mean**	**SD**
In Early Childhood Education	22.58	2.96
In Current Position	6.77	5.31
As a Master Teacher	9.02	5.47

Coaches reported working with an average of 17.1 classrooms (range: 14–20). Every coach reported they are trained on a formal assessment tool and identified the Early Childhood Environment Rating Scale – Third Edition (ECERS-3) as one of those tools. Three coaches reported being trained on other tools besides ECERS-3, including the ITERS, FCCERS, TPOT, Teaching Strategies *GOLD*, and Other. All coaches who responded to our question about current assessment practices reported they are currently using ECERS-3 in their coaching work. Coaches also reported using other tools in their coaching work, including ITERS, Fidelity Tool, Teaching

[7] In one district, two additional coaches were added (one in year two, one in year three) as co-coaches at 3 schools that included teachers in the sample. One of these coaches received incentives as part of the intervention; one coached teachers in the control group. We have included their surveys in this analysis. One preschool intervention and referral specialist (PIRS) also completed the survey but those responses have been excluded from this analysis.

Strategies *GOLD*, and TPOT. All coaches reported they are using *The Creative Curriculum* Fidelity Checklist in their work.

Use of coaching strategies

To understand in which ways coaches worked with teachers, we asked them about the types of interactions they most typically have with their teachers. Individual face-to-face meetings were reported by half as happening once a week, and by the other half as happening more than once a day. Group meetings were utilized by half of coaches about once a month, with the rest reporting they utilized these about every other week or more frequently. Videos are generally not being used in the coaching process. Individual or group meetings are generally complemented most frequently with email or online texting throughout a typical week. Responses generally looked similar across treatment and control coaches with one exception to some of the digital communications: All coaches in the treatment group reported never using online messaging (such as instant message or chat rooms) to communicate with teachers, while 60% of coaches in the control group reported using this form of communication at least once per week with teachers. In addition, while 40% of coaches in the treatment group reported that they never use texting to communicate with teachers, all coaches in the control group reported doing this at least once per month.

Table 17: How often over a typical month do you use the following formats to interact with the staff you coach?

	Phone Call	Face-to-face meeting (Individual)	Face-to-face meeting (Group)	Email	Online messaging (Instant message, chat room)	Texting	Virtual meeting (Zoom, Skype)	Video camera
	N (%)	*N* (%)	*N* (%)	*N* (%)	*N* (%)	*N* (%)	*N* (%)	*N* (%)
Never	-	-	-	-	7 (70%)	2 (20%)	-	5 (50%)
About once per month	4 (50%)	-	5 (50%)	-	-	2 (20%)	7 (70%)	3 (30%)
About every other week	3 (37.5%)	-	3 (30%)	-	-	2 (20%)	-	1 (10%)
About once a week	1 (12.5%)	5 (50%)	1 (10%)	5 (50%)	2 (20%)	4 (40%)	2 (20%)	-
About once a day	-	-	1 (10%)	5 (50%)	1 (10%)	-	-	-
More than once a day	-	5 (50%)	-	-	-	-	1 (10%)	1 (10%)
Total: N	8	10	10	10	10	10	10	10

In addition to asking about the types of interactions coaches have with teachers, we also explored the frequency with which coaches use specific observation, feedback, and discussion strategies. Table 18 summarizes how often, on average, coaches reported using each strategy with individual staff members in a typical month. Live on-site observations were the most frequently used strategy, with 60% of coaches reporting doing this more than four times per month and another 40% reporting 1–2 times per month. Working with video or video journals was less frequently used. Arranging for staff to observe peers was also limited, with 30% of

coaches never using this approach, and 30% using it 1–2 times or 3–4 times per month. Providing verbal feedback based on live observations or based on discussions with staff were common practice, with half or more of the coaches using it more than four times per month, and 30-40% at 3–4 times a month. Overall, live observations and verbal feedback predominate across coaches. As with the previous question, there were slight differences in the treatment and control coaches in their usage of these forms of observation and feedback. All treatment coaches reported that they never use a video journal with teachers as a form of observation and feedback, while 40% of coaches in the control group reported using this form of observation and feedback at least one time per month. In addition, 60% of coaches in the treatment group reported that they never arrange for staff to observe peers, while all coaches in the control group reported that they do this at least once per month, and 40% of coaches use this strategy often (3–4 times per month). In contrast, treatment coaches leaned more heavily on providing verbal feedback based on discussions with staff, with 80% of treatment coaches doing this more than 4 times per month, which was double the number of control coaches who reported using this form of feedback at this rate.

Table 18: On average, how often do you use the following observation, feedback, and discussion strategies in a typical month with each staff person that you coach?

	Live on-site observation (with or without tool) *N* (%)	Watch a video of staff member's work *N* (%)	Watch with staff, video of other staff member's work *N* (%)	Video journal *N* (%)	Arrange for staff to observe peer *N* (%)	Provide verbal feedback based on live observations *N* (%)	Provide verbal feedback based on discussions with staff *N* (%)
Never	-	2 (20%)	4 (40%)	8 (80%)	3 (30%)	-	-
1–2 times	4 (40%)	6 (60%)	4 (40%)	1 (10%)	3 (30%)	2 (20%)	2 (20%)
3–4 times	-	1 (10%)	2 (20%)	1 (10%)	3 (30%)	3 (30%)	2 (20%)
More than 4 times	6 (60%)	1 (10%)	-	-	1 (10%)	5 (50%)	6 (60%)
Total: N	10	10	10	10	10	10	10

Table 19 presents the frequency of six additional strategies. Providing written feedback (via text, email, or other online methods) was used often, with half of the coaches (50%) doing so more than four times per month. Introducing new skills, practices, or strategies followed a similar pattern: 50% of coaches reported doing so more than four times per month, and 40% did so 1–2 times per month. Setting and reassessing individual goals was also a common practice, with 44% of coaches using this strategy more than four times per month, and another 44% using it 1–2 times per month. Facilitating group discussions occurred less frequently: 60% of coaches reported doing so just 1–2 times per month. Other observations, feedback, or discussion strategies (as specified by the coach) were less commonly reported overall. Overall, the most consistently used strategies included written feedback, introducing new practices, and goal setting, all of which were used at least monthly by nearly all coaches. Coaches in both groups looked similar in terms of how often they used these strategies.

Table 19: On average, how often do you use the following observation, feedback, and discussion strategies in a typical month with each staff person that you coach? (please select one response for each strategy).

	Provide written feedback via text, email or other online method *N* (%)	Introduce new skills, practices, or strategies *N* (%)	Set and reassess goals for individuals *N* (%)	Facilitate group discussion *N* (%)	Staff shares mistakes/challenges in their work *N* (%)	Other observation feedback/discussion strategy (specify) *N* (%)
Never	-	-	-	1 (10%)	1 (10%)	-
1-2 times	4 (40%)	4 (40%)	4 (44.4%)	6 (60%)	3 (30%)	2 (50%)
3-4 times	1 (10%)	1 (10%)	1 (11.1%)	1 (10%)	3 (30%)	1 (25%)
More than 4 times	5 (50%)	5 (50%)	4 (44.4%)	2 (20%)	3 (30%)	1 (25%)
Total: N	10	10	9	10	10	4

Of the coaches who indicated that they use "other" observation feedback/discussion strategies and described these, they noted that they use data discussions (33%), reflective cycles (33%) and other discussion techniques such as *Three Before Me* and *Spark the Fire* (33%).

Coachers were also asked to reflect about practice and modeling strategies utilized with each teacher during a typical month. Demonstrating or modeling skills in the work setting (e.g., classroom or child care room) was used frequently, with 50% of coaches reporting they used this strategy 3–4 times per month and another 10% reporting they used it more than four times per month. Other practice/modeling strategies (not listed) also predominated. Coaching "on the fly" (e.g., unplanned or hurried coaching) was used more variably: 40% of coaches did this 1–2 times per month, 30% did so 3–4 times, and another 30% reported doing it more than four times. Asking staff to practice a skill and report back was less common overall; 60% of coaches reported using this strategy only 1–2 times per month.

Figure 3: On average, how often do you use the following practice and modeling strategies in a typical month with each staff person that you coach? (please select one response for each strategy).

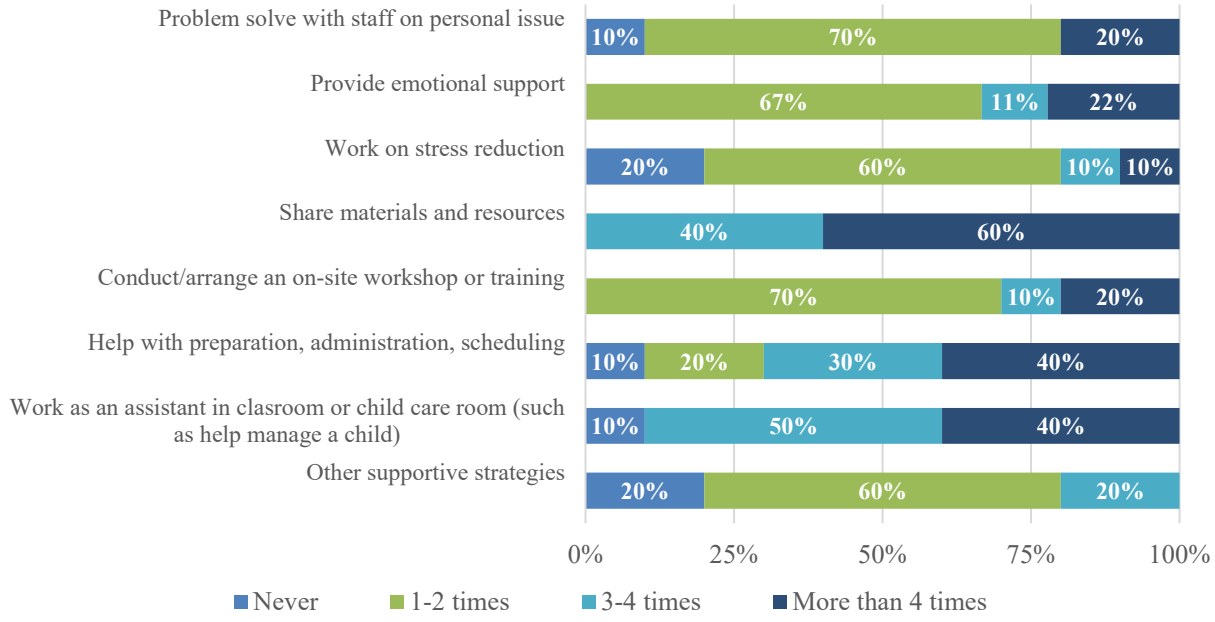
Coaches were also asked how often they use various supportive strategies to assist staff members. Sharing materials and resources was a frequently used strategy as all coaches reported doing this at least monthly, with 60% using it more than four times per month. Working as an assistant in the classroom or child care room (e.g., helping manage a child) was used regularly by many coaches with 40% stating they used this strategy more than four times per month, and another 50% did so 3–4 times. Helping with preparation, administration, or scheduling varied: 40% of coaches used this strategy more than four times per month, while others used it 1–2 times (20%), 3–4 times (30%), or never (10%). The rest of the supportive strategies were less frequently reported.

Of the coaches who selected they use other supportive strategies with teachers, all identified CST (Child Study Team) and family meetings. Stakeholder meetings and PIRS/PIRT support were also mentioned. Some minor differences by group emerged in usage of these supportive strategies; namely, 100% of coaches in the control group reported that they problem solve with staff on a personal issue not at all or 1–2 times per month, while 40% of coaches in the treatment group reported doing this more than 4 times per month. And 80% of coaches in the treatment group reported they share resources more than 4 times per month, which is double the amount of teachers in the control group reporting sharing resources with this much frequency. Finally, 80% of coaches in the treatment group reported that they help with preparation, administration, and scheduling more than 4 times per month: No teachers in the control group reported engaging in this type of support with this level of frequency (although 60% of coaches in the control group provided this support 3 to 4 times per month).

As shown in Figure 4, coaches were working assisting in a preschool room with a high level of frequency: 90% of coaches reported they were doing this at least 3-4 times per month. There was a slight difference in the frequency treatment and control coaches reported offering this support: 80% of coaches in the treatment group reported they were doing this more than 4

times per month, while 80% of coaches in the control group reported they were doing this 3-4 times per month.

Figure 4: On average, how often do you use these other supportive strategies in a typical month with each staff person that you coach? (please select one response for each strategy).



Goals of coaches

Coaches were asked "Please briefly list your most common goals that you target in your coaching." In the treatment group of coaches, responses focused on interactions (60% of respondents), curriculum implementation (40%) and lesson planning/lesson flow (40%). In the control group of coaches, responses also focused on lesson planning/flow (50%) and on meeting student standards (50%). One coach in the treatment group responded:

> *"My most common goals are developmentally appropriate practices in Preschool classrooms. Lesson Plans, classroom management, and student learning outcomes are the most important."*

Preferred strategies of coaches

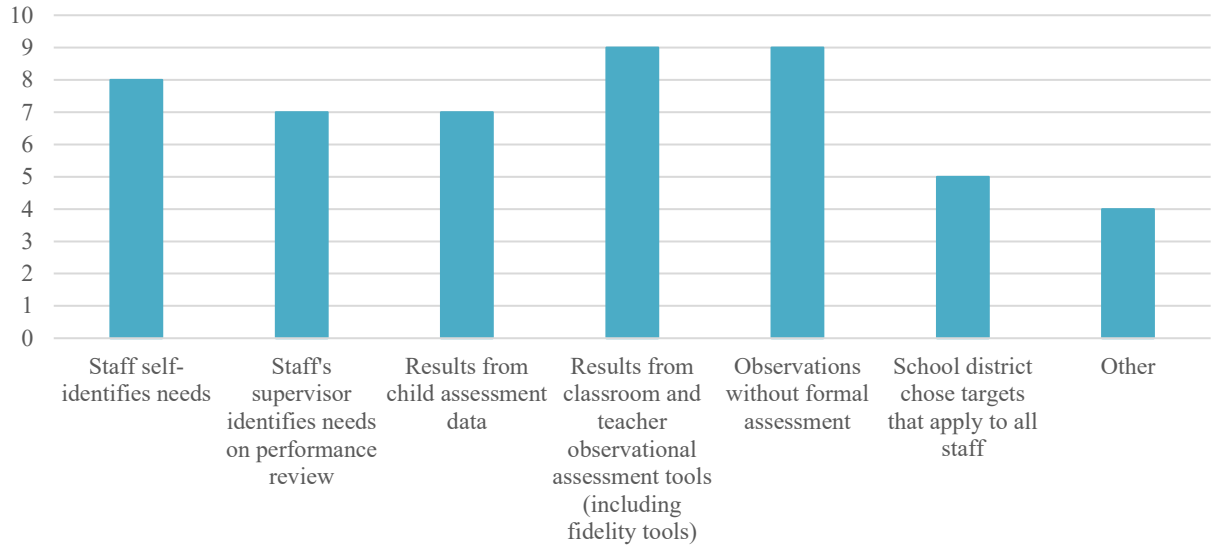
We asked the coaches *"Of all of the strategies that you use with the staff that you coach, what would you say are the three most effective coaching strategies for changing staff practices?"* Coaches responded with 36 responses (one coach only gave two strategies; some coaches described multiple strategies with each response), and these varied, although some emerged as consistent responses. Some form of modeling came up 7 times, with coaches writing responses such as:

> *"Model demonstrations that support curriculum, environment, DAP, interaction (Powerful interactions, Blooms), etc.. for the classroom so that the classroom teacher can see the strategies in action with thier {sic} own student…"*

Eight responses also identified the use of a reflective cycle and/or holding a discussion with teachers, providing them with feedback. Coaches shared that they use "reflective cycles" and "Provide verbal feedback based on discussion with staff members," with one noting that they use the Fidelity Tool to discuss strategies. Other categories that came up consistently include using in-person observations (4 responses), building relationships/collaborating with teachers (4 responses), using video to provide feedback (3 responses) and facilitating groups for discussion (2 responses). Eight responses fell under the category "Other" and included strategies such as visiting another classroom or elbow to elbow coaching. There were minor differences between treatment and control groups; for example, 4 responses in the control group mentioned building relationships, compared to no responses in the treatment group focused on this strategy. Using video was also more common amongst the control coaches (3 responses mentioned video, compared to none in the treatment group). Conversely, coaches in the treatment group were more likely to respond that they facilitated group discussions (2 responses in the treatment group, compared to none in the control group). One treatment coach shared that they relied on *"Facilitating group discussions on best developmentally appropriate practices."*

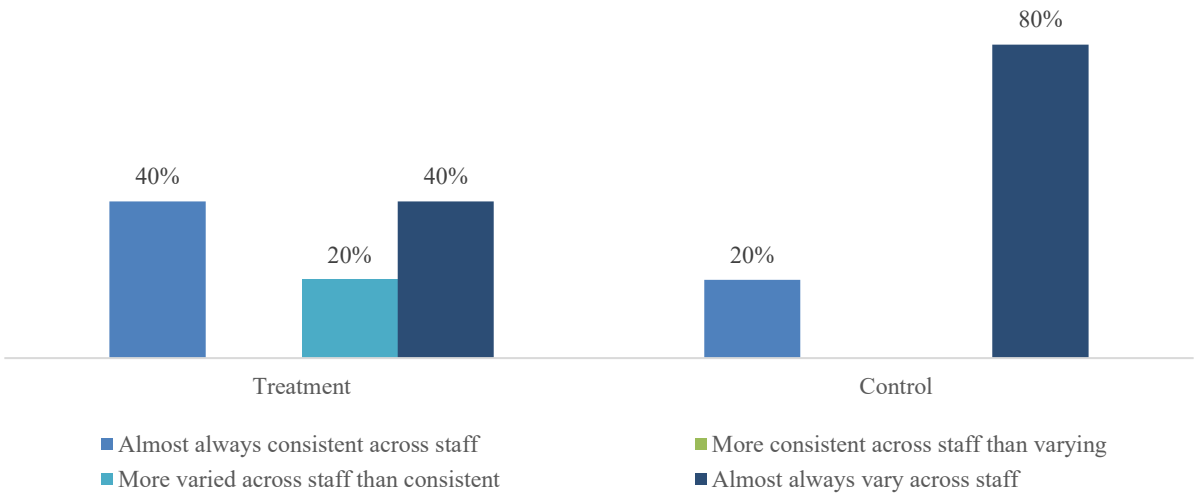
Next, we asked coaches to describe how they gather information about the needs of the staff they coach. They could select multiple responses. As shown in Figure 5, the most commonly selected tools for information gathering were results from classroom and teacher observational assessment tools, and observations without formal assessment. None of the coaches disclosed that they receive information from the state QRIS on-site monitoring review (not shown). For the teachers that selected other, the strategies described included ECERS-3, TPOT, and DISC.

Figure 5: How do you gather information about the needs of staff you coach? Please select all that apply, number of coaches



We also asked coaches to reflect on whether their strategies for coaching varied depending on the staff they were working with. Answers were split: 60% of coaches almost always varied strategies across staff, while 30% almost always used strategies that were consistent across staff (with one coach selecting an in-between option). As Figure 6 demonstrates, there were differences between the treatment and control coaches, with coaches in the control group more consistently varying their strategies across staff.

Figure 6. Would you say that your strategies for coaching sessions vary depending on the staff you are coaching? Treatment and control.



Coaches also reported on how frequently they work in their coaching to increase staff's professional knowledge in a variety of areas. All coaches reported that they frequently work to

increase knowledge in developmental areas (e.g., social-emotional, cognitive) and content areas (e.g., literacy, math). The areas coaches reported working to increase knowledge less often were in the needs of culturally diverse families (with 30% reporting they do this occasionally and 10% reporting hardly ever); and in the needs of dual/multi-language learner children (with 10% reporting occasionally and 10% hardly ever). Coaches identified how often they worked to increase and improve skills and strategies in their staff (Figures 7 and 8). Every coach reported doing many of the strategies frequently, including staff responsiveness to children and use of language with children. The strategies coaches reported working to support less frequently included those having to do with children's families: For example, only 20% of coaches said they frequently support staff in engaging parents, while 70% reported doing this occasionally and 10% hardly ever. Likewise, 50% of coaches reported supporting staff to encourage parent-child interactions frequently, and 50% reported doing this occasionally. Treatment and control coaches looked similar in response patterns with a few differences: While 100% of control coaches reported they frequently work to increase staff knowledge around the needs of children with identified disabilities, only 60% of treatment coaches reported doing this frequently (with the rest reporting they do this occasionally). And 40% of coaches in the control group reported they frequently work to increase staff's skills in engaging parents, while no coaches in the treatment group reported doing this more than occasionally.

Figure 7: In your coaching, how often do you work to increase staff's professional knowledge in each of the following areas? (please select one response for each area).

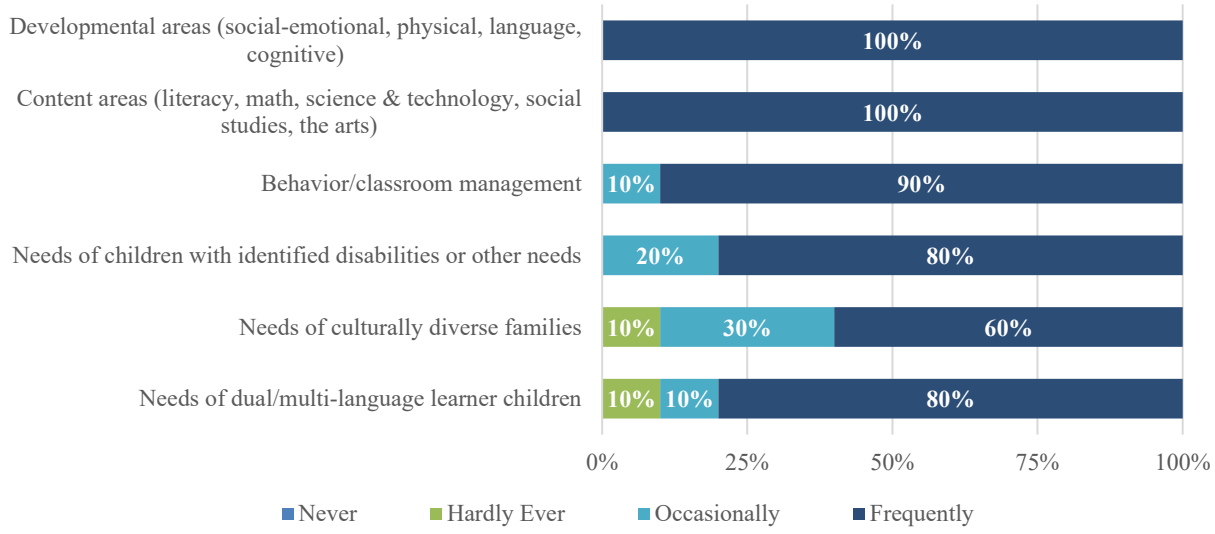
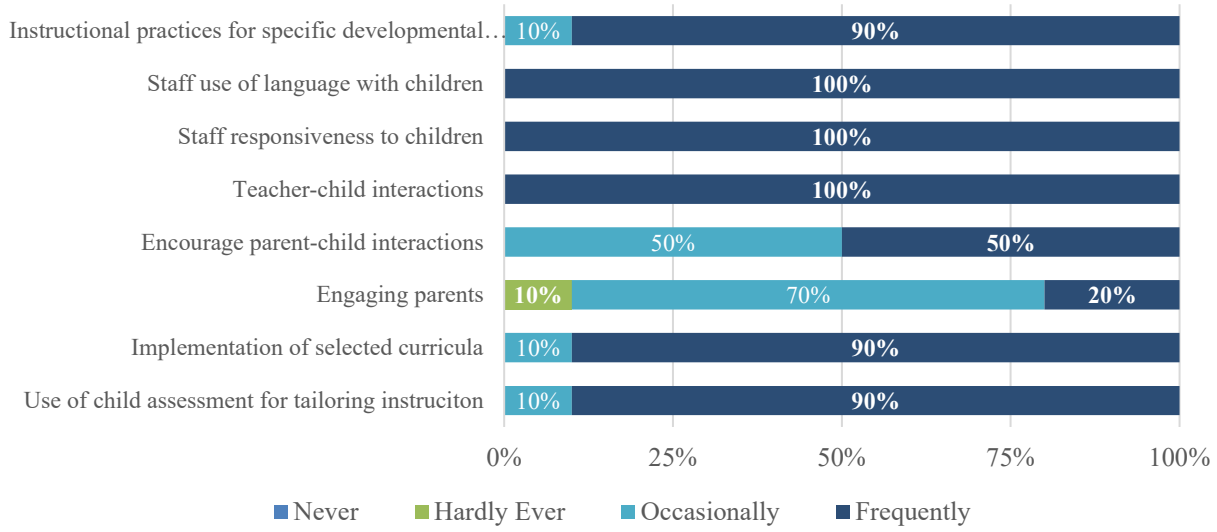
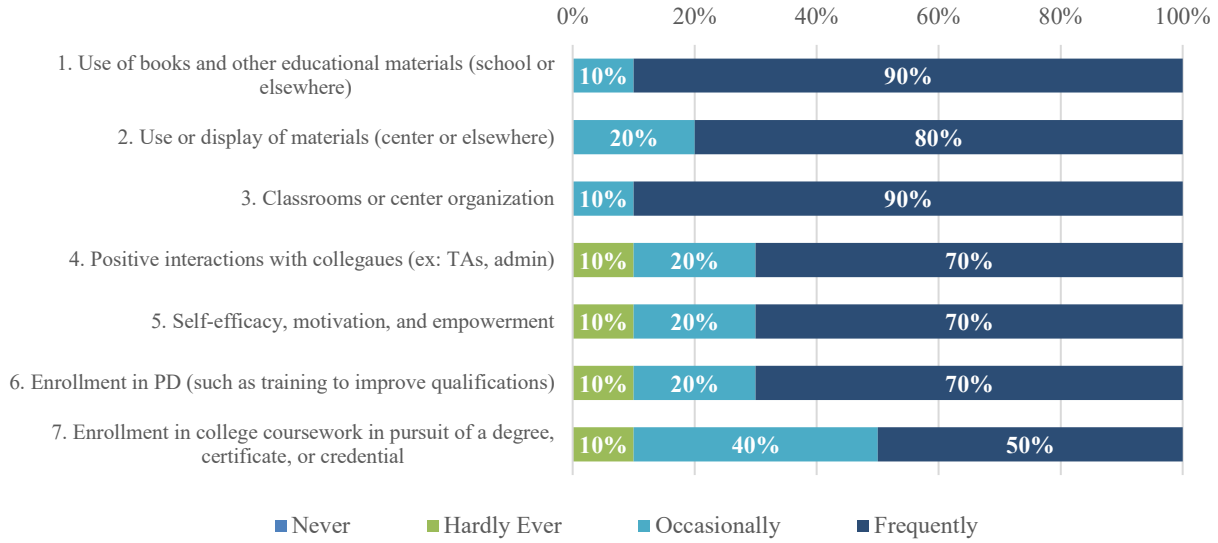


Figure 8. In your coaching, how often do you work to increase or improve staff's skills and strategies in each of the following areas? (please select one response for each area).



Coaches were also asked in which ways they work to improve classroom structure and organization through coaching, including in organization, display, and use of books. Most coaches (90%) reported that they frequently coached around classroom/center organization and use of books/other educational materials, while 10% of coaches reported they do those things occasionally (Figure 9). When coaches were asked how often they work to encourage staff personal growth in areas such as positive interactions with colleagues and enrollment in professional development, 70% of coaches reported that they are frequently encouraging personal growth in positive interactions: in self-efficacy, motivation, and empowerment, and in enrollment in professional development. The coaches reported they less frequently encourage staff personal growth in enrollment in college coursework in pursuit of a degree, certificate or credential: 50% of coaches reported doing this frequently, 40% reported doing this occasionally, and 10% reported doing this hardly ever. Response patterns looked similar across the treatment and control groups.

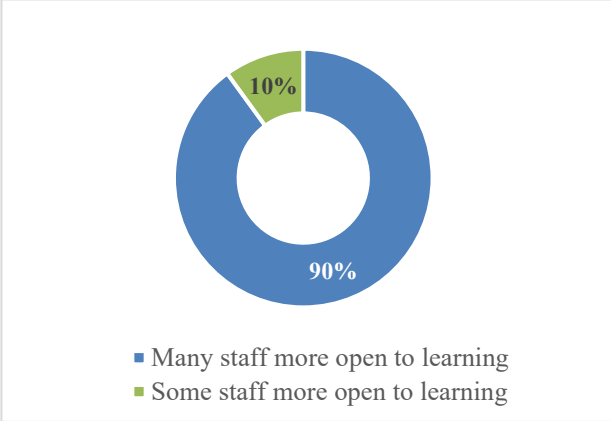
Figure 9. In your coaching, how often do you work to improve structure and organization in each of the following areas (questions 1-3), and how often do you work to encourage staff personal growth in each of the following areas (questions 4-7)? (please select one response for each area).



Finally, we asked coaches to reflect on their successes in a variety of different classroom practices, such as improving the quality of practice of the teachers they coach. The area in which coaches self-reported the most success was in increasing the implementation of their curriculum: 90% of coaches felt that many of their staff increased implementation, and 10% thought all staff increased their implementation. Coaches were also confident in increasing their teachers' openness to learning, with 90% reporting that many staff were more open to learning, and 10% reporting some staff were more open to learning. They were less confident in supporting teachers to increase their assessment use: 70% of coaches reported that some staff increased their assessment use, while 10% reported some staff increased their assessment use, and 10% said all staff increased their assessment use. When reflecting on their overall success as a Master Teacher, 90% reported they are moderately successful, and 10% reported very successful.

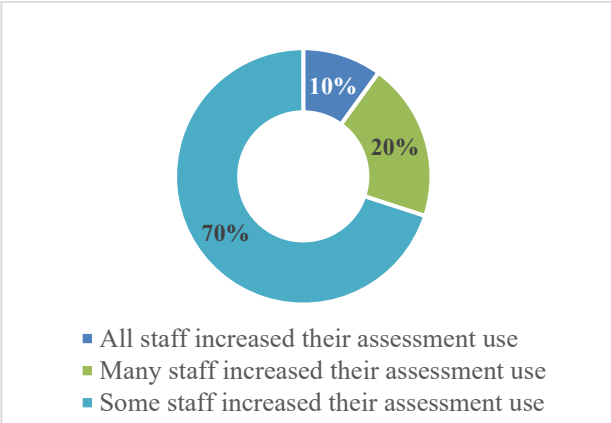
Figure 10. Reflecting on your work as a Master Teacher, please rate your success in … over the last year?

a. Increasing openness to learning

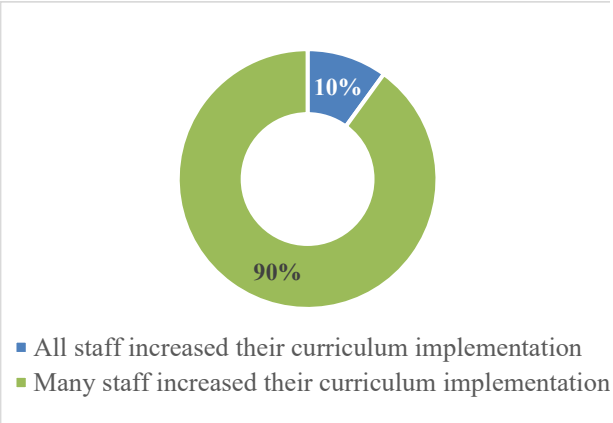


b. Improving the quality of practice

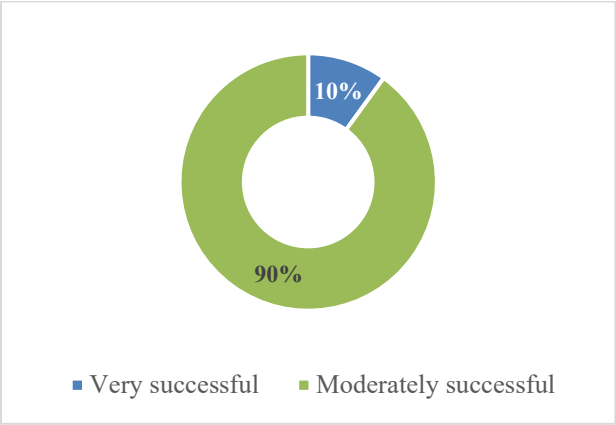
c. Increasing the appropriate use of assessment



d. Increasing the implementation of your curriculum



e. As a coach



Concluding reflections on coaches

In the final section of the survey, we asked coaches to reflect on their practices over the past three years. First, we asked coaches: "What single topic or goal area did you address most successfully as a coach? (describe)." For the treatment group, 80% of teachers mentioned interactions/fostering social-emotional development as their most successful topic and goal area, with responses including: *"Create and maintain a classroom environment that prioritizes the needs and interests of the children."* and *"Using the Library Area and books in general to teach Social Emotional skills."*[9] Just one of the five treatment coaches mentioned curriculum, noting that they were successful in implementation of the curriculum to fidelity. In the control group, responses were more variable. Half of those that responded mentioned fidelity to the curriculum, and the other half mentioned diversity and inclusion and *"Class Environment."*

We asked coaches to reflect on how their teachers' perspectives had changed toward implementing their program's selected curriculum in the classroom. Of the coaches that responded to this question, most (80%) coaches in the treatment group mentioned that their teachers were using the curriculum more consistently and/or with fidelity. For example, one coach in the treatment group responded: "*Moderately to implementing and understand how to use it responsively, intentionally, and with fidelity*." The concept of using the curriculum with consistency/fidelity was less frequently mentioned among the coaches in the control group, with just one coach in this group noting: "*Some of my teachers have grown in implementing parts of the curriculum with the guidance of the Teaching Strategies Fidelity Tool."*

We asked coaches to reflect on how their coaching practices for supporting stronger curriculum implementation have changed over the past three years. Fidelity and using the fidelity tool was specifically mentioned by some respondents. Other coaches mentioned that trainings have supported their growth, and that they are more able to use specific materials in the curriculum. For example, one coach in the treatment group wrote:

> *"Through the use of tools including the Fidelity Tool I have begun a cycle of coaching which incorporates a pre-conference, observation and feedback session."*

Finally, in a focus group session with the trainers, coaches reflected on the large impact on teacher retention for the treatment group. They pointed to the sustained match between coaches and teachers throughout the treatment period as a potential contributor to retention.

Parents Activities with Children

In addition to surveying teachers and coaches, we also sent a brief survey home with the children who were randomly selected to participate in the study (in most cases, this was four children per classroom). This survey was intended for parents/caretakers of the preschoolers in our sample.

[9] These responses are consistent with Teaching Strategies' PD and coaching foci. Specifically, Teaching Strategies conducted needs assessments with the treatment coaches and teachers at the start of year 2. Social-emotional growth, behavioral issues, and support for children with disabilities emerged as the areas of greatest need. Accordingly, year 2 & 3 trainings incorporated more PD content and coaching focused on social-emotional development.

Parents could complete the survey online or on the paper copy sent home. Parents were asked basic demographic information (e.g., family income, race/ethnicity, age, educational attainment, and use of household assistance programs), and questions about activities they complete with their children. While response rates for parents (59.64%) answering the parent survey were somewhat low, there were no significant differences in most child demographics between those for whom we have a parent survey, and those for whom we do not (see Appendix B.1 for missing data analyses; n = 508). The only differences that emerge are in age.

To measure parental engagement in math/language and literacy activities with children, parents responded to the question *"In a typical week, how often do you do the following activities with your child?"* They responded to 24 parent/child activities fitting within the content areas of language/literacy and math. Sample items for math included: "*Count number of things you can see/touch,"* and "*Teach simple sums."* A math score was computed from 11 items. Sample language/literacy items included: "*Practice writing alphabet letters,"* and "*Have child explain parts of storybook."* The Language score was computed from items describing 13 activities. Parents responded to each question on the survey with a four-point Likert scale (Never=1, 1-2 times per week=2, 3-6 times per week=3, Everyday=4), with an Average score computed across all items, as well as math and language scores. Parents most frequently reported that they talk with their children about the world around them each week, and they reported teaching simple sums to their children with the least amount of frequency each week. Appendix Table B.2. reports the average scores across items for parents of children in the treatment and control groups.

Figure 11 reports the mean score of activities reported by parents for children in the control and treatment groups in terms of math and language content areas. Parents of children in the treatment group reported slightly higher scores on both the math and language subscales, as well as on the average for all items. Activities were marginally significantly higher for math (p=0.087) and for the average of all items (p=0.094) for parents of children in the treatment group. Parents in the treatment group reported a greater frequency of engaging in these activities on 19 of 24 items, with significant differences in seven of these items (four in math, and three in language; see Table B.2.). Figure 12 shows the ITT estimated differences in parental activities for the treatment group relative to the control group in estimations controlling for child demographics. Differences are significant for average (p=0.022), math (p=0.015), and language (p=0.045), with treatment participation predicting higher levels of parental engagement in math and language activities.

Figure 11. Mean differences in parental activities across classrooms.

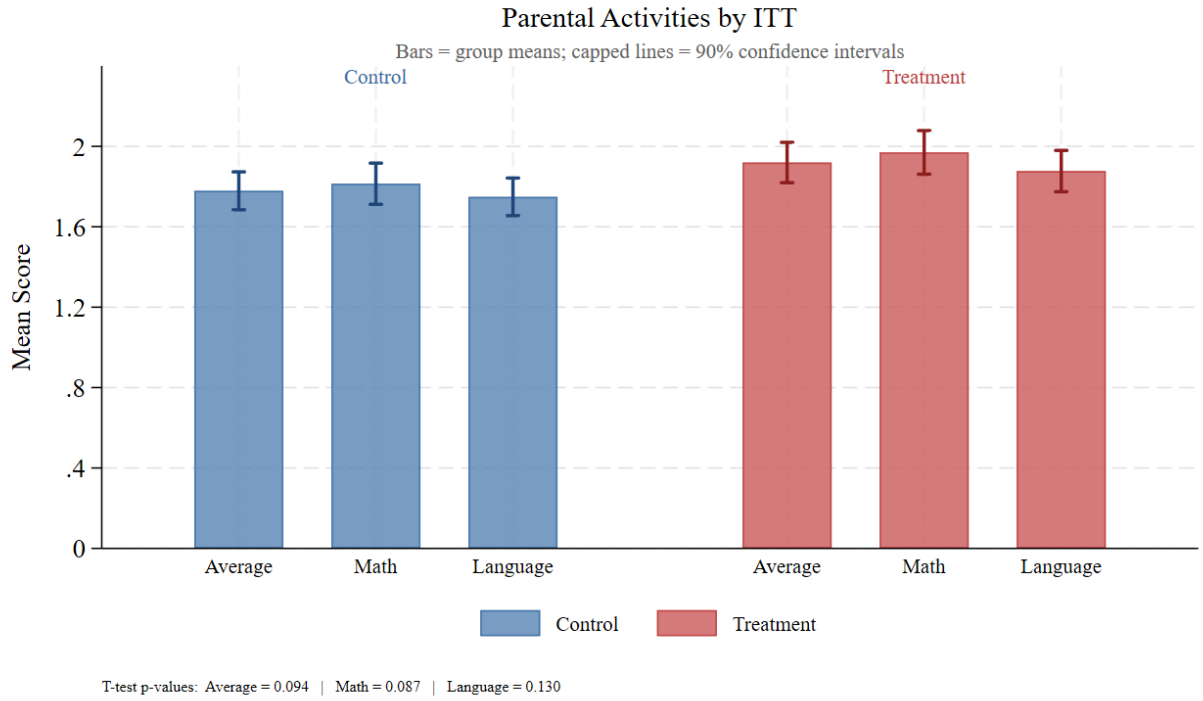
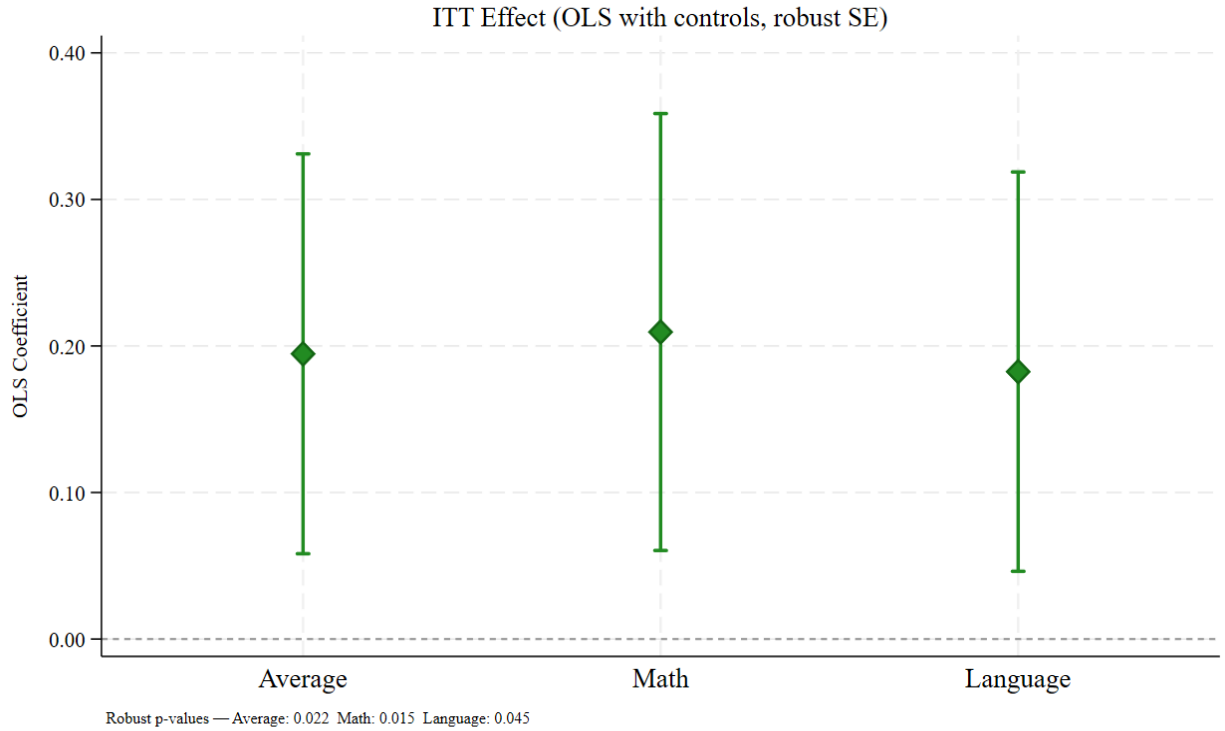


Figure 12. ITT estimated differences in parental activities for the treatment group, relative to the control group.



Summary & Discussion

This report summarizes the perspectives and self-reported activities for teachers and coaches in Teaching Strategies' Creative Curriculum Implementation and Ecosystem Engagement Study (CCIEE), and results from surveys of parents whose children participated in the study. Our surveys show that teachers and coaches enrolled in the study were on average highly educated, a trend that remained consistent at follow-up despite staff turnover. Teachers and coaches had high levels of experience in their current roles, with teachers averaging 8-11 years and coaches averaging more than 20 years of experience in ECE.

One of our aims was to measure classroom quality and children's academic growth in classrooms that received the Teaching Strategies' ecosystem engagement supports as compared to classrooms that continued a business-as-usual approach to the curriculum. In this study, business as usual meant that teachers and coaches had access to the ecosystem on their own (or as directed by their coach), and to openly available resources for users of the system. The treatment group, however, underwent a targeted PD independent of their access to the same resources.

Conducted across two low-income districts and a "synthetic" comparison group, the study found that access to virtually delivered synchronous professional development significantly improved teacher retention but had limited or no consistent effects on classroom quality nor curriculum fidelity (see Nores et al., 2025). Nonetheless, classrooms across the study (regardless of randomization) showed improvements in quality, and gains in child outcomes comparable to those of other districts across the state.

Prior research demonstrates that new teachers are likely to improve most rapidly in their first five years in their role, with some research showing these newer teachers improved about two to four times faster in their first five years of teaching than in their next five years (Ladd & Sorenson, 2017). However, recent research shows that teachers continue to improve in their tenth year of teaching and later, and that certain conditions support this improvement (Podolsky & Darling-Hammond, 2025). Given the relatively high experience level of teachers in the sample, observable shifts in practice may be more subtle, and some ingrained practices less malleable, potentially limiting the sensitivity of the fidelity or observation tools that offer only point-in-time snapshots of classroom quality.

Moreover, teacher and coach turnover—common throughout the duration of the study—along with disruptions to the coaching dyad itself, may have undermined the consistency needed for stronger teacher development and growth, even with an impact on teacher retention. Broader structural stressors in the preschool system, including enrollment challenges and lingering impacts of COVID on teacher stress and retention, may also have limited the effective impact of the professional development supports. This aligns with growing recognition in the ECE field that effective improvement efforts must address the full system: enhancing classroom practice, strengthening coach-teacher relationships, supporting teacher well-being, partnering effectively with families and communities, and engaging leadership in systems change needed to support teaching and learning (Kirby et al., 2023; Lombardi, 2024; Shachner et al., 2024).

Teachers reported different rates of curriculum-related professional development depending on treatment status. Teachers in the treatment group were significantly more likely to report receiving monthly trainings, underscoring the continuity of support associated with the intervention. Coaches' reflections on the professional development—both quantitative and

qualitative—revealed that they viewed these opportunities as beneficial for themselves and the teachers they supported. For example, coaches reported that many or all of their teachers increased their curriculum implementation over the course of the study. When asked how teachers' perspectives toward curriculum changed over the past three years, most treatment coaches stated that teachers were implementing the curriculum with fidelity. This perception was reinforced by teachers' qualitative reflections, with most teachers (across both groups) reporting using the Teaching Guides, Intentional Teaching Cards, and Mighty Minutes. As one teacher shared: *"The teaching guides support me in planning and implementing appropriate lessons. They guide me as I make my daily decisions. They help me bring my practice to life."*

Teachers and coaches had much favorable feedback about the elements of the curriculum that supported them in their day-to-day practice, both early on in the study and at follow-up. However, implementation can be shaped by context. For example, one study of implementation of a comprehensive birth–five curriculum found that teachers with more positive initial perceptions on the curriculum had higher implementation levels, and that teachers with more years of experience implemented fewer curriculum activities over time (Clayback et al., 2023). Other studies have similarly shown that teacher beliefs impact implementation, with those more open to coaching demonstrating greater fidelity (Domitrovich et al., 2019). As discussed, teachers in this study had high levels of education for the field, and high levels of experience in their current role. While they showed positive perceptions of certain facets of the curriculum (e.g., most respondents in the post-test survey who used *The Creative Curriculum* agreed/ strongly agreed that the curriculum is easy to implement), there were some areas that emerged as not as positively viewed. For example, teachers maintained less positive perceptions of curriculum usage when it came to the opportunities it provided for English Language Learners (ELLs) and students with special needs. For ELLs, there was little change in teacher perception that the curriculum met their needs (75% agreeing/strongly agreeing it met the needs of ELLs at post compared to 76.8% at pre). This was similar for students with disabilities, with 53.9% of teachers agreeing/strongly agreeing that it met the needs of students with special needs at pre-test, and 62.59% at post-test. Given the research linking teacher beliefs to curriculum implementation, these persistent teacher perceptions about the ability of the curriculum to meet the needs of diverse students (i.e., students with IEPs, ELLs or, more recently, high levels of social-emotional issues) may hinder full engagement with all curriculum components. Providing clearer guidance on the ways in which the curriculum supports diverse learners may strengthen teacher buy-in and effective implementation.

Teachers and coaches reported mostly positive experiences with the professional development opportunities offered throughout the course of the study. Across the whole sample, teachers overwhelmingly agreed that the Teaching Strategies professional development they attended was valuable, useful for improving teaching practice, and that it was valuable to the students in their classroom. Teachers in the treatment group were significantly more likely than teachers in the control group to agree that the learning experiences offered by Teaching Strategies were engaging, helped improve practice, provided them with knowledge they could use in the future, and that they would recommend the trainings to other teachers. While neither group perceived challenges with the professional development that hindered their utility, the treatment group more positively identified strengths of the professional development. Prior research shows that professional development can be an effective mechanism for reducing the association between teacher stress and less emotionally supportive classroom environments (Sandilos et al., 2018). This may explain why teachers in the treatment group reported higher

levels of personal accomplishment, feeling energized and experiencing exhilaration after working with students significantly more frequently than teachers in the control group, and reported fatigue significantly less frequently. While we cannot confirm causality, since these outcomes were only measured at the end of the study, the lack of group differences at baseline suggests that the professional development may have contributed to these shifts. Future studies should explore whether high-quality PD, even when not explicitly focused on wellness, may have spillover effects on teacher well-being.

Finally, we found slight differences in coaches regarding the types of support they were providing to teachers. While all teachers reported using key strategies, regardless of group (e.g., all coaches identified frequently engaging in strategies to improve staff use of language with children and staff responsiveness to children), most (i.e. 90%) coaches reported working as an assistant in the classroom (e.g., to help manage a child) at least 3–4 times per month. Treatment coaches reported engaging in this strategy with more frequency. These findings highlight the need to protect coaching time from competing demands. Previous research indicates that the role of a coach is often unclearly defined, and variable based on present needs of the school districts (Atteberry & Bryk, 2011) with coaches often taking on a large number and/or variety of tasks beyond their core function (Ryan & Li, 2021). Coaches in this sample were frequently engaged in "other duties as assigned," in this case, assisting in the classroom more often than providing 1:1 coaching support. While research shows that coaching in early childhood education can drive instructional improvement (see Yang et al., 2021 for a review), clearly defining and safeguarding coaching responsibilities combined with more dosage, is likely essential for long-term effectiveness.

We found that parents of children in the sample engage in math and language activities with their children at least one or more times per week, averaging doing these activities between 1-2 times per week, and 3-6 times per week, with differences in favor of the treatment group. Research shows that home numeracy and home literacy experiences between parents and preschoolers have an impact on children's academic skills, including symbolic number knowledge and letter word reading (Swarchuk et al., 2014). Future research could explore the connection between teachers' parental engagement efforts, and the role of coaching or curriculum supports, in further encouraging families to engage in these activities.

Our findings show that teachers and coaches held largely positive perceptions about both the curriculum and the professional development provided during the study. We observed significant post-test differences favoring the treatment group in staff's feelings of professional achievement, despite a lack of significant differences in observed classroom quality. The overall positive attitudes about the curriculum and the high percentage of uptake amongst study participants in using curriculum components (such as studies) indicate meaningful uptake, critical for teacher implementation of the curriculum in ways that support student achievement. Continued access to structured professional development and coaching, paired with attention to the needs of diverse learners and the working conditions of teachers and coaches, will be critical to sustaining fidelity, reducing burnout, and promoting instructional quality over time.

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Appendices

Appendix A. Teacher Survey

Table A.1. Baseline: teacher characteristics: Control vs. Treatment

Variables	Control			Treatment			P-value
	Obs.	Mean/ Percentage	SD	Obs.	Mean/ Percentage	SD	
No. of years in current role	39	6.11	6.52	45	11.87	8.31	0.008***
No. of training hours in early childhood education	39	33.46	21.92	45	31.54	18.55	0.665
Gender (Female)	39	97.44%	.16	45	97.78%	.14	0.920

Note: Synthetic is excluded. ***p<0.01, **p<0.05, *p<0.1.

Table A.2. Baseline: highest level of education completed so far (Q2) Control vs. Treatment

	Control		Treatment		Synthetic	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Associate degree (2 year)	1	2.56	0	0.00	1	2.56
Bachelor's degree (4 year)	20	51.28	24	53.33	23	58.97
Master's degree	16	41.03	19	42.22	15	38.46
Doctorate degree	2	5.13	2	4.44	0	0
Total	39	100	45	100	39	100

Note: Control vs Treatment comparison, Pearson chi2(3) = 1.198, Pr = 0.753. Synthetic versus Treatment comparison, Pearson chi2(3) = 3.079, Pr = 0.380.

Table A.3. How accurately do the following statements describe the curriculum you currently use? Synthetic vs. Treatment (baseline)

	Synthetic			Treatment			P-value
	Obs.	Mean	Std. dev	Obs.	Mean	Std. dev	
Is easy for me to implement	38	4.11	1.29	36	4.47	0.70	0.135
Is at the right level for the majority of my students	38	3.74	1.37	36	4.14	0.80	0.130
Teaches my students to control emotions and behaviors	37	3.19	1.37	36	4.33	0.76	0.000***
Teaches my students' academic skills	38	3.82	1.29	36	4.47	0.61	0.007***
Is engaging for my students	38	3.87	1.26	36	4.44	0.61	0.015**
Provides differentiated materials to meet the needs of all of my students	38	3.55	1.41	36	4.25	0.69	0.009***
Meets the needs of students with special needs	37	3.22	1.11	36	3.78	0.87	0.019**
Meets the needs of English Language Learners (ELLs)	34	3.65	1.10	36	4.19	0.71	0.015**

Note: Control is excluded. Mean values are calculated based on the following Likert Scale: Strongly disagree=1, Disagree=2, Neither agree nor disagree=3, Agree=4, Strongly Agree=5. Excluded 'Don't know'. ***p<0.01, **p<0.05, *p<0.1. N=74.

Table A.4. Use of Creative Curriculum (Full sample, baseline)

	Obs.	Mean	Std. Dev	% Often & Always
Do you implement the "Wow! Experiences" with children in your classroom?	89	2.79	0.97	48.88
Do you let families know when you begin a new study?	89	3.82	0.49	95.69
Do you involve families in the study?	85	2.66	1.05	45.45
Do you extend a study when children in your classroom are particularly interested in the topic?	89	2.17	0.83	25.80
Do you close each study with a celebration of learning?	89	3.35	0.93	74.19

Note: Sample includes only those who use the Creative Curriculum (N=89). Mean values are calculated based on the following Likert Scale: Never=1, Sometimes=2, Often=3 and Always=4. N=93.

Table A.5. Post-test: teacher experience and training, Control vs. Treatment

	Control			Treatment			P-value
Variables	Obs.	Mean/ Percentage	SD	Obs.	Mean/ Percentage	SD	
Number of years in current role	57	5.80	6.01	59	11.24	8.92	0.002***
Number of training hours in early childhood education	57	40.46	23.60	59	36.02	25.22	0.329
Gender (Female)	57	96.49%	.19	59	91.53%	.28	0.265

Note: Synthetic is excluded. ***p<0.01, **p<0.05, *p<0.1.

Table A.6. Post-test: teacher experience and training, Synthetic vs. Treatment

	Synthetic			Treatment			P-value
Variables	Obs.	Mean/ Percentage	SD	Obs.	Mean/ Percentage	SD	
Number of years in current role	41	10.93	8.04	59	11.24	8.92	0.862
Number of training hours in early childhood education	41	26.10	16.57	59	36.02	25.31	0.030**
Gender (Female)	41	100%	0.00	59	91.53%	22.00	0.057*

Note: Control is excluded. ***p<0.01, **p<0.05, *p<0.1.

Table A.7. Post-test: approximately how many total training hours in early childhood education have you completed during the past 12 months? Control vs. Treatment (follow-up)

	Control		Treatment	
	Freq.	Percent	Freq.	Percent
None	0	0.00	1	1.69
Less than 12 hours	1	1.75	6	10.17
12 to 23 hours	17	29.82	19	32.20
24 to 50 hours	25	43.86	19	32.20
51 to 75 hours	6	10.53	7	11.86
More than 75 hours	8	14.04	7	11.86
Total	57	100	59	100

Note: Synthetic is excluded. Pearson chi2(4) = 5.6115, Pr = 0.346.

Table A.8. Post-test: approximately how many total training hours in early childhood education have you completed during the past 12 months? Synthetic vs. Treatment (follow-up)

	Synthetic		Treatment	
	Freq.	Percent	Freq.	Percent
None	1	1	1	1.69
Less than 12 hours	2	5	6	10.17
12 to 23 hours	3	17	19	32.20
24 to 50 hours	4	16	19	32.20
51 to 75 hours	5	1	7	11.86
More than 75 hours	6	1	7	11.86
Total	41	100	59	100

Note: Control is excluded. Pearson chi2(5) = 6.4272, Pr = 0.267

Table A.9. Post-test: teacher characteristics, Full sample

Characteristic	Percentage
Female (%)	96.77
Race and ethnicity (%, select all)	
Black, African, or African American	24.18
Hispanic/Latino	27.45
White	40.52
Asian, Multi-racial & Other	7.85
Education (%)	
Some college credits, no degree:	1.27
Bachelor's degree (4 year)	55.41
Master's degree	42.04
Doctorate degree	1.27
Teaching experience (%)	
Less than 3 years	23.57
3 years to <10 years	26.75
At least 10 years	36.49
Sample size	157

Table A.10. Post-test: teacher characteristics, Control vs. Treatment

Teacher Characteristics	Control				Treatment				P-value
	N	Mean/ Percent	SD	95% CI	N	Mean/ Percent	SD	95% CI	
Female	57	96.49%	0.19		59	91.53%	0.28		0.265
Teaching experience (years)	57	5.80	6.01	4.21-7.40	59	11.24	8.92	8.91-13.56	0.002***
Race/ethnicity	57				59				0.037**
Black, African, or African American	23	40.35%			9	15.25%			
Hispanic/Latino	17	29.82%			21	35.59%			
White	11	19.30%			21	35.59%			
Asian, Multi-racial & Other	6	10.53%			8	13.56%			
Education	57				59				0.549
Associate degree (2 year)	2	3.51%			0	0.00%			
Bachelor's degree (4 year)	31	54.39%			33	55.93%			
Master's degree	23	40.35%			25	42.37%			
Doctorate degree	1	1.75%			1	1.69%			

Note: Column (9) for 'Female' and 'Teaching experience' represents P-value of the two tailed t-test. Column (9) for 'Race/ethnicity' and 'Education' represents P-value for chi-squared test of independence. ***p<0.01, **p<0.05, *p<0.1

Table A.11. Post-test: teacher characteristics, Synthetic vs. Treatment

	Synthetic				Treatment				P-value
	N	Mean/ Percent	SD	95% CI	N	Mean/ Percent	SD	95% CI	
Female	41	100.00%	0.00		59	91.53%	0.28		0.057*
Teaching experience (years)	41	10.93	8.04	8.39-13.47	59	11.24	8.92	8.91-13.56	0.8618
Race/ethnicity	41				59				0.004***
Black, African, or African American	5	12.2%			9	15.25%			
Hispanic/Latino	4	9.76%			21	35.59%			
White	30	73.17%			21	35.59%			
Asian, Multi-racial & Other	2	4.88%			8	13.56%			
Education	41				59				0.702
Associate degree (2 year)	0	0.00%			0	0.00%			
Bachelor's degree (4 year)	23	56.10%			33	55.93%			
Master's degree	18	43.90%			25	42.37%			
Doctorate degree	0	0.00%			1	1.69%			

Note: Column (9) for 'Female' and 'Teaching experience' represents P-value of the two tailed t-test. Column (9) for 'Race/ethnicity' and 'Education' represents P-value for chi-squared test of independence. ***p<0.01, **p<0.05, *p<0.1

Table A.12. Does your preschool curriculum have an associated child assessment tool that you use? Control vs. Treatment (follow-up)

	(1)	(2)	(3)	(4)
	Control		Treatment	
	Freq.	Percent	Freq.	Percent
Yes	50	87.72	53	91.38
No, we use a separate tool	2	3.51	3	5.17
No, we do not use a child assessment tool	4	7.02	2	3.44
Unknown	1	1.75	0	0.00
Total	57	100	58	100

Note: Synthetic is excluded. Pearson chi2(2) = 1.945, Pr = 0.584

Table A.13. Does your preschool curriculum have an associated child assessment tool that you use? Synthetic vs. Treatment (follow-up)

	Synthetic		Treatment	
	Freq.	Percent	Freq.	Percent
Yes	38	92.68	53	91.38
No, we use a separate tool	2	4.88	3	5.17
No, we do not use a child assessment tool	0	0.00	2	3.44
Unknown	1	2.44	0	0.00
Total	41	100	58	100

Note: Control is excluded. Pearson chi2(2) = 2.837, Pr = 0.417

Table A14. What preschool child assessment tools and/or processes does your school/site use Control vs. Treatment (follow-up)

	Control		Treatment	
	Freq.	Percent	Freq.	Percent
Child Find/Screening	36	63.16%	44	74.58%
Informing curriculum/instruction	30	52.63%	39	66.10%
Progress monitoring for IEP goals	26	45.61%	35	59.32%
Progress monitoring for program/curriculum goals	31	54.39%	32	54.24%
All of the above	15	26.32%	21	35.59%

Note: Synthetic is excluded. Categories are not mutually exclusive. N=116.

Table A15. What preschool child assessment tools and/or processes does your school/site use Synthetic vs. Treatment (follow-up)

	Synthetic		Treatment	
	Freq.	Percent	Freq.	Percent
Child Find/Screening	31	75.61%	44	74.58%
Informing curriculum/instruction	28	68.29%	39	66.10%
Progress monitoring for IEP goals	24	58.54%	35	59.32%
Progress monitoring for program/curriculum goals	22	53.66%	32	54.24%
All of the above	14	34.15%	21	35.59%

Note: Control is excluded. Categories are not mutually exclusive. N=84.

Table A.16. How accurately do the following statements describe the curriculum you currently use? Full sample (follow-up)

	Obs.	Mean	Std. dev	% Agree & Strongly Agree
Is easy for me to implement	146	4.33	0.95	95.21
Is at the right level for the majority of my students	146	4.02	1.09	78.08
Teaches my students to control emotions and behaviors	146	4.10	1.02	77.77
Teaches my students' academic skills	145	4.26	0.91	87.59
Is engaging for my students	147	4.27	0.80	90.48
Provides differentiated materials to meet the needs of all of my students	146	4.09	1.03	78.08
Meets the needs of students with special needs	139	3.69	1.15	62.59
Meets the needs of English Language Learners (ELLs)	144	3.95	1.01	75.00

Note: Mean values are calculated based on the following Likert Scale: Strongly disagree=1, Disagree=2, Neither agree nor disagree=3, Agree=4, Strongly Agree=5. Excluded 'Don't know'. N=104.

Table A.17. How accurately do the following statements describe the curriculum you currently use? Synthetic vs. Treatment

	Synthetic			Treatment			P-value
	Obs.	Mean	Std. dev	Obs.	Mean	Std. dev	
Is easy for me to implement	39	4.41	1.02	56	4.29	0.91	0.533
Is at the right level for the majority of my students	39	4.18	1.12	54	4.00	1.16	0.293
Teaches my students to control emotions and behaviors	39	4.08	1.06	55	4.13	1.06	0.821
Teaches my students' academic skills	39	4.21	1.08	55	4.24	0.90	0.879
Is engaging for my students	39	4.31	0.86	56	4.23	0.87	0.678
Provides differentiated materials to meet the needs of all of my students	39	4.28	1.07	55	4.02	1.01	0.227
Meets the needs of students with special needs	38	3.66	1.19	53	3.83	1.01	0.460
Meets the needs of English Language Learners (ELLs)	37	3.78	1.08	56	4.00	1.03	0.334

Note: Control is excluded. Mean values are calculated based on the following Likert Scale: Strongly disagree=1, Disagree=2, Neither agree nor disagree=3, Agree=4, Strongly Agree=5. Excluded 'Don't know'. ***p<0.01, **p<0.05, *p<0.1. N=74.

Table A.18. How accurately do the following statements describe your learning experience with Teaching Strategies this year? Full sample

	Obs.	Mean	Std. dev	% Agree & Strongly Agree
I felt motivated to participate in these learning opportunities	134	4.28	0.69	88.05
I felt motivated to implement the strategies I learned in my classroom	135	4.46	0.60	94.81
The strategies I learned were easy to begin and I could sustain them over time	135	4.21	0.71	88.14
The trainings were engaging	132	4.18	0.78	84.09
The trainings helped me improve my practice	135	4.35	0.64	91.11
Is benefitting the children in my classroom	134	4.32	0.64	91.79
Has influenced my teaching practice and classroom management	135	4.30	0.73	88.89
Has been a valuable professional development opportunity for me	134	4.31	0.73	88.06
Is providing me with knowledge I will likely continue to use in the future	135	4.37	0.68	92.60
I would recommend these trainings to other teachers	135	4.36	0.70	90.37

Table A.19. How accurately do the following statements describe your learning experiences with Teaching Strategies this year? Control vs. Treatment

	Control			Treatment			P-value
	Obs.	Mean	Std. dev	Obs.	Mean	Std. dev	
I felt motivated to participate in these learning opportunities.	51	4.20	0.78	55	4.40	0.66	0.146
I felt motivated to implement the strategies I learned in my classroom.	51	4.39	0.60	55	4.56	0.60	0.146
The strategies I learned were easy to begin and I could sustain them over time.	51	4.08	0.72	55	4.31	0.74	0.107
The trainings were engaging.	50	4.04	0.83	54	4.41	0.71	0.017**
The trainings helped me improve my practice.	51	4.22	0.64	55	4.51	0.66	0.023**
Is benefitting the children in my classroom.	50	4.26	0.69	55	4.42	0.64	0.234
Has influenced my teaching practice and classroom management.	51	4.22	0.81	55	4.40	0.74	0.222
Has been a valuable professional development opportunity for me.	50	4.14	0.83	55	4.47	0.69	0.028**
Is providing me with knowledge I will likely continue to use in the future.	51	4.24	0.79	55	4.51	0.64	0.051*
I would recommend these trainings to other teachers.	51	4.25	0.72	55	4.45	0.77	0.170

Note: Synthetic is excluded. Mean values are calculated based on the following Likert Scale: Strongly disagree=1, Disagree=2, Neither agree nor disagree=3, Agree=4, Strongly Agree=5. Excluded 'Don't know'. ***p<0.01, **p<0.05, *p<0.1. N=106.

Table A.20. How accurately do the following statements describe your learning experiences with Teaching Strategies this year? Control vs. Treatment

	Control			Treatment			P-value
	Obs.	Mean	Std. dev	Obs.	Mean	Std. dev	
Lack of resources and materials.	52	2.65	1.03	55	2.40	1.13	0.228
Insufficient time to plan and meet with coaches.	52	3.00	1.18	54	2.81	1.17	0.420
A mismatch in language with children and/or coaches.	52	2.00	0.84	53	2.17	1.07	0.367
The absence of support from my coach.	52	1.96	0.89	54	1.94	0.98	0.925
The absence of support from leadership at my school/center.	51	2.16	0.95	54	2.06	1.11	0.606
The load of curricular and assessment requirements I am expected to fulfill.	52	3.35	1.14	55	3.04	1.22	0.177

Note: Synthetic is excluded. Mean values are calculated based on the following Likert Scale: Strongly disagree=1, Disagree=2, Neither agree nor disagree=3, Agree=4, Strongly Agree=5. Excluded 'Don't know'. ***p<0.01, **p<0.05, *p<0.1. N=106.

Table A.21. Please rate the following statements with how often they occur. Control vs. Treatment

	Control			Treatment			P-value
	Obs.	Mean	Std. dev	Obs.	Mean	Std. dev	
I can easily understand how my students feel about things	53	5.30	1.40	54	5.26	1.42	0.876
I deal very effectively with the problems of my students.	53	5.34	1.31	56	5.70	0.81	0.093*
I feel I'm positively influencing other people's lives through my work.	52	4.94	1.73	56	5.27	1.20	0.256
I feel very energetic.	53	4.21	1.70	56	4.80	1.29	0.043**
I can easily create a relaxed atmosphere with my students.	54	5.48	1.06	56	5.63	0.65	0.391
I feel exhilarated after working closely with my students.	54	4.02	2.22	56	5.16	1.27	0.001***
I have accomplished many worthwhile things in this job.	53	4.96	1.64	57	5.35	1.01	0.142
In my work, I deal with emotional problems very calmly.	53	5.17	1.47	56	5.48	0.76	0.173
Personal accomplishment subscale	54	4.92	0.91	57	5.34	0.61	0.005***

Note: Synthetic is excluded. Mean values are calculated based on the following Likert Scale: Never=0, A few times a year or less=1, Once a month or less=2, A few times a month=3, Once a week=4, A few times a week=5, Everyday=6. N=150.***p<0.01, **p<0.05, *p<0.1. N=106.

Table A.22. Please rate the following statements with how often they occur. Control vs. Treatment

	Control			Treatment			P-value
	Obs.	Mean	Std. dev	Obs.	Mean	Std. dev	
I feel emotionally drained from my work.	54	3.04	2.08	56	2.73	1.91	0.425
I feel used up at the end of the workday.	54	3.26	2.26	56	2.77	1.90	0.220
I feel fatigued when I get up in the morning and have to face another day on the job.	54	2.72	2.26	56	2.00	1.87	0.074*
Working with people all day is really a strain for me.	53	0.85	1.46	56	0.82	1.54	0.924
I feel burned out from my work.	53	2.72	2.11	56	2.13	1.85	0.122
I feel frustrated by my job.	53	2.04	1.76	55	1.95	1.69	0.782
I feel I'm working too hard on my job.	52	2.65	2.06	55	2.45	2.05	0.617
Working with people directly puts too much stress on me.	53	0.75	1.41	56	0.54	1.09	0.366
I feel like I'm at the end of my rope.	54	1.06	1.72	56	0.57	1.31	0.098*
Emotional exhaustion subscale	54	2.10	1.30	56	1.77	1.52	0.222

Note: Synthetic is excluded. Mean values are calculated based on the following Likert Scale: Never=0, A few times a year or less=1, Once a month or less=2, A few times a month=3, Once a week=4, A few times a week=5, Everyday=6. N=150.***p<0.01, **p<0.05, *p<0.1. N=106.

Table A.23. Please rate the following statements with how often they occur. Control vs. Treatment

	Control			Treatment			P-value
	Obs.	Mean	Std. dev	Obs.	Mean	Std. dev	
I feel I treat some students as if they were impersonal objects.	54	0.26	0.87	56	0.16	0.60	0.489
I've become more callous toward people since I took this job.	52	0.67	1.40	55	0.53	1.37	0.587
I worry that this job is hardening me emotionally.	53	0.92	1.40	56	0.71	1.34	0.425
I don't really care what happens to some students.	53	0.09	0.49	56	0.07	0.53	0.816
I feel students blame me for some of their problems.	54	0.07	0.43	56	0.29	0.93	0.127
Depersonalization subscale	54	0.40	0.57	56	0.35	0.66	0.667

Note: Synthetic is excluded. Mean values are calculated based on the following Likert Scale: Never=0, A few times a year or less=1, Once a month or less=2, A few times a month=3, Once a week=4, A few times a week=5, Everyday=6. N=150.. ***p<0.01, **p<0.05, *p<0.1. N=106.

Appendix B. Parental Activities

Table B.1. Missing data analyses for children with and without a parent survey.

VARIABLES	Missing Parent Survey
ITT	0.030
	(0.044)
Age 3 group	0.200***
	(0.071)
Age in months	0.009*
	(0.005)
District 2	-0.064
	(0.052)
Female	0.051
	(0.044)
IEP	-0.014
	(0.093)
DLL	0.009
	(0.068)
Child Black	-0.020
	(0.307)
Child Hispanic	-0.045
	(0.305)
Child Asian	-0.229
	(0.334)
Child White	0.091
	(0.333)
Child Other Race or Ethnicity	-0.119
	(0.321)
Observations	508
R-squared	0.035

Note: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table B.2. Mean frequency in home learning activities reported across treatment and control families.

Outcome	All			Treatment			Control			
	N	Mean	SD	N	Mean	SD	N	Mean	SD	P-value
Read Books	302	1.712	0.863	94	1.628	0.790	101	1.564	0.842	0.589
Make Up Stories	297	1.623	0.911	93	1.624	0.871	99	1.505	0.850	0.341
Practice Alphabet	297	1.606	0.887	93	1.742	0.846	98	1.459	0.852	0.022**
Play Blocks	297	1.660	0.949	94	1.723	0.932	99	1.778	0.995	0.696
How to Read	294	1.612	0.916	93	1.634	0.894	96	1.500	0.858	0.293
Something Big / Small	299	1.773	0.981	94	1.798	1.053	100	1.720	0.900	0.580
Teach About the World	299	2.304	0.892	94	2.245	0.935	98	2.337	0.885	0.484
Practice Sounds	301	2.086	0.920	95	2.189	0.867	100	2.010	0.916	0.162
Count	299	2.284	0.869	95	2.389	0.854	97	2.237	0.887	0.227
Directional Words	303	2.135	0.958	95	2.158	0.971	101	2.218	0.901	0.655
Count Out Loud	302	2.457	0.754	95	2.547	0.665	101	2.356	0.782	0.068*
Rhyming Words	300	1.520	1.016	93	1.763	1.004	100	1.380	0.930	0.006***
Talk About the World	296	2.243	0.961	94	2.234	0.977	99	2.283	0.893	0.717
Simple Sums	297	1.367	1.041	94	1.500	1.024	100	1.250	1.009	0.088*
Learn Letters	300	2.117	0.890	93	2.226	0.861	101	2.079	0.891	0.246
Learn Shapes	298	2.138	0.879	95	2.221	0.853	100	2.050	0.857	0.164
Talk About Money	302	1.579	1.102	95	1.726	1.180	101	1.564	1.053	0.311
Sorting Activities	299	1.823	0.951	93	1.925	0.958	99	1.879	0.929	0.736
Writing Activities	303	1.713	1.007	95	1.895	1.026	101	1.485	0.955	0.004***
Identify Numbers	302	1.815	1.004	94	2.021	1.037	101	1.594	0.961	0.003***
Explain a Book	301	1.392	0.979	95	1.537	0.976	100	1.320	0.909	0.110
Discuss New Words	299	1.759	0.939	94	1.745	1.005	100	1.790	0.924	0.744
Books About Shapes	300	1.447	0.907	95	1.663	0.985	100	1.370	0.837	0.026**
Name Objects	301	2.003	0.981	93	1.892	1.037	101	2.050	0.963	0.276
All Activities	303	1.840	0.578	95	1.920	0.595	101	1.779	0.576	0.094*
Lang. Activities	303	1.823	0.588	95	1.877	0.609	101	1.749	0.572	0.130
Math Activities	303	1.861	0.625	95	1.970	0.643	101	1.814	0.626	0.087*

Note: *** p<0.01, ** p<0.05, * p<0.1