



The *We Grow Together* Professional Development System

Final Report of the 2019 Field Test: Appendices

December, 2020

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Appendix A

WGT glossary

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We Grow Together: GLOSSARY

- **Classroom** refers to both center-based classrooms and FCCs.
- **Family child care homes (FCCs)** refers to early care and education in a home setting, which may include children ranging from infants and toddlers to school age.
- **Infant and toddler caregiver:** Teachers of infants and toddlers in center-based care or in family child care (FCC) homes.
- **Infant classroom** refers to classrooms in which the majority of children are between birth and 18-months of age.
- **Key practice:** Key practices are skills that a caregiver focuses on within each module. Each key practice has associated activities and actions for the caregiver to incorporate into their setting. For example, “Engaging children in books” is a key-practice within the “Support Literacy” module of the Support for Language and Literacy Development domain.
- **Mixed-aged classroom** refers to classrooms in which children include both infants and toddlers. Some children may be outside of our age range. Mixed-aged classrooms are most common in FCCs.
- **PD provider:** A PD provider is an individual providing professional development at the local level and participating with a caregiver in We Grow Together.
- **Professional development** includes any activity to support an individual in gaining the knowledge, skills, attitudes, and behaviors of a high-quality early childhood education and care professional.
- **Q-CCIIT:** Quality of Caregiver-Child Interactions for Infants and Toddlers observational measure, which forms the basis of the We Grow Together professional development system.
- **Setting:** Center-based early care and education settings and family child care homes (FCCs). Early care and education programs can be FCCs or center-based settings.
- **Toddler classroom** refers to classrooms in which the majority of children are between 18-months and 36-months of age.
- **We Grow Together domain:** The We Grow Together system has three primary areas or domains: Support for Social-Emotional Development; Support for Cognitive Development; Support for Language and Literacy Development. These domains align with the three support domains of the Q-CCIIT (which also includes Areas of Concern).
- **We Grow Together module:** Within each We Grow Together domain is a set of modules that contain key practices for caregivers to implement in their settings. Modules break each domain out into more specific sub-topics. In the We Grow Together professional development system, there are 9 modules, each with 4 to 5 key practices. For example, “Support Toddlers’ Peer Interactions” is a module within the Support for Social-Emotional Development domain.
- **The We Grow Together system** refers to all of the information and activities provided by We Grow Together and the interactions between the caregivers and PD provider who are using We Grow Together.

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Appendix B

WGT descriptive analysis tables for full sample

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B.I. Overview of data tables

The sample in these tables represents the study participants as of March 1, 2019, eight weeks after the start of the implementation. Based on prior professional development studies, we set that date as the minimum time needed to consider that they participated in the study (although the full implementation period was four months). Specifically, all caregivers in the final analytic sample remained in a caregiver-professional development (PD) provider pair, completed either the background survey or the fall 2018 Quality of Caregiver-Child Interactions for Infants and Toddlers (Q-CCIIT) observation, and remained in the study until at least March 1, 2019. PD providers were in the final analytic sample if they remained in a caregiver-PD provider pair, participated in PD provider training (defined as attending at least one webinar or logging onto the We Grow Together [WGT] website during the training period), and remained in the study at least until March 1, 2019. The amount of time that caregivers and PD providers spent focusing on improving WGT practices varied greatly. Website usage varied from as little as a few minutes to more than 24 hours.

Across the period of data collection activities and implementation of WGT, caregivers and PD providers left the study for a variety of reasons, resulting in a final analytic sample of 271 pairs, comprising 271 caregivers and 168 PD providers. Of the PD providers, 93 were paired with more than one caregiver. The sample included 214 center-based classrooms (89 were affiliated with Early Head Start [EHS] and 125 were community-based child care programs). The field test sample also included 57 family child care (FCC) homes.

In the tables in this document, the sample size for different items and scales depends on the number of caregivers and PD providers among the analytic sample who responded to those items. Some items were not applicable to all respondents. For example, there was a skip pattern in the caregiver background survey for the items about the relationship with the PD provider when the caregivers had not worked with the WGT PD providers previously. In the feedback survey, participants reported only about the usefulness of the module on which they spent the most time working and the practices they tried in that module.

If a scale had responses on at least 75 percent of the component items, we imputed the mean for the missing data, increasing the sample size for those scales. These tables describe the actual responses on the survey; the sample size fluctuates between items and tables.

B.II. Who are the participants in the We Grow Together field test?

The tables in this section provide baseline information that describes the caregivers and PD providers who participated in our final analytic sample: their demographics; background education; prior experiences with PD and in early childhood education, particularly with infants and toddlers; and the well-being of caregivers. This study used purposive sampling of caregivers.

The data in this section describe the early childhood professionals who participated in WGT, focusing on the knowledge, background, and prior experiences participants brought to this PD experience.

Table B.II.1. What were caregivers' characteristics in We Grow Together (fall 2018)?

Caregiver characteristics	WGT caregivers, fall 2018	
	Sample size	Percentage/ mean (SE)
Race		
White	263	46.0
Black or African American	263	38.8
Asian	263	5.3
American Indian or Alaska Native	263	4.9
Native Hawaiian or other Pacific Islander	263	0.4
Hispanic or Latino	258	24.8
Female	260	98.8
Age (years)	258	38.7 (0.76)
Full-time status	252	95.2
A primary caregiver is assigned to each child in the setting	254	50.8
Experience in early care and education (years)	262	11.2 (0.53)

Source: Fall 2018 WGT Caregiver Background Survey.

Table B.II.2. What were caregivers' education levels and professional credentials before involvement in the study (fall 2018)?

Caregiver education and credentials	WGT caregivers, fall 2018	
	Sample Size	Percentage/mean (SE)
Highest level of education		
High school diploma or equivalent	255	19.2
Some college but no degree	255	23.9
Associate's degree	255	24.3
Bachelor's degree	255	20.0
Master's degree	255	5.5
Professional diploma past Master's degree	255	0.0
Field for highest degree		
Child development or developmental psychology	263	12.9
Early childhood education	263	43.3
Elementary education	263	4.6
Special education	263	2.3
Other	263	28.9
College coursework (mean number of courses)		
Infant/toddler development and care	222	3.4 (0.16)
Early childhood education	219	3.9 (0.18)
Child development	219	3.9 (0.17)
Child Development Associate (CDA) Credential		
Current	255	35.7
No longer current	255	5.9
Never had	255	58.4
Professional organization membership (e.g., NAEYC, NAFCC) ^a	253	43.9

Source: Fall 2018 WGT Caregiver Background Survey.

Note: Adapted Q-CCIIT Caregiver Self-Administered Questionnaire (SAQ) 2012.

^a NAEYC = National Association for the Education of Young Children; NAFCC = National Association for Family Child Care.

Table B.II.3. What was caregivers' mental health before involvement in the study (fall 2018)?

Caregiver mental health	WGT caregivers, fall 2018	
	Sample size	Percentage/ mean (SE)
Depressive symptoms		
Center for Epidemiological Studies – Depression (CES-D 10 short form; mean) ^a	257	5.4 (0.26)
Moderate depressive symptoms	257	8.6
Severe depressive symptoms	257	2.7
Anxiety and Depressive Symptoms		
Kessler-6 Self-Report (mean) ^b	257	3.0 (0.22)
Moderate depressive symptoms	257	10.5
Serious depressive symptoms	257	1.6

Source: Fall 2018 WGT Caregiver Background Survey.

Notes: Adapted from Radloff, L.S. Center for Epidemiological Studies Depression Scale CESD-10. 1997. [Measurement Instrument]; Kessler, R.C., G. Andrews, L. J. Colpe, E. Hiripi, D. K. Mroczek, S. L. T. Normand, E. E. Walkters and A. M. Zaslavsky. Short Screening Scales to Monitor Population Prevalences and Trends in Non-Specific Psychological Distress. Cambridge University Press, 2002.

Cut points for the levels of depressive symptoms (severe/serious or moderate) for the CES-D 10 were from the psychometric information provided in Bjorgvisson, T., S.J. Kertz, J.S. Bigda-Peyton, K.L. McCoy, and I.M. Aderka. "Psychometric Properties of the CES-D-10 in a Psychiatric Sample." *Assessment*, vol. 20, no. 4, 2013, pp. 429–436. The depressive symptoms are considered moderate for a score of 10–14 and severe for a score of 15 or greater.

For the Kessler-6, the analysis used the cut points identified in Madill, R., T. Halle, T. Gebhart, and E. Shuey. "Supporting the Psychological Well-Being of the Early Care and Education Workforce: Findings from the National Survey of Early Care and Education." OPRE Report #2018-49. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2018.

^a The possible range for the CES-D 10 is 0 to 30; the observed range is 0 to 24. The Cronbach alpha for CES-D 10 is 0.80.

^b The possible range for Kessler-6 is 1 to 24; the observed range is also 0 to 24. The Cronbach alpha is 0.78.

Table B.II.4. What were caregivers' professional development experiences before involvement in the study (fall 2018)?

	Sample size	Percentage/ mean (SE)	Observed range
Caregiver PD experiences			
Mentor, coach, or other PD provider before study	258	72.9	
Caregiver relationship with WGT PD provider (among caregivers who previously worked with the PD provider)^a	128	3.8 (0.03)	1.9–4.0
Support network of other caregivers (among network members)	108	76.9	
Support network meeting attendance (among network members)			
More than once a month	82	30.5	
Once a month	82	42.7	
Several times a year	82	22.0	
About once a year	82	4.9	
PD activities provided by center/FCC^b			
Paid preparation/planning time	222	68.0	
Tuition reimbursement for relevant college courses	215	52.1	
Participation in a mentor program	214	50.5	
Reimbursement for workshop fees or other costs for outside training	220	57.7	
Paid time during work hours for staff development	236	68.2	
Ongoing consultation from specialist coach or mentor	225	60.9	
Visits to other child care classrooms or settings	214	40.2	
Professional organizational meetings	227	75.3	
Other	107	29.9	
Number of technical assistance (TA) activity topics focused on teaching strategies (mean) ^c	263	2.8 (0.14)	0.0–6.0
Number of infant-toddler professional websites accessed this year (mean) ^d	263	1.9 (0.11)	0.0–9.0

Source: Fall 2018 WGT Caregiver Background Survey.

Note: Items adapted from Q-CCIIT Caregiver SAQ.

^a Reliability of caregiver-provider relationship scale is 0.92 with a total of 8 items. Score is the mean of the caregiver's ratings across the items. The possible range is 1–4, with higher scores indicating a more positive relationship. Half of the caregivers (50.2%) had not worked previously with the WGT PD provider.

^b Items in this section called for a yes or no response. Some participants only responded to items to which they answered "yes" and skipped the other items.

^c Seven topics in the list of TA activities refer to teaching strategies. The possible range was 0–7. TA activity topics focused on teaching strategies included in the list of possible training and TA items.

^d The possible range was 0 (none of the available options was visited by caregiver) to 11 (caregiver visited all 11 websites named as options).

Table B.II.5. What were caregivers' levels of satisfaction with work and readiness for change before involvement in the study (fall 2018)?

Caregiver views on satisfaction and change	Sample size	Percentage/ mean (SE)	Observed range
Likely to continue working in infant/toddler care^a			
Very likely	263	84.4	
Somewhat likely	263	12.5	
Five-year career goal			
Keep current job	259	52.5	
New position, current workplace	259	15.4	
Different early childhood education setting	259	16.2	
Job outside early childhood education field	259	10.0	
None of these	259	5.8	
Caregiving goals (mean)^b			
Keep infants and toddlers safe and healthy	261	5.5 (0.05)	1.0–6.0
Help infants and toddlers in all areas of development	261	5.7 (0.03)	1.0–6.0
Keep children happy	258	5.5 (0.05)	1.0–6.0
Stage of change^c			
Stage 1: Not ready to change	250	0.0	
Stage 2: Thinking about change but overwhelmed by obstacles	250	3.6	
Stage 3: Ready to change	250	45.6	
Stage 4; Actively engaged in change	250	46.0	
Stage 5: Maintaining change	250	4.8	

Source: Fall 2018 WGT Caregiver Background Survey.

^a Possible range was 1 (Very likely), 2 (Somewhat likely), 3 (Somewhat unlikely), and 4 (Very unlikely).

^b Possible range was 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree).

^c Peterson, S.M., A.C. Baker, and M.R. Weber. Stage of Change Scale [Measurement Instrument]. Rochester, NY: Children's Institute, 2010. Higher stages indicate more openness to continuous improvement.

Table B.II.6. How were caregivers' professional development needs assessed in their setting before involvement in the study (fall 2018)?

Caregiver views on determining PD needs	Sample size	Percentage
Caregiver has individual career or PD plan	253	53.4
Program director or supervisor uses the plan to provide PD and training (for those with a plan) ^a	130	87.7
Caregiver's classroom observed	217	90.8
Caregiver directly asked about PD needs	227	89.0
Child assessment data reviewed	191	81.7
Surveys/questionnaires completed by caregiver	197	67.0

Source: Fall 2018 WGT Caregiver Background Survey.

Note: Items are drawn from Baby FACES 2009 and 2018 teacher surveys. In Cannon, J., K. Schellenberger, A. Defnet, A. Bloomenthal, Y. Xue, and C. A. Vogel. Baby FACES 2018: Data Users' Guide, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2020.

^a Caregivers responded to the use of a PD plan only when they reported having a plan.

Table B.II.7. What was the primary curriculum or approach used by caregivers (fall 2018)?

Name of curriculum	WGT caregivers, fall 2018	
	N	Percentage
Creative Curriculum	263	60.1
Active Learning for Infants	263	24.3
Continuity of care	263	11.8
Reggio Emilia	263	8.0
High/Scope	263	7.2
Mother Goose	263	6.1
Scholastic Curriculum	263	4.9
Montessori Method	263	4.6
Educare	263	4.6
Resources for Infant Educare (RIE; Magda Gerber)	263	3.0
Frog Street	263	3.0
Bank Street developmental-interaction approach	263	1.1
Other	263	21.3
No specific curriculum or approach	263	17.9

Source: Fall 2018 WGT Caregiver Background Survey.

Notes: Adapted from LA Advance Administrator Survey [Measurement Instrument] (Moiduddin et al. 2016, unpublished instrument).

Table B.II.8. What did caregivers think about PD provider support in fall 2018?

Caregiver views on PD provider support	Sample size	Percentage/ mean (SE)	Observed range
What percentage of caregivers have worked with WGT PD provider in prior years?	257	48.6	
How long have you been working with this PD provider? (years)	112	4.6 (4.55)	0.0–30.0
Focusing on teacher-child interactions, how much support (such as information, feedback, and help in doing your job) do you feel you receive from your PD provider ^{a, b}	128	3.7 (0.65)	1.0–4.0
Overall, how much do you feel the resources and feedback provided by your PD provider have contributed to your professional effectiveness? ^{a, c}	129	3.6 (0.63)	1.0–4.0

Source: Fall 2018 WGT Caregiver Background Survey.

^a Adapted from the “Baby FACES 2018 Teacher Interview, Early Head Start Family and Child Experiences Study.” Administration for Children and Families. In Cannon, J., K. Schellenberger, A. Defnet, A. Bloomenthal, Y. Xue, and C. A. Vogel. Baby FACES 2018: Data Users’ Guide, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2020.

^b Possible range for these items was 1 (No support), 2 (A little support), 3 (Some support), and 4 (A lot of support). Only caregivers who received PD in prior years responded to this question.

^c Possible range for these items was 1 (Not at all), 2 (A little), 3 (Somewhat), and 4 (A great deal). Only caregivers who received PD in prior years responded to this question.

Table B.II.9. What were the characteristics of PD providers participating in We Grow Together (fall 2018)?

PD provider characteristics	PD providers, fall 2018	
	Sample size	Percentage/mean (SE)
Race		
White	166	55.4
Black or African American	166	30.7
Asian	166	4.2
American Indian or Alaska Native	166	4.2
Native Hawaiian or other Pacific Islander	166	3
Hispanic or Latino	163	18.4
Female	164	97.6
Age (mean)^a	163	46.2 (0.90)
Full-time status	161	57.1
Role		
Internal coach	157	59.2
External coach	157	29.9
Other	157	10.8
PD provider is also supervisor for caregiver (percentage of caregivers)	243	63
Caseload (mean caregivers worked with on an ongoing basis)	163	13.6 (0.91)

Source: Fall 2018 WGT PD Provider Background Survey.

^a Range is 22–72 years.

Table B.II.10. What were the education levels and professional credentials of PD providers participating in We Grow Together (fall 2018)?

PD provider characteristics	PD providers, fall 2018	
	Sample size	Percentage/ mean (SE)
Highest level of education		
High school diploma or equivalent	161	4.3
Some college but no degree	161	4.3
Associate's degree	161	8.7
Bachelor's degree	161	50.3
Master's degree	161	23.6
Professional diploma past Master's degree	161	1.9
Field for highest degree (all that apply)		
Child development or developmental psychology	166	18.7
Early childhood education	166	42.8
Elementary education	166	9
Special education	166	6
Other (less than associate's degree)	166	33.7
College coursework (mean number of courses)		
Infant/toddler development and care	155	4.4 (0.18)
Early childhood education	152	5.5 (0.17)
Child development	154	5.4 (0.17)
Child Development Associate (CDA) Credential		
Current	164	19.5
No longer current	164	64.6
Professional organization membership		
Professional organization membership (e.g., NAEYC, NAFCC)	161	56.5

Source: Fall 2018 WGT PD Provider Background Survey.

Note: Adapted from the SCOPE Coach Survey (Moiduddin et al. 2017, unpublished) and the Q-CCIIT Caregiver SAQ 2012 [Measurement Instrument].

Table B.II.11. What were the work experiences of PD providers participating in We Grow Together (fall 2018)?

PD provider work experiences	PD providers, fall 2018	
	Sample size	Percentage
Source for PD provider funding		
Program or center staff	157	59.2
Independent contractor	157	5.1
Work for organization paid to provide PD	157	1.3
Work for an organization funded to provide free PD to early childhood programs	157	23.6
Other	157	10.8
Received reflective supervision within last year	164	65.2
Member of PD provider support network	164	74.4
Support network meeting attendance^a		
More than once a month	119	31.1
Once a month	119	37.8
Several times a year	119	29.4
Once a year	119	1.7

Source: Fall 2018 WGT PD Provider Background Survey.

Note: Adapted from the SCOPE Coach Survey (Moiduddin et al. 2017, unpublished)

^a Among those PD providers who are members of a network.

B.III. How did caregivers' and PD providers' beliefs, knowledge, and practices related to infant-toddler development compare before and after participating in We Grow Together?

As noted in the report, caregivers were presented with three recommended learning modules based on how they scored on the Q-CCIIT observation. Consistent with adult learning theory and the importance of learner choice, caregivers were encouraged to select the practices within the modules on which they wanted to work. The first table in this section provides information about the recommended modules and the caregivers' and PD providers' reports about the focus of the caregivers' work in WGT. The remainder of the tables in this section provide information on the participants' perceptions of change during participation in the WGT program, as reported in the spring 2019 feedback survey.

Table B.III.1. Which We Grow Together modules were recommended to caregivers? Which one module did caregivers report spending the most time working on? Which modules did PD providers report using? (spring 2019)

Modules	Percentage of sample, spring 2019		
	Caregivers' recommended modules	Caregivers report spending most time	PD providers who reported use with caregivers
Language use	77.2	32.9	76.7
Understanding language	69.3	10.4	58.7
Behavior and emotions	13.5	22.1	51.3
Literacy	57.5	10.4	50.7
Caregiver-child relationships	38.2	10.4	45.3
Infants' peer interactions	10.1	4.4	23.3
Toddlers' peer interactions	25.8	4.8	38.0
Infants' cognitive development	1.1	2.4	27.3
Toddlers' cognitive development	7.1	2.0	28.7

Source: WGT administrative data and Spring 2019 WGT Caregiver and PD Provider Feedback Surveys.

Note: Caregivers were recommended three modules based on scores on the positive Q-CCIIT scales, but PD providers were given permission to introduce other modules' key practices as needed, based on their observations. Caregivers collaboratively selected practices within modules and created goals with the PD providers.

Tables B.III.2a and b and B.III.3a and b reflect caregivers' and PD providers' beliefs about development and caregiving. The first of each set of tables presents the scales as described in the baseline tables (noted by "a" and based on the organization of the items in the survey); the second table uses the factors determined empirically with an exploratory factor analysis of the items across questions in the survey (noted by "b").

Table B.III.2a. Were there differences in caregivers' knowledge and beliefs about caregiving and development from fall 2018 to spring 2019 (scales)?

Knowledge and practices	Fall 2018				Spring 2019		
	Sample size	Mean (SE)	Observed range	Reliability	Mean (SE)	Observed range	Reliability
Social-Emotional development beliefs scale ^a (20 items)	248	4.9 (0.03)	3.3–6.0	0.77	5.0 (0.03)	3.7–5.9	0.74
Language development beliefs scale (13 items) ^a	250	4.4*** (0.03)	3.2–5.6	0.7	4.8 (0.03)	3.4–6.0	0.7
Cognitive development: Thinking and learning beliefs scale (9 items) ^a	249	5.1 (0.03)	3.4–6.0	0.67	5.1 (0.03)	3.1–6.0	0.68
Beliefs about development (8 items) ^a	252	4.8 (0.03)	3.1–5.9	0.68	4.7 (0.03)	2.8–5.8	0.69
Knowledge of Infant Development Inventory (KIDI) ^b (19 items)	253	11.5 (0.19)	3.0–17.0	0.60	11.3 (0.20)	0.0–17.0	0.61

Source: Fall 2018 WGT Caregiver Background Survey, Spring 2019 WGT Caregiver Feedback Survey.

Note: Mean imputation was conducted when 75 percent of the items had responses.

* Indicates a significant difference between fall and spring means (*p < 0.05; **p < 0.01; ***p < .001; ~p<0.10) in a two-tailed test.

^a Adapted from Baby FACES 2018 and created by the Q-CCIIT PD team. The possible range was 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree), with some items reverse coded.

^b MacPhee, D. Knowledge of Infant Development Inventory (KIDI). [Measurement Instrument]. Princeton, NJ: Educational Testing Service, 1981. The possible range for the KIDI was 0 to 19 correct.

Table B.III.2b. Were there differences in caregivers' knowledge and beliefs about caregiving and development from fall 2018 to spring 2019 (factors)?

Knowledge and practices	Fall 2018				Spring 2019		
	Sample size	Mean (SE)	Observed range	Reliability	Mean (SE)	Observed range	Reliability
Caregiver-child relationships beliefs (7 items)	251	5.46 (.03)	3.0–6.0	0.75	5.49 (.03)	2.6–6.0	0.73
Building self-regulation beliefs (7 items)	248	4.74 (.05)	2.4–6.0	0.67	4.79 (.05)	1.0–6.0	0.73
Building language and cognitive development beliefs (9 items)	249	5.11 (.03)	3.3–6.0	0.72	5.17 (.03)	3.0–6.0	0.71
Beliefs about providing challenge (5 items)	252	3.44*** (.06)	1.0–5.2	0.60	4.11 (.06)	1.4–6.0	0.63
Ready to learn beliefs (6 items)	249	5.11 (.04)	2.4–6.0	0.69	5.13 (.04)	1.0–6.0	0.73
Supporting peer interactions beliefs (6 items)	251	4.98 (.04)	2.3–6.0	0.60	4.99 (.04)	2.7–6.0	0.51
Baby FACES development practices beliefs scale ^b (19 items)	248	4.99*** (.02)	3.1–5.7	0.79	5.23 (.03)	3.5–6.0	0.81

Source: Fall 2018 WGT Caregiver Background Survey; Spring 2019 WGT Caregiver Feedback Survey.

Note: Scale scores were estimated when 60 percent of the items had responses.

* Indicates a significant difference between fall and spring means (*p < 0.05; **p < 0.01; ***p < .001, ~p < 0.10) in a two-tailed test.

^a The fall background survey had only six of these items.

^b Subset of items from Baby FACES scale. Possible range was 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree), with some items reverse coded.

Table B.III.3a. Were there differences in PD providers' knowledge and beliefs about caregiving and development from fall 2018 to spring 2019 (scales)?

Knowledge and practices	Fall 2018				Spring 2019			
	Sample size	Mean (SE)	Observed range	Reliability	Sample size	Mean (SE)	Observed range	Reliability
Social-Emotional development beliefs scale (20 items) ^a	152	5.2 (0.04)	3.7–6.0	0.81	152	5.2 (0.04)	3.2–6.0	0.85
Language development beliefs scale ^a (13 items)	151	4.7 *** (0.04)	3.2–5.6	0.76	151	5.0 (0.05)	3.2–6.0	0.80
Cognitive development: Thinking and learning beliefs scale (9 items) ^a	151	5.3 (0.04)	3.9–6.0	0.76	151	5.2 (0.05)	2.9–6.0	0.80
Beliefs about development ^a (8 items)	152	5.1 * (0.04)	3.7–6.0	0.63	152	5.0 (0.04)	3.4–5.9	0.74
Knowledge of Infant Development (KIDI) ^b (19 items)	154	12.7 (0.24)	5.0–18.0	0.65	154	12.5 (0.25)	1.0–18.0	0.66

Sources: Fall 2018 WGT PD Provider Background Survey, Spring 2019 WGT PD Provider Feedback Survey.

Notes: * Indicates a significant difference between fall and spring means (*p < 0.05; **p < 0.01; ***p < .001, ~p < 0.10) in a two-tailed test.

^a Adapted from the Baby FACES Teacher Interview, Early Head Start Family and Child Experiences Study, Administration for Children and Families. Possible range was 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree), with some items reverse coded.

^b MacPhee, D. *Knowledge of Infant Development Inventory* (KIDI). [Measurement Instrument]. Princeton, NJ: Educational Testing Service, 1981. The possible range for the KIDI was 0 to 19 correct.

Table B.III.3b. Were there differences in PD providers' knowledge and beliefs about caregiving and development from fall 2018 to spring 2019 (factors)?

Knowledge and practices	Fall 2018				Spring 2019			
	Sample size	Mean (SE)	Observed range	Reliability	Sample size	Mean (SE)	Observed range	Reliability
Caregiver-child relationships beliefs (7 items)	152	5.60 (0.03)	4.6–6.0	0.68	152	5.58 (.05)	1.0–6.0	0.82
Building self-regulation beliefs (7 items)	152	5.23 (0.06)	1.3–6.0	0.81	152	5.12 (.06)	1.3–6.0	0.83
Building language and cognitive development beliefs (9 items)	151	5.30 (0.04)	3.8–6.0	0.79	151	5.33 (.05)	1.0–6.0	0.87
Beliefs about providing challenge (5 items)	151	3.79*** (0.07)	1.0–5.2	0.56	151	4.41 (.09)	1.0–6.0	0.75
Ready to learn beliefs (6 items)	151	5.42 (0.05)	2.2–6.0	0.74	151	5.33 (.07)	1.5–6.0	0.88
Supporting peer interactions beliefs (6 items)	153	5.19 (0.05)	3.7–6.0	0.59	153	5.20 (.06)	1.5–6.0	0.75
Baby FACES development practices beliefs scale ^b (19 items)	151	5.42 (0.04)	3.8–6.0	0.83	151	5.39 (.05)	3.2–6.0	0.89

Source: Fall 2018 WGT PD Provider Background Survey.

* Indicates a significant difference between fall and spring means (*p < 0.05; **p < 0.01; ***p < .001, ~p < 0.10) in a two-tailed test.

^a The fall background survey had only six of these items.

^b Subset of items from Baby FACES and created by the Q-CCIIT PD team. Possible range was 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree), with some items reverse coded.

Table B.III.4. Were there differences in caregivers' self-efficacy or beliefs about the value of professional development from fall 2018 to spring 2019?

Beliefs	Fall 2018				Spring 2019			
	Sample size	Mean (SE)	Observed range	Reliability	Sample size	Mean (SE)	Observed range	Reliability
Self-efficacy ^a	245	4.6** (0.03)	3.5–5.6	0.6	245	4.8 (0.03)	3.3–5.8	0.74
Belief about the value of professional development ^b	249	4.1 (0.03)	2.8–6.0	0.05	249	4.1 (0.04)	1.0–6.0	0.25

Source: Fall 2018 WGT Caregiver Background Survey, Spring 2019 WGT Caregiver Feedback Survey.

* Indicates a significant difference between fall and spring means (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10) in a two-tailed test.

^a Geller, S., and K.B. Lynch. *Teacher Opinion Survey* [Measurement Instrument]. Virginia Commonwealth University Intellectual Property Foundation and Wingspan, LLC, 1999.

^b Adapted from the Teachers' Attitudes about Professional Development (TAP) [Measurement Instrument]. Torff, Bruce, David Sessions, and Katherine Byrnes. "Assessment of Teachers' Attitudes About Professional Development." *Educational and Psychological Measurement*, vol. 65, no. 5, 2005, pp. 820–830. DOI: 10.1177/0013164405275664.

Table B.III.5. What were caregivers' beliefs about PD provider support in spring 2019?

Beliefs	Spring 2019		
	Sample size	Mean (SE)	Observed range
Belief in the value of PD			
Professional development (PD) often helps caregivers to develop new teaching techniques. ^a	252	5.7 (0.04)	1.0–6.0
If I did not have to participate in PD, I would not (reversed). ^a	252	4.9 (0.09)	1.0–6.0
PD is really worth the time it takes. ^a	253	5.3 (0.07)	1.0–6.0
I have been enriched by PD I have participated in. ^a	252	5.5 (0.06)	1.0–6.0
PD does not have much impact on how I provide care for infants or toddlers (reversed). ^a	252	5 (0.08)	1.0–6.0
Focusing on caregiver-child interactions, how much support (such as information, feedback, and help in doing your job) do you feel you receive from your PD provider? ^{b, c}	243	1.5 (0.05)	1.0–4.0
Overall, how much do you feel the resources and feedback provided by your PD provider have contributed to your professional effectiveness? ^{b, d}	241	3.6 (0.04)	1.0–4.0

Source: Spring 2019 WGT Caregiver Feedback Survey.

^a Items created by the Q-CCIIT PD team. Possible range was 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree). Only caregivers who received PD responded to these questions.

^b Adapted from the Baby FACES 2018 Teacher Interview, Early Head Start Family and Child Experiences Study, Administration for Children and Families.

^c Possible range for these items was 1 (No support), 2 (A little support), 3 (Some support), and 4 (A lot of support).

^d Possible range for these items was 1 (Not at all), 2 (A little), 3 (Somewhat), and 4 (A great deal).

Table B.III.6. Were there differences in PD providers' beliefs about professional development from fall 2018 to spring 2019?

Beliefs about professional development	Fall 2018		Spring 2019	
	Sample size	Percentage agree	Sample size	Percentage agree
Some caregivers just cannot change their practice (reversed).	148	73	148	67.6
You need to change your PD approach if you see no change in the caregiver.	151	96.7	151	96.0
With the right help, anyone can be a great caregiver.	151	74.2	151	74.8
Caregivers need different PD approaches	151	96.0	151	98.0
What are optimal PD practices?				
Professional development (PD) is best when it is intense and for a short period of time (reversed).	149	30.9	149	28.9
PD is best when there is ongoing training and support.	151	98.7	151	96.7
All caregivers need to see you model practices with children in their care (reversed).	151	7.9	151	13.9

Source: Fall 2018 WGT PD Provider Background Survey, Spring 2019 WGT PD Provider Feedback Survey.

Note: Items created by the Q-CCIIT PD team.

* Indicates a significant difference between fall and spring means (*p < 0.05; **p < 0.01; ***p < .001, ~p < 0.10) in a two-tailed test.

Exhibit B.III.1. How often did PD providers report using different professional development strategies before beginning We Grow Together (fall 2018)?

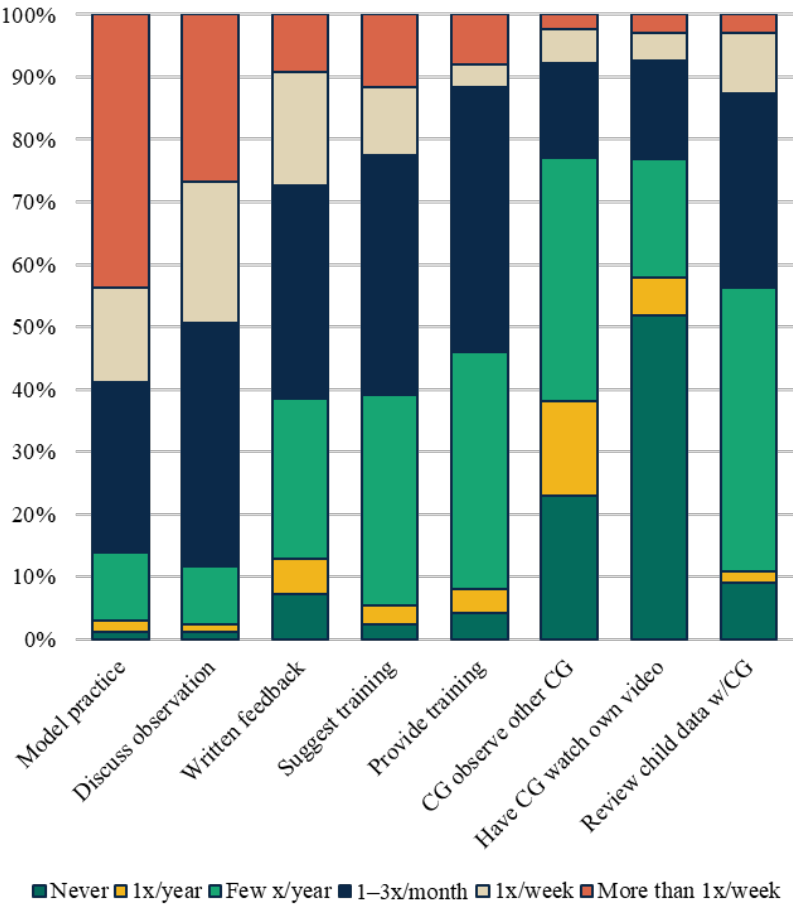
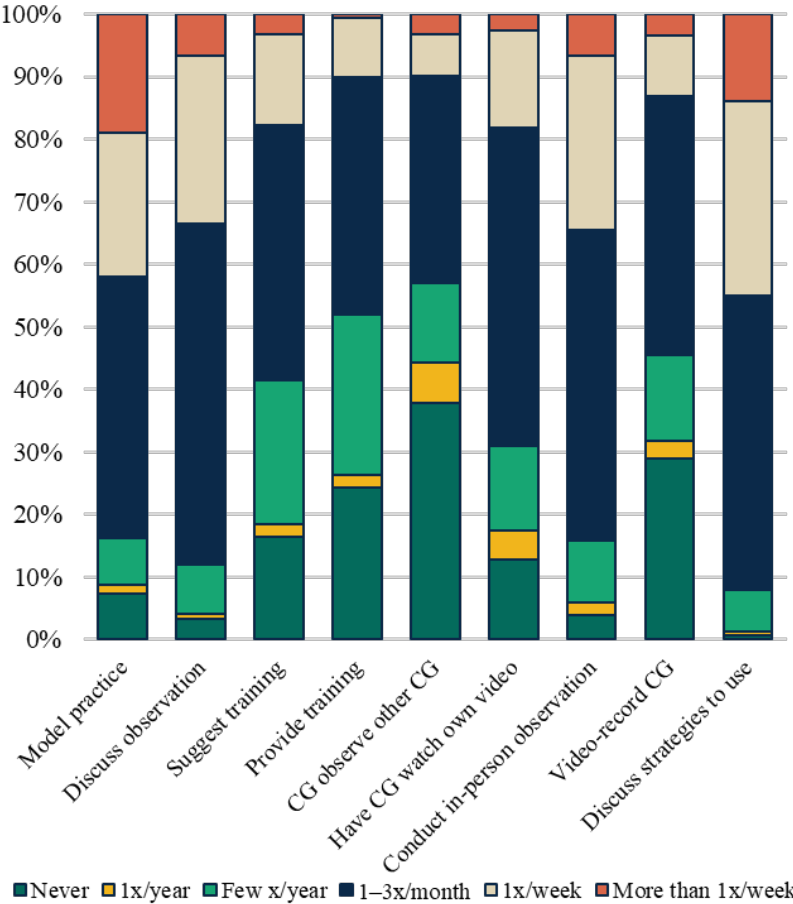


Exhibit B.III.2. How often did PD providers report using different professional development strategies after We Grow Together (spring 2019)?



Source: Fall 2018 WGT PD Provider Background Survey, Spring 2019 WGT PD Provider Feedback Survey.
 Note: Items created by the Q-CCIIIT PD team.
 The fall and spring surveys have slightly different items. The spaces in the spring are for items asked only in the fall. The final three bars represent items added in the spring.
 CG = caregiver.

Table B.III.7. On average, how did PD providers' reported use of PD strategies change between fall 2018 and spring 2019?

Professional development strategies	Fall 2018			Spring 2019		
	Sample size	Mean (SE)	Observed range ^a	Sample size	Mean (SE)	Observed range
Frequent PD strategy use scale^b	148	3.6 (0.06)	1.4–6.0	148	3.7 (0.06)	1.6–6.0
Discuss what you observed in the classroom	146	4.6*** (0.09)	1.0–6.0	146	4.2 (0.08)	1.0–6.0
Provide written feedback on what you observed in the caregiver's classroom	164	3.8 (0.10)	1.0–6.0		n.a.	
Have caregiver watch video record of their own teaching	146	2.2*** (0.12)	1.0–6.0	146	3.6 (0.10)	1.0–6.0
Have caregiver observe or watch a video of an experienced teacher	149	2.7 (0.10)	1.0–6.0	149	2.8 (0.13)	1.0–6.0
Model good teaching practices for caregivers	165	4.8 (0.09)	1.0–6.0		n.a.	
Suggest trainings for the caregiver to attend	149	3.9* (0.09)	1.0–6.0	149	3.5 (0.11)	1.0–6.0
Provide trainings to the caregiver	144	3.6*** (0.09)	1.0–6.0	144	3.1 (0.11)	1.0–6.0
Review child assessment data with the caregiver	165	3.4 (0.09)	1.0–6.0		n.a.	
Anything else?	151	3.1 (0.15)	1.0–6.0		n.a.	

Sources: Fall 2018 WGT PD Provider Background Survey, Spring 2019 WGT PD Provider Feedback Survey.

Note: Adapted from the Universal Preschool Child Outcomes Study, Phase 5 (UPCOS-5) Teacher Interview and NCRECE Teacher Interview.

* Indicates a significant difference between fall and spring means (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10) in a two-tailed test.

^a Response scale was 1 (Never), 2 (Once a year), 3 (A few times a year), 4 (One to three times a month), 5 (Once a week), and 6 (More than once a week). The mean score represents the average use of a PD strategy, with higher means indicating more frequent use.

^b The coefficient alpha for this scale is 0.81.

B.IV. After participating in we grow together, how did the observation of quality of the caregiver's interactions with infants and toddlers compare with the fall observation?

Before beginning the program, caregivers who agreed to participate in WGT were observed by trained observers using the Q-CCIIT. Those who continued to participate in the program through at least March 1, 2019, were observed again in May or June 2019. The first table in this section provides a comparison of Q-CCIIT scores for the total recruited sample of caregivers with those caregivers who were in the Q-CCIIT Psychometric Field Test (2012). The remaining tables provide the Q-CCIIT scores for each domain and then for dimensions of the Q-CCIIT in the fall and spring observations.

Table B.IV.1. How did Q-CCIIT scores from fall 2018 compare with scores from the Q-CCIIT Psychometric Study in fall 2012?

Q-CCIIT Scale ^a	We Grow Together caregivers – fall, 2018			Q-CCIIT Psychometric Study ^a		
	Sample size	Mean (SE)	Observed range	Sample size	Mean (SE)	Observed range
Support for Social-Emotional Development	240	4.3 (0.06)	1.5–6.4	400	4.5 (1.10)	1.31–6.89
Support for Language and Literacy Development	240	4.0 (0.06)	1.5–6.4	400	4.1 (0.99)	1.47–6.75
Support for Cognitive Development	240	3.3 (0.06)	1.3–6.1	400	3.5 (1.02)	1.14–6.31
Areas of Concern for physical health and safety	239	0.1 (0.02)	0.0–1.5			
Areas of Concern for psychological health	240	0.2 (0.02)	0.0–1.6			
Areas of Concern for cognitive development	240	0.1 (0.01)	0.0–1.2			
Extreme Areas of Concern ^b (count out of 10)	240	0.0 (0.01)	0.0–2.0			
Number of valid cycles	240	5.0 (0.01)	4.0–6.0			
Child/adult ratio	240	3.2 (0.09)	0.5–10.0			

Source: Fall 2018 and Spring 2019 We Grow Together: Q-CCIIT observation.

Note: Ratings for positive scales range from 1 (lowest quality) to 7 (highest quality). In the WGT, field test observers attempted to complete five to six cycles per observation.

^a The Q-CCIIT Classroom Observation and Fall 2012 Q-CCIIT Psychometric field test (Atkins-Burnett, Sally, Shannon Monahan, Louisa Tarullo, Yange Xue, Elizabeth Cavadel, Lizabeth Malone, and Lauren Akers. “Measuring the Quality of Caregiver-Child Interactions for Infants and Toddlers (Q-CCIIT).” OPRE Report #2015-13. Washington, DC: U.S. Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research and Evaluation, 2015).

^b 94.5 percent of classrooms had no extreme areas of concern.

Table B.IV.2. How did Q-CCIIT domain scores differ on average from fall 2018 to spring 2019?

Q-CCIIT Scale ^a	Fall 2018			Spring 2019		
	Sample size	Mean (SE)	Observed range	Sample size	Mean (SE)	Observed range
Support for Social-Emotional Development	240	4.3~ (0.06)	1.5–6.4	240	4.5 (0.06)	2.3–7.0
Support for Language and Literacy Development	240	4.0 (0.06)	1.5–6.4	240	4.1 (0.06)	2.1–6.4
Support for Cognitive Development	240	3.3 (0.06)	1.3–6.1	240	3.2 (0.06)	1.5–6.1
Areas of concern for physical health and safety	239	0.1 (0.02)	0.0–1.5	239	0.1 (0.01)	0.0–1.3
Areas of concern for psychological health	240	0.2 (0.02)	0.0–1.6	240	0.2 (0.02)	0.0–1.4
Areas of concern for cognitive development	240	0.1 (0.01)	0.0–1.2	240	0.1 (0.01)	0.2–0.8
Extreme Areas of Concern ^a (count out of 10)	240	0.0~ (0.01)	0.0–2.0	240	0.1 (0.02)	0.0–2.0
Number of valid cycles	240	5.0 (0.01)	4.0–6.0	240	5.0 (0.01)	4.0–6.0
Child:adult ratio ^b	240	3.2 (0.09)	0.5–10.0	240	3.2 (0.09)	0.9–9.6

Source: Fall 2018 and Spring 2019 We Grow Together: Q-CCIIT observation.

Note: Ratings for positive scales range from 1 (lowest quality) to 7 (highest quality). In the WGT, field test observers attempted to complete five to six cycles per observation.

* Indicates a significant difference or trend between fall and spring means (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10) using two-tailed test of significance.

^a 94.5 percent of classrooms had no extreme areas of concern.

^b The child:adult ratio at the time of the observation.

Exhibit B.IV.1. Distribution of Q-CCIIT observation scores in fall 2018, by category

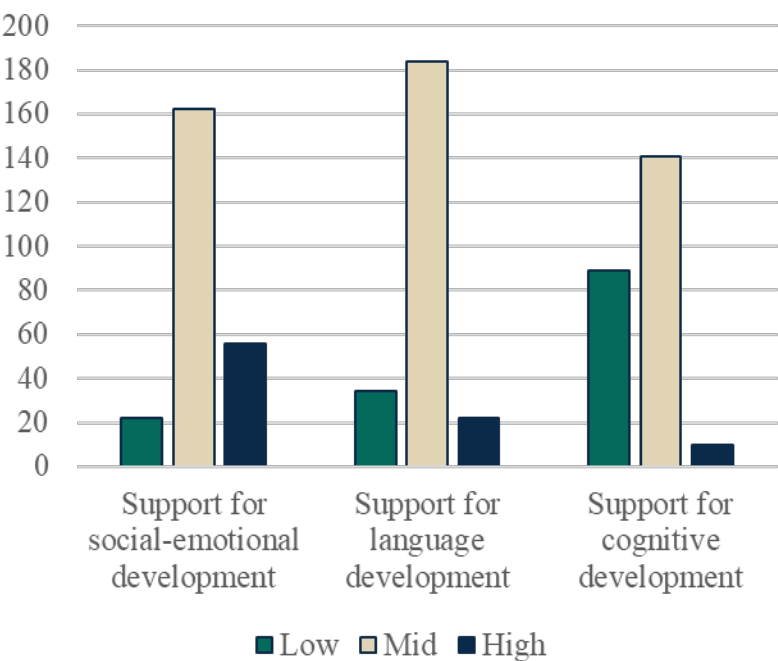


Exhibit B.IV.2. Distribution of Q-CCIIT observation scores in spring 2019, by category

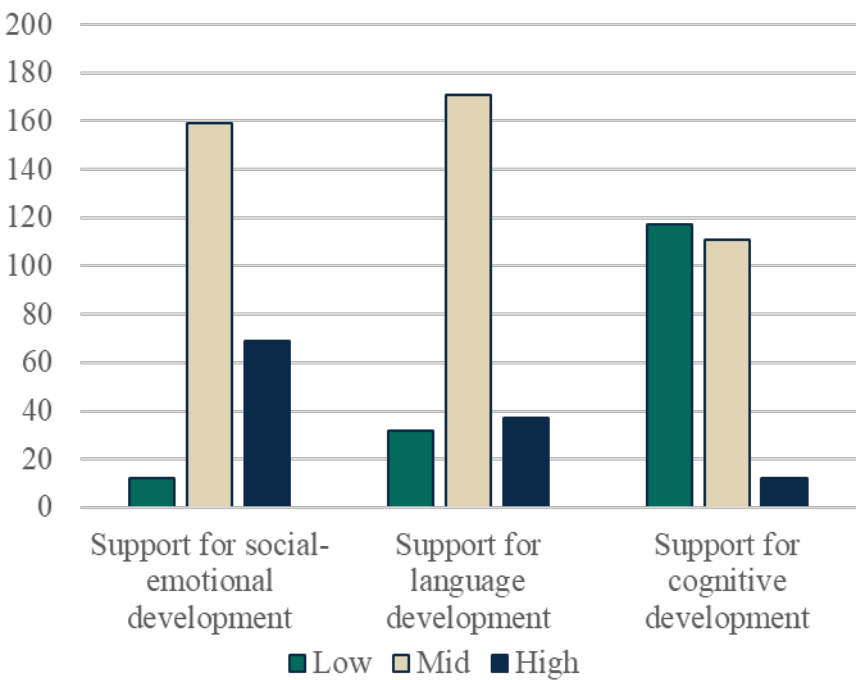


Exhibit B.IV.3. Distribution of Q-CCIIT scores in fall 2018, by rating

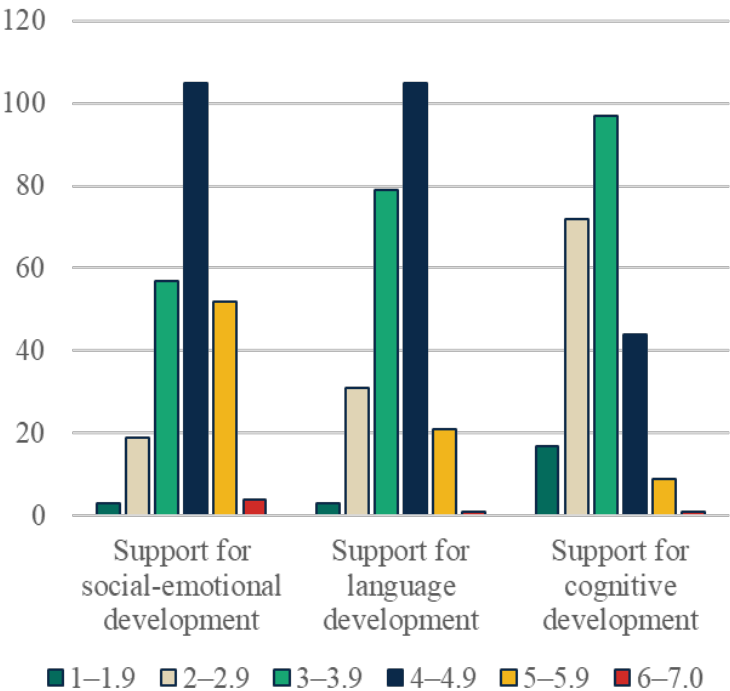


Exhibit B.IV.4. Distribution of Q-CCIIT scores in spring 2019, by rating

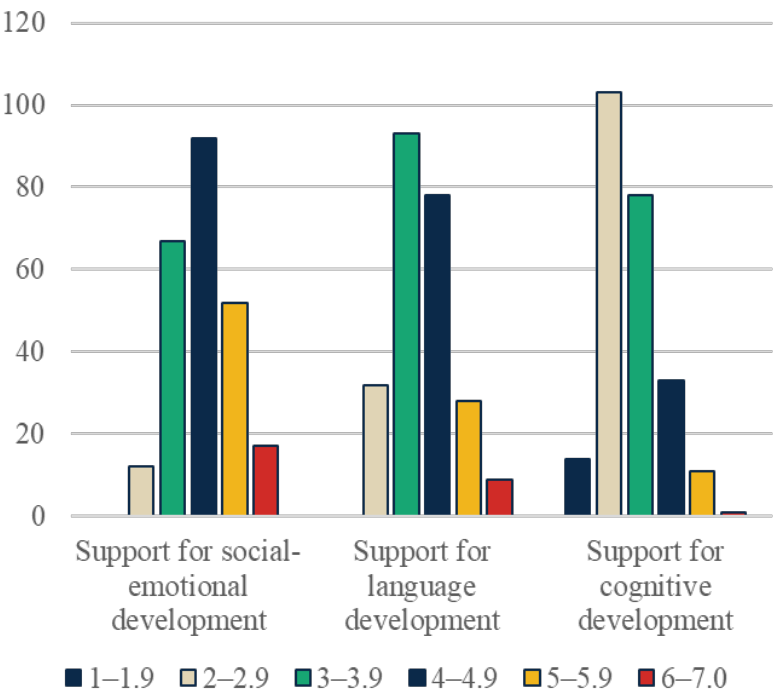


Table B.IV.3. How did Q-CCIIT dimension scores differ on average from fall 2018 to spring 2019?

Q-CCIIT dimensions	Fall 2018			Spring 2019		
	N	Mean (SE)	Observed range	N	Mean (SE)	Observed range
Support for Social-Emotional Development						
Responding contingently to distress	39	4.1 (0.28)	1.0–7.0	39	3.9 (0.21)	1.0–7.0
Responding to social cues	240	4.5*** (0.06)	1.4–6.8	240	4.9 (0.07)	1.6–7.0
Responding to emotional cues	240	4.4* (0.06)	1.4–6.8	240	4.7 (0.07)	1.6–7.0
Building a positive relationship	240	4.8~ (0.07)	1.4–7.0	240	5.0 (0.07)	2.2–7.0
Responsive routines	240	4.1 (0.09)	1.0–7.0	240	4.2 (0.08)	1.0–7.0
Classroom limits and management	152	3.7 (0.09)	1.0–7.0	152	3.8 (0.09)	1.0–7.0
Sense of belonging	234	4.0 (0.08)	1.0–7.0	234	4.2 (0.07)	2.0–7.0
Supporting peer interaction/playa	236	2.6* (0.05)	1.0–5.4	236	2.5 (0.05)	1.0–6.0
Support for social problem solving ^a	127	3.6 (0.11)	1.0–7.0	127	3.6 (0.11)	1.0–7.0
Support for Cognitive Development						
Supporting object exploration	225	3.7~ (0.07)	2.0–7.0	225	3.6 (0.07)	1.3–7.0
Scaffolding problem solving	235	2.7 (0.07)	1.0–6.2	235	2.7 (0.08)	1.0–6.5
Giving choices	238	3.6 (0.09)	1.0–7.0	238	3.5 (0.10)	1.0–7.0
Extending pretend play	222	2.9 (0.09)	1.0–7.0	222	2.9 (0.09)	1.0–7.0
Explicit teaching	239	3.3 (0.08)	1.0–7.0	239	3.2 (0.08)	1.0–7.0
Supervises or joins in play and activities	238	4.5 (0.09)	1.0–7.0	238	4.5 (0.09)	1.0–7.0
Concept development	240	4.0~ (0.08)	1.0–7.0	240	3.8 (0.08)	1.0–7.0
Support for Language and Literacy Development						
Caregiver use of varied vocabulary	240	3.7 (0.07)	1.0–6.4	240	3.8 (0.06)	1.5–6.5
Conversational turn-taking	240	3.8 (0.07)	1.2–6.8	240	4.0 (0.07)	1.6–6.8
Use of questions	240	3.4 (0.05)	1.2–5.8	240	3.4 (0.06)	1.8–6.6
Extending children's language use	240	3.6 (0.07)	1.0–7.0	240	3.6 (0.07)	1.2–6.8
Features of talk	239	4.8 (0.09)	1.0–7.0	239	4.7 (0.08)	1.0–7.0
Talk about things not present	240	3.3 (0.10)	1.0–7.0	240	3.4 (0.10)	1.0–7.0
Positive attitude toward books	239	4.4 (0.09)	1.0–7.0	239	4.4 (0.09)	1.0–7.0
Engaging children in books	231	4.6* (0.08)	1.0–7.0	231	4.9 (0.08)	3.0–7.0
Variety of words in literacy experience	232	4.2* (0.07)	1.0–7.0	232	4.4 (0.08)	2.0–7.0
Variety of types of sentences	231	3.9** (0.07)	1.0–7.0	231	4.2 (0.07)	2.0–7.0

Source: Fall 2018 and spring 2019 We Grow Together: Q-CCIIT observations (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10) in a two-tailed test.

^a These items are part of the Support for Cognitive Development scale but are rated in the Support for Social-Emotional Development section.

B.V. What did caregivers and PD providers report about implementation of We Grow Together?

This section provides information from the caregiver and PD provider feedback surveys about the support that caregivers received during implementation, tools and resources used, and challenges caregivers and PD providers encountered in implementing WGT.

Table B.V.1. What support did center-based setting leadership provide for caregivers during We Grow Together implementation? (spring 2019)

Types of support from leadership	Spring 2019		
	Sample size	Mean (SE)	Observed range ^c
Support available from leadership in center-based early childhood setting scale (8 items)^{a, b}	191	4.8 (0.06)	1.0–6.0
The leadership in my early childhood setting:			
Expects caregivers to do everything one way (reversed)	195	4.6 (0.09)	1.0–6.0
Holds mistakes against you (reversed)	190	4.7 (0.09)	1.0–6.0
Tries to help you do your best	194	5.1 (0.08)	1.0–6.0
Looks for information or experts who can help improve our work with children	193	5.1 (0.08)	1.0–6.0
Takes steps to solve problems. We don't just talk about them	193	4.7 (0.09)	1.0–6.0
Is more focused on saving money than on best practice (reversed)	183	4.6 (0.10)	1.0–6.0
Understands that learning new ways to work with children may involve making mistakes	192	4.8 (0.08)	1.0–6.0
Makes me feel comfortable talking about problems in caring for the infants and toddlers	194	5.1 (0.08)	1.0–6.0

Source: Spring 2019 WGT Caregiver Feedback Survey.

Note: The final analytic sample had 214 caregivers in center-based classrooms.

^a Items created by the Q-CCIIT PD team.

^b The coefficient alpha for this scale is 0.83. The scale is the mean score of items if at least 75 percent of them were answered.

^c Possible range was 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree).

Table B.V.2. What support for caregivers was available from peers (spring 2019)?

Types of support from peers	Spring 2019		
	Sample size	Mean (SE)	Observed range ^a
Support available from peers in center-based early childhood setting scale (8 items)^{b, c}	196	4.9 (0.05)	2.0–6.0
Infant-toddler caregivers in this early childhood setting:			
Share and talk about the best ways to meet the needs of children	197	5.3 (0.06)	1.0–6.0
Support each other to try out new ways to help children grow and develop	196	5.2 (0.07)	1.0–6.0
Don't want to share when they learn something new (reversed)	191	5.2 (0.07)	1.0–6.0
Focus on providing the best care possible for infants and toddlers	195	5.4 (0.06)	1.0–6.0
Don't like it when someone is better at something than they are (reversed)	194	5.0 (0.08)	1.0–6.0
Want to care for children in the easiest way possible (reversed)	194	3.6 (0.12)	1.0–6.0
Trust each other	195	5.0 (0.08)	1.0–6.0
Feel comfortable talking about problems in caring for the infants and toddlers	197	5.2 (0.06)	1.0–6.0

Source: Spring 2019 WGT Caregiver Feedback Survey.

^a Possible range was 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree).

^b The coefficient alpha for this scale is 0.80. The scale is the mean score of items if at least 75 percent of them were answered.

^c Items created by the Q-CCIIT PD team.

Table B.V.3. How did caregivers engage with the technological components of the We Grow Together website and technology (spring 2019)?

Use of technology	Spring 2019		
	Sample size	Percentage/mean (SE)	Observed range ^d
What devices did you prefer to use to access the We Grow Together website?^{a, e}			
Desktop computer	249	22.1	
Laptop computer	249	32.1	
Tablet (for example, iPad)	249	74.7	
Smartphone (for example, iPhone, Android)	249	24.1	
Other	249	1.6	
Where did you access the We Grow Together website the most?^a			
Work	247	45.7	
Home	247	46.2	
Other	247	8.1	
How did you access the internet when using the We Grow Together website?^{a, e}			
Cellular service ^f	249	30.9	
WiFi	249	81.1	
Cable/ LAN line/ fiber-optic internet (for examples, FIOS)	249	8.0	
Other	249	2.4	
Don't Know	249	1.6	
Website Satisfaction (mean)^{b, d}	247	5.2 (0.04)	3.5–6.0
On this website, it is simple to do what I want to do.	245	5.2 (0.05)	1.0–6.0
I find the website easy to use.	248	5.2 (0.05)	1.0–6.0
It is easy to find the information I need.	247	5.3 (0.04)	3.0–6.0
It was easy to learn to use the website.	247	5.2 (0.05)	2.0–6.0
The rate at which the information was displayed was fast enough.	247	5.2 (0.05)	1.0–6.0
The pages download quickly on this website.	248	5.3 (0.05)	2.0–6.0
The website provides content tailored to the individual.	248	5.1 (0.05)	2.0–6.0
I am satisfied with this website.	247	5.3 (0.04)	2.0–6.0
I feel comfortable in surfing this website.	247	5.3 (0.04)	2.0–6.0
The organization of the information on the website pages is clear.	247	5.3 (0.05)	1.0–6.0
How easy or difficult was it to use the iPad tablet provided by this project to video-record your practice?^a			
Very easy	243	42.4	
Easy	243	29.6	
A little difficult	243	16.5	
Difficult	243	4.1	
Did not try	243	7.4	

Source: Spring 2019 WGT Caregiver Feedback Survey.

^a Items created by the Q-CCIIT PD team.

^b The first nine items pertaining to website satisfaction are adapted from Wang, J., and S. Senecal. "Measuring Perceived Website Usability." *Journal of Internet Commerce*, vol. 6, no. 4, 2007, pp. 97–112. doi: <https://doi.org/10.1080/15332860802086318>. Reliability is 0.95.

^c Adapted from Lewis, J.R. "IBM Computer Usability Satisfaction Questionnaires: Psychometric Evaluation and Instructions for Use." *International Journal of Human-Computer Interaction*, vol. 7, no. 1, 1995, pp. 57–78. doi: <https://doi.org/10.1080/10447319509526110>.

^d Possible range was 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree).

^e Participants could mark all that apply.

^f Cellular service was provided for iPads provided by the WGT program.

Table B.V.4. Which of the websites recommended by We Grow Together did caregivers visit and plan to use again (spring 2019)?

Of the following websites, which have you accessed since beginning We Grow Together? ^a	Reported visited		Will continue to use	
	Sample size	Percentage/mean (SE)	Sample size	Percentage/mean (SE)
Center for Early Literacy Learning	249	42.2	105	73.3
Center on the Developing Child – Harvard University	249	14.1	35	62.9
Center on the Social and Emotional Foundations for Early Learning (CSEFEL) – Vanderbilt University	249	17.3	43	76.7
Early Childhood Knowledge and Learning Center (ECKLC)	249	17.7	44	63.6
National Association for the Education of Young Children (NAEYC)	249	44.2	110	70.9
Reading Rockets	249	8.8	22	63.6
Resources for Early Learning	249	28.9	72	70.8
Scholastic	249	25.7	64	70.3
Talk With Me Baby	249	31.7	79	68.4
Vroom	249	13.3	33	63.6
Zero to Three	249	40.6	101	87.1
None of the above	249	10.0	217	3.7
Number of these websites (mean)	249	2.8 (0.14)	214	2.4 (0.13)

Source: Spring 2019 WGT Caregiver Feedback Survey.

^a Items created by the Q-CCIIT PD team.

Table B.V.5. What were the caregivers' communication experiences with their We Grow Together PD provider (spring 2019)?

Caregivers' communication experiences	Spring 2019	
	Sample size	Percentage
What are the ways that you and your WGT PD provider communicate or meet?^a		
In person	249	89.2
Email	249	39.0
Phone call	249	33.3
Text message	249	26.5
Online chats	249	2.0
Video chats (for example, FaceTime or Skype)	249	1.6
We do not communicate or meet	249	2.0
Other	249	0.8
On average in a month, how often did you and your WGT PD provider meet to discuss your practice? (includes in-person meetings, video chats, and phone calls).^b		
Never	236	5.1
Once a month	236	27.5
Twice a month	236	34.3
Once a week	236	22.5
More than once a week	236	10.6

Source: Spring 2019 WGT Caregiver Feedback Survey.

^a Adapted from the UPCOS Teacher Interview. Caregivers selected all that apply.

^b Items created by the Q-CCIIT PD team.

Table B.V.6. What did caregivers report about their goal-setting experiences in We Grow Together (spring 2019)?

Goal setting processes	Spring 2019		
	Sample size	Mean (SE)	Observed range
How often did you do the following in your goal-setting process (mean)?^a	247	3.8 (0.05)	1.0–5.0
Use a goal-setting framework (for example, SMART goals) to guide the goal setting?	246	3.6 (0.06)	1.0–5.0
Work with a Caregiver/Provider to determine the area(s) of focus for goal setting?	247	3.8 (0.07)	1.0–5.0
Work with program or center directors or supervisors to determine the area(s) of focus for goal setting?	246	3.5 (0.08)	1.0–5.0
Set big picture goals so you/caregivers have something to work toward over a longer period of time?	248	3.8 (0.07)	1.0–5.0
Set specific goals that can be met relatively quickly?	246	3.9 (0.06)	1.0–5.0
Individualize goals based on caregiver's/your experience and needs?	247	4.1 (0.06)	1.0–5.0
Write goals that make it easy to measure progress? ^b	246	3.8 (0.07)	1.0–5.0
How much you agree or disagree with the following statements on how you and your PD provider set your goals?^c	192	4.3 (0.05)	1.3–6.0
My PD provider tended to use their expertise to suggest goals and action steps.	187	4.8 (0.08)	1.0–6.0
My goals came from other sources, like my center director, supervisor, or program.	178	2.9 (0.11)	1.0–6.0
I came up with the goals and told my PD provider.	189	4.4 (0.09)	1.0–6.0
My PD provider and I talked together about my hopes for my classroom and other things and came up with goals that way.	188	4.9 (0.08)	1.0–6.0
There are different ways that goals can be set and different ways of working towards meeting these goals. How true is each statement below about your goals (mean)?^d	247	3.7 (0.03)	1.0–4.0
My PD provider considered my views when we worked together to identify goals.	246	3.7 (0.04)	1.0–4.0
My PD provider took enough time to understand me, my circumstances, and what I want to achieve.	245	3.7 (0.04)	1.0–4.0
My PD provider identified the good things I do.	245	3.7 (0.04)	1.0–4.0
My PD provider understood my existing knowledge and experience and helped me build on that in my goals.	247	3.7 (0.04)	1.0–4.0
My goals were manageable.	246	3.8 (0.03)	1.0–4.0

Source: Spring 2019 Caregiver Feedback Survey.

^a Adapted from SCOPE Coach Survey (unpublished). Response scale was 1 (Never), 2 (Rarely), 3 (Sometimes), 4 (Almost always), and 5 (Always). Reliability is 0.90 (excluding the item “My goals came from other sources, like my center director, supervisor, or program.”).

^b Item created by the Q-CCIIT PD team.

^c Adapted from UPCOS-5. Response scale was 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree).

^d Adapted from UPCOS-5. Response scale was 1 (Never true), 2 (Sometimes true), 3 (Rarely true), and 4 (Usually true).

Table B.V.7. What challenges and barriers did caregivers report experiencing when implementing We Grow Together (spring 2019)?

Challenges caregivers reported	Sample size	Percentage agree
Do you agree that any of the following made it difficult to communicate with your WGT PD provider^a		
We speak different languages	249	2.4
She or he does not understand my culture	249	0.8
She or he does not understand the culture of some of the children in my program	249	0.4
Other communication challenges	249	6.0
I do not have difficulty communicating with my We Grow Together PD provider	249	87.1
Below is a list of reasons that caregivers may give for why participating in professional development activities is difficult. Please indicate how much you agree or disagree with the following statements in relation to your experience with WGT.^b		
I don't have enough time to use the online materials.	247	56.3
It's difficult for me to find a time to practice with the children in my setting.	247	35.6
I don't have support from my employer.	249	13.7
My supervisor doesn't like the We Grow Together program.	248	6.5
I don't have support from my family.	248	9.7
I don't have access to a reliable computer or internet connection.	248	14.1
I don't understand the We Grow Together tools.	248	8.9
I don't have the English language skills I need.	249	4.4
I don't have child care or dependent care for my family.	245	6.9
My PD provider is too busy.	247	21.5
The other caregivers in my room don't like the We Grow Together practices.	247	6.5
My work hours are more than 8 hours a day.	246	37.4
I have no-one to talk with about what I am learning.	247	13.4
I already feel overwhelmed with covering my program's curriculum and assessments.	246	36.6
Families of children in my class don't agree with some of the We Grow Together practices.	247	6.5
Older children in my class make it hard to focus on the infants and toddlers. (FCCs only)	55	50.9
I find it difficult to apply the We Grow Together practices to a home-based setting. (FCCs only)	56	19.6
Some other reason	210	11.0

Source: Spring 2019 WGT Caregiver Feedback Survey.

^a Adapted from UPCOS Teacher Interview.

^b Items adapted from ASPIRE Participant Year-End Survey 2013-2014 and \LA Advance EE Survey Time 3 (2016).

^c Response scale was 0 (Not applicable), 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (strongly agree). All other items in this section had a response scale of 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree).

Table B.V.8. What other PD experiences did caregivers have while participating in We Grow Together (spring 2019)?

PD topics	Spring 2019	
	Sample size	Percentage/mean (SE)
Please check all additional PD activities other than WGT that you participated in, whether on-site or off-site, since December 2018:^a		
Child development and early childhood education	253	56.9
Culture and diversity	253	36.8
Special needs and inclusion of children with disabilities	253	36.8
Development of dual language learners	253	27.7
Strategies and activities that support positive parent-child relationships	253	38.3
Managing and guiding children's behavior	253	41.9
None of the above ^b	253	24.5
Strategies and activities that support positive caregiver-child interactions	253	45.1
Strategies for engaging parents and families in program activities and in children's learning	253	41.9
Practices that support children who are dual language learners	253	26.9
Conducting and using information from screenings and assessments	253	34.4
Strategies and activities to support a positive classroom environment that is safe and encourages learning	253	45.1
Infant-toddler curriculum	253	48.2
None of the above ^b	253	20.6
Strategies and activities to support early learning in math and science	253	34.8
Strategies and activities to support language and literacy development	253	40.3
Strategies and activities to support social-emotional development	253	46.2
Health, safety, and nutrition	253	53.0
Professionalism (for example, ethics; reflective practice)	253	31.6
None of the above ^b	253	24.5
Other than your time spent on We Grow Together, how many hours since December 2018 did you participate in any other professional development, training, or technical assistance activities?^c	241	25.6 (2.07)

Source: Spring 2019 WGT Caregiver Feedback Survey.

^a Adapted from LA Advance Administrator Survey. Respondents could mark all that apply.

^b Professional development topics were presented across multiple pages of the survey. For each set of topics, caregivers had the opportunity to select "None of the above."

^c Range of hours spent was 1.0–180.0.

Table B.V.9. What challenges did PD providers report experiencing when implementing We Grow Together (spring 2019)?

Challenges PD providers reported	Sample size	Percentage
Some PD providers report challenges in supporting caregivers. Are any of these a challenge in conducting your We Grow Together work:^a		
It is hard to find time to meet with my caregiver(s) about PD	150	50.7
My additional work responsibilities prevent me from meeting with the caregiver	150	26.0
I don't know enough about We Grow Together	150	9.3
Caregiver(s) have gatekeepers that make it hard to reach some caregivers	150	5.3
I don't have support from my employer	150	5.3
I don't have access to a reliable computer or internet connection	150	5.3
I have to spend a lot of time traveling to meet with my caregiver(s)	150	3.3
My supervisor doesn't like the We Grow Together System	150	0
Other	150	17.3
None of the above	150	32

Source: Spring 2019 WGT PD Provider Feedback Survey.

^a Items adapted from ASPIRE Participant Year-End Survey 2013–2014. Respondents could mark all that apply.

B.VI. How satisfied are caregivers and PD providers with We Grow Together?

This section provides the perspectives of the caregivers and PD providers on the usefulness of the WGT processes, activities, tools, and practices. WGT has many different resources; in four months, the participants would not have had time to explore the entire website. Caregivers and PD providers reported only about activities, tools, and practices they used. Caregivers also reported about whether the use of the practices helped the development of the infants and toddlers in their care.

Table B.VI.1. What was the caregiver perception of usefulness of the We Grow Together Activities (spring 2019)?

Types of activities	Sample size	Mean (SE)	Observed range
How useful were the following We Grow Together activities?^a			
Trying the practices in my classroom	245	4.4 (0.04)	2.0–5.0
Self-reflection	235	4.2 (0.05)	1.0–5.0
Feedback from my PD provider	231	4.3 (0.05)	1.0–5.0
Reflecting on others' practice in the online videos	225	4.1 (0.06)	1.0–5.0
Discussing practice with my PD provider (my own practice or online videos)	232	4.1 (0.06)	1.0–5.0
Action planning with my PD provider	235	4.1 (0.06)	1.0–5.0
Video-recording my interactions with infants and toddlers	219	4.1 (0.07)	1.0–5.0
Participating in the website's discussion boards	148	3.9 (0.09)	1.0–5.0

Source: Spring 2019 WGT Caregiver Feedback Survey.

^a Items created by the Q-CCIIT PD team. The response scale was 1 (Not useful at all) 2 (Not very useful) 3 (Somewhat useful) 4 (Useful), and 5 (Very useful). The means for each item are estimated based on those who reported usefulness and excludes those who did not try that activity.

Table B.VI.2. What was the caregiver perception of usefulness of the We Grow Together tools (spring 2019)?

Types of tools ^a	Sample size	Mean (SE)	Observed range
Please tell us how useful to your work the following WGT tools were ^b	247	4.2 (0.05)	2.0–5.0
Presentations with voice-over	236	4.3 (0.06)	1.0–5.0
Self-reflection activity questions with self-video	233	4.2 (0.06)	1.0–5.0
Self-reflection activity questions without video	238	4.1 (0.06)	1.0–5.0
Summary handouts	247	4.4 (0.05)	1.0–5.0
Please tell us how useful to your work the following additional WGT tools were ^c	246	4.3 (0.05)	1.7–5.0
Handouts for families	238	4.2 (0.06)	1.0–5.0
Classroom supports (for example, posters, key rings)	221	4.2 (0.06)	1.0–5.0
Step-by-step guides	240	4.4 (0.05)	2.0–5.0
Caregiver self-assessment checklists	237	4.3 (0.05)	1.0–5.0
Videos of other caregivers implementing practices	228	4.4 (0.05)	1.0–5.0
Child progress charts	205	4.2 (0.07)	1.0–5.0
Links to additional resources	236	4.3 (0.05)	1.0–5.0

Source: Spring 2019 WGT Caregiver Feedback Survey.

^a Items created by the Q-CCIIT PD team. The response scale was 1 (Not useful at all) 2 (Not very useful) 3 (Somewhat useful) 4 (Useful), and 5 (Very useful).

^b The common types of tools were those presented on the first web page for each practice. The means for each item are estimated based on those who reported usefulness and excludes those who did not try that tool. The reliability for the usefulness of common types of tools scale is 0.80.

^c The reliability for the usefulness of the additional WGT tools is 0.89.

Table B.VI.3. How did the caregivers describe their relationship with the We Grow Together PD provider (spring 2019)?

Relationship with PD provider	Sample size	Mean (SE)	Observed range
Caregiver relationship with PD provider^{a, b}	245	3.8 (0.03)	1.0–4.0
I feel free to discuss with my PD provider the challenges I face in my classroom.	244	3.7 (0.04)	1.0–4.0
My PD provider is someone I trust.	242	3.8 (0.04)	1.0–4.0
I know my PD provider truly wants to help me.	245	3.8 (0.04)	1.0–4.0
My PD provider shows me respect in our interactions.	244	3.9 (0.03)	1.0–4.0
My relationship with my PD provider motivates me to continue to improve my classroom.	246	3.7 (0.04)	1.0–4.0
My relationship with my PD provider is very professional without personal discussions.	244	3.7 (0.04)	1.0–4.0
I am comfortable talking with my PD provider about mistakes that I make.	246	3.7 (0.04)	1.0–4.0
I feel comfortable asking my PD provider questions about things I am unsure of.	243	3.8 (0.03)	1.0–4.0

Source: Spring 2019 WGT Caregiver Feedback Survey.

^a Items adapted from UPCOS Teacher Interview, with additional items created by the Q-CCIIT PD team. The response scale was 1 (Never true), 2 (Rarely true), 3 (Sometimes true), and 4 (Usually true).

^b The reliability of the scale is 0.90.

Table B.VI.4. In the We Grow Together module on which caregivers spent the most time, how useful were the practices for their work (spring 2019)?

Practices within We Grow Together modules	Sample size	Mean (SE)	Observed range
Please tell us how useful to your work the following practices were in helping: ^a (each caregiver rated only the module they spent the most time working on)			
Most time spent on support of Children's Language Use	81	3.6 (0.06)	2.0–4.0
Responding to children's cues	78	3.6 (0.06)	2.0–4.0
Taking turns in conversations	81	3.5 (0.07)	2.0–4.0
Asking questions	80	3.6 (0.07)	1.0–4.0
Extending children's language use	80	3.6 (0.06)	2.0–4.0
Supporting children's use of new words	78	3.6 (0.06)	2.0–4.0
Most time spent on support of Understanding Language*	26	3.4 (0.10)	2.0–4.0
Using different types of talk	26	3.4 (0.15)	1.0–4.0
Using lots of specific and new words	26	3.5 (0.11)	2.0–4.0
Supporting learning about concepts	26	3.4 (0.17)	1.0–4.0
Engaging children in books	26	3.5 (0.10)	3.0–4.0
Using themes and projects	23	3.3 (0.16)	1.0–4.0
Most time spent on support of Literacy	26	3.4 (0.13)	1.5–4.0
Using new words and sentences	25	3.4 (0.15)	1.0–4.0
Engaging children in books	26	3.6 (0.10)	3.0–4.0
Making connections to things not present	25	3.3 (0.17)	1.0–4.0
Encouraging a positive attitude towards books	26	3.4 (0.15)	1.0–4.0
Most time spent on support of Social-Emotional Development: Regulation of Behavior and Emotions	55	3.3 (0.07)	2.0–4.0
Responding to emotional cues	54	3.3 (0.08)	2.0–4.0
Using responsive routines	50	3.3 (0.10)	2.0–4.0
Managing behavior and setting limits	53	3.4 (0.08)	2.0–4.0
Supporting self-regulation	51	3.4 (0.08)	2.0–4.0
Most time spent on support of Social-Emotional Development: Caregiver-Child Relationships	25	3.6 (0.10)	2.6–4.0
Responding to social cues	25	3.6 (0.10)	3.0–4.0
Responding to emotional cues	25	3.6 (0.10)	3.0–4.0
Building a positive relationship	24	3.6 (0.12)	2.0–4.0
Supervising and joining in play and activities	25	3.6 (0.12)	2.0–4.0
Responding to children in distress	25	3.6 (0.10)	3.0–4.0
Most time spent on support of Social-Emotional Development: Support Non-mobile Infants' Peer Interactions*	11	3.5 (0.21)	2.0–4.0
Supporting peer interaction and play	10	3.4 (0.22)	2.0–4.0

Practices within We Grow Together modules	Sample size	Mean (SE)	Observed range
Supervising and joining in play and activities	11	3.5 (0.21)	2.0–4.0
Creating a sense of belonging	9	3.6 (0.18)	3.0–4.0
Most time spent on support of Social-Emotional Development: Support Toddlers' Peer Interactions	11	3.6 (0.14)	3.0–4.0
Supporting peer interaction and play	11	3.7 (0.14)	3.0–4.0
Extending pretend play	8	3.5 (0.19)	3.0–4.0
Supporting social problem solving	10	3.6 (0.16)	3.0–4.0
Creating a sense of belonging	10	3.5 (0.17)	3.0–4.0
Most time spent on support of Infants' Cognitive Development	5	3.2 (0.35)	2.0–4.0
Supporting learning about concepts	5	3.0 (0.32)	2.0–4.0
Supporting object exploration	5	3.2 (0.37)	2.0–4.0
Supporting children in making choices	5	3.2 (0.37)	2.0–4.0
Extending knowledge about the world	5	3.4 (0.40)	2.0–4.0
Most Time spent on support of Toddlers' Cognitive Development	4	3.3 (0.25)	3.0–4.0
Scaffolding problem solving	3	3.3 (0.33)	3.0–4.0
Extending pretend play	4	3.3 (0.25)	3.0–4.0
Supporting children in making choices	4	3.3 (0.25)	3.0–4.0
Extending knowledge about the world	4	3.3 (0.25)	3.0–4.0

Source: Spring 2019 WGT Caregiver Feedback Survey.

^a Items created by the Q-CCIIT PD team. Caregivers rated the usefulness only of practices that they tried. Response scale was 1 (Not useful), 2 (A little useful), 3 (Useful), and 4 (Very useful).

Table B.VI.5. For practices on which the caregiver worked, what were the caregivers' perceptions of their own change during We Grow Together (spring 2019)?

Types of practices	Spring 2019		
	Sample size	Mean (SE)	Observed range ^a
Degree of change in caregiving practices during WGT^b			
Respond to children's distress	247	3.0 (0.06)	1.0–4.0
Respond to children's social cues	246	3.2 (0.06)	1.0–4.0
Respond to children's emotional cues	246	3.1 (0.06)	1.0–4.0
Build a positive relationship with children	246	3.0 (0.06)	1.0–4.0
Supervise and join in play and activities	244	3.0 (0.06)	1.0–4.0
Create a sense of belonging for children and families	244	3.0 (0.06)	1.0–4.0
Supervise and join in play and activities	247	3.1 (0.06)	1.0–4.0
Support children's interaction and play with other infants and toddlers	247	3.1 (0.06)	1.0–4.0
Support and extend pretend play	243	3.1 (0.06)	1.0–4.0
Help children learn to solve problems with other children	243	3.0 (0.06)	1.0–4.0
Manage behavior and set limits	240	3.0 (0.06)	1.0–4.0
Support children in managing their own behavior and emotions	243	3.0 (0.06)	1.0–4.0
Use responsive routines	244	2.9 (0.06)	1.0–4.0
Support object exploration	245	3.0 (0.06)	1.0–4.0
Support children in making choices	246	3.1 (0.06)	1.0–4.0
Provide experiences to extend knowledge about the world	243	3.0 (0.06)	1.0–4.0
Help children learn to solve problems on their own	245	2.9 (0.06)	1.0–4.0
Support understanding of basic concepts (e.g., in/out; top/bottom; wet/dry)	245	2.9 (0.06)	1.0–4.0
Develop a positive attitude towards books	246	2.9 (0.06)	1.0–4.0
Engage children in books and stories	246	3.0 (0.06)	1.0–4.0
Use specific and new words	248	3.1 (0.06)	1.0–4.0
Talk about things not present	241	3.0 (0.06)	1.0–4.0
Use different types of talk	240	3.0 (0.06)	1.0–4.0
Use different types of sentences	241	3.1 (0.06)	1.0–4.0
Engage children in conversational turn-taking	245	3.0 (0.06)	1.0–4.0
Ask children questions balanced with comments	242	3.1 (0.06)	1.0–4.0
Extend children's use of language	246	3.0 (0.06)	1.0–4.0
Support children's use of new words	243	3.1 (0.06)	1.0–4.0
Other	74	3.1 (0.12)	1.0–4.0

Source: Spring 2019 WGT Caregiver Feedback Survey.

^a The response scale was 1 (My practice did not change at all), 2 (Strengthened or reinforced what I already did), 3 (Improved a little), and 4 (Improved a lot). Caregivers noted "Did not try" for those practices on which they did not work. The means for each practice are based on caregivers who rated the change in their use of that practice.

^b Items created by the Q-CCIIT PD team.

Table B.VI.6. According to caregivers, how much did the use of We Grow Together practices support change in the children’s development (spring 2019)?

Types of practices	Spring 2019		
	Sample size	Mean (SE)	Percentage disagreeing
How much do you agree or disagree that your use of the We Grow Together key practices helped infants and toddlers?^{a, b}	248	5.3 (0.04)	n.a.
Use language (such as, use sounds and words to talk to you).	248	5.4 (0.04)	0.4
Understand and learn about words and sentences.	247	5.3 (0.05)	1.6
Develop early literacy and interest in books.	247	5.4 (0.04)	1.2
Manage their behavior and emotions.	248	5.2 (0.04)	1.2
Interact with you or other adults in positive ways.	248	5.3 (0.04)	0.8
Interact with other infants and toddlers.	248	5.3 (0.04)	0.4
Think, learn, and solve problems.	248	5.3 (0.04)	1.2

Source: Spring 2019 WGT PD Provider Feedback Survey.

^a Items created by the Q-CCIIT PD team. The reliability of the scale is 0.95.

^b The response scale was 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree).

Table B.VI.7. How did the caregivers perceive their overall experience with We Grow Together (spring 2019)?

Caregiver experience of We Grow Together	Sample size	Mean (SE)	Percentage disagreeing (SE) ^a
How much do you (caregiver) agree that We Grow Together ^b:			
Helped me be more effective in interacting with the children in my classroom.	246	5.3 (0.05)	1.6
Was worth the time I spent on it.	245	5.1 (0.06)	3.3
Helped me meet my professional goals.	245	5.3 (0.05)	2.0
Helped me learn new ways to support infants and toddlers.	245	5.3 (0.05)	3.3
Provided some useful resources for helping infants and toddlers grow and learn.	246	5.4 (0.04)	0.4
Is something I would like to continue to use.	246	5.1 (0.06)	4.9
Changed the way that I interact with infants and toddlers.	245	5.1 (0.06)	3.7

Source: Spring 2019 WGT Caregiver Feedback Survey.

^a Response scale was 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree). Percentage disagreeing includes those who responded from 1 to 3 on the scale.

^b Items adapted from LA Advance Early Educator Survey (Time 3). Last four items created by the Q-CCIIT PD team.

Table B.VI.8. When PD providers used a resource or strategy, were they satisfied with it (spring 2019)?

Resources and strategies	Spring 2019		
	Sample size	Mean (SD)	Observed range
How satisfied were PD providers with the following resources from the We Grow Together PD Provider Guide and appendices for supporting caregivers' use of We Grow Together?^a			
Coaching session guidelines	137	5.1 (0.07)	1.0–6.0
Coaching practice recommendations	133	5.2 (0.06)	2.0–6.0
Description of how to select SMART goals	137	5.2 (0.08)	1.0–6.0
Understanding the process of changing habits	131	5.1 (0.07)	1.0–6.0
Ideas for getting to know the caregiver	127	5.2 (0.07)	1.0–6.0
Action plan template	131	5.2 (0.07)	1.0–6.0
Caregiver Learning Preferences questions	129	5.1 (0.08)	1.0–6.0
Words and phrases to pair with positive comments	128	5.1 (0.07)	1.0–6.0
Coaching resource list	128	5.1 (0.06)	2.0–6.0
Description and resources on cultural awareness	119	5.1 (0.07)	2.0–6.0
Role play instructions	113	5.0 (0.07)	2.0–6.0
Mindfulness/meditation resources	103	5.2 (0.07)	2.0–6.0
How helpful were the following We Grow Together activities in coaching the caregiver(s) to meet their goals?^b			
Discussing things you noticed from observations with the caregiver(s).	139	4.3 (0.05)	2.0–5.0
Observing the caregiver(s) practice (video or in-person).	135	4.4 (0.06)	2.0–5.0
Action planning and review.	145	4.2 (0.06)	2.0–5.0
Guiding caregiver self-reflection.	138	4.2 (0.06)	2.0–5.0
Guiding caregiver(s) to additional resources.	142	4.1 (0.06)	1.0–5.0
Instructing caregiver(s) to watch a video-recording of themselves teaching.	135	4.1 (0.07)	1.0–5.0
Reviewing completed materials with caregiver(s).	133	4.2 (0.07)	1.0–5.0
Discussed things you noticed in videos of other caregivers' practice.	119	4.2 (0.06)	2.0–5.0
Instructing caregiver(s) to watch a video of another caregiver or observe another caregiver.	117	4.0 (0.07)	1.0–5.0
Role-play with caregiver(s).	108	4.0 (0.07)	1.0–5.0
Participating in website's discussion boards.	119	3.7 (0.09)	1.0–5.0

Source: Spring 2019 WGT PD Provider Feedback Survey.

^a Items created by the Q-CCIIT PD team. Response scale was 1 (Very unsatisfied), 2 (Unsatisfied), 3 (Somewhat unsatisfied), 4 (Somewhat satisfied), 5 (Satisfied), and 6 (Very satisfied). The mean for each item excludes those who did not try that resource.

^b Items created by the Q-CCIIT PD team. Response scale was 1 (Not helpful at all), 2 (Not very helpful), 3 (Somewhat helpful), 4 (Helpful) and 5 (Very helpful). The mean for each item excludes those who did not try that resource.

Appendix C

WGT subgroup analysis tables

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C.I. Did the experiences and change in beliefs and practices differ by subgroups of caregivers participating in We Grow Together?

This section provides information about the beliefs, use of quality caregiving practices, and experiences of caregivers participating in We Grow Together (WGT), by setting subgroups. Similar to the full sample analyses, the analytic sample in these tables represents the study participants as of March 1, 2019, eight weeks after the start of the implementation.¹ Tables C.1–C.13 present data comparing caregivers working in center-based classrooms with those in family child care classrooms (FCC). Tables C.14–C.26 present data comparing caregivers working in Early Head Start (EHS) and community-based classrooms. The sample included 214 center-based classrooms and 57 FCCs (Table C.1). It also included 105 EHS and 166 community-based classrooms. Both EHS and community-based settings are predominantly center based but also included some FCCs. Based on the ages of the children on the day of the fall classroom observations, there were 68 infant classrooms and 146 toddler classrooms in center-based settings.²

Table C.1. Analytic sample size, by subgroups

Classrooms	Center-based	FCCs	Total
Total	214	57	271
Infant	68		
Toddler	146		
EHS	89	16	105
Community-based	125	41	166

As a reminder, the sample size for different items and scales depends on the number of caregivers among the analytic sample who responded to those items. Some items were not applicable to all respondents.³ For example, caregivers only reported about the usefulness of a module when it was the one in which they spent the most time working. Similarly, within a module, they had the option of noting that they “did not try” a practice if they did not work on that practice in the module.

¹ All caregivers in the final analytic sample remained in a caregiver-professional development (PD) provider pair, completed either the background survey or the fall 2018 Q-CCIIT observation, and remained in the study at least until March 1, 2019.

² We used the classroom roster from the day of the Q-CCIIT observation to determine whether the majority of the children were younger than 18 months (infant classroom) or 18 months and older (toddler classroom).

³ Center-based infant classrooms and FCCs are estimated with lower precision, given their smaller sample sizes.

Table C.2. What were caregivers' demographic characteristics in We Grow Together (fall 2018) in center-based and FCC classrooms?

Caregiver characteristics	Center-based		FCC	
	Sample size	Percentage/mean (SE)	Sample size	Percentage/mean (SE)
Race				
White	206	47.1 (3.48)	57	42.1 (6.55)
Black or African American	206	37.4 (3.38)	57	43.9 (6.58)
Asian	206	6.8 (1.76)	57	0.0 (0.00)
American Indian or Alaska Native	206	3.4* (1.26)	57	10.5 (4.07)
Native Hawaiian or other Pacific Islander	206	0.5 (0.49)	57	0.0 (0.00)
Hispanic or Latino	202	22.3~ (2.93)	56	33.9 (6.34)
Female	204	99.5~ (0.49)	56	96.4 (2.48)
Age (years)	201	35.9*** (0.81)	57	48.8 (1.23)
Full-time status	197	93.9 (1.71)	55	100.0 (0.00)
A primary caregiver is assigned to each child in the setting	198	44.4*** (3.54)	56	73.2 (5.93)
Experience in early care and education (years)	205	9.9*** (0.56)	57	15.9 (1.14)

Source: Fall 2018 WGT Caregiver Background Survey.

* Indicates a significant difference between estimates for caregivers in each group (*p < 0.05;

p < 0.01; *p < .001; ~p < 0.10).

Table C.3. What were caregivers' education levels and professional credentials in center-based and FCC classrooms before involvement in the study (fall 2018)?

Caregiver education and credentials	Center-based		FCC	
	Sample size	Percentage/mean (SE)	Sample size	Percentage/mean (SE)
Highest level of education	200		55	
High school diploma or equivalent		20.5		14.5
Some college but no degree		24.5		21.8
Associate's degree		25.0		21.8
Bachelor's degree		20.0		20.0
Master's degree		5.0		7.3
Professional diploma past Master's degree		0.0		0.0
Field for highest degree	206		57	
Child development or developmental psychology		12.6		14.0
Early childhood education		41.7		49.1
Elementary education		3.9		7.0
Special education		2.9		0.0
Other		29.6		26.3
College coursework (mean number of courses)				
Infant/toddler development and care	172	3.1* (0.18)	50	4.1 (0.37)
Early childhood education	173	3.7** (0.20)	46	4.8 (0.37)
Child development	170	3.6** (0.19)	49	4.7 (0.37)
Child Development Associate (CDA) Credential	198		57	
Current		35.9		35.1
No longer current		3.5**		14.0
Never had		60.6		50.9
Professional organization membership (e.g., NAEYC, NAFCC) ^a	196	42.3	57	49.1

Source: Fall 2018 WGT Caregiver Background Survey.

Note: Adapted from the Q-CCIIT Caregiver SAQ 2012.

* Indicates a significant difference between estimates for caregivers in each group (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

^a NAEYC = National Association for the Education of Young Children; NAFCC = National Association for Family Child Care.

Table C.4. What were center-based and FCC caregivers' professional development experiences before involvement in the study (fall 2018)?

Caregiver PD Experiences	Center-based		FCC	
	Sample size	Percentage/mean (SE)	Sample size	Percentage /mean (SE)
Had mentor, coach, or other PD provider before the study	203	75.4~	55	63.6
Caregiver relationship with We Grow Together PD provider (among caregivers who previously worked with the PD provider)^a	93	3.8* (0.04)	35	3.9 (0.03)
Hours participating in PD, training or technical assistance (TA)	165	7.7	52	7.9
Support network of other caregivers (among network members)	80	71.3*	28	92.9
Support network meeting attendance (among network members)				
More than once a month	56	30.4	26	30.8
Once a month	56	39.3	26	50.0
Several times a year	56	23.2	26	19.2
About once a year	56	7.1	26	0.0
PD activities provided by center/FCC^b				
Paid preparation/planning time	180	73.3***	42	45.2
Tuition reimbursement for relevant college courses	174	55.7*	41	36.6
Participation in a mentor program	168	50.0	46	52.2
Reimbursement for workshop fees or other costs for outside training	177	59.3	43	51.2
Paid time during work hours for staff development	192	74.0***	44	43.2
Ongoing consultation from specialist, coach, or mentor	176	60.2	49	63.3
Visits to other child care classrooms or settings	173	42.2	41	31.7
Professional organizational meetings	180	73.9	47	80.9
Other	74	25.7	33	39.4
Determining PD needs^f				
Caregiver has individual career or PD plan	199	53.3	54	53.7
Program director or supervisor uses the plan to provide PD and training	103 ^c	86.4	27 ^c	92.6
Caregiver's classroom observed	170	90.6	47	91.5
Caregiver directly asked about PD needs	180	87.2~	47	95.7
Classroom observation data reviewed	155	80.0	44	84.1
Child assessment data reviewed	147	82.3	44	79.5
Surveys/questionnaires administered	154	68.2	43	62.8
Number of TA activity topics focused on teaching strategies (mean)^d	206	2.6~ (0.16)	57	3.3 (0.30)

Table C.4 (continued)

Caregiver PD Experiences	Center-based		FCC	
	Sample size	Percentage/mean (SE)	Sample size	Percentage /mean (SE)
Number of infant-toddler professional websites accessed this year (mean)^e	206	1.9 (0.12)	57	2.0 (0.26)

Source: Fall 2018 WGT Caregiver Background Survey.

Note: * Indicates a significant difference between estimates for caregivers in each group (*p < 0.05; **p < 0.01; ***p < 0.001; ~p < 0.10).

^a Reliability of caregiver-provider relationship scale is 0.92 with a total of 8 items. Score is the mean of the caregiver's ratings across the items. Possible range is 1–4, with higher scores indicating a more positive relationship. Half of the caregivers overall (50.2 percent) had not worked previously with the WGT PD provider.

^b Items in this section called for a yes or no response. Some participants responded only to items to which they answered “yes” and skipped the other items.

^c Caregivers only responded to the use of a PD plan when they reported having a plan.

^d Seven topics in the list of TA activities refer to teaching strategies. The possible range was 0–7. TA activity topics focused on teaching strategies included in the list of possible training and TA items.

^e Possible range was 0 (none of the available options visited by caregiver) to 11 (caregiver visited all 11 websites named as options).

^f Items in this section are drawn from Baby FACES 2009 and 2018 teacher surveys. All other items adapted from the Q-CCIIT Caregiver Self-Administered Questionnaire (SAQ).

Table C.5. What were center-based and FCC caregivers' levels of satisfaction with work and stage of change before involvement in this study (fall 2018)?

Caregiver views on satisfaction and change	Center-based		FCC	
	Sample size	Percentage/ mean (SE)	Sample size	Percentage/ mean (SE)
Likelihood caregiver will continue working in infant/toddler care^a				
Very likely	206	80.6**	57	98.2
Somewhat likely	206	15.5**	57	1.8
Five-year career goal				
Keep current job	203	47.3**	56	71.4
New position, current workplace	203	18.2*	56	5.4
Different early childhood education setting	203	16.7	56	14.3
Job outside early childhood education field	203	12.8	56	0.0
None of these	203	4.9	56	8.9
Caregiving goals^b				
Keep infants and toddlers safe and healthy	206	55.4	55	53.3
Help infants and toddlers in all areas of development	206	57.5	55	56.2
Keep children happy	204	55.2	54	53.5
Stage of change^c	203	3.5** (0.04)	55	3.7 (0.07)
Stage 2: Thinking about change but overwhelmed by obstacles	195	4.6	55	0.0
Stage 3: Ready to change	195	49.7*	55	30.9
Stage 4: Actively engaged in change	195	41.0**	55	63.6
Stage 5: Maintaining change	195	4.6	55	5.5

Source: Fall 2018 WGT Caregiver Background Survey.

Note: * Indicates a significant difference between estimates for caregivers in each group (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

^a Possible range was 1 (Very likely), 2 (Somewhat likely), 3 (Somewhat unlikely), and 4 (Very unlikely).

^b Possible range was 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree).

^c Peterson, S.M., A.C. Baker, and M.R. Weber. *Stage of Change Scale* [Measurement Instrument]. Rochester, NY: Children's Institute, 2010. Higher stages indicate more openness to continuous improvement. The scale reliability is 0.69.

Table C.6. What was the primary curriculum used by center-based and FCC caregivers (fall 2018)?

Name of curriculum	Center-based		FCC	
	Sample size	Percentage	Sample size	Percentage
Creative Curriculum	206	60.7	57	57.9
Active Learning for Infants	206	24.3	57	24.6
Continuity of care	206	12.1	57	10.5
Reggio Emilia	206	7.3	57	10.5
High/Scope	206	5.8	57	12.3
Educare	206	4.9	57	3.5
Mother Goose	206	4.4*	57	12.3
Montessori Method	206	3.9	57	7.0
Scholastic Curriculum	206	3.4*	57	10.5
Frog Street	206	1.9*	57	7.0
Resources for Infant Educators (RIE); Magda Gerber	206	1.9*	57	7.0
Bank Street developmental-interaction approach	206	1.0	57	1.8
Other	206	18.9	57	29.8
Do not use a specific curriculum or approach	206	17.0	57	21.1

Source: Fall 2018 WGT Caregiver Background Survey.

* Indicates a significant difference between estimates for caregivers in each group (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

Note: Adapted from LA Advance Administrator Survey [Measurement Instrument] (Moiduddin et al. 2016, unpublished instrument).

Table C.7. How did center-based and FCC caregivers perceive their overall experience with We Grow Together (spring 2019)?

Caregiver experience of WGT	Center-based caregivers		FCC caregivers	
	Sample size	Percentage agree ^a	Sample size	Percentage agree ^a
How much do you (caregiver) agree that WGT^b				
Helped me be more effective in interacting with the children in my classroom.	191	99.0	55	96.4
Was worth the time I spent on it.	190	97.4	55	94.5
Helped me meet my professional goals.	190	98.4	55	96.4
Helped me learn new ways to support infants and toddlers.	190	97.9	55	92.7
Provided some useful resources for helping infants and toddlers grow and learn.	191	100.0	55	98.2
Is something I would like to continue to use.	191	94.8	55	96.4
Changed the way that I interact with infants and toddlers.	190	96.3	55	96.4

Source: Spring 2019 WGT Caregiver Feedback Survey.

* Indicates a significant difference between estimates for caregivers in each group (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

^a Response scale was 1 (Strongly Disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree).

Percentage agree includes those who responded 4–6.

^b Items adapted from LA Advance Early Educator Survey (Time 3). The last four items were created by the Q-CCIIT PD team.

Table C.8. What challenges and barriers did infant center-based and FCC caregivers report experiencing when implementing We Grow Together (spring 2019)?

Challenges caregivers reported ^a	Center-based caregivers		FCC caregivers	
	Sample size	Percentage agree ^b	Sample size	Percentage agree ^b
Below is a list of reasons that caregivers may give for why participating in professional development activities is difficult. Please indicate how much you agree or disagree with the following statements in relation to your experience with We Grow Together.				
I don't have enough time to use the online materials.	191	56.5	56	55.4
It's difficult for me to find a time to practice with the children in my setting.	191	36.1	56	33.9
I don't have support from my employer. ^c	193	14.5	56	10.7
My supervisor doesn't like the We Grow Together program. ^c	192	5.7	56	8.9
I don't have support from my family.	192	6.8*	56	19.6
I don't have access to a reliable computer or internet connection.	192	14.6	56	12.5
I don't understand the We Grow Together tools.	192	7.8	56	12.5
I don't have the English language skills I need.	193	3.6	56	7.1
I don't have child care or dependent care for my family.	190	7.4	55	5.5
My PD provider is too busy.	191	24.1~	56	12.5
The other caregivers in my room don't like the We Grow Together practices. ^c	192	6.8	55	5.5
My work hours are more than 8 hours a day.	191	26.7***	55	74.5
I have no-one to talk with about what I am learning.	192	13.0	55	14.5
I already feel overwhelmed with covering my program's curriculum and assessment	191	33.5~	55	47.3
Families of children in my class don't agree with some of the We Grow Together practices.	192	6.8	55	5.5
Older children in my class make it hard to focus on the infants and toddlers. ^d	-	-	55	50.9
I find it difficult to apply the We Grow Together practices to a home-based setting. ^d	-	-	56	19.6
Some other reason	163	8.6~	47	19.1

Source: Spring 2019 WGT Caregiver Feedback Survey.

* Indicates a significant difference between estimates for caregivers in each group (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

^a Items adapted from ASPIRE Participant Year-End Survey 2013–2014 and LA Advance EE Survey Time 3 (2016).

^b Response scale was 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree). "Percentage agree" was calculated using responses of 4 to 6.

^c Response scale was 0 (Not Applicable), 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree). "Percentage agree" was calculated using responses of 4 to 6.

^d Items asked only in FCCs.

Table C.9. What were center-based and FCC caregivers' perceptions of usefulness of We Grow Together activities (spring 2019)?

Types of activities	Center-based caregivers			FCC caregivers		
	Sample size	Mean (SD)	Observed range	Sample size	Mean (SD)	Observed range
How useful were the following We Grow Together activities?^a						
Trying the practices in my classroom.	191	4.4 (0.05)	3.0–5.0	54	4.2 (0.10)	2.0–5.0
Self-reflection.	184	4.2 (0.06)	1.0–5.0	51	4.3 (0.10)	3.0–5.0
Feedback from my PD provider.	180	4.2 (0.06)	1.0–5.0	51	4.4 (0.10)	3.0–5.0
Reflecting on others' practice in the online videos.	175	4.1 (0.07)	1.0–5.0	50	4.3 (0.11)	1.0–5.0
Discussing practice with my PD provider (my own practice or online videos).	182	4.0 (0.07)	1.0–5.0	50	4.2 (0.12)	1.0–5.0
Action planning with my PD provider.	182	4.1 (0.07)	1.0–5.0	53	4.3 (0.10)	2.0–5.0
Video-recording my interactions with infants and toddlers.	168	4.0 (0.08)	1.0–5.0	51	4.2 (0.12)	2.0–5.0
Participating in the website's discussion boards.	116	3.9 (0.10)	1.0–5.0	32	3.9 (0.19)	1.0–5.0

Source: Spring 2019 WGT Caregiver Feedback Survey.

* Indicates a significant difference between estimates for caregivers in each group (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

^a Items created by the Q-CCIIT PD team. Response scale was 1 (Not useful at all), 2 (Not very useful), 3 (Somewhat useful), 4 (Useful), and 5 (Very useful). The mean for each item was estimated based on those who reported usefulness and excluded those who did not try that activity.

Table C.10. Which We Grow Together modules were recommended to caregivers in center-based settings compared with FCCs? On which one module did caregivers in center-based settings report spending the most time working compared with caregivers in FCCs (spring 2019)?

Modules	Percentage of center-based		Percentage of FCCs	
	Three recommended modules (n = 211)	Module on which caregiver spent most time (n = 193)	Three recommended modules (n = 56)	Module on which caregiver spent most time (n = 56)
Caregiver-child relationships	37.9	9.8	39.3	12.5
Behavior and emotions	13.3	19.7~	14.3	30.4
Understanding language	68.7	10.9	71.4	8.9
Language use	76.3	37.3**	80.4	17.9
Literacy	57.8	7.8*	57.1	19.6
Infants' cognitive development	1.4	2.1	0.0	3.6
Toddlers' cognitive development	7.6	2.1	5.4	1.8
Infants' peer interactions	11.4	5.2	5.4	1.8
Toddlers' peer interactions	25.6	5.2	26.8	3.6

Source: WGT administrative data and Spring 2019 WGT Caregiver Feedback Survey.

Note: Caregivers were recommended three modules based on scores on the positive Q-CCIIT scales, but PD providers were given permission to introduce other modules' key practices as needed, based on their observations. Caregivers collaboratively selected practices within modules and created goals with the PD providers.

* Indicates a significant difference between estimates for caregivers in each group (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

Table C.11. In the We Grow Together module where caregivers spent the most time, how useful did center-based and FCC caregivers report the practices were for their work (spring 2019)?

	Center-based caregivers			FCC caregivers		
	Sample size	Mean (SE)	Observed range ^b	Sample size	Mean (SE)	Observed range ^b
Please tell us how useful to your work the following practices were in helping^a						
Support Children's Language Use	71	3.6 (0.06)	2.0–4.0	10	3.6 (0.11)	3.0–4.0
Responding to children's cues	68	3.6 (0.07)	2.0–4.0	10	3.7 (0.15)	3.0–4.0
Taking turns in conversations	71	3.5 (0.07)	2.0–4.0	10	3.5 (0.16)	3.0–4.0
Asking questions	71	3.6 (0.07)	1.0–4.0	9	3.6 (0.17)	3.0–4.0
Extending children's language use	70	3.6 (0.07)	2.0–4.0	10	3.7 (0.15)	3.0–4.0
Supporting children's use of new words	68	3.6 (0.07)	2.0–4.0	10	3.4 (0.21)	2.0–4.0
Support Understanding Language	21	3.4 (0.12)~	2.0–4.0	5	3.7 (0.14)	3.2–4.0
Using different types of talk	21	3.3 (0.17)	1.0–4.0	5	3.6 (0.22)	3.0–4.0
Using lots of specific and new words	21	3.4 (0.13)	2.0–4.0	5	3.8 (0.18)	3.0–4.0
Supporting learning about concepts	21	3.2 (0.19)**	1.0–4.0	5	4.0 (0.00)	4.0–4.0
Engaging children in books	21	3.6 (0.11)	3.0–4.0	5	3.4 (0.22)	3.0–4.0
Using themes and projects	19	3.3 (0.18)	1.0–4.0	4	!	
Support Literacy	15	3.2 (0.18)*	1.5–4.0	11	3.7 (0.13)	2.8–4.0
Using new words and sentences	14	3.1 (0.22)~	1.0–4.0	11	3.6 (0.15)	3.0–4.0
Engaging children in books	15	3.5 (0.13)~	3.0–4.0	11	3.8 (0.12)	3.0–4.0
Making connections to things not present	14	3.1 (0.24)	1.0–4.0	11	3.5 (0.20)	2.0–4.0
Encouraging a positive attitude towards books	15	3.2 (0.22)~	1.0–4.0	11	3.7 (0.13)	3.0–4.0
Support Social-Emotional Development: Regulation of Behavior and Emotions	38	3.4 (0.07)	2.5–4.0	17	3.2 (0.15)	2.0–4.0
Responding to emotional cues	38	3.3 (0.10)	2.0–4.0	16	3.3 (0.14)	2.0–4.0
Using responsive routines	35	3.3 (0.11)	2.0–4.0	15	3.2 (0.17)	2.0–4.0
Managing behavior and setting limits	37	3.4 (0.09)	2.0–4.0	16	3.2 (0.16)	2.0–4.0
Supporting self-regulation	36	3.4 (0.08)	3.0–4.0	15	3.2 (0.17)	2.0–4.0

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Table C.11 (*continued*)

	Center-based caregivers			FCC caregivers		
	Sample size	Mean (SE)	Observed range ^b	Sample size	Mean (SE)	Observed range ^b
Support Social-Emotional Development: Caregiver-Child Relationships	19	3.7 (0.10)	3.0–4.0	6	3.4 (0.21)	2.6–4.0
Responding to social cues	19	3.6 (0.11)	3.0–4.0	6	3.5 (0.20)	3.0–4.0
Responding to emotional cues	19	3.7 (0.11)	3.0–4.0	6	3.5 (0.20)	3.0–4.0
Building a positive relationship	19	3.7 (0.11)	3.0–4.0	5	3.2 (0.34)	2.0–4.0
Supervising and joining in play and activities	19	3.7 (0.11)	3.0–4.0	6	3.2 (0.28)	2.0–4.0
Responding to children in distress	19	3.7 (0.10)~	3.0–4.0	6	3.3 (0.19)	3.0–4.0
Support Social-Emotional Development: Support Non-Mobile Infants' Peer Interactions	10	3.5 (0.21)*	2.0–4.0	1	!	!
Supporting peer interaction and play	9	3.4 (0.23)~	2.0–4.0	1	!	!
Supervising and joining in play and activities	10	3.5 (0.21)*	2.0–4.0	1	!	!
Creating a sense of belonging	8	3.6 (0.17)**	3.0–4.0	1	!	!
Support Social-Emotional Development: Support Toddlers' Peer Interactions	9	3.6 (0.14)	3.0–4.0	2	!	!
Supporting peer interaction and play	9	3.8 (0.14)	3.0–4.0	2	!	!
Extending pretend play	7	3.6 (0.19)*	3.0–4.0	1	!	!
Supporting social problem solving	8	3.6 (0.17)	3.0–4.0	2	!	!
Creating a sense of belonging	9	3.6 (0.17)*	3.0–4.0	1	!	!
Support Infants' Cognitive Development	4	3.0 (0.32)*	2.0–3.8	1	!	!
Supporting learning about concepts	4	2.8 (0.22)**	2.0–3.0	1	!	!
Supporting object exploration	4	3.0 (0.36)~	2.0–4.0	1	!	!
Supporting children in making choices	4	3.0 (0.36)~	2.0–4.0	1	!	!
Extending knowledge about the world	4	3.3 (0.42)	2.0–4.0	1	!	!
Support Toddlers' Cognitive Development	3	3.3 (0.27)	3.0–4.0	1	!	!
Scaffolding problem solving	2	3.5 (0.36)	3.0–4.0	1	!	!
Extending pretend play	3	3.3 (0.27)	3.0–4.0	1	!	!
Supporting children in making choices	3	3.3 (0.27)	3.0–4.0	1	!	!
Extending knowledge about the world	3	3.3 (0.27)	3.0–4.0	1	!	!

Source: Spring 2019 WGT Caregiver Feedback Survey.

* indicates a significant difference between estimates for caregivers in each group (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).
! indicates sample size is too small to present an estimate.
^a Items created by the Q-CCIIT PD team. Caregivers only rated the usefulness of practices they tried.
^b Response scale was 1 (Not useful), 2 (Somewhat useful) 3 (Useful), and 4 (Very useful).

Table C.12. According to center-based and FCC caregivers, how much did the use of We Grow Together practices support change in the children's development (spring 2019)?

Types of practices	Center-based caregivers		FCC caregivers	
	Sample size	Mean (SE)	Sample size	Mean (SE)
How much do you agree or disagree that your use of the We Grow Together key practices helped infants and toddlers:^{a, b}	192	5.3 (0.04)	56	5.3 (0.08)
Use language (such as, use sounds and words to talk to you).	192	5.4 (0.05)	56	5.4 (0.09)
Understand and learn about words and sentences.	191	5.3 (0.05)	56	5.2 (0.09)
Develop early literacy and interest in books.	191	5.4 (0.05)	56	5.3 (0.10)
Manage their behavior and emotions.	192	5.2 (0.05)	56	5.3 (0.10)
Interact with you or other adults in positive ways.	192	5.3 (0.05)	56	5.3 (0.09)
Interact with other infants and toddlers.	192	5.3 (0.04)	56	5.3 (0.08)
Think, learn, and solve problems.	192	5.3 (0.05)	56	5.1 (0.09)

Source: Spring 2019 WGT Caregiver Feedback Survey.

* Indicates a significant difference between estimates for caregivers in each group (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

^a Items created by the Q-CCIIT PD team. The reliability of the scale is 0.95 for all caregivers.

^b The response scale was 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree).

Table C.13. For practices on which center-based and FCC caregivers worked, what was their perception of their own change during We Grow Together (spring 2019)?

Types of practice	Center-based caregiver			FCC caregivers		
	Sample size	Mean (SE)	Observed range ^a	Sample size	Mean (SE)	Observed range ^a
Degree of self-reported change in child care practice during WGT^b	192	3.0 (0.05)	1.0–4.0	55	3.0 (0.10)	1.0–4.0
Respond to children's distress	192	3.0 (0.07)	1.0–4.0	55	3.0 (0.12)	1.0–4.0
Respond to children's social cues	191	3.1 (0.06)	1.0–4.0	55	3.2 (0.12)	1.0–4.0
Respond to children's emotional cues	191	3.1 (0.06)	1.0–4.0	55	3.1 (0.12)	1.0–4.0
Build a positive relationship with children	191	3.0 (0.07)	1.0–4.0	55	2.9 (0.14)	1.0–4.0
Supervise and join in play and activities	189	3.1 (0.07)	1.0–4.0	55	2.9 (0.13)	1.0–4.0
Create a sense of belonging for children and families	190	3.0 (0.07)	1.0–4.0	54	2.9 (0.13)	1.0–4.0
Supervise and join in play and activities	192	3.1 (0.07)	1.0–4.0	55	3.0 (0.13)	1.0–4.0
Support children's interaction and play with other infants and toddlers	192	3.2 (0.06)	1.0–4.0	55	3.0 (0.12)	1.0–4.0
Support and extend pretend play	189	3.1 (0.07)	1.0–4.0	54	3.1 (0.12)	1.0–4.0
Help children learn to solve problems with other children	188	3.1 (0.07)	1.0–4.0	55	2.9 (0.12)	1.0–4.0
Manage behavior and set limits	187	3.0 (0.07)	1.0–4.0	53	3.0 (0.12)	1.0–4.0
Support children in managing their own behavior and emotions	189	3.0 (0.07)	1.0–4.0	54	2.9 (0.13)	1.0–4.0
Use responsive routines	190	2.9 (0.07)	1.0–4.0	54	2.9 (0.12)	1.0–4.0
Support object exploration	192	3.0 (0.07)	1.0–4.0	53	2.8 (0.12)	1.0–4.0
Supporting children in making choices	192	3.1 (0.07)	1.0–4.0	54	3.1 (0.13)	1.0–4.0
Provide experiences to extend knowledge about the world	189	3.0 (0.07)	1.0–4.0	54	2.9 (0.12)	1.0–4.0
Help children learn to solve problems on their own	192	2.9 (0.07)	1.0–4.0	53	3.0 (0.12)	1.0–4.0
Support understanding of basic concepts (e.g., in/out; top/bottom; et/dry)	191	2.9 (0.07)	1.0–4.0	54	2.9 (0.12)	1.0–4.0
Develop a positive attitude towards books	192	2.9 (0.07)	1.0–4.0	54	3.0 (0.13)	1.0–4.0

Table C.13 (continued)

Types of practice	Center-based caregiver			FCC caregivers		
	Sample size	Mean (SE)	Observed range ^a	Sample size	Mean (SE)	Observed range ^a
Engage children in books and stories	191	3.0 (0.07)	1.0–4.0	55	2.9 (0.13)	1.0–4.0
Use specific and new words	192	3.1 (0.07)	1.0–4.0	56	3.1 (0.13)	1.0–4.0
Talk about things not present	186	3.0 (0.07)	1.0–4.0	55	3.1 (0.11)	1.0–4.0
Use different types of talk	185	3.1 (0.07)	1.0–4.0	55	3.0 (0.13)	1.0–4.0
Use different types of sentences	185	3.1 (0.07)	1.0–4.0	56	3.0 (0.12)	1.0–4.0
Engage children in conversational turn-taking	189	3.1 (0.07)	1.0–4.0	56	3.0 (0.13)	1.0–4.0
Ask children questions balanced with comments	187	3.1 (0.07)	1.0–4.0	55	3.0 (0.12)	1.0–4.0
Extend children's use of language	190	3.1 (0.07)	1.0–4.0	56	2.9 (0.12)	1.0–4.0
Support children's use of new words	187	3.1 (0.07)	1.0–4.0	56	3.1 (0.12)	1.0–4.0
Other	50	3.1 (0.14)	1.0–4.0	24	3.2 (0.19)	1.0–4.0

Source: Spring 2019 WGT Caregiver Feedback Survey.

Notes: * indicates a significant difference between estimates for caregivers in each group (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

^a Response scale was 1 (My practice did not change at all), 2 (Strengthened or reinforced what I already did), 3 (Improved a little), and 4 (Improved a lot). Caregivers noted "Did not try" for those practices on which they did not work. The means for each practice are based on caregivers who rated the change in their use of that practice.

^b Items created by the Q-CCIIT PD team.

Table C.14. Among center-based and FCC caregivers who participated in We Grow Together, were there differences in knowledge and beliefs about caregiving and development from fall 2018 to spring 2019?

Center-based caregivers knowledge and practices	Fall 2018			Spring 2019		
	Sample size	Mean (SE)	Observed range	Sample size	Mean (SE)	Observed range
Social-emotional development beliefs scale (20 items) ^a	192	4.9 (0.03)	3.3–6.0	192	5.0 (0.03)	3.7–5.8
Language development beliefs scale ^a	194	4.4 (0.03) ^{***}	3.2–5.6	194	4.8 (0.04)	3.5–6.0
Cognitive development: Thinking and learning beliefs scale (9 items) ^a	194	5.1 (0.04)	3.7–6.0	194	5.1 (0.04)	3.3–6.0
Beliefs about development ^a	196	4.8 (0.04)	3.1–5.9	196	4.7 (0.04)	3.4–5.8
Knowledge of Infant Development (KIDI) ^b	196	11.6 (0.22)	3.0–17.0	196	11.6 (0.21)	0.0–17.0

FCC caregiver knowledge and practices	Fall 2018			Spring 2019		
	Sample size	Mean (SE)	Observed range	Sample size	Mean (SE)	Observed range
Social-emotional development beliefs scale (20 items) ^a	56	4.9 (0.06)	3.4–5.9	56	4.9 (0.06)	3.8–5.9
Language development beliefs scale ^a	56	4.5 (0.06) ^{***}	3.3–5.6	56	4.8 (0.07)	3.4–5.9
Cognitive development: Thinking and learning beliefs scale (9 items) ^a	55	5.1 (0.07)	3.4–6.0	55	5.1 (0.07)	3.1–6.0
Beliefs about development ^a	56	4.8 (0.08)	3.3–5.9	56	4.8 (0.07)	2.8–5.6
Knowledge of Infant Development (KIDI) ^b	57	10.9 (0.39)	5.0–16.0	57	10.3 (0.47)	4.0–16.0

Source: Fall 2018 WGT Caregiver Background Survey, Spring 2019 WGT Caregiver Feedback Survey.

Note: Mean imputation was conducted when 75 percent of the items had responses.

* Indicates a significant difference between fall and spring means (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10) in a two-tailed test.

^a Adapted from Baby FACES 2018 and created by the Q-CCIIT PD team. Possible range was 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree), with some items reverse coded.

^b MacPhee, D. *Knowledge of Infant Development (KIDI)* [Measurement Instrument]. Princeton, NJ: Educational Testing Service, 1981. The possible range for the KIDI was 0 to 19 correct.

Table C.15a. Among participating center-based and FCC classrooms in We Grow Together, how did Q-CCIIT domain raw scores differ on average from fall 2018 to spring 2019?

Center-based classrooms Q-CCIIT Scale ^a	Fall 2018			Spring 2019		
	Sample size	Mean (SE)	Observed range	Sample size	Mean (SE)	Observed range
Support for Social-Emotional Development	188	4.3 (0.07)	1.7–6.4	188	4.5 (0.07)	2.3–7.0
Support for Language and Literacy Development	188	4.0 (0.06)	1.5–6.0	188	4.0 (0.07)	2.1–6.4
Support for Cognitive Development	188	3.2 (0.06)	1.3–6.1	188	3.1 (0.07)	1.5–6.1
Areas of concern for physical health and safety	187	0.1 (0.02)	0.0–1.5	187	0.1 (0.01)	0.0–1.0
Areas of concern for psychological health	188	0.2 (0.02)	0.0–1.6	188	0.2 (0.02)	0.0–1.4
Areas of concern for cognitive development	188	0.0 (0.01)	0.0–0.8	188	0.1 (0.01)	0.0–0.8
Extreme Areas of Concern ^a (count out of 10)	188	0.0~ (0.01)	0.0–1.0	188	0.1 (0.02)	0.0–2.0
Number of valid cycles	188	5.0 (0.01)	4.0–6.0	188	5.0 (0.01)	4.0–6.0
Child:adult ratio ^b	188	3.2 (0.10)	0.7–10.0	188	3.2 (0.11)	0.9–9.6

FCC classrooms Q-CCIIT Scale ^a	Fall 2018			Spring 2019		
	Sample size ^c	Mean (SE)	Observed range	Sample size	Mean (SE)	Observed range
Support for Social-Emotional Development	52	4.3 (0.14)	1.5–5.7	52	4.4 (0.13)	2.6–6.4
Support for Language and Literacy Development	52	4.0 (0.11)	2.1–6.4	52	4.2 (0.13)	2.6–6.0
Support for Cognitive Development	52	3.5 (0.12)	1.6–5.0	52	3.4 (0.12)	1.9–5.5
Areas of concern for physical health and safety	52	0.2 (0.04)	0.0–1.3	52	0.2 (0.04)	0.0–1.3
Areas of concern for psychological health	52	0.2 (0.06)	0.0–1.4	52	0.2 (0.04)	0.0–1.2
Areas of concern for cognitive development	52	0.1 (0.03)	0.0–1.2	52	0.1 (0.03)	0.0–0.8
Extreme Areas of Concern (count out of 10)	52	0.1 (0.04)	0.0–2.0	52	0.1 (0.04)	0.0–1.0
Number of valid cycles	52	5.0 (0.03)	4.0–6.0	52	5.0 (0.03)	4.0–6.0
Child:adult ratio ^b	52	3.0 (0.21)	0.5–7.0	52	3.2 (0.21)	0.9–8.0

Source: Fall 2018 and Spring 2019 WGT: Q-CCIIT observation.

Note: Ratings for positive scales range from 1 (lowest quality) to 7 (highest quality). In the WGT field test, observers attempted to complete five to six cycles per observation.

* Indicates a significant difference or trend between fall and spring means (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10) using a two-tailed test of significance.

^a 94.5 percent of classrooms had no extreme areas of concern.

^b The child:adult ratio at the time of the observation.

Table C.15b. Among participating center-based and FCC classrooms in We Grow Together, how did the quality of caregiver-child interactions differ on average from fall 2018 to spring 2019? (Q-CCIIT W-score comparison).

Subgroup Q-CCIIT W-scores (overall and by domain)	Sample size	Fall 2018 W-score (SE)	Spring 2019 W-score (SE)
Center-based caregivers	188		
Overall Q-CCIIT		498.6 (0.7)	499.3 (.8)
Support for Social Emotional Development		504.5~ (1.1)	507.5 (1.2)
Support for Language and Literacy Development		500.5 (0.2)	501.6 (1.1)
Support for Cognitive Development		490.8 (0.9)	489.6 (0.9)
FCC caregivers	52		
Overall Q-CCIIT		499.2 (1.4)	500.4 (1.1)
Support for Social Emotional Development		503.2 (2.2)	505.4 (2.1)
Support for Language and Literacy Development		500.5 (1.7)	503.8 (1.9)
Support for Cognitive Development		494.1 (1.6)	492.7 (1.6)

Source: WGT Field Test 2018 and 2019 Q-CCIIT observations

* Indicates a significant difference or trend between fall and spring means *p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10) using a two-tailed test of significance.

Early Head Start and community-based caregivers who participated in We Grow Together

Table C.16. What were caregivers' demographic characteristics in We Grow Together (fall 2018) in EHS and community-based classrooms?

Caregiver characteristics	EHS		Community-based	
	Sample size	Percentage/ mean (SE)	Sample size	Percentage/ mean (SE)
Race				
White	101	34.7** (4.74)	162	53.1 (3.93)
Black or Africa -American	101	46.5* (4.97)	162	34.0 (3.73)
Asian	101	6.9 (2.53)	162	4.3 (1.60)
American Indian or Alaska Native	101	5.9 (2.36)	162	4.3 (1.60)
Native Hawaiian or other Pacific Islander	101	0.0 (0.00)	162	0.6 (0.62)
Hispanic or Latino	98	31.6* (4.71)	160	20.6 (3.20)
Female	100	100.0 (0.00)	160	98.1 (1.07)
Age (years)	98	38.8 (1.16)	160	38.7 (1.00)
Full-time status	98	96.9 (1.74)	154	94.2 (1.89)
A primary caregiver is assigned to each child in the setting	98	45.9 (5.04)	156	53.8 (4.00)
Experience in early care and education (years)	101	10.9 (0.88)	161	11.4 (0.66)

Source: Fall 2018 WGT Caregiver Background Survey and National Survey of Early Care and Education (NSECE 2012).

* Indicates a significant difference between estimates for caregivers in each group (*p < 0.05; **p < 0.01; ***p < .001; ~p< 0.10).

Table C.17. What were caregivers' education levels and professional credentials in EHS and community-based classrooms before involvement in the study (fall 2018)?

Caregiver education and credentials	EHS caregivers		Community-based caregivers	
	Sample size	Percentage/ mean (SE)	Sample size	Percentage/ mean (SE)
Highest level of education	98		157	
High school diploma or equivalent		10.2**		24.8
Some college but no degree		19.4		26.8
Associate's degree		29.6		21.0
Bachelor's degree		27.6*		15.3
Master's degree		6.1		5.1
Field for highest degree	101		162	
Child development or developmental psychology		11.9		13.6
Early childhood education		55.4**		35.8
Elementary education		4.0		4.9
Special education		3.0		1.9
Other		25.7		30.9
College coursework (mean number of courses)				
Infant/toddler development and care	85	4.1*** (0.26)	137	2.9 (0.20)
Early childhood education	84	4.9*** (0.26)	135	3.4 (0.22)
Child development	83	4.7*** (0.27)	136	3.4 (0.21)
Child Development Associate (CDA) Credential	98		157	
Current		46.9**		28.7
No longer current		6.1		5.7
Never had		46.9**		65.6
Professional organization membership (e.g., NAEYC, NAFCC) ^a	100	38.0	153	47.7

Source: Fall 2018 WGT Caregiver Background Survey. Note: Adapted from Q-CCIIIT Caregiver SAQ 2012.

* Indicates a significant difference between estimates for caregivers in each group (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

^a NAEYC = National Association for the Education of Young Children; NAFCC = National Association for Family Child Care.

Table C.18. What were EHS and community-based caregivers' professional development experiences before involvement in the study (fall 2018)?

Caregiver PD experiences	EHS		Community-based	
	Sample size	Percentage/ mean (SE)	Sample size	Percentage/ mean (SE)
Had mentor, coach, or other PD provider before the study	99	81.8* (3.88)	159	67.3 (3.73)
Caregiver relationship with We Grow Together PD provider (among caregivers who previously worked with the PD provider)^a	48	3.8~ (0.07)	80	3.9 (0.03)
Hours participating in PD, training or TA	89	8.9 (1.64)	128	7.0 (1.02)
Support network of other caregivers (among network members)	37	78.4 (6.78)	71	76.1 (5.08)
Support network meeting attendance (among network members)				
More than once a month	29	31.0 (8.61)	53	30.2 (6.33)
Once a month	29	34.5 (8.85)	53	47.2 (6.88)
Several times a year	29	34.5* (8.85)	53	15.1 (4.93)
About once a year	29	0.0 (0.00)	53	7.5 (3.64)
PD activities provided by center/FCC^b				
Paid preparation/planning time	87	81.6*** (4.16)	135	59.3 (4.24)
Tuition reimbursement for relevant college courses	83	56.6 (5.45)	132	49.2 (4.36)
Participation in a mentor program	79	54.4 (5.61)	135	48.1 (4.31)
Reimbursement for workshop fees or other costs for outside training	82	56.1 (5.49)	138	58.7 (4.20)
Paid time during work hours for staff development	92	81.5*** (4.05)	144	59.7 (4.10)
Ongoing consultation from specialist, coach, or mentor	88	78.4*** (4.39)	137	49.6 (4.28)
Visits to other child care classrooms or settings	80	52.5** (5.59)	134	32.8 (4.07)
Professional organizational meetings	90	77.8 (4.39)	137	73.7 (3.77)
Other	37	32.4 (7.71)	70	28.6 (5.41)
Determining PD needs^f				
Caregiver has individual career or PD plan	98	61.2* (4.93)	155	48.4 (4.02)
Program director or supervisor uses the plan to provide PD and training	59 ^c	93.2~ (3.28)	71 ^c	83.1 (4.46)
Caregiver's classroom observed	89	93.3 (2.66)	128	89.1 (2.76)
Caregiver directly asked about PD needs	90	90.0 (3.17)	137	88.3 (2.75)

Table C.18 (continued)

Caregiver PD experiences	EHS		Community-based	
	Sample size	Percentage/ mean (SE)	Sample size	Percentage/ mean (SE)
Classroom observation data reviewed	82	90.2** (3.28)	117	74.4 (4.05)
Child assessment data reviewed	80	91.3** (3.17)	111	74.8 (4.13)
Surveys/questionnaires administered	76	81.6** (4.46)	121	57.9 (4.50)
Number of TA activity topics focused on teaching strategies (mean)^d	101	3.2* (0.22)	162	2.5 (0.18)
Number of infant-toddler professional websites accessed this year (mean)^e	101	1.9 (0.17)	162	1.9 (0.14)

Source: Fall 2018 WGT Caregiver Background Survey.

* Indicates a significant difference between estimates for caregivers in each group (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

^a Reliability of caregiver-provider relationship scale is 0.92 with a total of 8 items. Score is the mean of the caregiver's ratings across the items. Possible range is 1 to 4, with higher scores indicating a more positive relationship. Half of the caregivers overall (50.2 percent) had not worked previously with the WGT PD provider.

^b Items in this section called for a yes or no response. Some participants only responded to items to which they answered "yes" and skipped the other items.

^c Caregivers only responded to the use of a PD plan when they reported having a plan.

^d Seven topics in the list of TA activities refer to teaching strategies. The possible range was 0–7. TA activity topics focused on teaching strategies included in the list of possible training and TA items.

^e Possible range was 0 (none of the available options visited by caregiver) to 11 (caregiver visited all 11 websites named as options).

^f Items in this section are drawn from Baby FACES 2009 and 2018 teacher surveys. All other items adapted from the Q-CCIIT Caregiver SAQ.

Table C.19. What were EHS and community-based caregivers' levels of satisfaction with work and readiness for change before involvement in this study (fall 2018)?

Caregiver views on satisfaction and change	EHS		Community-based	
	Sample size	Percentage/ mean (SE)	Sample size	Percentage/ mean (SE)
Likelihood caregiver will continue working in infant/toddler care^a				
Very likely	101	86.1 (3.44)	162	83.3 (2.93)
Somewhat likely	101	11.9 (3.23)	162	13.0 (2.64)
Five-year career goal				
Keep current job	101	52.5 (4.98)	158	52.5 (3.98)
New position, current workplace	101	17.8 (3.82)	158	13.9 (2.76)
Different early childhood education setting	101	13.9 (3.44)	158	17.7 (3.04)
Job outside early childhood education field	101	12.9 (3.34)	158	8.2 (2.19)
None of these	101	3.0 (1.69)	158	7.6 (2.11)
Caregiving goals^b				
Keep infants and toddlers safe and healthy	100	5.4~ (0.08)	161	5.6 (0.06)
Help infants and toddlers in all areas of development	100	5.7 (0.05)	161	5.7 (0.05)
Keep children happy	99	5.5 (0.07)	159	5.5 (0.06)
Stage of change^c				
Stage 2: Thinking about change but overwhelmed by obstacles	101	5.9~ (2.36)	157	1.9 (1.09)
Stage 3: Ready to change	101	46.5 (4.97)	157	45.2 (3.98)
Stage 4: Actively engaged in change	101	44.6 (4.95)	157	47.1 (3.99)
Stage 5: Maintaining change	101	3.0 (1.69)	157	5.7 (1.86)

Source: Fall 2018 WGT Caregiver Background Survey.

* Indicates a significant difference between estimates for caregivers in each group (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

^a Possible range was 1 (Very likely), 2 (Somewhat likely), 3 (Somewhat unlikely), and 4 (Very unlikely).

^b Possible range was 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree).

^c Peterson, S.M., A.C. Baker, and M.R. Weber. *Stage of Change Scale* [Measurement Instrument]. Rochester, NY: Children's Institute, 2010. Higher stages indicate more openness to continuous improvement. The scale reliability is 0.69.

Table C.20. What was the primary curriculum used by EHS and community-based caregivers (fall 2018)?

Name of curriculum	EHS caregivers		Community-based caregivers	
	Sample size	Percentage	Sample size	Percentage
Creative Curriculum	101	82.2*** (3.82)	162	46.3 (3.92)
Active Learning for Infants	101	24.8 (4.30)	162	24.1 (3.37)
Continuity of care	101	12.9 (3.34)	162	11.1 (2.47)
Reggio Emilia	101	8.9 (2.84)	162	7.4 (2.06)
High/Scope	101	6.9 (2.53)	162	7.4 (2.06)
Educare	101	7.9* (2.69)	162	2.5 (1.22)
Mother Goose	101	4.0 (1.94)	162	7.4 (2.06)
Montessori Method	101	0.0 (0.00)	162	7.4 (2.06)
Scholastic Curriculum	101	3.0 (1.69)	162	6.2 (1.89)
Frog Street	101	1.0 (0.99)	162	4.3 (1.60)
Resources for Infant Educators (RIE); (Magda Gerber)	101	3.0 (1.69)	162	3.1 (1.36)
Bank Street developmental-interaction approach	101	1.0 (0.99)	162	1.2 (0.87)
Other	101	17.8 (3.82)	162	23.5 (3.34)
Do not use a specific curriculum or approach	101	4.0*** (1.94)	162	26.5 (3.48)

Source: Fall 2018 WGT Caregiver Background Survey.

* Indicates a significant difference between estimates for caregivers in each group (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

Adapted from LA Advance Administrator Survey [Measurement Instrument] (Moiduddin et al. 2016, unpublished instrument).

Table C.21. How did EHS and community-based caregivers perceive their overall experience with We Grow Together (spring 2019)?

Caregiver experience of WGT	EHS caregivers		Community-based caregivers	
	Sample size	Percentage agree ^a	Sample size	Percentage agree ^a
How much do you (caregiver) agree that WGT^b				
Helped me be more effective in interacting with the children in my classroom.	96	100.0	150	97.3
Was worth the time I spent on it.	96	99.0	149	95.3
Helped me meet my professional goals.	95	100.0	150	96.7
Helped me learn new ways to support infants and toddlers.	96	97.9	149	96.0
Provided some useful resources for helping infants and toddlers grow and learn.	96	100.0	150	99.3
Is something I would like to continue to use.	96	96.9	150	94.0
Changed the way that I interact with infants and toddlers.	96	96.9	149	96.0

Source: Spring 2019 WGT Caregiver Feedback Survey.

* Indicates a significant difference between estimates for caregivers in each group (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

^a Response scale was 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree).

“Percentage agree” includes those who responded 4–6.

^b Items adapted from LA Advance Early Educator Survey (Time 3). The last four items created by the Q-CCIIT PD team.

Table C.22. What challenges and barriers did EHS and community-based caregivers report experiencing when implementing We Grow Together (spring 2019)?

Challenges caregivers reported ^a	EHS caregivers		Community-based caregivers	
	Sample size	Percentage agree ^b	Sample size	Percentage agree ^b
Below is a list of reasons that caregivers may give for why participating in professional development activities is difficult. Please indicate how much you agree or disagree with the following statements in relation to your experience with We Grow Together.				
I don't have enough time to use the online materials.	95	53.7	152	57.9
It's difficult for me to find a time to practice with the children in my setting.	95	31.6	152	38.2
I don't have support from my employer. ^c	97	13.4	152	13.8
My supervisor doesn't like the We Grow Together program. ^c	96	5.2	152	7.2
I don't have support from my family.	96	10.4	152	9.2
I don't have access to a reliable computer or internet connection.	96	15.6	152	13.2
I don't understand the We Grow Together tools.	97	8.2	151	9.3
I don't have the English language skills I need.	97	6.2	152	3.3
I don't have child care or dependent care for my family.	95	7.4	150	6.7
My PD provider is too busy.	97	22.7	150	20.7
The other caregivers in my room don't like the We Grow Together practices. ^c	97	4.1	150	8.0
My work hours are more than 8 hours a day.	96	26.0 **	150	44.7
I have no-one to talk with about what I am learning.	97	14.4	150	12.7
I already feel overwhelmed with covering my program's curriculum and assessments.	97	40.2	149	34.2
Families of children in my class don't agree with some of the We Grow Together practices.	97	9.3	150	4.7
Older children in my class make it hard to focus on the infants and toddlers. ^d	16	50.0	39	51.3
I find it difficult to apply the We Grow Together practices to a home-based setting. ^d	16	18.8	40	20.0
Some other reason	81	8.6	129	12.4

Source: Spring 2019 WGT Caregiver Feedback Survey.

* Indicates a significant difference between estimates for caregivers in each group (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

^a Items adapted from ASPIRE Participant Year-End Survey 2013–2014 and LA Advance EE Survey Time 3 (2016).

^b Response scale was 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree). "Percentage agree" was calculated using responses of 4 to 6.

^c Response scale was 0 (Not applicable), 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree). "Percentage agree" was calculated using responses of 4 to 6.

^d Items asked only in FCCs.

Table C.23. Which We Grow Together modules were recommended to caregivers in EHS settings compared with community-based centers? On which one module did caregivers in EHS settings report spending the most time working compared with caregivers in community-based settings (spring 2019)?

Modules	Percentage of EHS caregivers		Percentage of community-based caregivers	
	Three recommended modules (n = 104)	Module on which caregiver spent most time (n = 97)	Three recommended modules (n = 163)	Module on which caregiver spent most time (n = 152)
Caregiver-child relationships	38.5	11.3	38.0	9.9
Behavior and emotions	11.5	13.4**	14.7	27.6
Understanding language	69.2	8.2	69.3	11.8
Language use	79.8	39.2~	75.5	28.9
Literacy	58.7	10.3	57.1	10.5
Infants' cognitive development	1.9	4.1	0.6	1.3
Toddlers' cognitive development	3.8~	2.1	9.2	2.0
Infants' peer interactions	11.5	4.1	9.2	4.6
Toddlers' peer interactions	25.0	7.2	26.4	3.3

Source: WGT Administrative Data and Spring 2019 WGT Caregiver Feedback Survey.

Note: Caregivers were recommended three modules based on scores on the positive Q-CCIIT scales, but PD providers were given permission to introduce other modules' key practices as needed based on their observations. Caregivers collaboratively selected practices within modules and created goals with the PD providers.

* Indicates a significant difference between estimates for caregivers in each group (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

Table C.24. What were EHS and community-based caregivers' perceptions of usefulness of We Grow Together activities (spring 2019)?

Types of activities	EHS caregivers			Community-based caregivers		
	Sample size	Mean (SD)	Observed range	Sample size	Mean (SD)	Observed range
How useful were the following We Grow Together activities?^a						
Trying the practices in my classroom	96	4.4 (0.07)	3.0–5.0	149	4.4 (0.05)	2.0–5.0
Self-reflection	90	4.2 (0.09)	1.0–5.0	145	4.2 (0.07)	1.0–5.0
Feedback from my PD provider	88	4.2 (0.09)	2.0–5.0	143	4.3 (0.06)	1.0–5.0
Reflecting on others' practice in the online videos	90	4.1 (0.08)	1.0–5.0	135	4.2 (0.08)	1.0–5.0
Discussing practice with my PD provider (my own practice or online videos)	91	4.0 (0.10)~	1.0–5.0	141	4.2 (0.07)	1.0–5.0
Action planning with my PD provider	94	4.0 (0.10)	1.0–5.0*	141	4.2 (0.07)	2.0–5.0
Video-recording my interactions with infants and toddlers	86	4.1 (0.10)	2.0–5.0	133	4.0 (0.09)	1.0–5.0
Participating in the website's discussion boards	53	4.0 (0.13)	1.0–5.0	95	3.8 (0.12)	1.0–5.0

Source: Spring 2019 WGT Caregiver Feedback Survey.

* Indicates a significant difference between estimates for caregivers in each group (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

^a Items created by the Q-CCIIT PD team. Response scale was 1 (Not useful at all), 2 (Not very useful), 3 (Somewhat useful), 4 (Useful), and 5 (Very useful). The mean for each item is estimated based on those who reported usefulness and excludes those who did not try that activity.

Table C.25. In the We Grow Together module on which EHS and community-based caregivers spent the most time, how useful were the practices for their work (spring 2019)?

	EHS caregivers			Community-based caregivers		
	Sample size	Mean (SE)	Observed range	Sample size	Mean (SE)	Observed range
Please tell us how useful to your work the following practices were in helping:						
Support Children's Language Use	38	3.6 (0.07)	2.8–4.0	43	3.5 (0.08)	2.0–4.0
Responding to children's cues	38	3.7 (0.08)	3.0–4.0	40	3.5 (0.09)	2.0–4.0
Taking turns in conversations	38	3.4 (0.10)	2.0–4.0	43	3.5 (0.09)	2.0–4.0
Asking questions	38	3.7~ (0.07)	3.0–4.0	42	3.5 (0.11)	1.0–4.0
Extending children's language use	38	3.7 (0.07)	3.0–4.0	42	3.5 (0.09)	2.0–4.0
Supporting children's use of new words	37	3.6 (0.08)	3.0–4.0	41	3.5 (0.10)	2.0–4.0
Support Understanding Language	8	3.5 (0.13)	3.0–4.0	18	3.4 (0.13)	2.0–4.0
Using different types of talk	8	3.4 (0.17)	3.0–4.0	18	3.4 (0.20)	1.0–4.0
Using lots of specific and new words	8	3.3 ~ (0.15)	3.0–4.0	18	3.6 (0.14)	2.0–4.0
Supporting learning about concepts	8	3.5 (0.18)	3.0–4.0	18	3.3 (0.22)	1.0–4.0
Engaging children in books	8	3.5 (0.18)	3.0–4.0	18	3.6 (0.12)	3.0–4.0
Using themes and projects	8	3.6 (0.17)	3.0–4.0	15	3.2 (0.22)	1.0–4.0
Support Literacy	10	3.4 (0.17)	2.5–4.0	16	3.4 (0.17)	1.5–4.0
Using new words and sentences	10	3.3 (0.20)	2.0–4.0	15	3.4 (0.21)	1.0–4.0
Engaging children in books	10	3.6 (0.16)	3.0–4.0	16	3.6 (0.12)	3.0–4.0
Making connections to things not present	10	3.2 (0.24)	2.0–4.0	15	3.3 (0.23)	1.0–4.0
Encouraging a positive attitude towards books	10	3.5 (0.21)	2.0–4.0	16	3.4 (0.20)	1.0–4.0
Support Social-Emotional Development: Regulation of Behavior and Emotions	13	3.3 (0.13)	2.5–4.0	42	3.3 (0.08)	2.0–4.0
Responding to emotional cues	13	3.2 (0.16)	2.0–4.0	41	3.3 (0.09)	2.0–4.0
Using responsive routines	12	3.3 (0.17)	2.0–4.0	38	3.3 (0.11)	2.0–4.0
Managing behavior and setting limits	13	3.5 (0.18)	2.0–4.0	40	3.3 (0.09)	2.0–4.0
Supporting self-regulation	12	3.4 (0.14)	3.0–4.0	39	3.4 (0.09)	2.0–4.0
Support Social-Emotional Development: Caregiver-Child Relationships	11	3.4* (0.13)	3.0–4.0	14	3.8 (0.11)	2.6–4.0
Responding to social cues	11	3.4* (0.15)	3.0–4.0	14	3.8 (0.11)	3.0–4.0
Responding to emotional cues	11	3.5 ~ (0.15)	3.0–4.0	14	3.8 (0.11)	3.0–4.0
Building a positive relationship	10	3.4 (0.16)	3.0–4.0	14	3.7 (0.16)	2.0–4.0
Supervising and joining in play and activities	11	3.4 (0.15)	3.0–4.0	14	3.7 (0.16)	2.0–4.0
Responding to children in distress	11	3.4* (0.15)	3.0–4.0	14	3.9 (0.09)	3.0–4.0

Table C.25 (continued)

	EHS caregivers			Community-based caregivers		
	Sample size	Mean (SE)	Observed range	Sample size	Mean (SE)	Observed range
Support Social-Emotional Development: Support Non-Mobile Infants' Peer Interactions	4	!		7	3.3 (0.27)	2.0–4.0
Supporting peer interaction and play	3	!		7	3.3 (0.27)	2.0–4.0
Supervising and joining in play and activities	4	!		7	3.3 (0.27)	2.0–4.0
Creating a sense of belonging	3	!		6	3.5 (0.21)	3.0–4.0
Support Social-Emotional Development: Support Toddlers' Peer Interactions	7	3.5 (0.18)	3.0–4.0	4	!	
Supporting peer interaction and play	7	3.6 (0.19)	3.0–4.0	4	!	
Extending pretend play	5	3.4 (0.22)	3.0–4.0	3	!	
Supporting social problem solving	6	3.5 (0.20)	3.0–4.0	4	!	
Creating a sense of belonging	6	3.3 (0.19)	3.0–4.0	4	!	
Support Infants' Cognitive Development	4	!		1	!	
Supporting learning about concepts	4	!		1	!	
Supporting object exploration	4	!		1	!	
Supporting children in making choices	4	!		1	!	
Extending knowledge about the world	4	!		1	!	
Support Toddlers' Cognitive Development	1	!		3	!	
Scaffolding problem solving	1	!		2	!	
Extending pretend play	1	!		3	!	
Supporting children in making choices	1	!		3	!	
Extending knowledge about the world	1	!		3	!	

Source: Spring 2019 WGT Caregiver Feedback Survey.

* indicates a significant difference between estimates for caregivers in each group (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

! indicates sample size is too small to present an estimate.

^a Items created by the Q-CCIIT PD team. Response scale was 1 (Not useful at all), 2 (Not very useful), 3 (Somewhat useful), 4 (Useful), and 5 (Very useful). The mean for each item is estimated based on those who reported usefulness and excludes those who did not try that activity.

Table C.26. According to EHS and community-based caregivers, how much did the use of We Grow Together practices support change in the children’s development (spring 2019)?

Types of practices	EHS caregivers		Community-based caregivers	
	Sample size	Mean (SE)	Sample size	Mean (SE)
How much do you agree or disagree that your use of the We Grow Together key practices helped infants and toddlers ^{a, b}	97	5.3 (0.05)	151	5.3 (0.05)
Use language (such as, use sounds and words to talk to you).	96	5.4 (0.06)	152	5.4 (0.06)
Understand and learn about words and sentences.	96	5.4 (0.06)	151	5.3 (0.06)
Develop early literacy and interest in books.	96	5.3 (0.07)	151	5.4 (0.05)
Manage their behavior and emotions.	97	5.2 (0.07)	151	5.3 (0.06)
Interact with you or other adults in positive ways.	97	5.3 (0.07)	151	5.3 (0.05)
Interact with other infants and toddlers.	97	5.4 (0.06)	151	5.3 (0.05)
Think, learn, and solve problems.	97	5.3 (0.06)	151	5.3 (0.06)

Source: Spring 2019 WGT Caregiver Feedback Survey.

* Indicates a significant difference between estimates for caregivers in each group (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

^a Items created by the Q-CCIIT PD team. The reliability of the scale is 0.95 for all caregivers.

^b The response scale was 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree).

Table C.27. For practices on which EHS and community-based caregivers worked, what was their perception of their own change during We Grow Together (spring 2019)?

Types of practice	EHS caregivers			Community-based caregivers		
	Sample size	Mean (SE)	Observed range ^a	Sample size	Mean (SE)	Observed range ^a
Degree of self-reported change in caregiving practice during WGT^b	96	3.1 ~ (0.07)	2.0–4.0	151	3.0 (0.06)	1.0–4.0
Respond to children's distress	96	3.0 (0.09)	1.0–4.0	151	2.9 (0.08)	1.0–4.0
Respond to children's social cues	96	3.3 (0.09)	2.0–4.0	150	3.1 (0.07)	1.0–4.0
Respond to children's emotional cues	96	3.2 (0.09)	2.0–4.0	150	3.0 (0.07)	1.0–4.0
Build a positive relationship with children	95	3.1 (0.10)	1.0–4.0	151	2.9 (0.08)	1.0–4.0
Supervise and join in play and activities	96	3.2~ (0.09)	2.0–4.0	148	2.9 (0.08)	1.0–4.0
Create a sense of belonging for children and families	94	3.1 (0.09)	1.0–4.0	150	2.9 (0.08)	1.0–4.0
Supervise and join in play and activities	96	3.2~ (0.09)	2.0–4.0	151	3.0 (0.08)	1.0–4.0
Support children's interaction and play with other infants and toddlers	96	3.2 (0.08)	2.0–4.0	151	3.1 (0.07)	1.0–4.0
Support and extend pretend play	95	3.3* (0.08)	2.0–4.0	148	3.0 (0.08)	1.0–4.0
Help children learn to solve problems with other children	95	3.2** (0.08)	1.0–4.0	148	2.9 (0.08)	1.0–4.0
Manage behavior and set limits	95	3.1 * (0.09)	1.0–4.0	145	2.9 (0.08)	1.0–4.0
Support children in managing their own behavior and emotions	95	3.2 ** (0.08)	2.0–4.0	148	2.9 (0.08)	1.0–4.0
Use responsive routines	93	3.0 (0.10)	1.0–4.0	151	2.8 (0.08)	1.0–4.0
Supporting object exploration	94	3.1 * (0.09)	1.0–4.0	151	2.9 (0.08)	1.0–4.0
Supporting children in making choices	95	3.2 (0.09)	1.0–4.0	151	3.0 (0.08)	1.0–4.0
Provide experiences to extend knowledge about the world	95	3.2* (0.08)	2.0–4.0	148	2.9 (0.08)	1.0–4.0
Help children learn to solve problems on their own	95	3.1~ (0.09)	1.0–4.0	150	2.9 (0.08)	1.0–4.0
Support understanding of basic concepts (e.g., in/out; top/bottom; wet/dry)	95	3.0 (0.09)	1.0–4.0	150	2.8 (0.08)	1.0–4.0
Develop a positive attitude towards books	95	3.0 (0.10)	1.0–4.0	151	2.9 (0.08)	1.0–4.0
Engage children in books and stories	95	3.1 (0.10)	1.0–4.0	151	3.0 (0.08)	1.0–4.0
Use specific and new words	96	3.2 (0.09)	1.0–4.0	152	3.1 (0.08)	1.0–4.0
Talk about things not present	95	3.0 (0.10)	1.0–4.0	146	3.0 (0.08)	1.0–4.0

Table C.27 (continued)

Types of practice	EHS caregivers			Community-based caregivers		
	Sample size	Mean (SE)	Observed range ^a	Sample size	Mean (SE)	Observed range ^a
Use different types of talk	95	3.1 (0.10)	1.0–4.0	145	3.0 (0.08)	1.0–4.0
Use different types of sentences	96	3.2 (0.09)	1.0–4.0	145	3.0 (0.08)	1.0–4.0
Engage children in conversational turn-taking	95	3.1 (0.09)	1.0–4.0	150	3.0 (0.08)	1.0–4.0
Ask children questions balanced with comments	93	3.1 (0.09)	1.0–4.0	149	3.0 (0.07)	1.0–4.0
Extend children's use of language	94	3.2* (0.09)	1.0–4.0	152	2.9 (0.08)	1.0–4.0
Support children's use of new words	94	3.2 (0.09)	1.0–4.0	149	3.0 (0.08)	1.0–4.0
Other	23	3.3 (0.19)	2.0–4.0	51	3.0 (0.14)	1.0–4.0

Source: Spring 2019 WGT Caregiver Feedback Survey.

* Indicates a significant difference between estimates for caregivers in each group (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

^a Response scale was 1 (My practice did not change at all), 2 (Strengthened or reinforced what I already did), 3 (Improved a little), 4 (Improved a lot). Caregivers noted “Did not try” for those practices on which they did not work. The means for each practice are based on caregivers who rated the change in their use of that practice.

^b Items created by the Q-CCIIT PD team.

Table C.28. Among EHS and community-based caregivers who participated in We Grow Together, were there differences in knowledge and beliefs about caregiving and development from fall 2018 to spring 2019?

EHS caregivers knowledge and practices	Fall 2018			Spring 2019	
	Sample size	Mean (SE)	Observed range	Mean (SE)	Observed range
Social-emotional development beliefs scale (20 items) ^a	96	4.9 (0.05)	3.7–6.0	5.0 (0.04)	3.7–5.9
Language development beliefs scale ^a	96	4.5*** (0.05)	3.3–5.6	4.9 (0.05)	3.7–5.9
Cognitive development: Thinking and learning beliefs scale (9 items) ^a	95	5.1 (0.06)	3.7–6.0	5.1 (0.05)	3.1–6.0
Beliefs about development ^a	95	4.8* (0.06)	3.5–5.9	4.7 (0.05)	3.6–5.8
Knowledge of Infant Development (KIDI) ^b	97	11.2 (0.30)	3.0–17.0	11.1 (0.31)	4.0–16.0

Community-based caregivers knowledge and practices	Fall 2018			Spring 2019	
	Sample size	Mean (SE)	Observed range	Mean (SE)	Observed range
Social-emotional development beliefs scale (20 items) ^a	152	4.9 (0.03)	3.3–5.8	5.0 (0.03)	3.8–5.8
Language development beliefs scale ^a	154	4.4*** (0.04)	3.2–5.5	4.7 (0.04)	3.4–6.0
Cognitive development: Thinking and learning beliefs scale (9 items) ^a	154	5.1 (0.04)	3.4–6.0	5.1 (0.04)	3.3–6.0
Beliefs about development ^a	157	4.7 (0.04)	3.1–5.9	4.7 (0.04)	2.8–5.8
Knowledge of Infant Development (KIDI) ^b	156	11.6 (0.24)	4.0–17.0	11.4 (0.25)	0.0–17.0

Source: Fall 2018 WGT Caregiver Background Survey, Spring 2019 WGT Caregiver Feedback Survey.

Note: Mean imputation was conducted when 75 percent of the items had responses.

* Indicates a significant difference between fall and spring means (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10) in a two-tailed test.

^a Adapted from Baby FACES 2018 and created by the Q-CCIIT PD team. The response scale was 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree), with some items reverse coded.

^b MacPhee, D. *Knowledge of Infant Development (KIDI)* [Measurement Instrument]. Princeton, NJ: Educational Testing Service, 1981. Possible range for the KIDI was 0 to 19 correct.

Table C.29a. Among participating EHS and community-based classrooms in We Grow Together, how did Q-CCIIT domain raw scores differ on average from fall 2018 to spring 2019?

EHS classrooms Q-CCIIT Scale	Fall 2018			Spring 2019	
	Sample size	Mean (SE)	Observed range	Mean (SE)	Observed range
Support for Social-Emotional Development	96	4.3* (0.10)	1.7–6.4	4.6 (0.10)	2.7–7.0
Support for Language and Literacy Development	96	3.8* (0.09)	1.5–5.9	4.1 (0.10)	2.1–6.4
Support for Cognitive Development	96	3.3 (0.09)	1.3–5.9	3.3 (0.10)	1.8–6.1
Areas of concern for physical health and safety	96	0.1 (0.02)	0.0–1.3	0.1 (0.03)	0.0–1.3
Areas of concern for psychological health	96	0.2 (0.03)	0.0–1.3	0.1 (0.03)	0.0–1.4
Areas of concern for cognitive development	96	0.1 (0.02)	0.0–0.8	0.1 (0.02)	0.0–0.8
Extreme Areas of Concern (count out of 10) ^a	96	0.0 (0.01)	0.0–1.0	0.1 (0.02)	0.0–1.0
Number of valid cycles	96	5.0 (0.01)	4.0–6.0	5.0 (0.02)	4.0–6.0
Child:adult ratio ^b	96	2.9 (0.11)	0.7–7.0	2.9 (0.14)	0.9–9.6

Community-based classrooms Q-CCIIT Scale	Fall 2018			Spring 2019	
	Sample size	Mean (SE)	Observed range	Mean (SE)	Observed range
Support for Social-Emotional Development	144	4.4 (0.07)	1.5–6.1	4.4 (0.07)	2.3–6.8
Support for Language and Literacy Development	144	4.1 (0.07)	1.9–6.4	4.0 (0.08)	2.3–6.4
Support for Cognitive Development	144	3.3 (0.07)	1.5–6.1	3.1 (0.07)	1.5–5.6
Areas of concern for physical health and safety	143	0.1 (0.02)	0.0–1.5	0.1 (0.02)	0.0–1.0
Areas of concern for psychological health	144	0.2 (0.03)	0.0–1.6	0.2 (0.02)	0.0–1.4
Areas of concern for cognitive development	144	0.1 (0.01)	0.0–1.2	0.1 (0.01)	0.2–0.8
Extreme Areas of Concern (count out of 10) ^a	144	0.0 (0.02)	0.0–2.0	0.1 (0.02)	0.0–2.0
Number of valid cycles	144	5.0 (0.02)	4.0–6.0	5.0 (0.02)	4.0–6.0
Child:adult ratio ^b	144	3.3 (0.13)	0.5–10.0	3.4 (0.12)	0.9–8.0

Source: Fall 2018 and Spring 2019 We Grow Together: Q-CCIIT observation.

Note: Ratings for positive scales range from 1 (lowest quality) to 7 (highest quality). In the WGT field test, observers attempted to complete five to six cycles per observation.

* Indicates a significant difference or trend between fall and spring means (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10) using a two-tailed test of significance.

^a 94.5 percent of classrooms had no extreme areas of concern.

^b The child:adult ratio at the time of the observation.

Table C.29b. Among participating EHS and community-based classrooms in We Grow Together, how did the quality of caregiver-child interactions differ on average from fall 2018 to spring 2019? (Q-CCIIT W-score comparison).

Subgroup Q-CCIIT scores (overall and by domain)	Sample size	Fall 2018 W-score (SE)	Spring 2019 W-score (SE)
EHS caregivers	96		
Overall Q-CCIIT		498.1~ (1.1)	500.8 (1.2)
Support for Social Emotional Development		503.8*(1.6)	509.7(1.8)
Support for Language and Literacy Development		498.7*(1.4)	502.8 (1.5)
Support for Cognitive Development		491.9 (1.3)	491.9 (1.3)
Community-based caregivers	144		
Overall Q-CCIIT		499.1 (0.8)	498.7 (0.9)
Support for Social Emotional Development		504.5 (1.2)	505.3 (1.3)
Support for Language and Literacy Development		501.7 (1.1)	501.6 (1.2)
Support for Cognitive Development		491.3 (1.0)	489.1 (1.0)

Source: WGT Field Test 2018 and 2019 Q-CCIIT observations

* Indicates a significant difference or trend between fall and spring means (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10) using a two-tailed test of significance.

Appendix D

Evidence of the reliability and validity of the Q-CCIIT in WGT

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The We Grow Together (WGT) study is the first time that the Q-CCIIT has been used in a professional development intervention study. Results in this appendix point to evidence of the reliability and validity of using the Q-CCIIT for this purpose.

Information about psychometric properties of the Q-CCIIT when used in the WGT professional development study include (1) classical test theory and item response theory (IRT) evidence of strong reliability of the domains and the overall score, (2) evidence of sensitivity to change in a professional development program, and (3) long-term stability of the measure across a six- to nine-month period. For the analysis of change in the overall and domain scores as well as for the multivariate analyses, we used IRT to estimate scores and examine the sensitivity and validity of the Q-CCIIT. The IRT estimate is more precise and more sensitive to differences than a raw score because it is interval-level measurement rather than ordinal (see Appendix E.IV for additional information).

Consistent with the findings in the Q-CCIIT psychometric field test, both classical test theory (coefficient alpha) and IRT reliability coefficients indicate strong reliability (Table D.1).

Table D.1. Estimates of reliability for Q-CCIIT measure of caregivers and items

	Rasch measure	Rasch item	Alpha
Overall Q-CCIIT	0.96	1.0	0.96
Support for Social-Emotional Development	0.91	0.91	0.87
Support for Cognitive Development	0.89	0.99	0.90
Support for Language and Literacy Development	0.93	0.99	0.93

The stability of Q-CCIIT scores across a six- to nine-month period from fall to spring are in the moderate range. With caregivers selecting different practices to work on improving, as well as the length of time between administrations, we did not expect to see high correlations. The strongest correlations are in the cognitive domain where the fewest number of caregivers reported spending most of their time. Only 2 to 5 percent of caregivers reported spending most of their time in any of the modules with practices measured in the Support for Cognitive Development domain.

Table D.2. Test-retest reliability for overall Q-CCIIT measure and domain-specific measures across six- to nine-month period in WGT

Measure	Pearson <i>r</i>
Overall Q-CCIIT	0.40**
Support for Social-Emotional Development	0.37**
Support for Cognitive Development	0.40**
Support for Language and Literacy Development	0.35**

The overall Q-CCIIT score is not the average of the domain scores. A separate Rasch model was estimated for the overall Q-CCIIT and for each of the domain scores. The metric for the domain scores reflects the difficulty of the items and caregiver quality in that domain. Though the model for each domain is set to have a mean of 500, the metric differs for each. We did not anchor the

item difficulty estimates for each domain on the overall Q-CCIIT as we wanted to be able to see how change occurred in each domain. Caregivers in WGT may have worked in only a single domain or on only a few dimensions within a domain (for example, the literacy dimensions within the Support for Language and Literacy domain).

Estimating the items and caregiver quality on the same scale provides information about practices that a caregiver uses with moderate to high quality. Any item that has a difficulty below the caregiver's score would be implemented by the caregiver with greater quality.

The Wright item map (Exhibit D.1) illustrates how well the caregivers were measured and the variation in quality that was captured for the overall Q-CCIIT. In a Rasch model, the ability (in this case quality of the caregiver-child interactions) and difficulty of the dimensions or items in the Q-CCIIT are estimated on the same scale. The Wright item map presents a histogram of the caregivers' quality on the left side and the difficulty of the items on the right. The mean overall score for the caregivers was close to the mean difficulty of the items. The Rasch rating scale model was estimated overall and with all of the Q-CCIIT positive domains from both the fall and spring observations for each caregiver.

The ordering of item difficulty is consistent with theoretical expectations, providing evidence of construct validity even within a professional development field test when caregivers are working on different practices (Table D.3). Exhibit D.1 also shows that the difficulty of the dimensions in the cognitive domain is higher than the difficulty of most of the dimensions in the other two domains. The four items that are most difficult for caregivers to implement are all in the Support for Cognitive Development domain. The easiest items are in the Support for Social-Emotional Development (four of the six easiest items) and Support for Language and Literacy Development domains. Three of the four literacy items are among the eight items that are easiest to implement.

Exhibit D.2 provides evidence of the validity of the steps (that is, the increase in ratings across the rubrics in the Q-CCIIT). Step increases confirm the ordering of the rubric categories in this sample with each subsequent rating of increasing difficulty.

Histograms in Exhibit D.3 depict the distribution of the scores in fall and spring on the overall Q-CCIIT and then in each of the domains. Comparison of the fall and spring histograms illustrates where change occurred in the distributions of quality for that domain. The histograms are presented first with overall quality and then by the quality of each domain.

Table D.3. IRT item difficulties from overall Q-CCIIT presented within domains

Support for Social Emotional Development	Item difficulty	Support for Cognitive Development	Item difficulty	Support for Language and Literacy Development	Item difficulty
Classroom limits and management	502	Supporting peer interaction/play	517	Talk about things not present	507
Sense of belonging	498	Scaffolding problem solving	515	Use of questions	506
Responsive routines	497	Extending pretend play	513	Extending children's language use	503
Responding contingently to distress	496	Explicit teaching	508	Caregiver use of varied vocabulary	501
Supervises or joins in play and activities	492	Support for social problem solving	504	Conversational turn-taking	500
Responding to emotional cues	492	Giving choices	504	Variety of types of sentences	498
Responding to social cues	491	Supporting object exploration	502	Variety of words in literacy experience	494
Builds a positive relationship	488	Basic concept development	499	Positive attitude toward books	494
				Features of talk	490
				Engaging children in books	489

Source: WGT Field Test Q-CCIIT observations.

Exhibit D.1. Wright item map illustrating distribution of caregivers' quality and of difficulty of items



Exhibit D.2. All dimensions of Q-CCIIT with fall and spring observations from We Grow Together

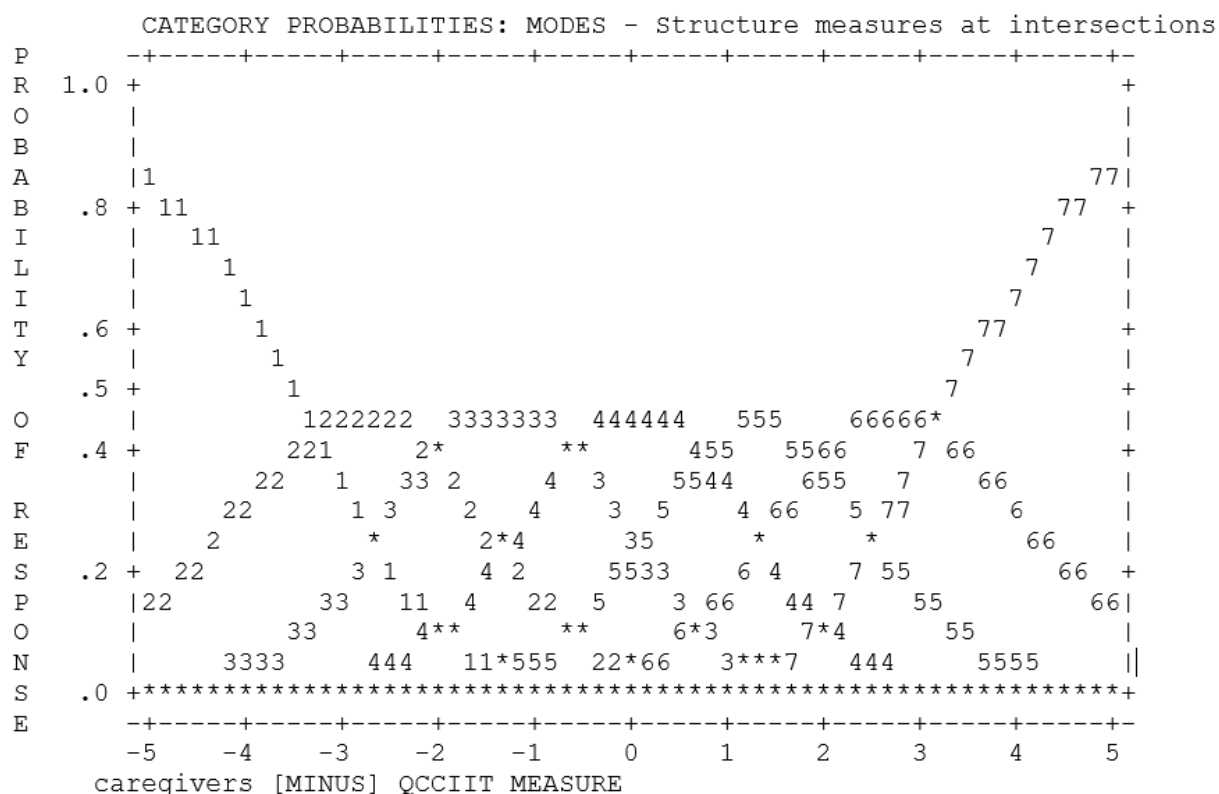


Exhibit D.3. Distribution of caregiver-child interaction quality overall and by domain in the fall and spring

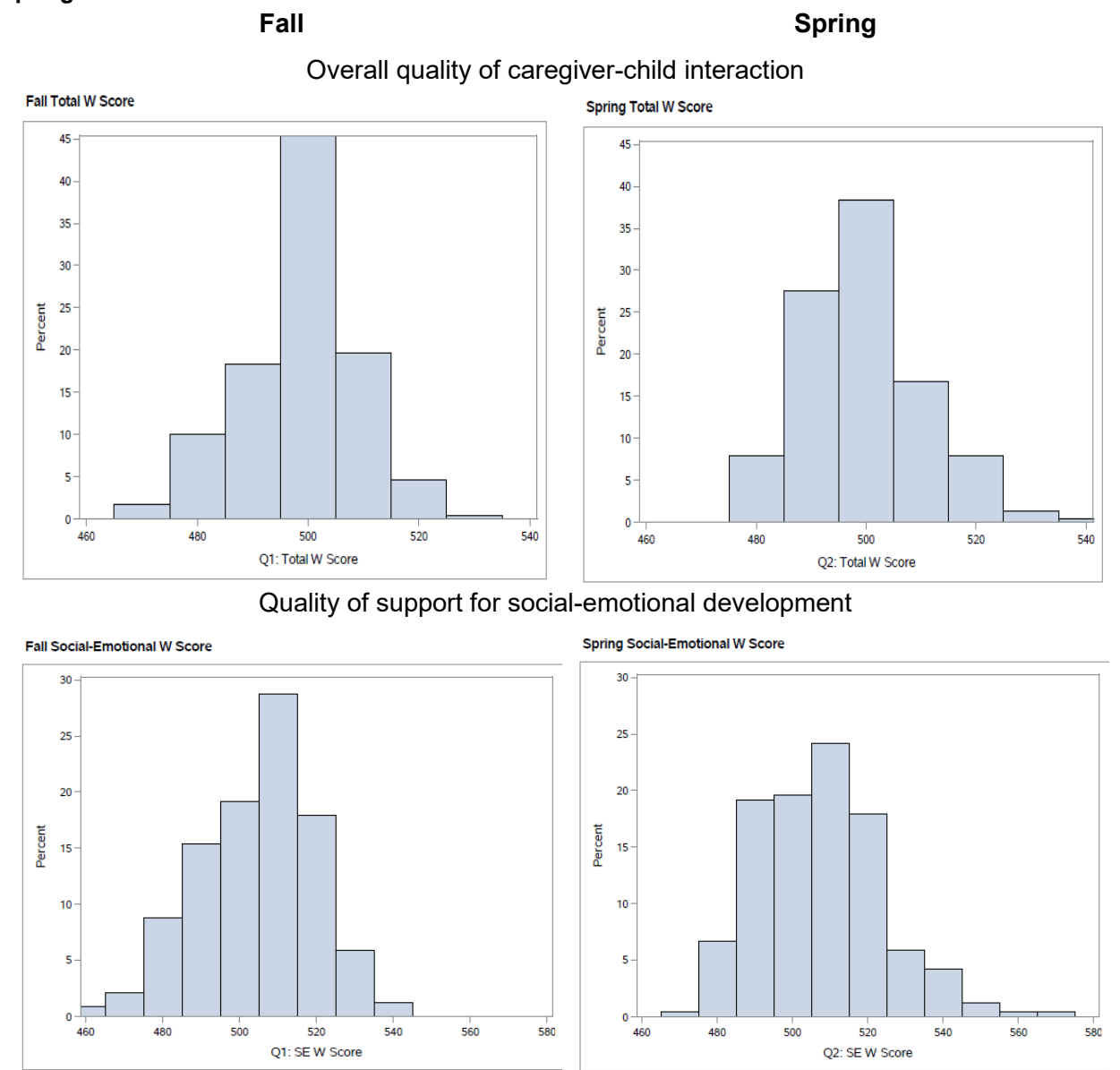
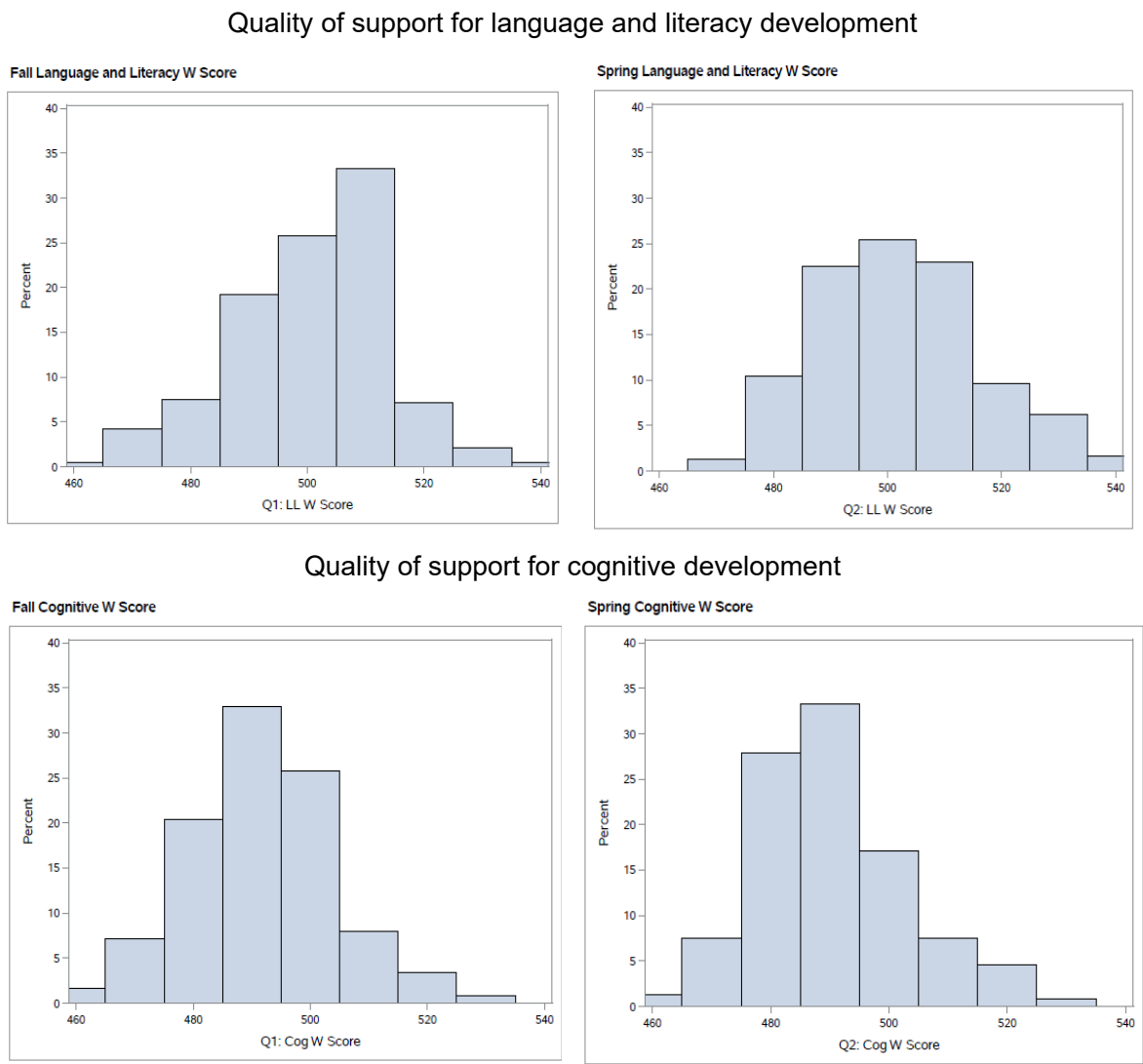


Exhibit D.3. Distribution of caregiver-child interaction quality overall and by domain in the fall and spring (continued)



D.I. Evidence of sensitivity to change

The WGT field test final report provides some evidence of sensitivity of the Q-CCIIT to change related to participation in a professional development intervention. Caregiver change in beliefs and practices was evident in the domains in which caregivers reported spending the most time. Unfortunately, our attempts to collect dosage information were not very successful, thereby hindering efforts to associate change with specific goals and activities. Caregivers could spend extended time on a single practice or could work on multiple practices in the same or different domains. We examined the fall and spring raw scores for each dimension to see what practices showed the most change in each domain (Table D.4).

Though observers had no knowledge of the modules or practices that the caregivers selected as goals, positive change in the interaction quality was evident in the practices associated with domains in which the greatest percentage of caregivers reported spending most of their time—within modules for support for social-emotional development and language and literacy development. The strongest positive change was noted in responding to children’s social and emotional cues, practices represented in the Caregiver-Child Relationships, Behavior and Self-Regulation, and Language Use modules. On average, caregivers also made significant improvement in all three dimensions for Literacy even though only 10.4 percent of caregivers reported spending the most time in that module. These practices are among the easiest for caregivers to master.

Modules in which less than 5 percent of caregivers reported spending the majority of their time demonstrate no change or a decline in observed quality in the associated domain. Support for Cognitive Development includes practices that are the most difficult for caregivers to implement with quality, perhaps because there has been less attention to these areas in prior professional development for caregivers of infants and toddlers.

Table D.4. Change in Q-CCIT positive dimensions

	Fall 2018			Spring 2019		
	N	Mean (SE)	Observed range	N	Mean (SE)	Observed range
Support for Social-Emotional Development						
Responding contingently to distress	39	4.1 (0.28)	1.0 – 7.0	39	3.9 (0.21)	1.0 – 7.0
Responding to social cues	240	4.5*** (0.06)	1.4 – 6.8	240	4.9 (0.07)	1.6 – 7.0
Responding to emotional cues	240	4.4* (0.06)	1.4 – 6.8	240	4.7 (0.07)	1.6 – 7.0
Builds a positive relationship	240	4.8 (0.07)	1.4 – 7.0	240	5.0 (0.07)	2.2 – 7.0
Responsive routines	240	4.1 (0.09)	1.0 – 7.0	240	4.2 (0.08)	1.0 – 7.0
Classroom limits and management	152	3.7 (0.09)	1.0 – 7.0	152	3.8 (0.09)	1.0 – 7.0
Sense of belonging	234	4.0 (0.08)	1.0 – 7.0	234	4.2 (0.07)	2.0 – 7.0
Supervises or joins in play and activities	238	4.5 (0.09)	1.0 – 7.0	238	4.5 (0.09)	1.0 – 7.0
Support for Cognitive Development						
Supporting object exploration	225	3.7 (0.07)	2.0 – 7.0	225	3.6 (0.07)	1.3 – 7.0
Scaffolding problem solving	235	2.7 (0.07)	1.0 – 6.2	235	2.7 (0.08)	1.0 – 6.5
Giving choices	238	3.6 (0.09)	1.0 – 7.0	238	3.5 (0.10)	1.0 – 7.0
Extending pretend play	222	2.9 (0.09)	1.0 – 7.0	222	2.9 (0.09)	1.0 – 7.0
Explicit teaching	239	3.3 (0.08)	1.0 – 7.0	239	3.2 (0.08)	1.0 – 7.0
Supervises or joins in play and activities	238	4.5 (0.09)	1.0 – 7.0	238	4.5 (0.09)	1.0 – 7.0
Concept development	240	4.0 (0.08)	1.0 – 7.0	240	3.8 (0.08)	1.0 – 7.0
Supporting peer interaction/play	236	2.6* (0.05)	1.0 – 5.4	236	2.5 (0.05)	1.0 – 6.0
Support for social problem solving	127	3.6 (0.11)	1.0 – 7.0	127	3.6 (0.11)	1.0 – 7.0
Support for Language and Literacy Development						
Caregiver use of varied vocabulary	240	3.7 (0.07)	1.0 – 6.4	240	3.8 (0.06)	1.5 – 6.5
Conversational turn-taking	240	3.8 (0.07)	1.2 – 6.8	240	4.0 (0.07)	1.6 – 6.8
Use of questions	240	3.4 (0.05)	1.2 – 5.8	240	3.4 (0.06)	1.8 – 6.6

Table D.4 (continued)

	Fall 2018			Spring 2019		
	N	Mean (SE)	Observed range	N	Mean (SE)	Observed range
Extending children's language use	240	3.6 (0.07)	1.0 – 7.0	240	3.6 (0.07)	1.2 – 6.8
Features of talk	239	4.8 (0.09)	1.0 – 7.0	239	4.7 (0.08)	1.0 – 7.0
Talk about things not present	240	3.3 (0.10)	1.0 – 7.0	240	3.4 (0.10)	1.0 – 7.0
Positive attitude toward books	239	4.4 (0.09)	1.0 – 7.0	239	4.4 (0.09)	1.0 – 7.0
Engaging children in books	231	4.6* (0.08)	1.0 – 7.0	231	4.9 (0.08)	3.0 – 7.0
Variety of words in literacy experience	232	4.2* (0.07)	1.0 – 7.0	232	4.4 (0.08)	2.0 – 7.0
Variety of types of sentences	231	3.9** (0.07)	1.0 – 7.0	231	4.2 (0.07)	2.0 – 7.0

Source: We Grow Together Field Test observations.

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ (one-way test of significance).

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Appendix E

WGT composite variable construction

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Appendix E provides findings from analyses used to construct variables from the new caregiver and professional development (PD) provider self-report items, and for the dosage indicator—that is, an indicator of how much the caregivers and PD providers participated in the We Grow Together (WGT) professional development based on web analytics and self-report measures. In Section E.IV, we also discuss the advantages of using a W-score for the outcome measures.

For the self-report measures, we used exploratory principal components analyses with varimax rotation to identify factors. We identified many different factors, often with few items and cross-loading on other factors. We selected those factors with at least three items and factor loadings greater than 0.40. In an exploratory factor analysis, we examined item to total correlations and coefficient alphas for the factors identified, as well as for the theoretical scales. The theoretical scales are organized by support for the different domains of development.

In the first section, E.I, we present the item to total correlations for the theoretical scales followed by item to total correlations for factors identified in the exploratory factor analysis. Section E.II provides the bivariate correlations used to identify the scales we would use to examine change. Section E.III provides the information used to select a measure of dosage for the WGT intervention to use in the multivariate models. Section E.IV discusses the Quality of Caregiver-Child Interactions for Infants and Toddlers (Q-CCIIT) observation rating for examining change.

E.I. Item to total scale correlations for survey measures

This section presents the item to total scale correlations for both caregivers and PD providers, using their responses to the spring feedback survey. The estimates used a listwise deletion, so the sample size will vary across the scales. Across scales and respondents, the item to total scale correlations range from 0.42 to 0.89, with most correlations above 0.70. As indicated by the reliability estimates, the correlations are stronger for PD providers than for caregivers. These correlations suggest that PD providers have a more coherent understanding of how to support social-emotional development. The correlations are the weakest for beliefs about support for cognitive development and strongest for beliefs about support for social-emotional development.

Table E.I.1. Social-emotional beliefs scale: item to total correlations

Items	Item to total correlations (standardized)	
	Caregivers ^a	PD providers ^b
You should position infants and toys so that infants play with other children.	0.76	0.85
You should draw children's attention to what others are doing.	0.76	0.85
You should be aware of and monitor your emotional expressions and body language.	0.73	0.84
You need to show toddlers how to follow rules/limits.	0.74	0.84
You need to word limits/rules positively (tell infants and toddlers what to do instead of what not to do).	0.73	0.83
When children are crying, you should respond to them right away.	0.74	0.84
Infants and toddlers are too young to learn about the feelings that others have (reversed).	0.73	0.84
Infants should be kept away from each other so they do not hurt one another (reversed).	0.73	0.83
Infants and toddlers should have the same caregiver every day.	0.73	0.84
You should smile frequently at infants and toddlers.	0.73	0.84
You should greet each child by name when they arrive.	0.72	0.84
You should let children cry it out so you do not spoil them (reversed).	0.73	0.83
Toddlers who cry when mom and dad leave should be ignored until they calm down (reversed).	0.74	0.84
If toddlers are fighting, you need to take away what they are fighting over (reversed).	0.73	0.84
You should pay attention to infants and toddlers body language.	0.73	0.84
You need to change activities every few minutes to keep toddlers happy (reversed).	0.75	0.85
You should limit toys so infants and toddlers learn to share (reversed).	0.73	0.84
You should provide lots of positive touch (hugs, rubbing backs, holding) for infants and toddlers.	0.73	0.84
As long as needs for food and diapering are taken care of, any caregiver can take care of an infant (reversed).	0.73	0.84
You spoil children if you play with them all the time (reversed).	0.72	0.84

Source: Spring 2019 WGT Caregiver Feedback Survey.

^a N = 254.

^b N = 160.

Table E.I.2. Language and literacy development beliefs scale: item to total correlations

Items	Item to total correlations (standardized)	
	Caregivers ^a	PD providers ^b
You need to start all the conversations with infants (reversed).	0.69	0.79
You should only use short sentences (reversed).	0.68	0.80
You should talk about what children are doing while they play.	0.68	0.77
You should balance questions and comments when talking with infants or toddlers.	0.70	0.78
You should talk in sentences so babies can learn and understand words and sentences.	0.69	0.80
You should always use as few words as possible with children younger than 18 months (reversed).	0.68	0.78
You should repeat sounds that children make.	0.69	0.79
Infants and toddlers need to hear only familiar words throughout the day (reversed).	0.70	0.78
You should play games with infants and toddlers that involve a back and forth with you.	0.68	0.78
Reading to children younger than one month probably doesn't help them (reversed).	0.67	0.78
You should wait and watch at least 5 seconds for infants and toddlers to respond to a question.	0.69	0.79
You should wait until children are old enough to sit and pay attention before reading a book to them (reversed).	0.67	0.79
You should respond when a child makes a sound.	0.67	0.79

Source: Spring 2019 WGT Caregiver Feedback Survey.

^a N = 260.

^b N = 162.

Table E.I.3. Cognitive thinking and learning beliefs scale: item to total correlations

Items	Item to total correlations (standardized)	
	Caregivers ^a	PD Providers ^b
Most children will turn out okay no matter what the caregiver does (reversed).	0.64	0.78
Infants should be put in swings or car seats when awake so that they are safe and can see everything (reversed).	0.63	0.78
Infants and toddlers are concrete learners so you should talk only about things that are in the room (reversed).	0.65	0.82
You should quietly fix things and solve problems for toddlers (reversed).	0.64	0.78
What caregivers do with infants and toddlers makes a big difference in their development.	0.63	0.78
You should plan some new experiences for young children to challenge them.	0.61	0.78
You should use cause and effect statements when talking to infants and toddlers (for example, the baby is crying because _____).	0.66	0.79
Sometimes you should change the pretend play materials to help infants and toddlers understand more about the world.	0.64	0.78
Infants only learn by watching so you don't need to talk to them often (reversed).	0.63	0.78

Source: Spring 2019 WGT Caregiver Feedback Survey.

^a N = 268.

^b N = 162.

Table E.I.4. Beliefs about development scale: item to total correlations

Items	Item to total correlations (standardized)	
	Caregivers ^a	PD providers ^b
Infants under 3 months do not feel pain (reversed).	0.68	0.73
An 8-month-old infant will look for something when it is hidden under a blanket.	0.70	0.74
If a toddler is very shy, he or she has an emotional problem (reversed).	0.68	0.71
Older infants who are very active – always on the go – need to see a doctor (reversed).	0.68	0.72
Older infants and toddlers who drink while laying flat on their backs are more likely to have ear infections.	0.70	0.73
Toddlers who drink milk or formula to go to sleep are likely to have dental problems.	0.69	0.74
All children must be toilet trained by the time they are 30 months old (reversed).	0.66	0.72
An 8-month-old can solve some problems on his/her own.	0.68	0.73
Newborns try to imitate adult movements.	0.69	0.73
Singing songs with infants is fun, but doesn't really do anything to help them to learn (reversed).	0.67	0.72
A young infant (0 to 3 months) cannot have a back and forth conversation (reversed).	0.67	0.72
Infants use their bodies (movement, looking, and expressions) to communicate.	0.68	0.70
It is best to keep infants safely in a seat when in your care (reversed).	0.66	0.71
Even children younger than 8 months can play with the other infants and toddlers in the room.	0.69	0.74
It is good to use lots of new words like "opportunity," "jog," "insect" with infants and toddlers.	0.69	0.72
Infants are too young to benefit from looking at and hearing you talk about books (reversed).	0.65	0.71

Source: Spring 2019 WGT Caregiver Feedback Survey.

^a N = 250.

^b N = 161.

Belief Scales Based on Factor Structure

Table E.I.5. Caregiver-child relationships beliefs scale: item to total correlations

Items	Item to total correlation (standardized)	
	Caregivers ^a	PD providers ^b
You need to word limits/rules positively (tell infants and toddlers what to do instead of what not to do).	.73	.79
You should be aware of and monitor your emotional expressions and body language.	.70	.79
You should smile frequently at infants and toddlers.	.67	.77
Infants and toddlers should have the same caregiver every day.	.73	.83
You should greet each child by name when they arrive.	.67	.79
You should pay attention to infants and toddlers body language.	.71	.79
You should provide lots of positive touch (hugs, rubbing backs, holding) for infants and toddlers.	.70	.79

Source: Spring 2019 WGT Caregiver Feedback Survey.

^a N = 261.

^b N = 162.

Table E.I.6. Building self-regulation beliefs scale: item to total correlations

Items	Item to total correlations (standardized)	
	Caregivers ^a	PD providers ^b
Infants and toddlers are too young to learn about the feelings that others have (reversed).	.73	.82
If toddlers are fighting, you need to take away what they are fighting over (reversed).	.70	.81
You should let children cry it out so you do not spoil them (reversed).	.69	.79
You should limit toys so infants and toddlers learn to share (reversed).	.69	.81
As long as needs for food and diapering are taken care of, any caregiver can take care of an infant (reversed).	.70	.82
You spoil children if you play with them all the time (reversed).	.68	.81
Toddlers who cry when mom and dad leave should be ignored until they calm down (reversed).	.73	.82

Source: Spring 2019 WGT Caregiver Feedback Survey.

^a N = 260.

^b N = 162.

Table E.I.7. Building language and cognitive development beliefs scale: item to total correlations

Items	Item to total correlations (standardized)	
	Caregivers ^a	PD providers ^b
What caregivers do with infants and toddlers makes a big difference in their development.	.71	.87
You should plan some new experiences for young children to challenge them.	.66	.85
You should use cause and effect statements when talking to infants and toddlers (for example, the baby is crying because _____).	.69	.86
Sometimes you should change the pretend play materials to help infants and toddlers understand more about the world.	.67	.85
You should respond when a child makes a sound.	.68	.87
You should balance questions and comments when talking with infants or toddlers.	.70	.86
You should talk in sentences so babies can learn and understand words and sentences.	.70	.87
You should play games with infants and toddlers that involve a back and forth with you.	.67	.86
You should wait and watch at least 5 seconds for infants and toddlers to respond to a question.	.70	.86

Source: Spring 2019 WGT Caregiver Feedback Survey.

^a N = 263.

^b N = 162.

Table E.I.8. Beliefs about providing challenge scale: item to total correlations

Items	Item to total correlations (standardized)	
	Caregivers ^a	PD providers ^b
You need to start all the conversations with infants (reversed).	.63	.73
You should only use short sentences (reversed).	.52	.69
You should always use as few words as possible with children younger than 18 months (reversed).	.51	.68
Infants and toddlers need to hear only familiar words throughout the day (reversed).	.59	.68
Infants and toddlers are concrete learners so you should talk only about things that are in the room (reversed).	.63	.78

Source: Spring 2019 WGT Caregiver Feedback Survey.

^a N = 264.

^b N = 162.

Table E.I.9. Ready to learn beliefs scale: item to total correlations

Items	Item to total correlations (standardized)	
	Caregivers ^a	PD providers ^b
Reading to children younger than one month probably doesn't help them.	.67	.84
You should wait until children are old enough to sit and pay attention before reading a book to them.	.65	.85
Most children will turn out okay no matter what the caregiver does.	.73	.86
Infants should be put in swings or car seats when awake so that they are safe and can see everything.	.71	.86
You should quietly fix things and solve problems for toddlers.	.71	.84
Infants only learn by watching so you don't need to talk to them often.	.69	.85

Source: Spring 2019 WGT Caregiver Feedback Survey.

Note: In the scale, all items are reverse coded.

^a N = 267.

^b N = 162.

Table E.I.10. Supporting peer interactions beliefs scale: item to total correlations

Items	Item to total correlations (standardized)	
	Caregivers ^a	PD providers ^b
You need to word limits/rules positively (tell infants and toddlers what to do instead of what not to do).	.43	.69
You should provide lots of positive touch (hugs, rubbing backs, holding) for infants and toddlers.	.49	.69
You need to show toddlers how to follow rules/limits.	.46	.74
Infants and toddlers are too young to learn about the feelings that others have (reversed).	.46	.70
Infants should be kept away from each other so they do not hurt one another (reversed).	.42	.66
If toddlers are fighting, you need to take away what they are fighting over (reversed).	.54	.74

Source: Spring 2019 WGT Caregiver Feedback Survey.

^a N = 262.

^b N = 162.

Table E.I.11. Baby FACES development practices beliefs scale: item to total correlations

Items	Item to total correlation (standardized)	
	Caregivers ^a	PD providers ^b
You should greet each child by name when they arrive.	.80	.89
You need to word limits/rules positively (tell infants and toddlers what to do instead of what not to do).	.81	.89
You should let children cry it out so you do not spoil them (reversed).	.80	.88
You spoil children if you play with them all the time (reversed).	.79	.89
You should repeat sounds that children make.	.81	.89
You should respond when a child makes a sound.	.80	.89
Most children will turn out okay no matter what the caregiver does (reversed).	.80	.88
What caregivers do with infants and toddlers makes a big difference in their development.	.80	.88
You should plan some new experiences for young children to challenge them.	.79	.88
Infants only learn by watching so you don't need to talk to them often (reversed).	.79	.88
Infants should be put in swings or car seats when awake so that they are safe and can see everything (reversed).	.80	.88
You should talk about what children are doing while they play.	.80	.88
You should wait until children are old enough to sit and pay attention before reading a book to them (reversed).	.79	.88
Reading to children younger than one month probably doesn't help them (reversed).	.79	.88
Toddlers who cry when mom and dad leave should be ignored until they calm down (reversed).	.80	.88
When children are crying, you should respond to them right away.	.81	.89
Infants and toddlers should have the same caregiver every day.	.80	.89
Infants and toddlers are too young to learn about the feelings that others have (reversed).	.80	.88
You should provide lots of positive touch (hugs, rubbing backs, holding) for infants and toddlers.	.80	.88

Source: Spring 2019 WGT Caregiver Feedback Survey.

^a N = 256.

^b N = 160.

E.II. Concurrent validity evidence for self-report measures (overall and by subgroup)

This section presents evidence of validity for the WGT self-report beliefs scales by examining concurrent correlations with other self-report measures used in the study. Comparisons are made with the Knowledge of Infant Development Inventory (KIDI; MacPhee 1981) and the Baby FACES development beliefs⁴ (Baby FACES 2018). In addition, we explored correlations with the Q-CCIIT observation measure scores. The tables are organized with the fall correlations among the self-report scales (the WGT scales, KIDI, and Baby FACES development beliefs) below the diagonal and the spring 2019 correlations above the diagonal. Following the correlations between caregiver self-report scales, correlations of those scales with the fall 2018 Q-CCIIT observation scores are presented, followed by correlations with the spring 2019 observation scores. Note that PD provider tables do not include Q-CCIIT observation scores.

In these tables, we present correlations among scales constructed using the most reliable set of items within each theoretical group of questions about beliefs in the WGT survey. We refer to them as the theoretical scales. We also looked at scales we derived based on an exploratory factor analysis of the spring survey items. Below, we first present correlations for the theoretical self-report scales, followed by measures based on the exploratory factor analysis of the WGT spring survey. The data presented in the tables below suggest slightly stronger validity for the theoretical scales than for the factor-based measures across both caregivers and PD providers. More of the correlations are significant and consistent in the theoretical scales than the factor-based measures. Generally, the WGT correlations tend to be stronger in the spring than in the fall for the theoretical scales for the caregivers, and stronger overall for PD providers than for caregivers (particularly in the fall). With the measures based on the exploratory factor structure, the pattern of change in the strength of correlations among measures between fall and spring was not as consistent. Some correlations were stronger and others weaker.

Table E.II.1. Measures included in correlation tables

WGT theoretical self-report scales	Other self-report scales
<ul style="list-style-type: none"> • Beliefs about child development • Social-Emotional beliefs • Cognitive: Thinking and learning beliefs • Language/Literacy beliefs 	<ul style="list-style-type: none"> • Knowledge of Infant Development Inventory (KIDI; MacPhee 1981) • Baby FACES development beliefs (Baby FACES 2018)
WGT factor-based measures	Q-CCIIT observation measures
<ul style="list-style-type: none"> • Caregiver-child relationships beliefs • Building self-regulation beliefs • Building language and cognitive development beliefs • Beliefs about providing challenge • Ready to learn beliefs • Supporting peer interactions beliefs 	<ul style="list-style-type: none"> • Support for social-emotional development • Support for language and literacy development • Support for cognitive development • Areas of concern for physical health and safety • Areas of concern for psychological health • Areas of concern for cognitive development

⁴ A subset of items from the Teacher Beliefs about Infant and Toddler Care and Education (Atkins-Burnett et al. 2017) used in Baby FACES.

The estimates for the caregivers overall are followed by the estimates of the self-report measures for the PD providers. Estimates for the subgroups of caregivers are then presented. The tables are organized as follows:

- i. Caregiver bivariate correlations for the full analytic sample
- ii. PD provider correlations for the full analytic sample
- iii. Correlations for community-based caregivers⁵
- iv. Correlations for Early Head Start (EHS) caregivers²
- v. Correlations for center-based caregivers
- vi. Correlations for family child care (FCC) caregivers
- vii. Readiness characteristics and caregiver satisfaction with WGT

This appendix also includes bivariate correlations between readiness characteristics and caregiver reports of satisfaction with WGT. These bivariate correlations informed initial understanding of the relations between the readiness and perceived usefulness of tools and activities. They also informed decisions about multivariate models. Many of the caregivers gave very positive ratings of the tools and processes in WGT. With shared method variance and limited overall variance, we wanted to avoid multicollinearity in our models.

⁵ Caregivers in both center-based and FCC classrooms are included.

E.1. Correlations among caregiver scales and the Q-CCIIT in fall 2018 and spring 2019 for the overall sample

Table E.II.2. Correlations among caregiver belief scales and with the Q-CCIIT observation scores (fall 2018 and spring 2019)

Knowledge and beliefs scales (theoretical)	Knowledge of Infant Development (KIDI) ^a	Beliefs about child development ^b	Social-Emotional beliefs ^b	Cognitive: Thinking and learning beliefs ^b	Language/Literacy beliefs ^b	Baby FACES development beliefs ^b
Knowledge of Infant Development (KIDI)		0.42***	0.32***	0.39***	0.36***	0.35***
Beliefs about child development	0.30***		0.46***	0.57***	0.52***	0.55***
Social-Emotional beliefs	0.31***	0.52***		0.62***	0.58***	0.82***
Cognitive: Thinking and learning beliefs	0.39***	0.46***	0.51***		0.62***	0.80***
Language/Literacy beliefs	0.30***	0.49***	0.49***	0.56***		0.71***
Baby FACES development beliefs	0.31***	0.54***	0.79***	0.73***	0.62***	
Fall 2018 Q-CCIIT scales						
Q-CCIIT Support for social-emotional development	0.16**	0.17**	0.13*	0.08	0.10	0.09
Q-CCIIT Support for cognitive development	0.10	0.13*	0.09	0.07	0.08	0.07
Q-CCIIT Support for language and literacy development	0.21***	0.19**	0.20**	0.11~	0.14*	0.14*
Areas of concern for physical health and safety	-0.07	0.03	-0.03	-0.08	-0.02	-0.03
Areas of concern for psychological health	-0.05	0.02	-0.02	-0.04	0.01	-0.05
Areas of concern for cognitive development	-0.08	-0.02	-0.05	-0.05	-0.07	-0.08
Spring 2019 Q-CCIIT scales						
Q-CCIIT Support for social-emotional development	0.17**	0.18**	0.14*	0.16*	0.17**	0.14*
Q-CCIIT Support for cognitive development	0.08	0.12~	0.17**	0.16*	0.14*	0.17**
Q-CCIIT Support for language and literacy development	0.13*	0.19**	0.12~	0.16*	0.18**	0.14*
Areas of concern for physical health and safety	-0.02	-0.08	-0.06	-0.17**	-0.07	-0.12~
Areas of concern for psychological health	-0.18**	-0.16*	-0.11~	-0.14*	-0.10	-0.12~
Areas of concern for cognitive development	-0.21**	-0.13*	-0.05	-0.13*	-0.08	-0.06

Source(s): Fall 2018 WGT Caregiver Background Survey; spring 2019 WGT Caregiver Feedback Survey; fall 2018 Q-CCIIT classroom observations; spring 2019 Q-CCIIT classroom observations.

Note: Fall estimates are presented below the diagonal and spring estimates above the diagonal.

* Indicates a significant relationship (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10 in a two-tailed test of significance).

Fall sample size was 252–263.

Spring sample size was 235–254.

^a MacPhee, D. Knowledge of Infant Development Inventory (KIDI) [Measurement Instrument]. Educational Testing Service, 1981.

^b Adapted from Baby FACES and created by the Q-CCIIT PD team.

Table E.II.3. Correlations among caregiver self-report measures based on factors and Q-CCIIT scores (fall 2018 and spring 2019)

Knowledge and beliefs scales (factor-based)	Caregiver- child relationships beliefs ^a	Building self- regulation beliefs ^a	Build language and cognitive development beliefs ^a	Beliefs about providing challenge ^a	Ready to learn beliefs	Supporting peer interaction s beliefs	Knowledge of Infant Development (KIDI) ^b	Baby FACES development beliefs ^a
Caregiver-child relationships beliefs		0.28***	0.54***	0.15*	0.29***	0.54***	0.14*	0.66***
Building self-regulation beliefs	0.38***		0.24***	0.53***	0.64***	0.66***	0.56***	0.74***
Build language and cognitive development beliefs	0.58***	0.23***		0.16**	0.26***	0.42***	0.08	0.55***
Beliefs about providing challenge	-0.05	0.37***	-0.02		0.57***	0.40***	0.50***	0.48***
Ready to learn beliefs	0.42***	0.54***	0.31***	0.39***		0.52***	0.57***	0.80***
Supporting peer interactions beliefs	0.66***	0.60***	0.48***	0.22***	0.40***		0.30***	0.66***
Knowledge of Infant Development (KIDI)	0.38***	0.50***	0.20**	0.30***	0.50***	0.39***		0.48***
Baby FACES development beliefs	0.69***	0.70***	0.63***	0.18**	0.75***	0.62***	0.51***	
Fall 2018 Q-CCIIT scales								
Q-CCIIT Support for social-emotional development	0.12~	0.15*	0.14*	0.16*	0.12~	0.15*	0.06	0.14*
Q-CCIIT Support for cognitive development	0.10	0.20**	0.12~	0.13*	0.11~	0.19**	-0.01	0.17**
Q-CCIIT Support for language and literacy development	0.12~	0.14*	0.17**	0.14*	0.11~	0.15*	0.06	0.14*
Areas of concern for physical health and safety	-0.04	-0.07	-0.09	-0.03	-0.17**	-0.05	-0.01	-0.12~
Areas of concern for psychological health	-0.15*	-0.10	-0.09	-0.08	-0.13*	-0.05	-0.07	-0.12~
Areas of concern for cognitive development	-0.01	-0.10	-0.03	-0.08	-0.15*	-0.04	-0.08	-0.06

Table E.II.3 (continued)

Knowledge and beliefs scales (factor-based)	Caregiver- child relationships beliefs ^a	Building self- regulation beliefs ^a	Build language and cognitive development beliefs ^a	Beliefs about providing challenge ^a	Ready to learn beliefs	Supporting peer interaction s beliefs	Knowledge of Infant Development (KIDI) ^b	Baby FACES development beliefs ^a
Spring 2019 Q-CCIIT scales								
Q-CCIIT Support for social- emotional development	0.04	0.16**	-0.02	0.11~	0.10	0.15*	0.10~	0.09
Q-CCIIT Support for cognitive development	0.00	0.10	0.06	0.08	0.04	0.12~	0.06	0.07
Q-CCIIT Support for language and literacy development	0.12~	0.18**	0.06	0.11~	0.12*	0.24***	0.13*	0.14*
Areas of concern for physical health and safety	0.02	-0.04	0.00	-0.07	-0.06	-0.07	0.02	-0.03
Areas of concern for psychological health	0.01	-0.07	0.02	0.02	-0.05	0.01	0.00	-0.05
Areas of concern for cognitive development	-0.08	-0.09	0.01	-0.04	-0.12~	-0.03	-0.07	-0.08

Source(s): Fall 2018 WGT: Q-CCIIT PD Caregiver Background Survey; spring 2019 WGT: Q-CCIIT PD Caregiver Feedback Survey; fall 2018 Q-CCIIT classroom observations; spring 2019 Q-CCIIT classroom observations.

Note: Fall estimates are presented below the diagonal and spring estimates above the diagonal.

* Indicates a significant relationship (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

Fall sample size was 252–263.

Spring sample size was 235–256.

^a Adapted from Baby FACES and created by the Q-CCIIT PD team.

^b MacPhee, D. *Knowledge of Infant Development (KIDI)* [Measurement Instrument]. Educational Testing Service, 1981.

E.2. Correlations among PD provider scales (theoretical and factor-based scales)

Table E.II.4. Correlations among PD provider theoretical knowledge and belief scales (fall 2018 and spring 2019)

Knowledge and beliefs scales (theoretical)	Knowledge of Infant Development (KIDI) ^b	Beliefs about child development ^a	Social-Emotional beliefs ^a	Cognitive: Thinking and learning ^a	Language/Literacy beliefs ^a	Baby FACES development practices beliefs ^a
Knowledge of Infant Development (KIDI)		0.44***	0.49***	0.42***	0.48***	0.47***
Beliefs about child development	0.39***		0.65***	0.68***	0.71***	0.70***
Social-Emotional beliefs	0.50***	0.55***		0.78***	0.78***	0.91***
Cognitive: Thinking and learning beliefs	0.37***	0.51***	0.61***		0.75***	0.87***
Language/Literacy beliefs	0.41***	0.52***	0.67***	0.64***		0.83***
Baby FACES development beliefs	0.44***	0.60***	0.83***	0.82***	0.76***	

Source(s): Fall 2018 WGT: Q-CCIIT PD Provider Background Survey; spring 2019 WGT: Q-CCIIT PD Provider Feedback Survey.

Note: Fall estimates are presented below the diagonal and spring estimates above the diagonal.

* Indicates a significant relationship (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

Fall sample size was 164–165.

Spring sample size was 148–151.

^a Adapted from Baby FACES and created by the Q-CCIIT PD team.

^b MacPhee, D. *Knowledge of Infant Development (KIDI)* [Measurement Instrument]. Educational Testing Service, 1981.

Table E.II.5. Correlations among PD provider self-report scales based on factors (fall 2018 and spring 2019)

Knowledge and beliefs scales (factor-based)	Caregiver-child relationships beliefs ^a	Building self-regulation beliefs ^a	Build language and cognitive development beliefs ^a	Beliefs about providing challenge ^a	Ready to learn beliefs ^a	Supporting peer interactions beliefs ^a	Knowledge of Infant Development (KIDI) ^b	Baby FACES development beliefs ^a
Caregiver-child relationships beliefs		0.40***	0.72***	0.20*	0.46***	0.68***	0.32***	0.77***
Building self-regulation beliefs	0.35***		0.24**	0.61***	0.81***	0.69***	0.47***	0.79***
Build language and cognitive development beliefs	0.51***	0.33***		0.10	0.30***	0.48***	0.21**	0.63***
Beliefs about providing challenge	0.24**	0.49***	0.18*		0.57***	0.40***	0.44***	0.49***
Ready to learn beliefs	0.39***	0.77***	0.38***	0.49***		0.61***	0.44***	0.86***
Supporting peer interactions beliefs	0.63***	0.63***	0.43***	0.36***	0.49***		0.44***	0.79***
Knowledge of Infant Development (KIDI)	0.32***	0.50***	0.14~	0.40***	0.47***	0.38***		0.47***
Baby FACES development beliefs	0.62***	0.81***	0.67***	0.44***	0.84***	0.65***	0.44***	

Source(s): Fall 2018 WGT: Q-CCIIT PD Provider Background Survey; spring 2019 WGT: Q-CCIIT PD Provider Feedback Survey.

Note: Fall estimates are presented below the diagonal and spring estimates above the diagonal.

* Indicates a significant relationship (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

Fall sample size was 164–165.

Spring sample size was 148–151.

^a Adapted from Baby FACES and created by the Q-CCIIT PD team.

^b MacPhee, D. *Knowledge of Infant Development Inventory (KIDI)* [Measurement Instrument]. Educational Testing Service, 1981.

E.3. Correlations among community-based caregiver scales (theoretical and factor-based)

Table E.II.6. Correlations among community-based caregiver belief scales and observations (fall 2018 and spring 2019)

Knowledge and beliefs scales (theoretical)	Knowledge of Infant Development (KIDI) ^a	Beliefs about child development ^b	Social-Emotional beliefs ^b	Cognitive: Thinking and learning beliefs ^b	Language/Literacy beliefs ^b	Baby FACES development beliefs ^b
Knowledge of Infant Development (KIDI)		0.46***	0.43***	0.49***	0.43***	0.48***
Beliefs about child development	0.24**		0.52***	0.65***	0.59***	0.61***
Social-Emotional beliefs	0.30***	0.45***		0.61***	0.59***	0.82***
Cognitive: Thinking and learning beliefs	0.43***	0.39***	0.50***		0.63***	0.81***
Language/Literacy beliefs	0.33***	0.47***	0.45***	0.51***		0.70***
Baby FACES development beliefs	0.31***	0.46***	0.77***	0.71***	0.55***	
Fall 2018 Q-CCIIT scales						
Q-CCIIT Support for social-emotional development	0.13	0.13	0.09	0.07	0.09	0.07
Q-CCIIT Support for cognitive development	0.07	0.09	0.00	0.09	0.06	0.03
Q-CCIIT Support for language and literacy development	0.16*	0.20*	0.15~	0.15~	0.18*	0.13
Areas of concern for physical health and safety	-0.08	0.01	0.06	-0.09	0.03	-0.02
Areas of concern for psychological health	-0.13	0.08	0.06	-0.01	0.08	-0.02
Areas of concern for cognitive development	-0.12	-0.05	-0.02	0.03	-0.03	-0.04
Spring 2019 Q-CCIIT scales						
Q-CCIIT Support for social-emotional development	0.18*	0.13	0.12	0.14~	0.12	0.07
Q-CCIIT Support for cognitive development	0.09	0.13	0.21*	0.18*	0.11	0.15~
Q-CCIIT Support for language and literacy development	0.13	0.17*	0.12	0.17*	0.13	0.09
Areas of concern for physical health and safety	-0.02	-0.01	0.07	-0.04	0.03	0.01
Areas of concern for psychological health	-0.19*	-0.10	-0.05	-0.09	-0.06	-0.07
Areas of concern for cognitive development	-0.24**	-0.03	-0.01	-0.09	-0.08	-0.01

Source(s): Fall 2018 WGT: Q-CCIIT PD Caregiver Background Survey; spring 2019 WGT: Q-CCIIT PD Caregiver Feedback Survey; fall 2018 Q-CCIIT classroom observations; spring 2019 Q-CCIIT classroom observations.

Note: Fall estimates are presented below the diagonal and spring estimates above the diagonal.

* Indicates a significant relationship (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

Fall sample size was 153–161; spring sample size was 141–156.

^a MacPhee, D. *Knowledge of Infant Development Inventory (KIDI)* [Measurement Instrument]. Educational Testing Service, 1981.

^b Adapted from Baby FACES and created by the Q-CCIIT PD team.

Table E.II.7. Correlations among community-based caregiver self-report scales based on factors (fall 2018 and spring 2019)

Knowledge and beliefs scales (factor-based)	Caregiver-child relationships beliefs ^a	Building self-regulation beliefs ^a	Build language and cognitive development beliefs ^a	Beliefs about providing challenge ^a	Ready to learn beliefs	Supporting peer interactions beliefs	Knowledge of Infant Development (KIDI) ^b	Baby FACES development beliefs ^a
Caregiver-child relationships beliefs		0.23**	0.56***	0.09	0.25**	0.50***	0.13	0.64***
Building self-regulation beliefs	0.40***		0.23**	0.53***	0.69***	0.69***	0.61***	0.75***
Build language and cognitive development beliefs	0.56***	0.15~		0.10	0.21**	0.36***	0.15~	0.54***
Beliefs about providing challenge	-0.06	0.35***	-0.07		0.56***	0.40***	0.55***	0.44***
Ready to learn beliefs	0.43***	0.56***	0.31***	0.29***		0.58***	0.71***	0.81***
Supporting peer interactions beliefs	0.71***	0.57***	0.40***	0.21**	0.45***		0.43***	0.67***
Knowledge of Infant Development (KIDI)	0.35***	0.51***	0.20*	0.31***	0.50***	0.42***		0.59***
Baby FACES development beliefs	0.70***	0.69***	0.59***	0.08	0.74***	0.60***	0.54***	
Fall 2018 Q-CCIIT scales								
Q-CCIIT Support for social-emotional development	0.02	0.11	-0.02	0.07	0.09	0.20*	0.11	0.07
Q-CCIIT Support for cognitive development	-0.06	0.01	0.03	0.08	0.08	0.10	0.04	0.03
Q-CCIIT Support for language and literacy development	0.10	0.12	0.08	0.12	0.15~	0.28***	0.11	0.13
Areas of concern for physical health and safety	0.08	0.03	0.02	-0.03	-0.08	0.01	0.00	-0.02
Areas of concern for psychological health	0.06	-0.01	0.05	0.08	-0.02	0.09	0.02	-0.02
Areas of concern for cognitive development	-0.05	-0.07	0.08	-0.02	-0.04	-0.03	-0.07	-0.04
Spring 2019 Q-CCIIT scales								
Q-CCIIT Support for social-emotional development	0.13	0.10	0.13	0.12	0.07	0.16~	0.08	0.07
Q-CCIIT Support for cognitive development	0.11	0.22*	0.12	0.10	0.15~	0.24**	0.09	0.15~
Q-CCIIT Support for language and literacy development	0.11	0.13	0.19*	0.08	0.09	0.20*	0.11	0.09
Areas of concern for physical health and safety	-0.02	0.09	-0.08	0.06	0.01	0.07	0.05	0.01
Areas of concern for psychological health	-0.20*	-0.01	-0.08	-0.06	-0.06	0.03	-0.03	-0.07
Areas of concern for cognitive development	-0.01	-0.02	-0.03	-0.08	-0.11	-0.05	-0.03	-0.01

Source(s): Fall 2018 WGT: Q-CCIIT PD Caregiver Background Survey; spring 2019 WGT: Q-CCIIT PD Caregiver Feedback Survey; fall 2018 Q-CCIIT classroom observations; spring 2019 Q-CCIIT classroom observations.

Notes: Fall estimates are presented below the diagonal and spring estimates above the diagonal.

* Indicates a significant relationship (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

Fall sample size was 153–161.

Spring sample size was 141–156.

^a Adapted from Baby FACES and created by the Q-CCIIT PD team.

^b MacPhee, D. *Knowledge of Infant Development Inventory (KIDI)* [Measurement Instrument]. Educational Testing Service, 1981.

E.4. Correlations among EHS caregiver scales (theoretical and factor-based)

Table E.II.8. What were the correlations among EHS caregiver belief scales and observations (fall and spring 2019)?

Knowledge and beliefs scales (theoretical)	Knowledge of Infant Development (KIDI) ^a	Beliefs about child development ^b	Social-Emotional beliefs ^b	Cognitive: Thinking and learning beliefs ^b	Language/Literacy beliefs ^b	Baby FACES development beliefs ^b
Knowledge of Infant Development (KIDI)		0.36***	0.15	0.22*	0.27**	0.13
Beliefs about child development	0.43***		0.36***	0.40***	0.42***	0.44***
Social-Emotional beliefs	0.33***	0.63***		0.64***	0.59***	0.84***
Cognitive: Thinking and learning beliefs	0.35***	0.57***	0.52***		0.60***	0.77***
Language/Literacy beliefs	0.30**	0.52***	0.56***	0.63***		0.70***
Baby FACES development practices beliefs	0.31**	0.65***	0.82***	0.76***	0.71***	
Fall 2018 Q-CCIIT scales						
Q-CCIIT Support for social-emotional development	0.20~	0.23*	0.19~	0.11	0.14	0.14
Q-CCIIT Support for cognitive development	0.16	0.18~	0.23*	0.06	0.12	0.12
Q-CCIIT Support for language and literacy development	0.26*	0.22*	0.27**	0.10	0.16	0.18~
Areas of concern for physical health and safety	-0.04	0.06	-0.15	-0.07	-0.10	-0.04
Areas of concern for psychological health	0.07	-0.07	-0.17~	-0.09	-0.09	-0.10
Areas of concern for cognitive development	-0.01	0.01	-0.09	-0.17~	-0.14	-0.15
Spring 2019 Q-CCIIT scales						
Q-CCIIT Support for social-emotional development	0.18~	0.26*	0.17	0.18~	0.22*	0.22*
Q-CCIIT Support for cognitive development	0.08	0.11	0.13	0.10	0.16	0.19~
Q-CCIIT Support for language and literacy development	0.15	0.22*	0.12	0.14	0.27**	0.21*
Areas of concern for physical health and safety	-0.03	-0.18~	-0.23*	-0.35***	-0.20~	-0.29**
Areas of concern for psychological health	-0.18~	-0.28**	-0.20~	-0.21*	-0.13	-0.19~
Areas of concern for cognitive development	-0.16	-0.30**	-0.11	-0.19~	-0.07	-0.13

Source(s): Fall 2018 WGT: Q-CCIIT PD Caregiver Background Survey; spring 2019 WGT: Q-CCIIT PD Caregiver Feedback Survey; fall 2018 Q-CCIIT classroom observations; spring 2019 Q-CCIIT classroom observations.

Note: Fall estimates are presented below the diagonal and spring estimates above the diagonal.

* Indicates a significant relationship (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

Fall sample size was 99–104.

Spring sample size was 93–100.

^a MacPhee, D. *Knowledge of Infant Development Inventory (KIDI)* [Measurement Instrument]. Educational Testing Service, 1981.

^b Adapted from Baby FACES and created by the Q-CCIIT PD team.

Table E.II.9. Correlations among EHS caregiver self-report scales based on factors (fall 2018 and spring 2019)

Knowledge and beliefs scales (factor-based)	Caregiver-child relationships beliefs ^a	Building self-regulation beliefs ^a	Build language and cognitive development beliefs ^a	Beliefs about providing challenge ^a	Ready to learn beliefs ^a	Supporting peer interactions beliefs ^a	Knowledge of Infant Development (KIDI) ^b	Baby FACES development beliefs ^a
Caregiver-child relationships beliefs		0.36***	0.52***	0.30**	0.37***	0.62***	0.16	0.72***
Building self-regulation beliefs	0.35***		0.26**	0.53***	0.57***	0.62***	0.47***	0.72***
Build language and cognitive development beliefs	0.66***	0.38***		0.27**	0.32**	0.49***	0.01	0.54***
Beliefs about providing challenge	-0.03	0.41***	0.05		0.58***	0.41***	0.45***	0.54***
Ready to learn beliefs	0.41***	0.52***	0.33***	0.54***		0.43***	0.38***	0.77***
Supporting peer interactions beliefs	0.59***	0.63***	0.60***	0.24*	0.35***		0.14	0.64***
Knowledge of Infant Development (KIDI)	0.44***	0.48***	0.25*	0.29**	0.50***	0.36***		0.35***
Baby FACES development beliefs	0.67***	0.72***	0.70***	0.34***	0.76***	0.65***	0.48***	
Fall 2018 Q-CCIIT scales								
Q-CCIIT Support for social-emotional development	0.06	0.23*	0.00	0.17~	0.11	0.09	0.08	0.14
Q-CCIIT Support for cognitive development	0.12	0.25*	0.09	0.07	-0.01	0.15	0.10	0.12
Q-CCIIT Support for language and literacy development	0.17~	0.27**	0.09	0.13	0.08	0.20*	0.14	0.18~
Areas of concern for physical health and safety	-0.08	-0.13	-0.04	-0.14	-0.03	-0.20*	0.04	-0.04
Areas of concern for psychological health	-0.10	-0.19~	0.00	-0.08	-0.10	-0.12	-0.05	-0.10
Areas of concern for cognitive development	-0.14	-0.13	-0.10	-0.08	-0.21*	-0.04	-0.07	-0.15
Spring 2019 Q-CCIIT scales								
Q-CCIIT Support for social-emotional development	0.12	0.23*	0.12	0.20*	0.19~	0.12	0.05	0.22*
Q-CCIIT Support for cognitive development	0.11	0.18~	0.09	0.16	0.06	0.12	-0.10	0.19~
Q-CCIIT Support for language and literacy development	0.15	0.15	0.13	0.25*	0.14	0.07	0.01	0.21*
Areas of concern for physical health and safety	-0.08	-0.29**	-0.12	-0.18~	-0.40***	-0.21*	-0.08	-0.29**
Areas of concern for psychological health	-0.06	-0.23*	-0.08	-0.11	-0.24*	-0.16	-0.14	-0.19~
Areas of concern for cognitive development	-0.02	-0.20~	-0.03	-0.10	-0.20*	-0.03	-0.14	-0.13

Source(s): Fall 2018 WGT: Q-CCIIT PD Caregiver Background Survey; spring 2019 WGT: Q-CCIIT PD Caregiver Feedback Survey; fall 2018 Q-CCIIT classroom observations; spring 2019 Q-CCIIT classroom observations.

Note: Fall estimates are presented below the diagonal and spring estimates above the diagonal.

* Indicates a significant relationship (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

Fall sample size was 99–104.

Spring sample size was 93–100.

^a Adapted from Baby FACES and created by the Q-CCIIT PD team.

^b MacPhee, D. *Knowledge of Infant Development Inventory (KIDI)* [Measurement Instrument]. Educational Testing Service, 1981.

E.5. Correlations among center-based caregiver scales (theoretical and factor-based)

Table E.II.10. Correlations among center-based caregiver belief scales and observations (fall 2018 and spring 2019)

Knowledge and beliefs scales (theoretical)	Knowledge of Infant Development (KIDI) ^a	Beliefs about child development ^b	Social-Emotional beliefs ^b	Cognitive: Thinking and learning beliefs ^b	Language/Literacy beliefs ^b	Baby FACES development beliefs ^b
Knowledge of Infant Development (KIDI)		0.44***	0.38***	0.45***	0.41***	0.42***
Beliefs about child development	0.35***		0.44***	0.55***	0.50***	0.54***
Social-Emotional beliefs	0.29***	0.52***		0.65***	0.57***	0.83***
Cognitive: Thinking and learning beliefs	0.41***	0.43***	0.45***		0.62***	0.82***
Language/Literacy beliefs	0.31***	0.45***	0.48***	0.55***		0.70***
Baby FACES development beliefs	0.31***	0.50***	0.78***	0.70***	0.61***	
Fall 2018 Q-CCIIT scales						
Q-CCIIT Support for social-emotional development	0.23**	0.21**	0.14*	0.12~	0.15*	0.13~
Q-CCIIT Support for cognitive development	0.14*	0.13~	0.09	0.09	0.09	0.07
Q-CCIIT Support for language and literacy development	0.24***	0.20**	0.21**	0.13~	0.16*	0.17*
Areas of concern for physical health and safety	-0.09	0.03	0.06	-0.08	-0.04	0.03
Areas of concern for psychological health	-0.10	-0.05	-0.01	-0.06	-0.01	-0.04
Areas of concern for cognitive development	-0.13~	-0.03	-0.01	-0.13~	-0.14~	-0.08
Spring 2019 Q-CCIIT scales						
Q-CCIIT Support for social-emotional development	0.20**	0.21**	0.14~	0.20**	0.20**	0.17*
Q-CCIIT Support for cognitive development	0.10	0.10	0.16*	0.16*	0.15*	0.16*
Q-CCIIT Support for language and literacy development	0.13~	0.17*	0.10	0.16*	0.17*	0.11
Areas of concern for physical health and safety	-0.11	-0.16*	-0.01	-0.17*	-0.07	-0.06
Areas of concern for psychological health	-0.26***	-0.20**	-0.14~	-0.19**	-0.16*	-0.16*
Areas of concern for cognitive development	-0.22**	-0.14~	-0.05	-0.16*	-0.11	-0.08

Source(s): Fall 2018 WGT: Q-CCIIT PD Caregiver Background Survey; spring 2019 WGT: Q-CCIIT PD Caregiver Feedback Survey; fall 2018 Q-CCIIT classroom observations; spring 2019 Q-CCIIT classroom observations.

Note: Fall estimates are presented below the diagonal and spring estimates above the diagonal.

* Indicates a significant relationship (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

Fall sample size was 199–209.

Spring sample size was 182–199.

^a Adapted from Baby FACES and created by the Q-CCIIT PD team.

^b MacPhee, D. *Knowledge of Infant Development Inventory (KIDI)* [Measurement Instrument]. Educational Testing Service, 1981.

Table E.II.11. Correlations among center-based caregiver self-report measures based on factors (fall 2018 and spring 2019)

Knowledge and beliefs scales (factor-based)	Caregiver-child relationships beliefs ^a	Building self-regulation beliefs ^a	Build language and cognitive development beliefs ^a	Beliefs about providing challenge ^a	Ready to learn beliefs ^a	Supporting peer interactions beliefs ^a	Knowledge of Infant Development (KIDI) ^b	Baby FACES development beliefs ^a
Caregiver-child relationships beliefs		0.30***	0.57***	0.15*	0.32***	0.55***	0.12~	0.70***
Building self-regulation beliefs	0.36***		0.20**	0.51***	0.65***	0.67***	0.55***	0.72***
Build language and cognitive development beliefs	0.55***	0.19**		0.13~	0.26***	0.40***	0.06	0.55***
Beliefs about providing challenge	-0.08	0.38***	-0.02		0.56***	0.38***	0.47***	0.46***
Ready to learn beliefs	0.37***	0.53***	0.27***	0.39***		0.52***	0.55***	0.81***
Supporting peer interactions beliefs	0.63***	0.60***	0.43***	0.22**	0.36***		0.30***	0.65***
Knowledge of Infant Development (KIDI)	0.35***	0.50***	0.14*	0.28***	0.47***	0.35***		0.45***
Baby FACES development beliefs	0.67***	0.70***	0.59***	0.18**	0.73***	0.60***	0.50***	
Fall 2018 Q-CCIIT scales								
Q-CCIIT Support for social-emotional development	0.05	0.17*	0.00	0.16*	0.13~	0.20**	0.15*	0.13~
Q-CCIIT Support for cognitive development	0.02	0.09	0.07	0.09	0.05	0.17*	0.06	0.07
Q-CCIIT Support for language and literacy development	0.14*	0.19**	0.08	0.12~	0.13~	0.29***	0.15*	0.17*
Areas of concern for physical health and safety	0.07	0.01	0.06	-0.14*	-0.06	0.02	0.01	0.03
Areas of concern for psychological health	0.02	-0.10	0.06	-0.04	-0.06	0.03	-0.10	-0.04
Areas of concern for cognitive development	-0.02	-0.10	0.02	-0.16*	-0.20**	0.02	-0.11	-0.08
Spring Q-CCIIT scales								
Q-CCIIT Support for social-emotional development	0.17*	0.17*	0.11	0.23**	0.16*	0.15*	0.08	0.17*
Q-CCIIT Support for cognitive development	0.13~	0.18*	0.10	0.16*	0.11	0.18*	-0.02	0.16*
Q-CCIIT Support for language and literacy development	0.14~	0.11	0.14~	0.16*	0.09	0.14~	0.03	0.11
Areas of concern for physical health and safety	-0.06	-0.03	-0.07	-0.10	-0.12	-0.03	-0.03	-0.06
Areas of concern for psychological health	-0.19**	-0.14~	-0.09	-0.16*	-0.20**	-0.08	-0.10	-0.16*
Areas of concern for cognitive development	-0.02	-0.10	-0.02	-0.13~	-0.20**	-0.04	-0.09	-0.08

Source(s): Fall 2018 WGT: Q-CCIIT PD Caregiver Background Survey; spring 2019 WGT: Q-CCIIT PD Caregiver Feedback Survey; fall 2018 Q-CCIIT classroom observations; spring 2019 Q-CCIIT classroom observations.

Note: Fall estimates are presented below the diagonal and spring estimates above the diagonal.

* indicates a significant relationship (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

Fall sample size was 199–209.

Spring sample size was 182–199.

^a Adapted from Baby FACES and created by the Q-CCIIT PD team.

^b MacPhee, D. *Knowledge of Infant Development Inventory (KIDI)* [Measurement Instrument]. Educational Testing Service, 1981.

E.6. Correlations among FCC caregiver scales (theoretical and factor-based)

Table E.II.12. Correlations among FCC caregiver belief scales and observations (fall 2018 and spring 2019)

Knowledge and beliefs scales (theoretical)	Knowledge of Infant Development (KIDI) ^a	Beliefs about child development ^b	Social-Emotional beliefs ^b	Cognitive: Thinking and learning beliefs ^b	Language/Literacy beliefs ^b	Baby FACES development belief ^b
KIDI		0.45***	0.11	0.24~	0.25~	0.13
Beliefs about child development	0.17		0.52***	0.64***	0.61***	0.59***
Social-Emotional beliefs	0.36**	0.55***		0.54***	0.65***	0.81***
Cognitive: Thinking and learning beliefs	0.31*	0.58***	0.74***		0.64***	0.72***
Language/Literacy beliefs	0.28*	0.63***	0.58***	0.61***		0.76***
Baby FACES development beliefs	0.28*	0.64***	0.82***	0.84***	0.67***	
Fall 2018 Q-CCIIT scales						
Q-CCIIT Support for social-emotional development	-0.09	0.01	0.09	-0.04	-0.06	-0.01
Q-CCIIT Support for cognitive development	0.02	0.10	0.16	0.02	0.05	0.08
Q-CCIIT Support for language and literacy development	0.07	0.17	0.12	0.08	0.09	0.04
Areas of concern for physical health and safety	0.02	0.03	-0.26~	-0.09	0.02	-0.17
Areas of concern for psychological health	0.08	0.16	-0.03	0.01	0.07	-0.06
Areas of concern for cognitive development	0.10	-0.02	-0.12	0.12	0.06	-0.08
Spring 2019 Q-CCIIT scales						
Q-CCIIT Support for social-emotional development	0.06	0.13	0.11	0.03	0.08	0.04
Q-CCIIT Support for cognitive development	0.09	0.19	0.27~	0.13	0.11	0.23~
Q-CCIIT Support for language and literacy development	0.21	0.26~	0.21	0.17	0.23	0.25~
Areas of concern for physical health and safety	0.17	0.01	-0.13	-0.18	-0.08	-0.23~
Areas of concern for psychological health	0.09	-0.06	0.02	0.04	0.10	0.02
Areas of concern for cognitive development	-0.16	-0.12	-0.05	-0.06	0.00	0.02

Source(s): Fall 2018 WGT: Q-CCIIT PD Caregiver Background Survey; spring 2019 WGT: Q-CCIIT PD Caregiver Feedback Survey; fall 2018 Q-CCIIT classroom observations; spring 2019 Q-CCIIT classroom observations.

Note: Fall estimates are presented below the diagonal and spring estimates above the diagonal.

* Indicates a significant relationship (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

Fall sample size was 52–57.

Spring sample size was 53–57.

^a MacPhee, D. *Knowledge of Infant Development Inventory (KIDI)* [Measurement Instrument]. Educational Testing Service, 1981.

^b Adapted from Baby FACES and created by the Q-CCIIT PD team.

Table E.II.13. Correlations among FCC caregiver self-report measures based on factors (fall 2018 and spring 2019)

	Caregiver- child relationships beliefs ^a	Building self- regulation beliefs ^a	Build language and cognitive development beliefs ^a	Beliefs about providing challenge ^a	Ready to learn beliefs ^a	Supporting peer interactions beliefs ^a	KIDI ^b	Baby FACES development beliefs ^a
Caregiver-child relationships beliefs		0.21	0.42**	0.21	0.20	0.50***	0.22~	0.53***
Building self-regulation beliefs	0.43***		0.36**	0.62***	0.61***	0.62***	0.59***	0.78***
Build language and cognitive development beliefs	0.69***	0.36**		0.35**	0.26~	0.48***	0.20	0.53***
Beliefs about providing challenge	0.15	0.41**	0.00		0.59***	0.52***	0.62***	0.54***
Ready to learn beliefs	0.63***	0.60***	0.46***	0.42**		0.55***	0.66***	0.79***
Supporting peer interactions beliefs	0.76***	0.58***	0.60***	0.33*	0.58***		0.34*	0.67***
KIDI	0.52***	0.51***	0.39**	0.36**	0.59***	0.54***		0.63***
Baby FACES development beliefs	0.74***	0.71***	0.73***	0.24~	0.82***	0.66***	0.57***	
Fall 2018 Q-CCIIT scales								
Q-CCIIT Support for social-emotional development	-0.04	0.13	-0.11	-0.07	0.00	-0.04	-0.03	-0.01
Q-CCIIT Support for cognitive development	-0.03	0.20	0.04	-0.04	0.01	0.02	0.05	0.08
Q-CCIIT Support for language and literacy development	0.03	0.15	-0.03	0.11	0.11	0.09	0.05	0.04
Areas of concern for physical health and safety	-0.12	-0.14	-0.15	0.11	-0.07	-0.28*	0.03	-0.17
Areas of concern for psychological health	-0.01	0.00	-0.04	0.15	-0.01	0.01	0.19	-0.06
Areas of concern for cognitive development	-0.22	-0.05	0.02	0.21	0.08	-0.11	0.02	-0.08
Spring 2019 Q-CCIIT scales								
Q-CCIIT Support for social-emotional development	-0.07	0.09	0.23~	-0.06	0.02	0.12	-0.02	0.04
Q-CCIIT Support for cognitive development	0.02	0.28*	0.21	-0.01	0.12	0.26~	0.04	0.23~
Q-CCIIT Support for language and literacy development	0.05	0.24~	0.29*	0.06	0.20	0.22	0.19	0.25~
Areas of concern for physical health and safety	0.00	-0.13	-0.16	0.07	-0.27~	-0.07	0.02	-0.23~
Areas of concern for psychological health	0.04	0.04	-0.09	0.17	0.05	0.12	0.05	0.02
Areas of concern for cognitive development	0.01	-0.08	-0.08	0.02	-0.02	-0.02	-0.05	0.02

Source(s): Fall 2018 WGT: Q-CCIIT PD Caregiver Background Survey; spring 2019 WGT: Q-CCIIT PD Caregiver Feedback Survey; fall 2018 Q-CCIIT classroom observations; spring 2019 Q-CCIIT classroom observations.

Note: Fall estimates are presented below the diagonal and spring estimates above the diagonal.

* Indicates a significant relationship (*p < 0.05; **p < 0.01; ***p < .001; ~p < 0.10).

Fall sample size was 52–57.

Spring sample size was 53–57.

^a Adapted from Baby FACES and created by the Q-CCIIT PD team.

^b MacPhee, D. *Knowledge of Infant Development Inventory (KIDI)* [Measurement Instrument]. Educational Testing Service, 1981.

E.7. Correlations between readiness characteristics and satisfaction with WGT

Table E.II.14. Caregivers who reported more comfort with technology in the fall reported greater usefulness of WGT activities and greater satisfaction with technological components of WGT than those who reported less comfort

Correlation of caregiver comfort with technology with...	All caregivers		Center-based caregivers		FCC caregivers	
	Bivariate correlation	Sample size	Bivariate correlation	Sample size	Bivariate correlation	Sample size
Value of WGT overall	0.11	239	0.14	186	0.02	53
Helpfulness of WGT practices for children	0.16*	240	0.15*	186	0.21	54
Usefulness of the WGT activities	0.15*	238	0.16*	186	0.12	52
Usefulness of the WGT tools	0.12	239	0.16*	187	-0.03	52
Usefulness of the WGT additional tools	0.12	238	0.15*	185	-0.002	53
Satisfaction with WGT website	0.18**	240	0.21**	186	0.07	54
Ease of using iPad to record practice	0.23***	219	0.24**	170	0.12	49

Source: Spring 2019 WGT Caregiver Background Surveys and 2019 WGT Caregiver Feedback Surveys.

* Indicates a significant relationship ($p \leq 0.05$; ** $p < 0.01$; *** $p < 0.001$).

Table E.II.15. Caregivers who reported higher teacher self-efficacy in the fall were more satisfied with WGT than those who reported low self-efficacy

Correlation of fall caregiver self-efficacy as a teacher with...	All caregivers		Center-based caregivers		FCC caregivers	
	Bivariate correlation	Sample size	Bivariate correlation	Sample size	Bivariate correlation	Sample size
Value of WGT overall	0.30***	242	0.36***	189	0.11	53
Helpfulness of WGT practices for children	0.28***	244	0.28***	190	0.29*	54
Usefulness of the WGT activities	0.26***	241	0.29***	189	0.12	53
Usefulness of the WGT tools	0.08*	243	0.10	191	-0.06	53
Usefulness of the WGT additional tools	0.14*	242	0.13	189	0.17	53
Satisfaction with WGT website	0.17**	243	0.17*	189	0.17	54

Source: Spring 2019 WGT Caregiver Background Surveys and 2019 WGT Caregiver Feedback Surveys.

* Indicates a significant relationship ($p \leq 0.05$; ** $p < 0.01$; *** $p < 0.001$).

Table E.II.16. Caregivers who reported higher readiness for change in the fall were more satisfied with WGT than those who reported less readiness

Correlation of caregiver readiness for change with...	All caregivers		Center-based caregivers		FCC caregivers	
	Bivariate correlation	Sample size	Bivariate correlation	Sample size	Bivariate correlation	Sample size
Value of WGT overall	0.09	233	0.13	179	0.03	54
Helpfulness of WGT practices for children	0.05	234	0.10	180	-0.11	54
Usefulness of the WGT activities	0.22***	231	0.25***	179	0.03	54
Usefulness of the WGT tools	0.12	233	0.16*	181	-0.14	52
Usefulness of the WGT additional tools	0.17**	232	0.19*	179	0.06	53
Satisfaction with WGT website	0.01	241	0.08	179	-0.11	54

Source: Spring 2019 WGT Caregiver Background Surveys and 2019 WGT Caregiver Feedback Surveys.

* Indicates a significant relationship ($p \leq 0.05$; ** $p < 0.01$; *** $p < 0.001$).

E.8. Selecting an indicator of dosage and use of WGT

When planning a field test that would occur remotely, we anticipated difficulty in reliably measuring dosage. In the field test, we collected data in multiple ways regarding use of the website, meetings with PD providers, and practice of the caregiving strategies in the classroom. Most indicators required a response from the caregiver and/or PD provider. In addition, we collected metadata from the website analytics. Each of these indicators posed challenges for us. The monthly pop-up surveys had a high incidence of missingness. Caregivers and PD providers had many demands on their time. In addition, some caregivers did not access the website independently, or at all. Some PD providers reported making copies of the materials for their partner caregivers. Web analytics also had some limitations. Below we note the potential measures of dosage and the associated problems with using them as indicators.

- Brief pop-up surveys: Retrospective survey questions about frequency of behaviors frequently are inaccurate when respondents are asked to recall across a long period of time (Rowan et al. 2004). Therefore, we limited questions about dosage to the prior seven days and repeated the questions once a month. At three times during implementation of the WGT program, we asked caregivers and PD providers about how they were using the WGT materials outside of the time they spent on the website. These brief surveys also asked how they were working together (for example, how frequently caregivers had attended meetings with the PD provider in the last month, and what their methods of communication had been).
 - Spring feedback surveys: Although skeptical about the validity of questions across the entire field period, we did ask caregivers about the number of months they spent working on WGT. Although the feedback survey had a high response rate (90 percent for PD providers and 93 percent for caregivers), many responses on this question confirmed the previous research about inaccuracies in this type of reporting. The response to the number of months spent on WGT went well beyond the time available. The majority of the caregiver responses to this question (80.1 percent) were greater than the four months of the field period.
 - Web analytics: From November 2018 until April 2019, we collected web user tracking data from the WGT website on both caregivers and PD providers, noting log-in frequency, tools accessed, and length of time spent on the WGT website. The web analytics variables also included the number of WGT web pages and the number of PDFs opened by the caregiver and PD providers. Because many PD providers reported printing and making copies of forms to use with their caregivers, this analytic was an imperfect measure of dosage. Although we do not have direct data to support this assumption, PD providers for multiple caregivers likely spent more time on the website, whereas caregivers receiving printed materials likely spent little time on it. In addition, modules differed in the number of web pages and PDF documents available on the website. For example, the “types of talk” practice within the understanding language module has more pages than any other practice. Caregivers working in “types of talk” would likely open more pages than those working in other practices.

- PD training webinar attendance: We invited all PD providers who completed their background surveys and were participating at the end of November to the PD provider training, which took place between November and December 2019. During the training, we hosted three live webinars over four weeks to introduce WGT, discuss study logistics, demonstrate website navigation, and answer PD providers' questions. Out of 168 PD providers, 76 percent attended at least one webinar, 24 percent did not attend any, and 31 percent attended all three. Because we were able to track attendance and participation in these webinars, attendance was considered as a PD provider dosage indicator.
- Implementation webinar attendance: Some PD providers were relatively new to providing professional development, whereas others mainly had used workshops and presentations rather than any type of coaching or mentoring. Before the start of the field test, the development team questioned whether we would need to offer additional opportunities to communicate with PD providers. Guided by questions from them, we decided to supplement online training with monthly one-hour live webinars. Our initial webinar provided more detail about starting the PD process and action planning. For the latter two webinars, we asked PD providers to submit questions for the trainers in advance. We saved webinars to the WGT website for all PD providers to view or review. However, we had information about attendance only if the PD provider attended the live session.

We examined distributions and missingness patterns of these variables and estimated bivariate correlations among the dosage indicators and between these indicators and the overall spring scores on Q-CCIIT to select variables that suggested important association but would avoid multicollinearity.

Because a high incidence of missingness on the monthly pop-up surveys was likely biased, we did not select it as the indicator. Respondents could close the pop-up survey to access desired information on the website if their time was limited, so if they ignored the survey and did not return to the website that month, we did not have a report of their activities. In addition, some caregivers received materials printed out by the PD provider and so did not go to the website very often. FCCs were significantly more likely to report the minutes spent than the center-based programs (and also had higher web usage). Those in the lowest quartile of web usage were significantly less likely than other groups to report the minutes spent on WGT. Of those in the lowest quartile, only 32.8 percent of caregivers reported the time spent on WGT, whereas every other quartile of web usage had more than 80 percent reporting the time spent on WGT ($p < .001$). For each of the middle quartiles, 81.8 percent of caregivers reported the amount of time spent on WGT, and 85.1 percent in the highest quartile.

We examined bivariate correlations of potential dosage variables with the spring Q-CCIIT Support for Language and Literacy Development outcome (Table E.III.1).

Web analytics examined

- Web usage time: large tails in distribution, even though we knew that some time was not captured
- Web usage level: using the high, middle, and low ends of distribution
- Number of PDFs opened, quartiles: large tail in distribution; some PDFs may have been downloaded for future use; may have been printed by a partner
- Number of pages opened, quartiles: does not capture time the person was on a page

Pop-up survey

- Time reported using WGT in the classroom—high missingness
- Time reported using WGT outside of the classroom— high missingness

Table E.III.1. Bivariate correlations of potential dosage variables with observed quality of support for language and literacy in the spring

	Spring language and literacy	Time in classroom	Time outside of classroom	PDF quartile	Page quartile	Web use level	Web use total min.
Q-CCIIIT spring score	1.00	0.06	0.09	0.17**	0.20**	0.16*	0.08
Time in classroom			0.41***	0.19**	0.22**	0.24**	0.24***
Time out of classroom				0.12	0.17*	0.14	0.19**
Total PDF, quartile					0.82***	0.62***	0.55***
Total pages opened, quartile						0.70***	0.64***
Web use level							0.77***

In addition, we created count variables and examined correlations among the count of WGT tools and the practices the caregiver indicated trying in each domain. The count of WGT tools used is correlated with the count of peer/cognitive practices ($r = 0.76^{***}$), social-emotional practices ($r = 0.40^{**}$), and language and literacy practices ($r = 0.19^{*}$). The count of peer/cognitive practices also is correlated with web use ($r = 0.47^{**}$).

The high correlations among time use variables (all greater than $r = 0.7$) suggest a need for selectivity to avoid multicollinearity in the models. Because web use data were available for almost all caregivers and all PD providers, it is not surprising that the metadata on web use provide the strongest correlation with observation scores in the spring. Of the metadata on web use, the bivariate correlations for the caregiver quartile for the number of web pages opened had the strongest correlation with spring observed quality. Therefore, the quartile of pages opened was selected as the best candidate for a dosage indicator.

To decrease the amount of noise (imprecision in measurement), we used the quartiles rather than the raw estimates of web usage for the caregivers. Given that the middle and high quartiles of pages opened by the PD provider would depend in part on the number of caregivers, we

collapsed them further into a binary indicator for use of the website beyond the lowest quartile. That is, dosage for the PD provider was measured as middle or high quartile of WGT pages opened and compared in analytic models with PD providers in the lowest quartile of pages opened. As noted above, the range for the web analytic variable likely included a great deal of variance not related to dosage of their work on WGT, particularly if caregivers or PD providers printed a large amount of materials for future use or left the website window open frequently.

We also considered the caregiver report of their relationship with the PD provider to be important for our conceptual model of professional development, so we also included the caregivers' reports of how much the PD provider contributed to their effectiveness in the models.

In addition to dosage for PD providers, we included the number of training webinars and implementation webinars attended. The two webinar variables had moderate correlation with one another ($r = 0.54$, $p < 0.01$) and with the dosage variable ($r = 0.45$ to 0.49 , $p < 0.01$). However, we trimmed the latter two webinar variables from the models when they did not add to the explanation of the variance.

E.9. Q-CCIIT observation measure

This section discusses how and why we scored the Q-CCIIT observation rating for examining change.

As with most measures in psychology and education, the raw score ratings on the Q-CCIIT share the problem of being ordinal measures. Using a mean raw score assumes that the difference of increasing a single rating point demonstrates the same improvement in quality no matter what dimension is being rated. In addition, most commonly used analyses (for example, factor analysis, correlations, linear regression) assume normally distributed interval or ratio outcome variables. The use of a mean raw score also assumes that errors are normally distributed among caregiver observations with constant variance and have an expected value of zero. The item difficulties and discrimination are omitted from the measurement model and supported by their impact on various group statistics (variances and reliabilities) and their relationship to other measures (Embretson et al. 1999). Item statistics are influenced greatly by the sample distributions—thus the need for large representative samples and national norms when using classical test theory.

More recent theories of measurement use latent trait or item response models (IRT) to improve measurement. IRT estimates the probability of a rating on an item based on the ability or trait level of a particular person and the characteristics of a particular item. The difficulty of the items and the ability of the person (in this case, the measure of the caregiver's quality of interactions) are estimated on the same scale. When ability level is the same as the difficulty level of an item, a caregiver has a 50 percent chance of receiving that rating. On items above their ability level, caregivers would have a decreased likelihood; on items below their ability level, they would have an increased likelihood of receiving that rating.

This study used a Rasch model to estimate interval-level scores on the Q-CCIIT, which considered the difficulty of the item being rated. In Rasch models, sometimes called one parameter logistic models, the discrimination parameter is averaged across the items. This approach yields stable estimates of the item parameters with much smaller sample sizes than needed for other IRT measurement models. In Rasch models, the log odds of the probability of a correct response is a function of the difference between the person's ability or level of the trait (quality caregiver-child interaction) and the ease (or difficulty) of demonstrating the behaviors in the item.

Rasch models allow researchers to determine what is measurable on a linear scale, which data are useful in describing the latent trait and which are not, how the respondents used the categories in the measure, and whether different groups of respondents used the categories of the measures in different ways (Smith 2004; Woodcock 1999). The major advantages of the Rasch model are the item and sample invariance properties, and the interval measurement scale (Hashway 1998).

Measure developers typically transform the IRT estimates so the results are interpretable for users. All IRT models produce results in logits and are usually estimated with a mean item

difficulty of 0, leading to negative scores as well as positive. As noted in the report, the most common transformation of a Rasch score is the W-score, developed by Woodcock and Dahl (1971). Instead of using 0 for the mean difficulty of the items, W-scores use 500 as the mean and each logit as 9.1024. This transformation results in all positive scores and aids in interpretation of the person's score relative to a particular item—or in this case, the caregiver's score relative to a quality interaction practice such as supporting object exploration. For example, if the caregiver's score is 10 W-score points higher than the difficulty of receiving a rating of 5 on an item, the caregiver has a 75 percent probability of achieving a rating of 5 on that item. Alternatively, if a caregiver's score is 10 W-score points lower than the difficulty of receiving a rating of 5 on an item, the caregiver has only a 25 percent probability of achieving a rating of 5 on that item. Because the relationship between the probabilities and differences is not linear, Woodcock has provided tables for how to interpret these differences (for example, Woodcock 1999, p. 112).

When all dimensions are estimated in an overall model, the W-scores indicate that the dimensions on which it is most difficult to achieve a high rating are in support for the cognitive development domain. Conversely, the dimensions on which it is easiest for caregivers to achieve a high rating are in support for the literacy development domain (Table E.IV).

Table E.IV.1. W-score for each of the caregiver-child interaction quality rating categories

Q-CCIT dimension	1	2	3	4	5	6
Support for social-emotional development						
Responding contingently to distress	466	477	491	503	514	525
Responding to social cues	461	472	485	497	508	519
Responding to emotional cues	462	473	487	499	510	521
Builds a positive relationship	458	469	483	495	506	517
Supervises or joins in play and activities	462	474	487	499	510	521
Responsive routines	467	479	492	504	515	526
Classroom limits and management	472	483	496	508	519	530
Sense of belonging	468	479	492	505	515	527
Support for cognitive development						
Supporting peer interaction/play	488	499	512	524	535	546
Support for social problem solving	475	499	499	511	522	533
Supporting object exploration	473	484	497	509	520	531
Scaffolding problem solving	485	496	509	522	532	544
Giving choices	474	486	499	511	522	533
Extending pretend play	483	495	508	520	531	542
Explicit teaching	478	490	503	515	526	537
Concept development	470	481	494	506	517	528
Support for language and literacy development						
Caregiver use of varied vocabulary	471	482	495	508	518	530
Conversational turn-taking	470	481	494	507	517	529
Use of questions	477	488	501	513	524	535
Extending children's language use	474	485	498	510	521	532
Features of talk	460	471	484	497	507	519
Talk about things not present	477	488	501	514	524	536
Positive attitude toward books	464	475	488	501	511	523
Engaging children in books	460	471	484	496	507	518
Variety of words in literacy experience	465	476	489	501	512	523
Variety of types of sentences	469	480	493	505	516	527

Appendix F

WGT multivariate models

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This appendix includes the estimates for all variables in the full information maximum likelihood (FIML) models and hierarchical linear models (HLM) in the sensitivity analyses.

Outcomes in the analyses included the quality of caregiver-child interaction as measured by the spring total Quality of Caregiver-Child Interactions with Infants and Toddlers (Q-CCIIT) classroom quality score, each of the individual spring Q-CCIIT domain scores, and two teacher self-reported scales: teacher self-efficacy and teacher beliefs about supporting development (items from the Baby FACES Beliefs about Development scale).

We z-scored all outcomes—for example, the spring Q-CCIIT W-scores. Therefore, the coefficients reported represent the change in the outcome in standard deviation units for each one-point increase in the respective variable. In the case of nominal variables, such as “the setting is a toddler classroom,” the coefficients represent a difference in the outcome in standard deviation units relative to the reference group.

Covariates examining classroom quality outcomes included in the models were as follows:

- Teacher characteristics: fall score on the outcome of interest, number of weeks between fall and spring observations, education and experience in providing early care and education, and reported psychological distress in the fall (Kessler-6 score)
- Classroom characteristics: class/group size, caregiver:child ratio and whether the center-based classrooms served infants or toddlers
- Setting type: family child care (FCC), Early Head Start (EHS) center, community-based center

The We Grow Together (WGT) variables included in the models were as follows:

- Caregiver WGT dosage indicator: the quartile for the number of WGT pages the caregiver opened
- Caregiver’s self-reported relationship with the professional development (PD) provider: perception of how much the resources and feedback provided by the PD provider contributed to the caregivers’ professional effectiveness (self-efficacy)
- PD provider was also the caregiver’s supervisor⁶
- PD provider’s dosage indicators: the PD providers in the middle or high quartiles of WGT pages opened, the number of training webinars attended, and the number of implementation webinars attended

Our intent in using PD providers in the middle or high quartiles of pages opened was to reduce variance that was not meaningful in indicating the PD provider dosage of WGT. Although most PD providers had only one or two caregivers, the number a PD provider supported could affect the number of pages opened. Some PD providers opened and printed handouts and other pages

⁶ Our initial models included PD provider education, but because it was not significant, we trimmed it from the models.

for some of the caregivers, and all PD providers needed to print action planning forms for each caregiver. PD providers might be opening multiple pages for a single caregiver, one page for each caregiver, or printing information for their own use. We collapsed the distribution to indicate that a PD provider was above the lowest quartile in opening pages on WGT.

Implementation webinars were expected to have a low (or negative) association with the outcomes. Most of those PD providers attending the implementation webinars seemed to have less internal support for coaching. All other WGT indicators were expected to be positively associated with the outcomes.

F.I. Full Information Maximum Likelihood models (FIML)

Table F.I.1. Associations with spring total score on Quality of Caregiver-Child Interactions with Infants and Toddlers (Q-CCIIT)

Quality of Caregiver-Child Interactions with Infants and Toddlers: Q-CCIIT total score		Estimate (SE)
Caregiver characteristics		
Fall Q-CCIIT score		0.38 (0.06)***
Weeks between WGT start and spring observation		-0.11 (0.07)*
Education (referent is high school diploma)		
Some college, no degree		-0.01 (0.06)
Associate's degree		0.00 (0.08)
Bachelor's degree		0.10 (0.08)
Master's degree or higher		0.04 (0.07)
Experience in ECE (early care and education) (years, z-score)		0.13 (0.06)*
Kessler-6		-0.08 (0.04)*
Classroom characteristics		
Toddler (referent is infant)		0.06 (0.07)
Class/group size		-0.11 (0.07)
Caregiver:child ratio		0.09 (0.07)
Setting type (referent is community-based center)		
FCC		-0.04 (0.08)
EHS centers		0.13 (0.08)*
We Grow Together indicators		
Caregiver pages opened, quartile		0.12 (0.06)*
Caregiver report of contribution to professional effectiveness		0.07 (0.07)
PD provider is supervisor		-0.04 (0.06)

Notes: Outcomes are z-scored so coefficients can be interpreted as effect sizes. Additional covariates were not significant in any of these models: other caregiver education indicators (some college, AA, MA+), PD provider is supervisor, or PD provider dosage (PD providers in the middle or high quartiles of WGT pages opened).

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ (one-way test of significance).

Table F.I.2. Associations with quality of support for social-emotional development

Quality of support for social-emotional development	Estimate (SE)
Caregiver characteristics	
Fall social-emotional domain score	0.37*** (0.06)
Weeks between WGT start and spring observation	-0.14* (0.06)
Education (referent is high school diploma)	
Some college, no degree	-0.03 (0.06)
Associate's degree	0.03 (0.09)
Bachelor's degree	0.16* (0.08)
Master's degree or higher	0.04 (0.06)
Experience in ECE (years, z-score)	0.09* (0.06)
Kessler-6	-0.02 (0.05)
Classroom characteristics	
Toddler (referent is infant)	-0.02 (0.07)
Class/group size	-0.13* (0.07)
Caregiver:child ratio	0.13* (0.07)
Setting type (referent is community-based center)	
FCC	-0.07 (0.08)
EHS centers	0.17* (0.08)
We Grow Together indicators	
Caregiver pages opened quartile	0.06 (0.06)
Caregiver report of contribution to professional effectiveness	0.08 (0.07)
PD provider is supervisor	-0.04 (0.06)
PD provider pages ^a	0.03 (0.06)

Notes: Outcomes are z-scored so coefficients can be interpreted as effect sizes. Additional covariates were not significant in any of these models: other caregiver education indicators (some college, AA, MA+), PD provider is supervisor, or PD provider dosage (PD providers in the middle or high quartiles of WGT pages opened).

^a For the cognitive domain, the change in R² for the model with WGT covariates is significant ($p \leq 0.05$) for the model with WGT covariates compared to the model that has only caregiver and classroom characteristics.

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ (one-way significance levels)

Table F.I.3. Associations with quality of support for cognitive development

Quality of support for cognitive development	Estimate (SE)
Caregiver characteristics	
Fall cognitive domain score	0.34*** (0.06)
Weeks between WGT start and spring observation	-0.05 (0.07)
Education (referent is high school diploma)	
Some college, no degree	0.00 (0.07)
Associate's degree	0.00 (0.08)
Bachelor's degree	0.07 (0.08)
Master's degree or higher	0.01 (0.06)
Experience in ECE (years, z-score)	0.14** (0.06)
Kessler-6	-0.09* (0.04)
Classroom characteristics	
Toddler (referent is infant)	0.12 (0.07)
Class/group size	-0.19** (0.07)
Caregiver:child ratio	0.11* (0.07)
Setting type (referent is community-based center)	
FCC	-0.05 (0.08)
EHS centers	0.12 (0.08)
We Grow Together indicators	
Caregiver pages opened quartile	0.11* (0.06)
Caregiver report of contribution to professional effectiveness	0.10* (0.06)
PD provider is supervisor	-0.04 (0.06)
PD provider pages	0.02 (0.06)

Notes: Outcomes are z-scored so coefficients can be interpreted as effect sizes. Additional covariates were not significant in any of these models: other caregiver education indicators (some college, AA, MA+), PD provider is supervisor, or PD provider dosage (PD providers in the middle or high quartiles of WGT pages opened).

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ (one-way test of significance).

Table F.I.4. Associations with quality of support for language and literacy development

Quality of support for language and literacy development	Estimate (SE)
Caregiver characteristics	
Fall language/literacy domain score	0.34*** (0.05)
Weeks between WGT start and spring observation	-0.12* (0.06)
Education (referent is high school diploma)	
Some college, no degree	-0.01 (0.06)
Associate's degree	0.00 (0.08)
Bachelor's degree	0.08 (0.07)
Master's degree or higher	0.04 (0.07)
Experience in ECE (years, z-score)	0.13* (0.07)
Kessler-6	-0.09* (0.05)
Classroom characteristics	
Toddler (referent is infant)	0.07 (0.07)
Class/group size	-0.03 (0.07)
Caregiver:child ratio	0.04 (0.08)
Setting type (referent is community-based center)	
FCC	-0.01 (0.08)
EHS centers	0.09 (0.08)
We Grow Together indicators	
Caregiver pages opened quartile	0.16** (0.06)
Caregiver report of contribution to professional effectiveness	0.002 (0.07)
PD provider is supervisor	-0.03 (0.07)
PD provider pages	0.00 (0.06)

Notes: Outcomes are z-scored so coefficients can be interpreted as effect sizes. Additional covariates were not significant in any of these models: other caregiver education indicators (some college, AA, MA+), PD provider is supervisor, or PD provider dosage (PD providers in the middle or high quartiles of WGT pages opened).

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ (one-way test of significance).

F.II. Sensitivity test: Hierarchical linear models (HLM) with multiply imputed data sets of observed quality

As with the teacher-reported outcomes, we ran sensitivity tests for the FIML findings about the quality of teacher-child interactions.

We tested our findings using multiple imputations on the model-specific variables and re-estimated the hierarchical linear models using *miAnalyze* with the 20 imputed data sets.

We estimated three models for each outcome. The first one was the unconditional model. The second model included covariates for caregiver and PD provider characteristics, such as education, experience, and fall scores on the outcomes of interest. The third model added variables that account for different aspects of the WGT experience, such as the dosage indicators⁷ for the caregiver and PD provider and reported helpfulness of the PD provider in increasing their effectiveness.

The coefficients in the final models and the differences between the variance explained in Models 2 and 3 (the change in the R^2) provided estimates of the effect of WGT on the outcomes of interest.

Specifying the same model covariates as the FIML, we estimated each of the models in HLM with 20 multiply imputed chained equations (MICE) data sets using *miAnalyze* (Exhibit IV.22). For these models, we also created separate variables for the number of weeks between the fall observation and the start of WGT, and the number of weeks from the start of WGT to the spring observation. This approach confirmed our hypothesis that the negative coefficient for weeks between observations is related to how early in the fall an observation took place. The pre-WGT variable was negative across all domains and significant for all but the cognitive domain. The post-WGT variable was not significant, but the coefficient was positive for all but the language and literacy domain (-0.01).

Similar to the FIML, most effect size estimates were less than 0.20, but the estimates for the setting-level covariates were greater and effects of some other covariates were not significant (Exhibit IV.22). In addition to the fall scores for the outcomes, being a toddler classroom and the EHS setting had effect sizes greater than 0.25. Also, the caregiver's report on the Kessler-6 and having a bachelor's degree were not significant in any of the HLMs, and the caregiver:child ratio was significant only for the Support for Social-Emotional Development domain. The sum of the FIML model effect sizes for the bachelor's degree and EHS (0.33) in the Support for Social-Emotional Development domain was similar to the stronger effect size for EHS in HLM models (0.36). Similarly, in the Support for Cognitive Development domain, the effect size for being a toddler classroom was 0.27, similar to the sum of toddler and caregiver:child ratio effect sizes (0.23) in the FIML model.

⁷ See additional information about dosage indicators in Appendix C.

Table F.II.1. Summary of significant model predictors of spring quality of caregiver-child interactions in HLM using 20 data sets MICE

	Quality of caregiver-child interaction total	Support for social emotional development	Support for cognitive development	Support for language and literacy development
Dosage (caregiver pages opened)	0.11*			0.14*
PD-supported teacher efficacy (z-score)				
Covariates				
Fall score (z-score)	0.36*	0.35*	0.32*	0.33*
Number of weeks between observation and WGT start	-0.04*	-0.05*		
bachelor's degree		0.41*		
Experience in ECE (z-score)	0.12*		0.13*	0.12*
Kessler-6				
Class/group size			-0.07*	
Caregiver:child ratio (z-score)				
Toddler classroom			0.33*	
EHS center	0.28*	0.27*		
Variance explained	0.312	0.29	0.29 ^a	0.27

Notes: Outcomes are z-scored so coefficients can be interpreted as effect sizes. Additional covariates were not significant in any of these models: other caregiver education indicators (some college, AA, MA+), PD provider is supervisor, or PD provider dosage (PD providers in the middle or high quartiles of WGT pages opened).

^a For the cognitive domain, the change in R² for the model with WGT covariates is significant ($p < 0.05$) for the model with WGT covariates compared to the model that has only caregiver and classroom characteristics.

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ (one-way test of significance).

The full set estimates for each of these models are displayed below in Tables F.II.2–F.II.5.

Table F.II.2. Spring We Grow Together associations with overall caregiver-child interaction quality

Outcome: Q-CCIIT total score	Unconditional	Model 1 Basic	Model 2 with WGT
Intercept	0.000* (0.06)	0.154 (0.98)	-0.381 (1.03)
Caregiver characteristics			
Fall Q-CCIIT score		0.369* (0.06)	0.363* (0.06)
Weeks between fall observations and WGT start		-0.040* (0.02)	-0.043* (0.02)
Weeks between WGT start and spring observation		0.015 (0.05)	0.017 (0.05)
Education (referent is high school diploma)			
Some college, no degree		-0.021 (0.17)	-0.018 (0.17)
Associate's degree		0.020 (0.18)	-0.003 (0.18)
Bachelor's degree		0.318* (0.18)	0.268 (0.19)
Master's degree or higher		0.189 (0.27)	0.193 (0.27)
Experience in ECE (years, z-score)		0.116* (0.06)	0.120* (0.06)
Kessler-6		-0.167 (0.11)	-0.128 (0.11)
Classroom characteristics			
Toddler (referent is infant)		0.171 (0.17)	0.188 (0.17)
Class/group size		-0.039 (0.03)	-0.040 (0.03)
Caregiver:child ratio		0.070 (0.08)	0.072 (0.08)
Setting type (referent is community-based center)			
FCC		-0.095 (0.18)	-0.152 (0.19)
EHS centers		0.187 (0.15)	0.223 (0.16)
We Grow Together indicators			
Caregiver pages opened quartile			0.106* (0.06)
Caregiver report of contribution to professional effectiveness			0.084 (0.09)
PD provider is supervisor			-0.079 (0.14)
PD provider pages opened ^a			0.004 (0.15)
Variance explained		0.291	0.317

Notes: Outcomes are z-scored so coefficients can be interpreted as effect sizes. Additional covariates were not significant in any of these models: other caregiver education indicators (some college, AA, MA+), PD provider is supervisor, or PD provider dosage (PD providers in the middle or high quartiles of WGT pages opened).

^a PD providers who opened more than the lowest quartile of pages on WGT website.

*p ≤ 0.05; **p ≤ 0.01; ***p ≤ 0.001 (one-way test of significance).

Table F.II.3. Spring We Grow Together associations with caregiver support for social-emotional development

Outcome: spring Q-CCIIT social-emotional development domain score	Unconditional	Model 1 Basic	Model 2 with WGT
Intercept	0.000* (0.06)	-0.061 (0.98)	-0.473 (1.04)
Caregiver characteristics			
Fall Q-CCIIT score		0.352* (0.06)	0.346* (0.06)
Weeks between fall observations and WGT start		-0.051* (0.02)	-0.054* (0.02)
Weeks between WGT start and spring observation		0.035 (0.05)	0.034 (0.05)
Education (referent is high school diploma)			
Some college, no degree		-0.077 (0.17)	-0.063 (0.17)
Associate's degree		0.079 (0.18)	0.072 (0.19)
Bachelor's degree		0.421* (0.18)	0.407* (0.19)
Master's degree or higher		0.234 (0.27)	0.237 (0.27)
Experience in ECE (years, z-score)		0.080 (0.06)	0.087 (0.07)
Kessler-6		-0.072 (0.10)	-0.045 (0.10)
Classroom characteristics			
Toddler (referent is infant)		0.048 (0.17)	0.048 (0.17)
Class/group size		-0.045 (0.03)	-0.046 (0.03)
Caregiver:child ratio (z-score)		0.096 (0.08)	0.098 (0.08)
Setting type (referent is community-based center)			
FCC		-0.210 (0.18)	-0.259 (0.19)
EHS centers		0.230 (0.15)	0.267* (0.15)
We Grow Together indicators			
Caregiver pages opened quartile			0.056 (0.06)
Caregiver report of contribution to professional effectiveness			0.102 (0.09)
PD provider is supervisor			-0.074 (0.14)
PD provider pages opened ^a			0.005 (0.15)
Variance explained		0.281	0.299

Notes: Outcomes are z-scored so coefficients can be interpreted as effect sizes. Additional covariates were not significant in any of these models: other caregiver education indicators (some college, AA, MA+), PD provider is supervisor, or PD provider dosage (PD providers in the middle or high quartiles of WGT pages opened).

*p < 0.05 (one-way test of significance).

^a PD providers who opened more than the lowest quartile of pages on WGT website.

Table F.II.4. Spring We Grow Together associations with caregiver support for cognitive development

Outcome: Spring Q-CCIIT cognitive domain score	Unconditional	Model 1 Basic	Model 2 with WGT
Intercept	0.000* (0.06)	-0.164 (0.99)	-0.774 (1.03)
Caregiver characteristics			
Fall Q-CCIIT cognitive domain score		0.325* (0.06)	0.322* (0.06)
Weeks between fall observations and WGT start		-0.015 (0.02)	-0.019 (0.02)
Weeks between WGT start and spring observation		0.026 (0.05)	0.025 (0.05)
Education (referent high school diploma)			
Some college, no degree		-0.022 (0.16)	-0.004 (0.17)
Associate's degree		-0.005 (0.18)	-0.020 (0.18)
Bachelor's degree		0.193 (0.19)	0.166 (0.19)
Master's degree or higher		0.062 (0.27)	0.064 (0.27)
Experience in ECE (years, z-score)		0.125* (0.07)	0.133* (0.07)
Kessler-6		-0.190* (0.11)	-0.151 (0.11)
Classroom characteristics			
Toddler (referent is infant)		0.326* (0.17)	0.331* (0.17)
Class/group size		-0.066* (0.03)	-0.067* (0.03)
Caregiver:child ratio (z-score)		0.085 (0.08)	0.087 (0.08)
Setting type (referent is community-based center)			
FCC		-0.094 (0.18)	-0.153 (0.19)
EHS center		0.170 (0.15)	0.219 (0.16)
We Grow Together indicators			
Caregiver pages opened, quartile			0.088 (0.06)
Caregiver report of PD provider contribution to professional effectiveness			0.134 (0.09)
PD provider is supervisor			-0.074 (0.14)
PD provider pages opened ^a			-0.005 (0.15)
Variance explained		0.254	0.289*

Notes: Outcomes are z-scored so coefficients can be interpreted as effect sizes. Additional covariates were not significant in any of these models: other caregiver education indicators (some college, AA, MA+), PD provider is supervisor, or PD provider dosage (PD providers in the middle or high quartiles of WGT pages opened).

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ (one-way test of significance).

^a PD providers who opened more than the lowest quartile of pages on WGT website.

Table F.II.5. Spring We Grow Together associations with caregiver support for language and literacy development

Outcome: Spring Q-CCIIT language and literacy domain score	Unconditional	Model 1 Basic	Model 2 with WGT
Intercept	0.000* (0.06)	0.557 (1.00)	0.063 (1.05)
Caregiver characteristics			
Fall Q-CCIIT language and literacy domain		0.330* (0.06)	0.326* (0.06)
Number of weeks between fall observations and January 9, 2019		-0.043* (0.02)	-0.044* (0.02)
Number of weeks between January 9, 2019 and spring observations		-0.013 (0.05)	-0.008 (0.05)
Education (referent is high school diploma)			
Some college, no degree		0.012 (0.17)	-0.005 (0.17)
Associate's degree		0.022 (0.19)	-0.017 (0.19)
Bachelor's degree		0.301 (0.19)	0.217 (0.20)
Master's degree or higher		0.219 (0.28)	0.223 (0.28)
Experience in ECE (years, z-score)		0.125* (0.07)	0.123* (0.07)
Kessler-6		-0.187* (0.11)	-0.146 (0.11)
Classroom characteristics			
Toddler (referent is infant)		0.143 (0.17)	0.173 (0.18)
Class/group size		-0.010 (0.03)	-0.011 (0.03)
Caregiver:child ratio (z-score)		0.032 (0.08)	0.033 (0.08)
Setting type (community-based center)			
FCC		0.002 (0.19)	-0.048 (0.19)
EHS center		0.126 (0.16)	0.149 (0.16)
We Grow Together indicators			
Caregiver pages opened quartile			0.137* (0.06)
Caregiver report of how much of the resources and feedback provided by PD provider contributed to professional effectiveness			0.022 (0.09)
PD provider is supervisor			-0.064 (0.15)
PD provider pages opened ^a			0.015 (0.15)
Variance explained		0.247	0.273

Notes: Outcomes are z-scored so coefficients can be interpreted as effect sizes. Additional covariates were not significant in any of these models: other caregiver education indicators (some college, AA, MA+), PD provider is supervisor, or PD provider dosage (PD providers in the middle or high quartiles of WGT pages opened).

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ (one-way test of significance).

^a PD providers who opened more than the lowest quartile of pages on WGT website.

F.III. Sensitivity test: HLM with multiply imputed data sets of teacher-reported beliefs about knowledge and development and self-efficacy

As a sensitivity test for the FIML findings, we estimated each of the models in HLM specifying the same covariates with 20 MICE data sets. Overall, the analysis yielded similar results to the FIML. Estimates of effect sizes for the dosage indicators were weaker than the FIML. In addition to the FIML findings, the effect size for FCC settings was significant in the HLM for the beliefs about development and practice scale.

Table F.III.1. Summary of significant model predictors of teacher-reported outcomes with 20 multiply imputed data sets

	Beliefs about development and practice (Baby FACES)	Teacher efficacy
PD provider training attended		0.05*
PD implementation webinars		-0.06*
PD provider contributed to professional effectiveness		0.09*
Covariates		
Fall score (z-score)	0.63*	0.40*
Baby FACES beliefs scale (z-score)		0.15*
Experience in ECE (z-score)		
Kessler-6 (z-score)		-0.08*
Class/group size	0.03*	0.02*
Caregiver:child ratio (z-score)		
Toddler classroom		
FCC	0.12*	
EHS center	0.10*	0.14*
Variance explained	0.43	0.39 ^a

* $p \leq 0.05$ (one-way test of significance).

^a R² for the model with WGT covariates increases significantly from the model with only caregiver and classroom characteristics.

Appendix G

WGT web examples

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Image 1. Professional Development Provider main modules page

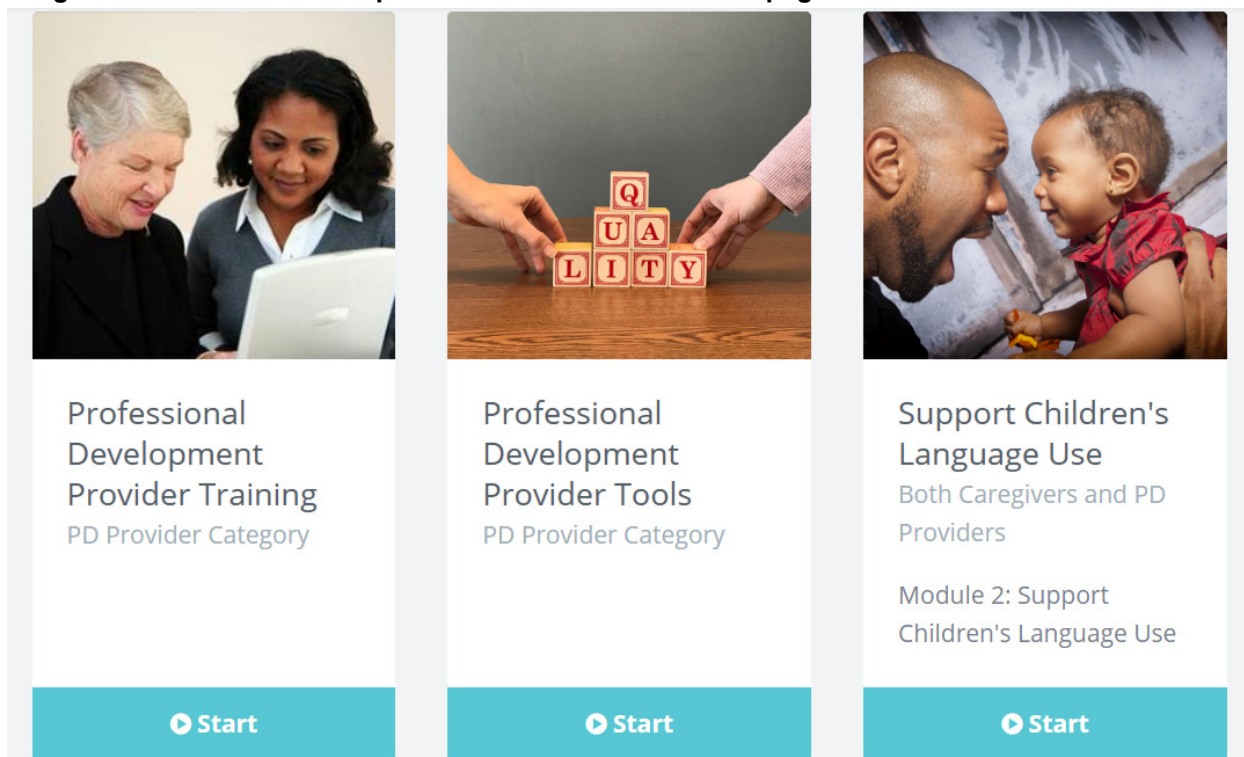


Image 2. Caregivers main module page

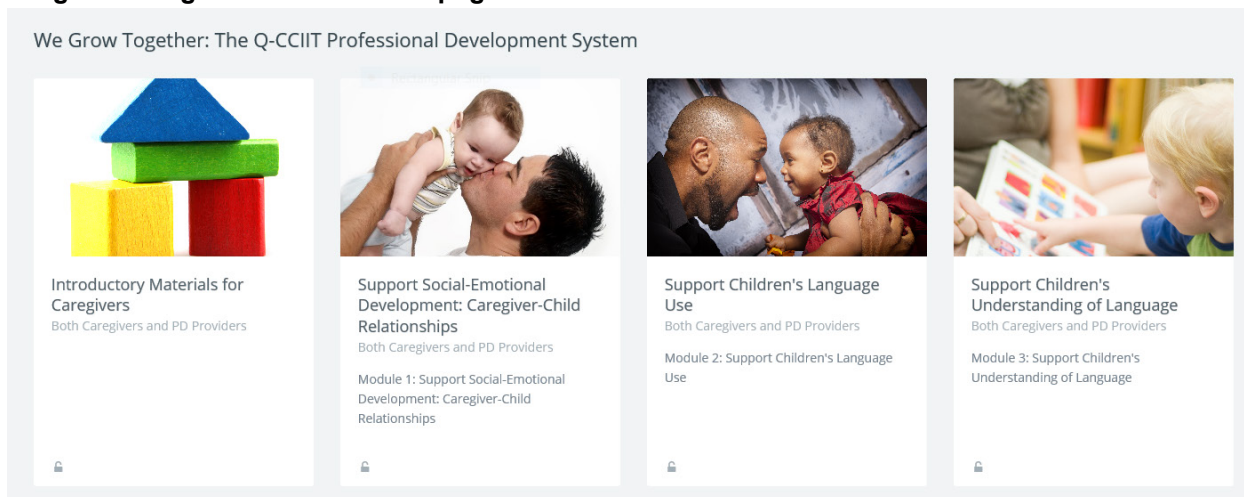
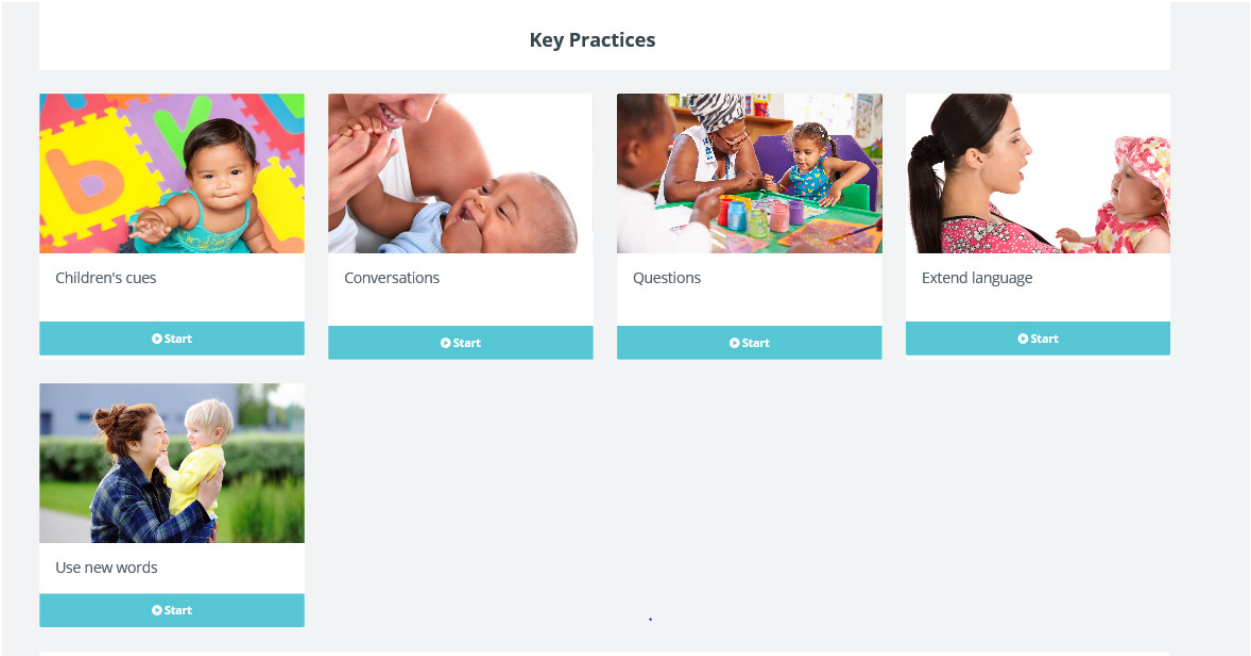


Image 3. Key practices



Appendix X. Example key practice page



Image 4. Example key practices from professional development provider perspective

Watch the presentation below:
(Presentation time: 10 minutes and 20 seconds)

Support children's language use

Key practice:
Responding to children's cues

**NOTICE
 RESPOND
 GUIDE**

0:00 / 10:20

Presentation Activity
 Hidden from students

Recommended Tools:

Summary Handout
(5 - 10 minutes)

Step-by-Step Guide
(15 - 20 minutes)

Self-Reflection Activity: Infant
(30 - 40 minutes)

Self-Reflection Activity: Infant (PD Provider Version)
 Hidden from students

Self-Reflection Activity: Toddler
(30 - 40 minutes)

Self-reflection Activity: Toddler (PD Provider Version)
 Hidden from students

Handout for families
(5 minutes)

Image 5. Additional key practice resources for professional development providers








Click below for additional tools:	
Additional Tools	
Additional Tools (PD Provider)	
Hidden from students	
	Video of Caregivers (Video #3) Available but not shown on course page
	Video of Caregivers (Video #3) PD Provider Version Available but not shown on course page
	Video of Caregivers (Video #10) Available but not shown on course page
	Video of Caregivers (Video #10) PD Provider Version Available but not shown on course page
	Additional Tools Available but not shown on course page
	Additional Tools (PD Provider Version) Available but not shown on course page


Image 6. Example handout

SUPPORT CHILDREN'S LANGUAGE USE

HANDOUT FOR FAMILIES

Responding to Children's Cues





LET'S EXPLORE RESPONDING TO CHILDREN'S CUES

What does it mean to respond to children's cues?

Your child's cues are a kind of communication. This communication may or may not be verbal. A cue could be a sound, motion, or word. You should look for and respond to your child's cues.

Why is responding to children's cues important?

Responding to cues helps meet your child's need, includes your child as a conversational partner, and builds the relationship with your child.

When and how can I respond to children's cues?

It is important to try to pay attention to cues, which can happen at any time. You can take these steps to respond to your child's cues:

- Pay attention to your child's interest, emotional states, or activities. Comment on what your child is looking at or doing.
- When you respond to a cue, make sure you have your child's attention:
- Get on the same level.
- Say their name or say "look."
- Smile and point to what you will talk about.
- Shake a toy or gain attention in another way.
- After you say something to your child, wait and watch for a response before continuing the conversation.

TRY IT AT HOME

Image 7. Key ring of concepts

SUPPORT CHILDREN'S UNDERSTANDING OF LANGUAGE

CLASSROOM SUPPORT: KEY RINGS

Using Lots of Specific and New Words



Key ring reminders are easy to create and can be hung on a hook near the area where the reminders will be most useful or attached to a belt loop with a carabineer.

To make the key rings: The key ring can use index cards with a hole in the corner or pieces of cardboard cut to desired sizes. You might color code the prompts [using colored index cards or cardboard]. You might also laminate the cards for extra durability.

Make your own lists of words or questions that you would like to introduce. You might select specific and descriptive words from lists available on the internet, like these lists [here](https://www.pinterest.com/explore/descriptive-words/): <https://www.pinterest.com/explore/descriptive-words/>. For example, you can use these lists to replace some "tired words" like good, went, look, run. You can also use a thesaurus to find new words for tired words.

Sample index cards are provided below. They include reminders of strategies and lists of words that you might want to introduce interacting with a child.

To use the key rings: Read through your selected reminders at the start of the day or any time **before** joining an interaction. These reminder cards should not distract you from having interactions. They should remind you of types of talk that you might include in the interaction. Select a few (1-3) things to try using during each activity/interaction.

● Words about farm animals

Cow

Calf (babies)

Herd

Milk

Hoof

Udder

Pig

Piglets (babies)

Herd

Squeal

Litter

Snout

Curly tail

● Words about farm animals

Horse

Foal (babies)

Hooves

Walking

Trotting

Galloping

Colt (male under 4)

Stallion (male over 4)

Filly (female under 4)

Mare (female over 4)

Sheep

Lamb (babies)

Hoof (hooves)

Fleece

Horns

Wool

Flocks

Hardy

Ram (male); Ewe (female)

Bleat

Image 8. Posters of descriptive vocabulary/concepts (Responding to Emotional Cues Poster)



Image 9. Other classroom supports (Responding to Emotional Cues classroom support tool)

SUPPORT SOCIAL-EMOTIONAL DEVELOPMENT:
 CAREGIVER-CHILD RELATIONSHIPS

CLASSROOM SUPPORT: CAREGIVER ACTIVITIES

Responding to Emotional Cues

1. Brainstorm infant and toddler cues

Instructions: Fill in the table below with emotional cues that infants or toddlers might use to express the messages in the first column. Think about cues that are different for infants and toddlers. You might do this activity with the other caregivers in your care setting or on your own and discuss with your PD Provider.

Message	Cues an infant or toddler may use		
	Movement	Eye contact	Sounds or words
A. I am overwhelmed; I need a change.			
B. I am enjoying what's currently happening.			
C. I want to move.			
D. I am hungry.			
E. I am tired.			

Image 10. Caregiver-specific resources (“Good Job” alternatives additional materials for caregivers)











 TALK WITH ME BABY Conversation Starters				
 TALKING AT HOME	 Our Home	 Getting Dressed	 Changing Diapers	 Reading
	Talking Tips			
	<p>Your baby just arrived in your home, and could use a tour! Take your baby from room to room and point out important items in the room. Explaining what these items do and what they are for will lead to more conversation and teaching.</p>	<p>Explain what you are doing while you are getting your baby dressed. Tell your baby what is going on at each step, and use this situation to introduce body parts as well as clothing names.</p>	<p>Similar to getting dressed, this every day situation is a perfect time to reassure your baby by explaining each of your steps.</p>	<p>Even though your baby can't read yet, introducing books and stories is an important part of their early literacy. You don't have to feel like you need to read every word on each page. Let your baby lead the discussion and watch what catches their interest. Talk about what they are looking at or pointing toward.</p>
You Could Say Things Like:	<p>"This is the kitchen. We cook our meals in the kitchen using the stove, the oven, and these pots and pans."</p> <p>"We're standing in the living room. This is our couch, where we sit to relax. Here is a table that is holding a lamp. Lamps light up the room."</p>	<p>"Now it's time to get dressed for our day! Let's start with your pants. One leg goes in one side of the pants. There we go! And now the other leg. Thank you for your help!"</p> <p>"It's cold today so we're going to put a hat on your head to keep you warm. Feel how soft the hat is? This hat will keep you nice and toasty today!"</p>	<p>"Let's get you all cleaned up. I have to wipe your bottom before we put a new diaper on. The wipe is a little cold, are you ready?"</p> <p>"There we go, now you have a clean, dry diaper on. Do you feel better? Let's continue our day!"</p>	<p>"Which book would you like to read? Can you point to the book you'd like to read? Help me turn the page. Good job turning the pages!"</p> <p>"Do you see the green frog on this page? He lives in that pond! Where do you live? ... You live here, in our home. The pond is the green frog's home."</p>
	 Cooking	 Meal Time	 Washing Up	 Play Time
	Talking Tips			
	<p>Whether you are cooking for your baby, yourself, or the rest of the family, cooking in the kitchen is a daily activity that is full of talking points. Make the most of this time by discussing foods, preparation, and ways your baby can contribute to the situation.</p>	<p>No matter how you are feeding your baby, it's a great time to talk, because baby is especially focused on you.</p>	<p>Babies need to be cleaned up many times a day and having a cold washcloth wiped across their face with no prior warning could be startling. Use this time to tell baby what you are doing before you do it and encourage them to participate in washing up.</p>	<p>Your baby is constantly learning and play time is a wonderful time to talk about colors, shapes, actions and feelings. Pay attention to what your baby is engaging with and let them lead your talking.</p>
You Could Say Things Like:	<p>"We're making pasta for dinner! Pasta comes in many different shapes. This is spaghetti. It's long and straight. First, we have to boil the water."</p> <p>"Your sister is setting the table for dinner. She is being so helpful getting us ready for dinner. You can help too! Would you like to carry your napkin over to the table and give it to your big sister?"</p>	<p>"Are you feeling hungry? Let's get you into your chair so you can eat. I'm going to pick you up and put you into your chair. Ready? 1, 2, 3...UP WE GO!"</p> <p>"That was a big bite! Chew it all up before you swallow it. Would you like another bite? No? All done? Okay, we're all done with eating our meal."</p>	<p>"Oh, your hands are all sticky. I'm going to wipe your hands with this cloth. Can you help me by putting your hands out, please? Thank you for your help! All clean now, thank you."</p> <p>"You're looking uncomfortable. I'm going to wipe your neck with this cool cloth and get you feeling cooler. Ok? Here we go. That's better, right?"</p>	<p>"Oh! I see you have your toy bunny there. What are you and bunny doing? Bunny has long ears. Where are bunny's ears? Can you show me YOUR ears? You and bunny both have ears but they look different, don't they?"</p> <p>"These are blocks. We have red blocks, blue blocks and green blocks. 1, 2, 3, groups of blocks. Let's stack the block on top of each other to make a pyramid."</p>

Image 11. Caregiver self-assessment checklist (Understanding Language)

SUPPORT CHILDREN'S UNDERSTANDING OF LANGUAGE

CAREGIVER SELF-ASSESSMENT CHECKLIST

Using Lots of Specific and New Words



Bath children in language

Consider the following types of words and how you use them with children.

You can use this checklist in many ways. First, you can use it to select practices to work on with your PD provider. Talk with your PD provider to identify a few of the checklist practices to work on at a time. Try to increase your use of these practices. Then, you can re-use this tool each week to see how you are changing.

Think about whether you've used any of these practices this week and mark whether you: did not do it, sometimes did it (a few times this week), often did it (daily or more), or usually did it (multiple times throughout each day)?

	Did not	Sometimes	Often	Usually
BATHE CHILDREN IN LANGUAGE				
1. I used specific words when talking with children (for example, I labeled, talked about specific actions, and used nouns instead of pronouns).				
2. I used descriptive words when talking with the children.				
3. I introduced new or unusual words to children (for example, "That pig has a large snout" or "the bubble disappeared").				
4. I introduced challenging words to children (words children would not hear in everyday conversation).				
5. I narrated children's activities with specific words (described what a child was doing).				
6. I sang songs to or with children that introduced specific and challenging words.				

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Appendix H

WGT weekly web usage data

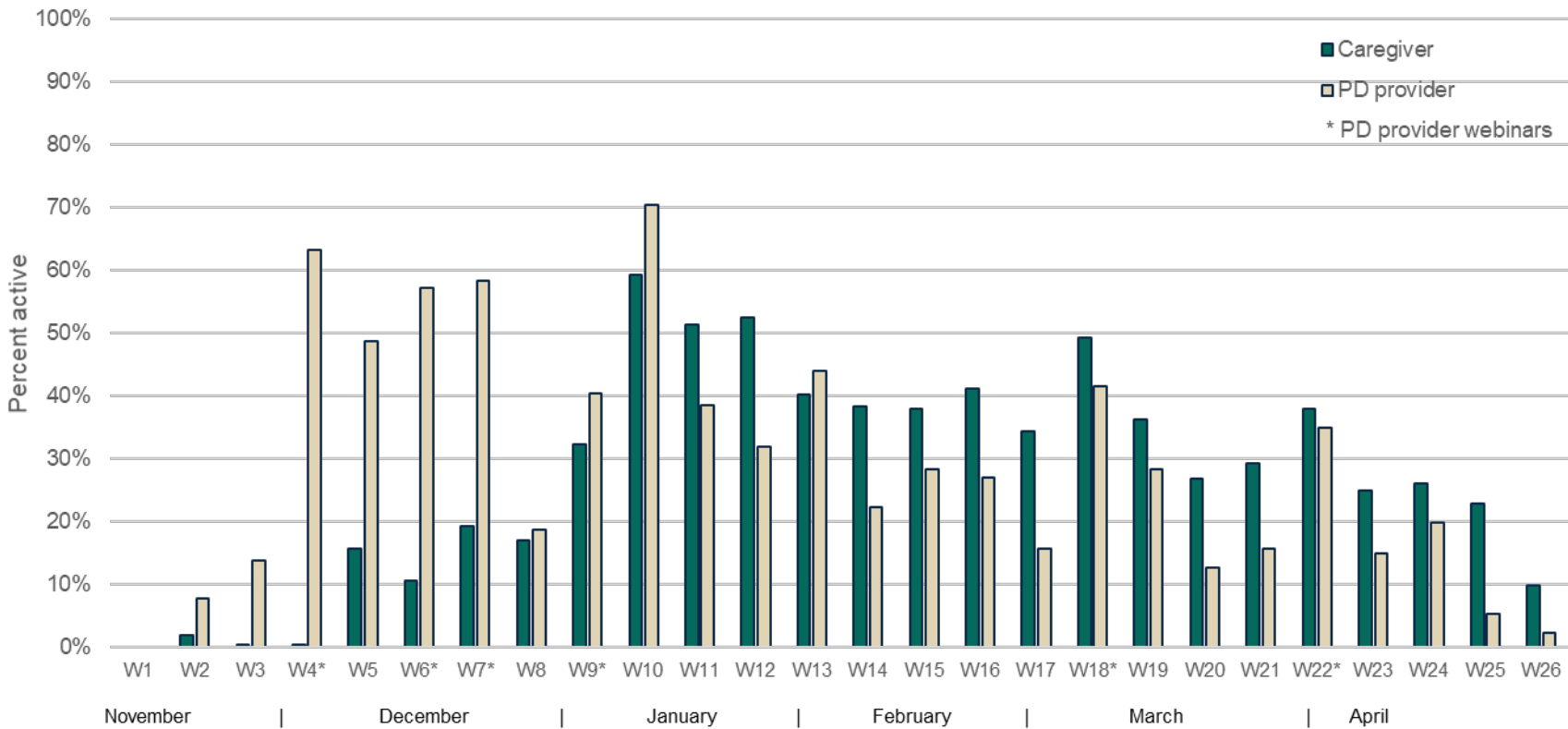
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From November 2018 until April 2019, we collected web usage tracking data from the WGT website on both caregivers and PD providers, noting login frequency, tools accessed, and length of time spent on the WGT website. The data tracked the time that the primary webpage was open (a proxy for use of the website). The data do not capture time spent on linked PDFs, which include most content for key practice tools and resources. Table H.1 describes the key terms used in Tables H.2-H.3 and Exhibits H.1-H.4, which provide details on weekly website usage.

Table H.1. Definition of key terms for web usage data

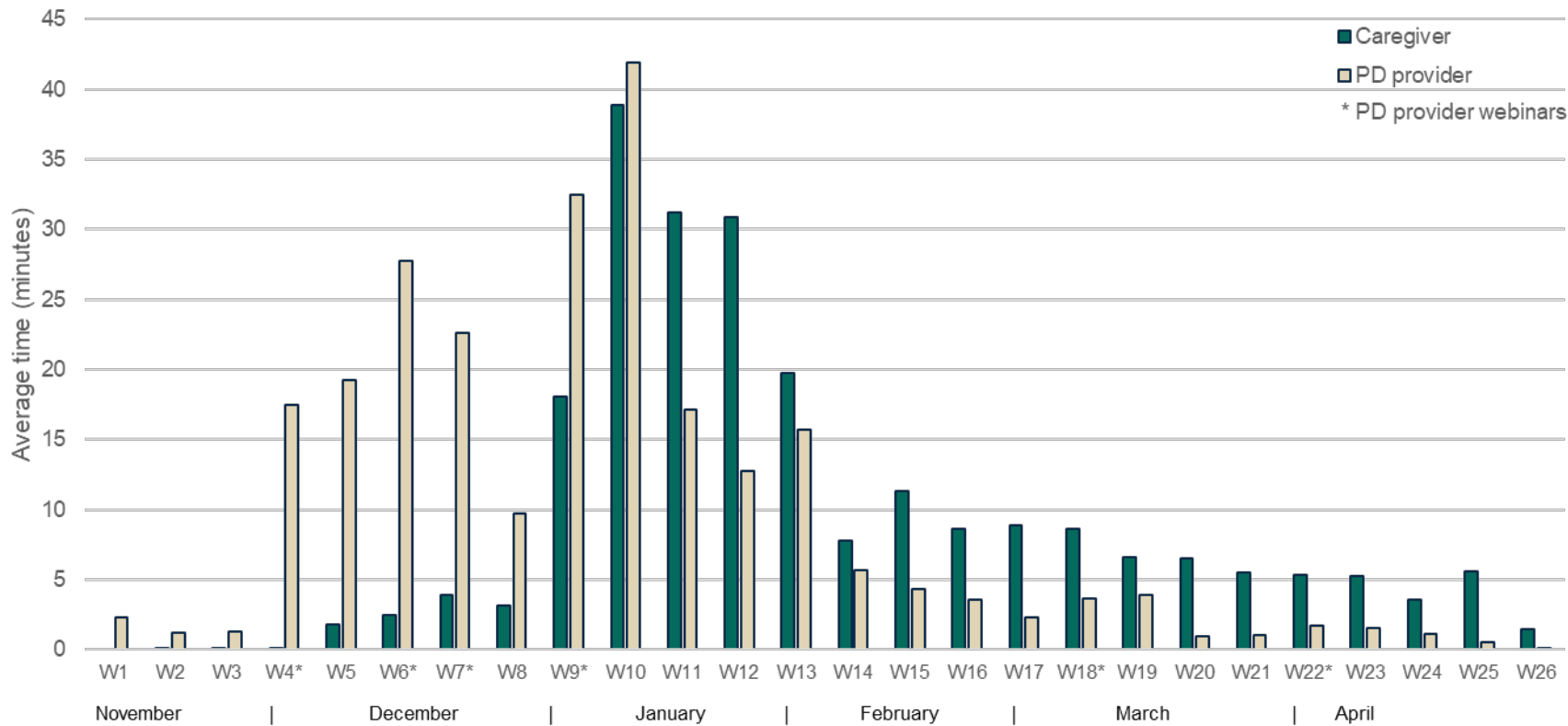
Key Term	Definition
Training and introductory modules	For caregivers, includes introductory materials and learning preferences quiz. For PD providers, includes the PD provider training, PD provider resources and tools, and PD provider discussion board.
Caregivers' recommended modules	Includes all web content contained in the caregiver's three recommended modules as well as the key practices, discussion boards, and links to additional resources within those modules. For PD providers, includes the recommended modules for each of their paired caregivers. Modules were recommended based on areas for growth according to the Q-CCIIT measure conducted during an initial observation.
Additional modules	Includes all web content contained in the remaining modules that were not recommended to a caregiver or a PD provider's caregiver. Caregivers and PD providers could visit additional modules for a more comprehensive learning experience.
Other pages	Includes administrative pages, caregiver profiles, about us, contact us, and module landing pages.

Exhibit H.1. Percentage active on WGT website by week for PD providers and caregivers^a



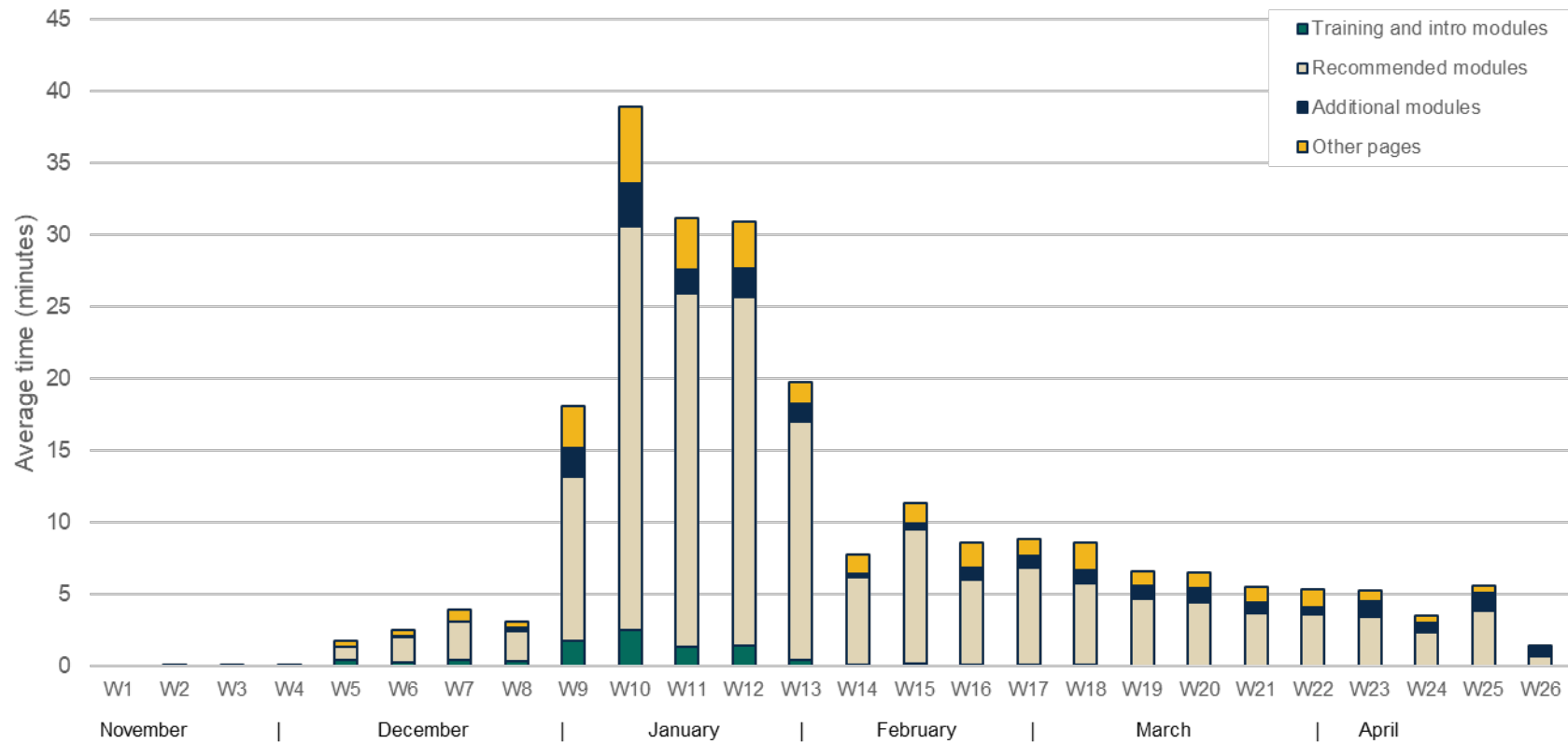
Notes: This exhibit represents web usage between 11/03/18 and 4/30/19 for participants in the final analytic sample.
^a Percentage active represents the percentage of participants who logged into the WGT website each week between 11/3/18 and 4/30/19.

Exhibit H.2. Average time spent on WGT website by week for PD providers and caregivers^a



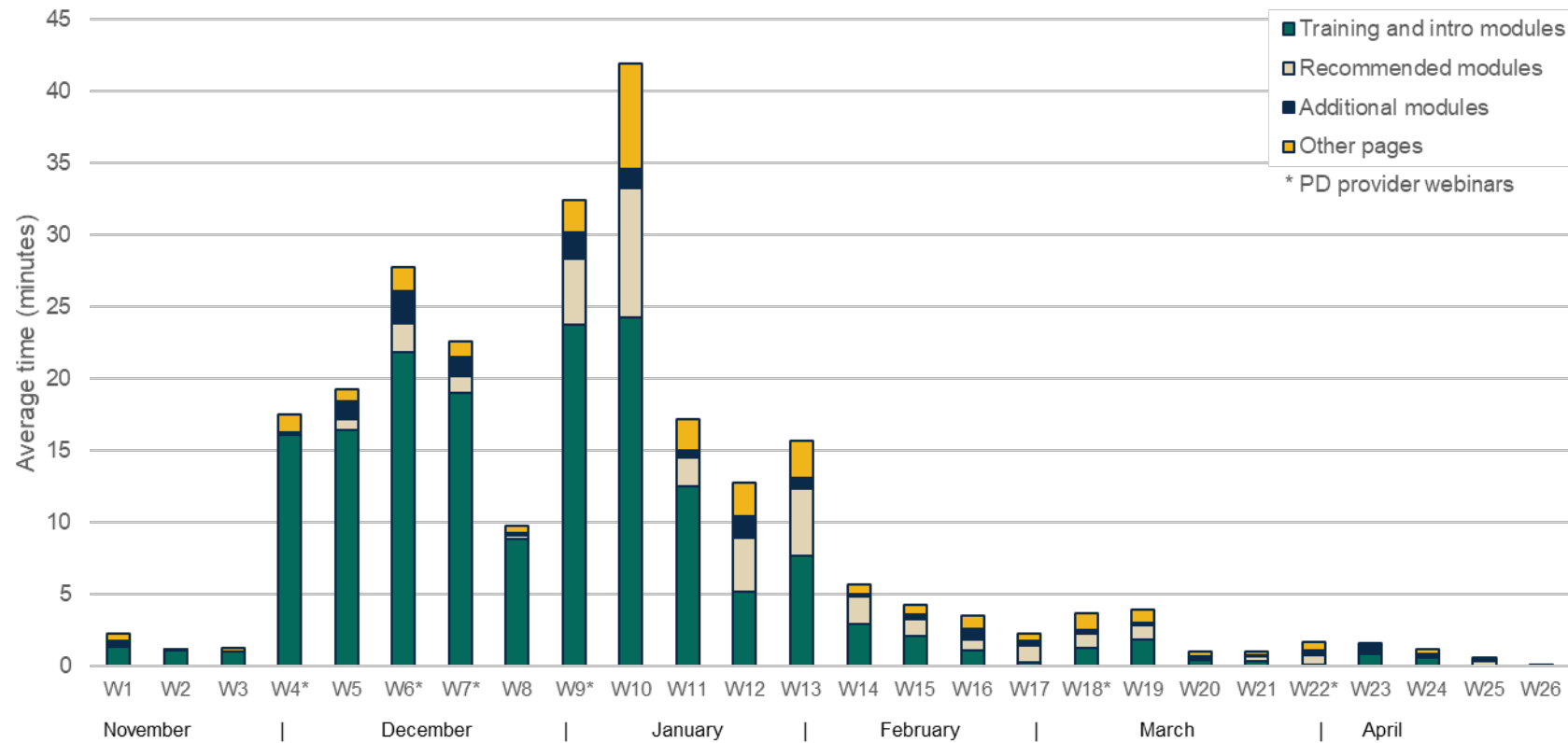
Notes: This exhibit represents web usage between 11/03/18 and 4/30/19 for participants in the final analytic sample.
^a Average time spent by week is an average of individual participants' weekly time spent logged in to the WGT website between 11/3/18 and 4/30/19.

Exhibit H.3. Average time caregivers spent on WGT website by week and page type ^a



Notes: This exhibit represents web usage between 11/03/18 and 4/30/19 for participants in the final analytic sample.
^a Average time spent by week is an average of individual participants' weekly time spent logged in to each type of WGT website pages between 11/3/18 and 4/30/19.

Exhibit H.4. Average time PD providers spent on WGT website by week and page type^a



Notes: This exhibit represents web usage between 11/03/18 and 4/30/19 for participants in the final analytic sample.
^a Average time spent by week is an average of individual participants' weekly time spent logged in to each type of WGT website pages between 11/3/18 and 4/30/19.

Table H.2. Number of participants active on WGT website by weeks and page type ^a

Page type	Study weeks						
	1-4	5-8	9-12	13-16	17-20	21-24	25-26
Caregivers							
Website total	0	62	137	121	110	94	39
Training and intro modules	0	48	117	48	25	12	4
Recommended modules	0	34	128	110	91	74	30
Additional modules	0	5	32	31	27	26	11
Other pages	0	62	137	121	110	93	37
PD providers							
Website total	114	143	148	106	103	89	12
Training and intro modules	108	142	148	92	65	49	5
Caregivers' recommended modules	12	51	83	57	45	27	5
Additional modules	11	49	33	25	19	13	4
Other pages	112	136	138	106	100	84	9

Notes: This table represents web usage between 11/03/18 and 4/30/19 for participants in the final analytic sample.

^a Percentage active represents the percentage of participants who logged into the WGT website each week between 11/3/18 and 4/30/19.

Table H.3. Average weekly time spent (minutes) on WGT website by weeks and page type ^a

Page type	Study weeks						
	1-4	5-8	9-12	13-16	17-20	21-24	25-26
Caregivers							
Website total	0.0	11.7	124.1	54.9	28.1	19.3	6.3
Training and intro modules	0.0	1.3	7.3	0.6	0.2	0.1	0.0
Recommended modules	0.0	7.7	93.9	45.1	19.3	12.4	3.3
Additional modules	0.0	0.6	7.1	2.7	4.2	4.0	2.3
Other pages	0.0	2.1	15.7	6.4	4.4	2.8	0.7
PD providers							
Website total	22.2	79.3	104.2	29.2	10.8	5.4	0.6
Training and intro modules	19.5	66.1	65.7	13.8	3.7	1.9	0.1
Caregivers' recommended modules	0.1	4.2	19.3	8.5	3.4	1.3	0.3
Additional modules	0.5	4.9	5.2	1.9	0.8	0.8	0.1
Other pages	2.1	4.2	14.0	4.9	2.8	1.4	0.1

Notes: This table represents web usage between 11/03/18 and 4/30/19 for participants in the final analytic sample.

^a Average time spent by week is an average of individual participants' weekly time spent logged in to each type of WGT website pages between 11/3/18 and 4/30/19.

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Appendix I

WGT implementation inquiries data

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The We Grow Together (WGT) study team reached out to professional development (PD) providers, caregivers, and setting directors to support PD providers' and caregivers' involvement with WGT. From July 2018 to November 2018, recruiters contacted setting directors and PD providers to explain the study and recruit pairs of PD providers and caregivers to participate in it. Beginning on November 7, 2018 and continuing through December 2018, recruited pairs received an email introducing them to the study and detailing the tools they would be using during the implementation period. PD providers began training on November 28, 2018.

A. Types of contact

This set of tables and exhibits summarizes inquiries from caregivers and PD providers about pre-implementation activities (for example, questions about the background survey and address changes), implementation support for PD providers, PD provider webinar logistics, website questions, logistics related to using the iPads, changes to the sample (for example, drop or pair switches), post-implementation activities, and other reasons for contacting the implementation team (for example, requesting replacement materials). All tables and exhibits represent inquiries to the WGT study team as of May 28, 2019. The categories described below are mutually exclusive, and each inquiry was coded once.

In Table I.1, we define the key terms used in the exhibits. In Exhibit I.1, we describe the overall WGT communication, by month, for caregivers and PD providers. In Table I.2, we describe the monthly communication, by category of inquiries, for caregivers and PD providers.

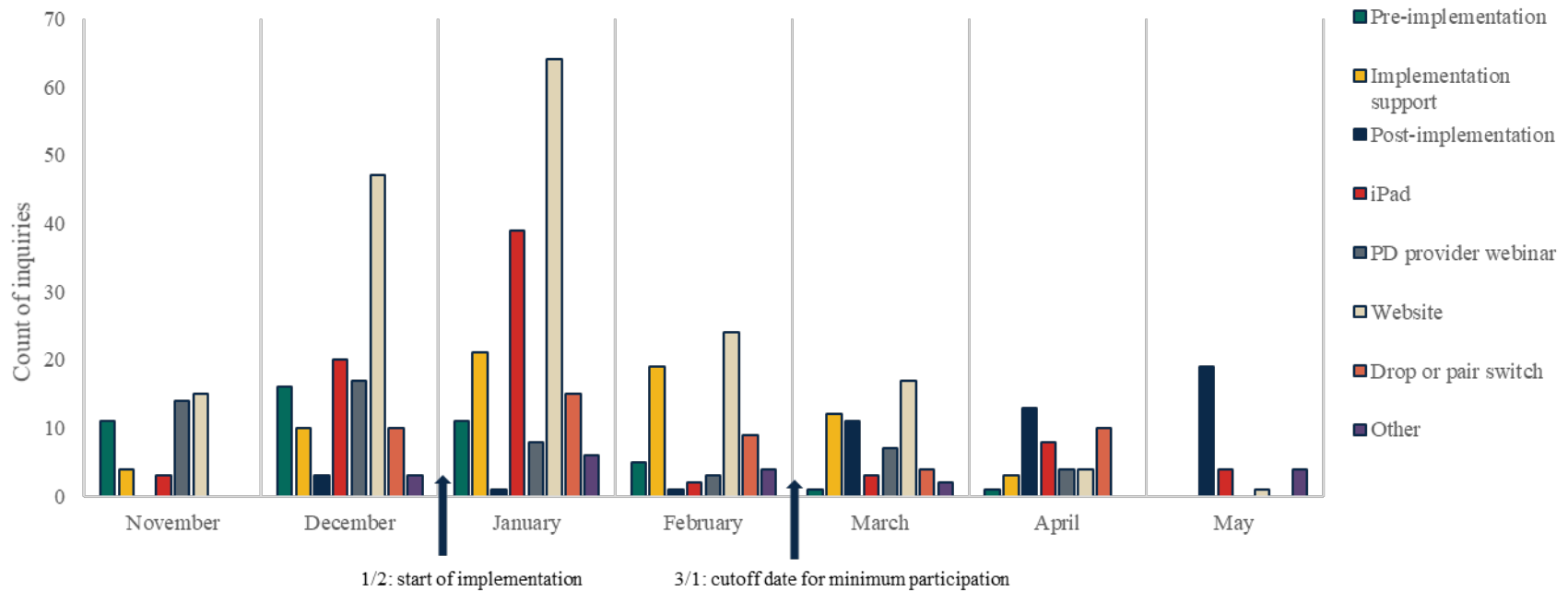
Table I.1. Key terms and definitions: Types of WGT contact

Key term	Definition
Pre-implementation activities	Includes questions about the background survey. Other issues include inquiries about field test gift cards, address changes, informed consent questions, and scheduling of Quality of Caregiver-Child Interactions for Infants and Toddlers (Q-CCIIT) observation.
Implementation support	Includes questions about training schedules, timing of meetings, materials available, giving feedback, time management, using SMART goals/action plans (specific, measurable, attainable, relevant, and time-bound), ideas for how to support caregivers, questions from caregivers and PD providers about activities during the implementation, or module content.
Post-implementation activities	Includes questions about the feedback survey, Q-CCIIT observation scheduling, keeping the materials, and accessing the website beyond the study period.
iPad	Includes questions about Apple ID log in, disabled iPads, iPad updates, apps, and keeping the iPad beyond the study period.
PD provider webinar	Includes questions about webinar attendance, registration, recordings, or call/log in.
Website	Includes questions about technology (how to log onto the website, password issues), pop-up survey, or navigation issues within the website. Specifically, participants asked about login, loading videos, downloading PDFs, navigating the site, or viewing the pop-up surveys.
Drop or pair switch	Includes questions about leaving the program or study (drops), potential drops, or PD providers/caregivers switching pairings.
Other	Includes questions about Moodle learning software profile change requests, replacement materials, and requests to be removed from reminder emails.

Key findings:

- As the WGT program was getting underway, participants reached out to our team once the PD provider training was ongoing (December 2018) and when we asked participants to begin actively implementing WGT in January 2019. The most common inquiries at that time were about the website and use of the iPad.
- After the start-up period, inquiries became less frequent. Inquiries in February and March 2019 tended to focus on the website and implementation support (for example, questions about time management).
- By April and May, the content of inquiries was shifting to post-implementation activities (for example, questions about the final data collection activities).

Exhibit I.1. Overall WGT communication, by month, for caregivers and PD providers



Category definitions:

Pre-implementation activities: Includes questions about the background survey. Other issues include inquiries about field test gift cards, address changes, informed consent questions, and Q-CCIIT observation scheduling.

Implementation support: Includes questions about training schedules, timing of meetings, materials available, giving feedback, time management, using SMART goals/action plans, ideas for how to support caregivers, questions about activities during the implementation received from caregivers and PD providers, or module content.

Post-implementation activities: Includes questions about the feedback survey, Q-CCIIT observation scheduling, keeping the materials, and accessing the website beyond the study period.

iPad: Includes questions about Apple ID log in, disabled iPads, iPad updates, apps, and keeping the iPad beyond the study period.

PD provider webinar: Includes questions about webinar attendance, registration, or call/log in. Webinars were available only for PD providers.

Website: Includes questions about technology, survey, or navigation issues. Specifically, participants asked about login, loading videos, downloading PDFs, navigating the site, or viewing the pop-up surveys.

Drop or pair switch: Includes questions about leaving the program or study (drops), potential drops, or PD providers/caregivers switching pairings.

Other: Includes questions about Moodle learning software profile change requests, replacement materials, and requests to be removed from reminder emails.

Table I.2. WGT combined monthly communication, by category of inquiry, for caregivers and PD providers (counts and percentage)

Category of inquiry	Nov	Dec	Jan	Feb	Mar	Apr	May	Total monthly count	Total monthly % ^a
Pre-implementation	11	16	11	5	1	1	0	45	8%
PD provider training logistics	0	4	2	0	0	0	0	6	1%
Background survey	8	8	2	0	0	0	0	18	3%
Other	3	4	7	5	1	1	0	21	4%
Implementation support	4	10	21	19	12	3	0	69	13%
Caregiver support	0	4	3	2	5	0	0	14	3%
Caregiver meeting logistics	3	3	4	0	2	1	0	13	2%
PD provider support	1	3	11	9	3	1	0	28	5%
Solely positive WGT feedback ^b	0	0	0	2	0	0	0	2	<1%
Self-reflection videos	0	0	3	6	2	1	0	12	2%
Post-implementation	0	3	1	1	11	13	19	48	9%
Feedback survey	0	0	0	0	0	1	7	8	1%
Other	0	3	1	1	11	12	12	40	8%
iPad	3	20	39	2	3	8	4	79	15%
Post-implementation possession	0	3	1	0	0	1	0	5	1%
Technology issues	3	16	36	2	3	7	4	71	13%
Other	0	1	2	0	0	0	0	3	1%
PD provider webinar	14	17	8	3	7	4	0	53	10%
Attendance	14	17	7	3	7	1	0	49	9%
Technology issues	0	0	1	0	0	3	0	4	1%
Website	15	47	64	24	17	4	1	172	32%
Navigation	0	3	9	2	1	0	0	15	3%
Pop-up survey	0	0	0	13	11	3	0	27	5%
Technology issues	15	44	55	9	5	1	1	130	24%
Drop or pair switch	0	10	15	9	4	10	0	48	9%

Category of inquiry	Nov	Dec	Jan	Feb	Mar	Apr	May	Total monthly count	Total monthly % ^a
Drop	0	6	13	9	4	8	0	40	8%
Pair switch	0	4	2	0	0	2	0	8	1%
Other	0	3	6	4	2	0	4	19	4%
Total inquiries for all categories	47	126	165	67	57	43	28	533	---

^a Percentage represents the number of inquiries per category divided by the total number of inquiries.

^b Represents participants who contacted the study team solely to provide positive feedback. Participants also provided positive feedback when inquiring about other topics; those comments are not included in our counts.

B. Modes of contact and participant type

This set of tables and exhibits provides information on the modes, types, and quantity of inquiries the WGT team received from PD providers and caregivers during the implementation period. We received inquiries through our inbox, toll-free number, PD provider webinars, PD provider office hours, and participants contacting WGT recruiters directly. All tables and exhibits represent contact with Mathematica as of May 28, 2019. The categories described below are mutually exclusive, and each inquiry was coded once.

During the pre-implementation period (November and December 2018), the study team held three PD training webinars; PD providers could select which dates they would attend. The trainings were held on November 29 and 30, December 12 and 13, and December 19 and 20. During the implementation period, three sets of PD provider implementation webinars were scheduled between January and April 2019 (January 30 and 31, February 5 and 6, and March 3 and 4). During implementation, the study team also provided office hours for PD providers on dates in February, March, and April 2019. PD providers registered for office hours that aligned with their availability.

In Table I.3, we define key terms used to describe the methods by which WGT participants contacted the study team. In Exhibit I.2, we display the methods and number of communications received across the implementation period for caregivers and PD providers. Exhibit I.3 displays the communication, by categories of inquiry, for caregivers and PD providers; Exhibit I.4 displays the frequency of communication by caregivers. In Exhibit I.5, we display the frequency of communication by PD providers. In Table I.4, we display the number of inquiries for caregivers and PD providers by mode of contact; Table I.5 displays the number of participants who contacted the WGT team by unique contact mode.

Table I.3. Key terms and definitions: Types of WGT implementation participant methods of contact

Key term	Definition
Inbox	Includes questions from participants to the study inbox, which was advertised in recruitment materials and on the website. The inbox was available to participants for the duration of the study (through June 2019).
800 number	Includes questions from participants to the study's toll-free 800 number, which was advertised in recruitment materials and on the website. The toll-free number was available to participants for the duration of the study (through June 2019).
PD provider webinar	Includes questions that required follow-up from PD providers during PD provider webinars. Three sets of PD training webinars took place between November and December 2018; three sets of PD provider implementation webinars took place between January and April 2019. Though many PD providers interacted with the study team through the webinar platform, only questions entered through the chat feature were coded for this category.
PD provider office hours	Includes questions from PD providers during PD provider office hours. Three sets of office hours sessions were scheduled between February and April 2019.
Recruiter contact	Includes study-related questions from participants to their recruiter. Recruiters remained available to field questions from participants during the first few weeks of the implementation period (November–December 2018).

Key findings:

- Forty-six percent of all caregivers and 58 percent of all PD providers contacted the study team during the implementation period.
- Participants who contacted the study team used the WGT survey inbox as their primary means of communication. Participants also contacted the team by using the toll-free number.
- During the implementation period, the largest percentage of total inquiries from both caregivers and PD providers were about the website. For caregivers, the second largest percentage covered questions about the iPad. For PD providers, the second largest percentage focused on implementation support.

Exhibit I.2. WGT communication, by week and contact mode, for caregivers and PD providers

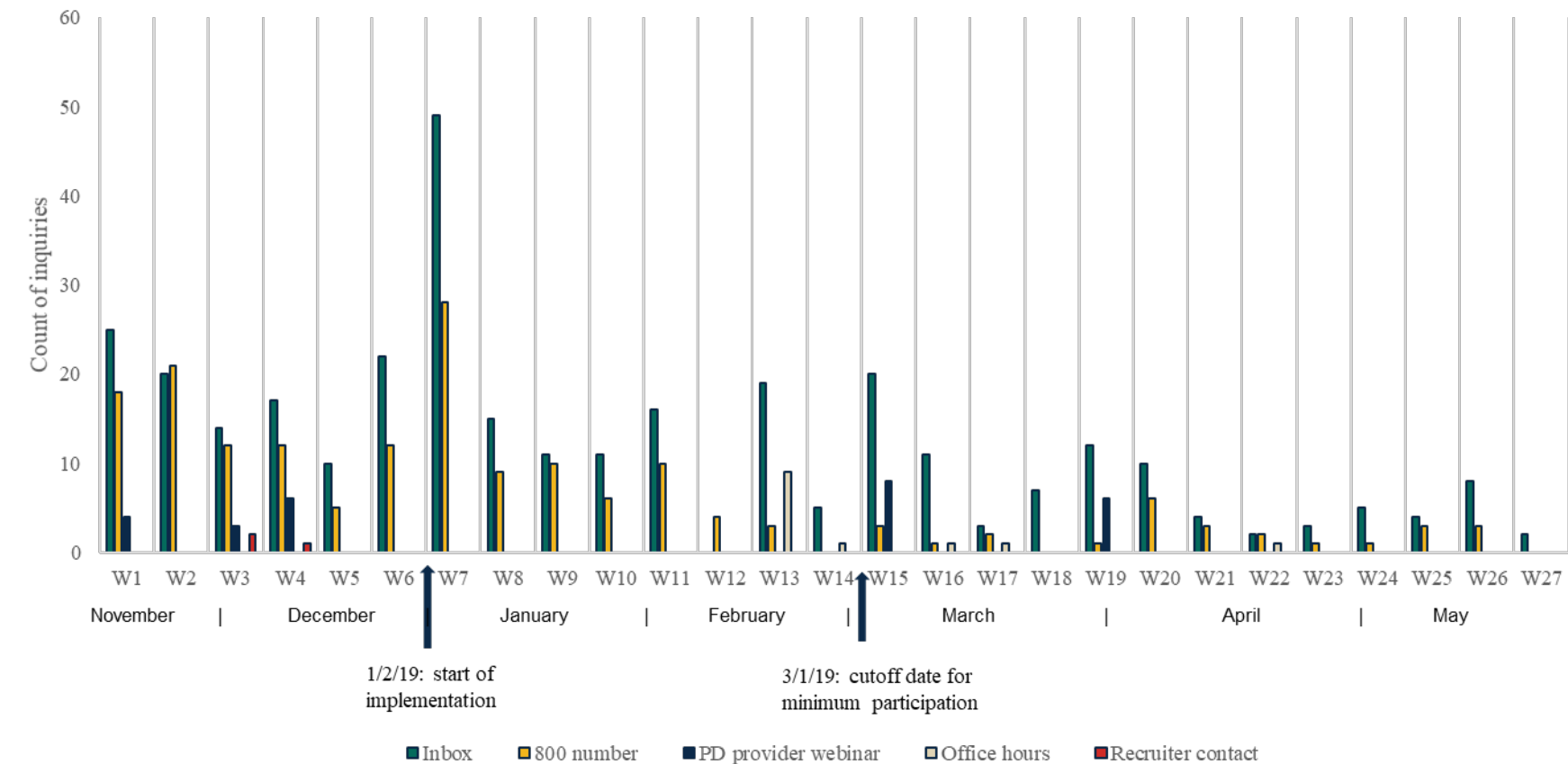
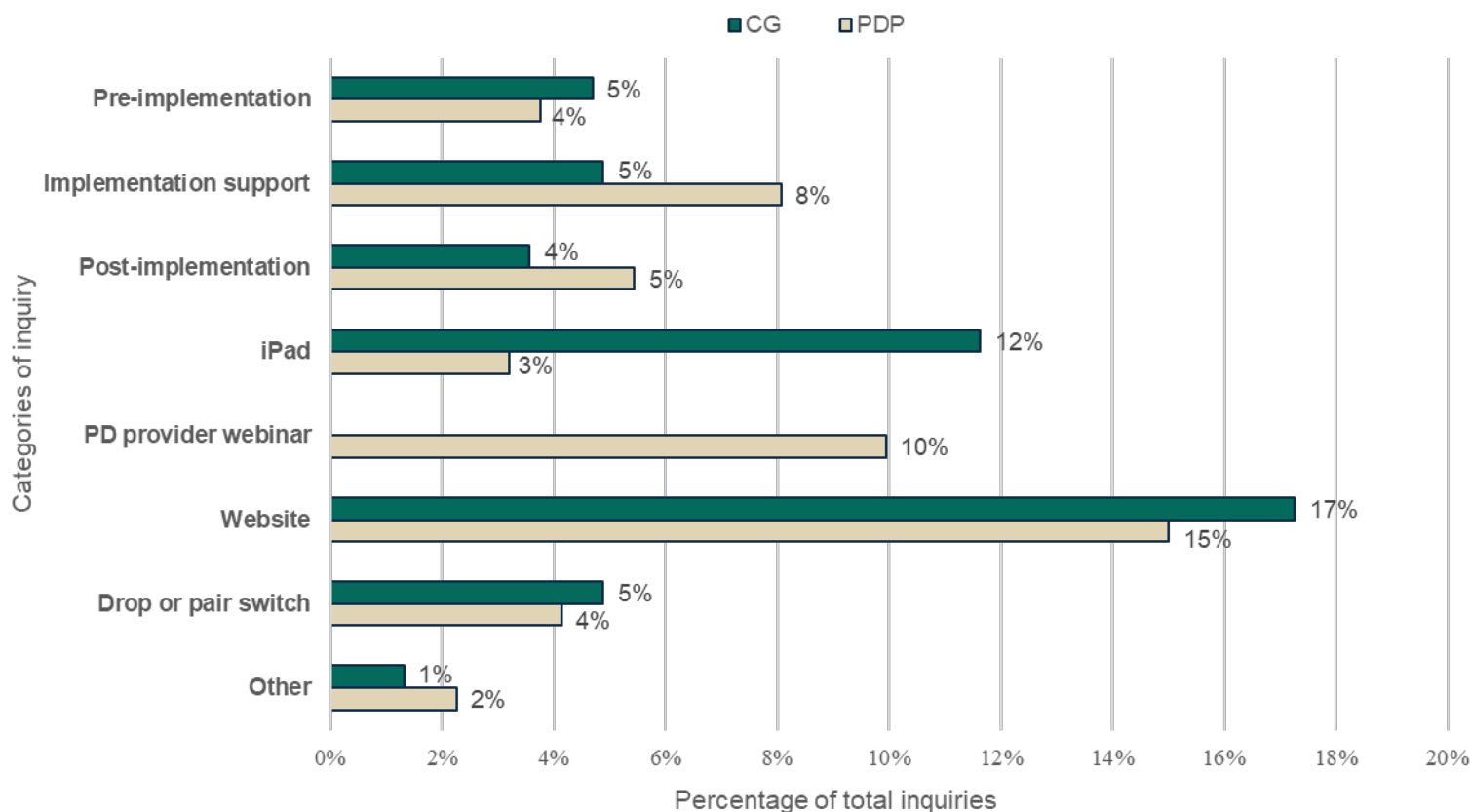


Exhibit I.3. WGT communication, by categories of inquiry, for caregivers (CG) and PD providers (PDP)



Category definitions:

Pre-implementation activities: Includes questions about the background survey. Other issues include inquiries about field test gift cards, address changes, informed consent questions, and Q-CCIIT observation scheduling.

Implementation support: Includes questions about training schedules, timing of meetings, materials available, giving feedback, time management, using SMART goals/action plans, ideas for how to support caregivers, questions about activities during the implementation received from caregivers and PD providers, or module content.

Post-implementation activities: Includes questions about the feedback survey, Q-CCIIT observation scheduling, keeping the materials, and accessing the website beyond the study period.

iPad: Includes questions about Apple ID log in, disabled iPads, iPad updates, apps, and keeping the iPad beyond the study period.

PD provider webinar: Includes questions about webinar attendance, registration, recordings, or call/log in.

Website: Includes questions about technology (how to log onto website, password issues), pop-up survey, or navigation issues within the website. Specifically, participants asked about login, loading videos, downloading PDFs, navigating the site, or viewing the pop-up surveys.

Drop or pair switch: Includes questions about leaving the program or study (drops), potential drops, or PD providers/caregivers switching pairings.

Other: Includes questions about Moodle learning software profile change requests, replacement materials, and requests to be removed from reminder emails.

Exhibit I.4. Frequency of communication, by caregivers

Notes: All graphs and tables represent contact with Mathematica as of May 28, 2019.

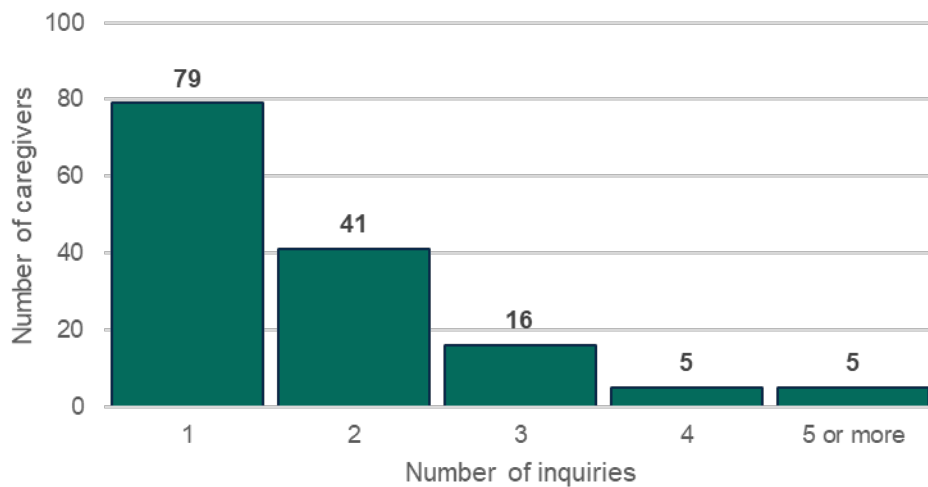
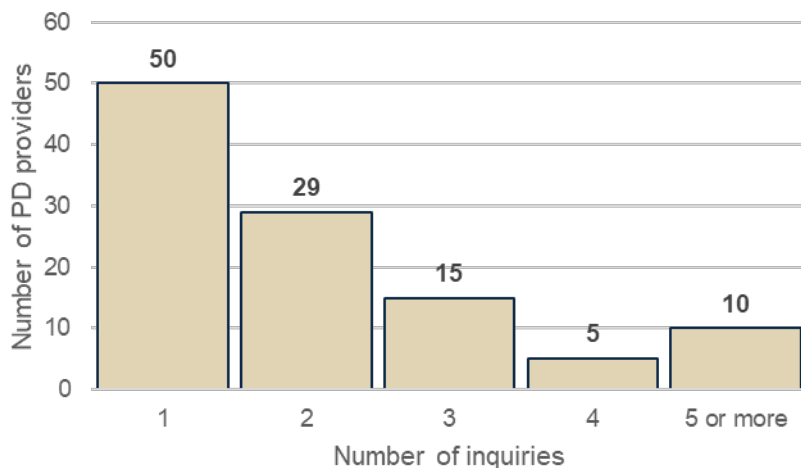


Exhibit I.5. Frequency of communication, by PD providers



Notes: All graphs and tables represent contact with Mathematica as of May 28, 2019.

Table I.4. Number of inquiries, by participants and contact mode

Modes of contact	Caregivers			PD providers		
	Number of caregivers	Average number of inquiries	Range of inquiries	Number of PD providers	Average number of inquiries	Range of inquiries
Inbox	95	1.5	1-4	85	2	1-11
800 number	72	1.5	1-7	39	1.6	1-5
Office hours	-	-	-	10	1.2	1-2
Recruiter contact	1	1	1	2	1	1
Total	143	1.8	1-8	110	2.3	1-14

Notes: Counts represent the unique number of caregivers and PD providers who contacted the WGT study team. Averages and ranges represent the number of inquiries each caregiver or PD provider made to the WGT team throughout the study. In addition to caregivers and PD providers, we also had contact with 11 setting staff who served as conduits of information for caregivers and PD providers.

We excluded PD provider webinar inquiries because they were asked anonymously.

Office hour calls were specifically for PD providers.

Table I.5. Number of participants who contacted WGT, by unique contact mode

Modes of contact	Caregivers		PD providers	
	n	Percentage	n	Percentage
Contacted by one mode	116	37%	88	47%
Inbox	69	23%	64	34%
800 number	46	14%	21	11%
Office hours	-	-	1	1%
Recruiter contact	1	0%	2	1%
Contacted by two modes	26	9%	18	10%
Inbox & 800 number	26	9%	13	7%
Inbox & office hours	-	-	4	2%
800 number & office hours	-	-	1	1%
Contacted by three modes	-	-	4	2%
Inbox, 800 number, and office hours	-	-	4	2%
Did not contact the study team	169	54%	79	42%
Total	311	--	189	--

Notes: Counts represent the unique number of caregivers and PD providers who contacted the WGT study team. Percentage represents the number of caregivers or PD providers per category divided by the total number of caregivers or PD providers. In addition to caregivers and PD providers, we also had contact with 11 setting staff who served as conduits of information for caregivers and PD providers.

We excluded PD provider webinar inquiries because they were asked anonymously.

Office hour calls were specifically for PD providers.

Percentages may not add up to 100 due to rounding.

Appendix

References

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