



Young Children's Home Learning and Preschool Participation Experiences During the Pandemic

NIEER 2020 Preschool Learning Activities Survey: Technical Report and Selected Findings

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Introduction

COVID-19 has brought chaotic change to early education. Most of the nation's 5 million 3- to 5-year-olds attending preschool classrooms had their attendance cut short in March 2020. Preschool-age children in family day care or at home with parents and other family members had their daily routines disrupted. Parents now often work from home and families "shelter in place." These changes may have important consequences for young children's learning and development, and mental health. Moreover, impacts of the pandemic and its consequences are likely to vary with child and family characteristics.

To learn how the pandemic is impacting young children's learning experiences the National Institute for Early Education Research (NIEER) developed a parent survey on: (1) children's home learning activities during the pandemic; (2) children's preschool participation and program closures; and (3) services children and parents received to support emergency remote learning when preschool programs closed their classroom operations due to the pandemic. NIEER adopted some questions from previous national surveys such as the National Household Survey Education Survey to compare pre- and post-school closure activity patterns.

Ipsos Public Affairs (Ipsos) conducted the survey on KnowledgePanel®, a probability-based web panel designed to represent the population of the United States. Panel members are randomly recruited through probability-based sampling, and households are provided access to the Internet and hardware if needed. The target population for this survey consisted of non-institutionalized United States adults age 18 and older with at least one child aged 3, 4, or 5 years old in the household. Ipsos sampled United States adults with children in their household aged 3, 4, or 5 years old to obtain 1,001 interviews.

The survey was conducted between May 22 and June 5, 2020. Selected panel members received an email invitation to complete the survey and were asked to do so at their earliest convenience. The survey was fielded in both English and Spanish. Respondents answered questions about a 3, 4, or 5 year-old child in their household, including items about the child's daily activities during the pandemic and the child's childcare, preschool, or kindergarten program both before and during the pandemic. As some children had completed the school year by the time of the survey, parents were asked to report on remote supports for learning when classrooms were closed for the time prior to the end of the school year.

Study-specific post-stratification weights have been applied to the final sample to adjust for survey nonresponse and to ensure the proper distributions for the specific target population (i.e., race/ethnicity, education level of parents, household income, language proficiency and census region). In addition, the sample was weighted to adjust for the presence of more than one preschool child in some families. A complete description of survey and weighting procedures is provided in a separate *NIEER Methodology Report*. Table 1 provides a full description of the sample and complete copy of the survey instrument.

The focus of our study is on children from the age of three through five who are not yet in kindergarten. However, a small number of the families surveyed reported on a child who had

been attending kindergarten. We separated out the kindergarten children, and primarily report on children ages 3-5 and not yet in kindergarten (N=945). Table 2 provides a full description of this sample. A few selected findings are presented for children in kindergarten but the sample size and limited age range limits useful generalization to the kindergarten population generally.

All statements of comparison in this report have been tested for statistical significance using two-tailed t-tests, analysis of variance, and post-hoc tests and are significant at the 95% confidence level. No adjustments were made for multiple comparisons. Some estimates that might appear to the reader to be different may not be measurably different in a statistical sense due to sampling error. We present results using two different sets of weights: one to present representative results for parents of young children and the other to present representative results for young children. In addition, we distinguish results for all children three to five and for those three to five and not yet in kindergarten.

Comparisons of results between the NIEER 2020 Preschool Learning Activities Survey and other surveys must account for important differences. For example, we compare some results with the Early Childhood Program Participation (ECP) sample from the 2016 National Household Education Survey (<https://nces.ed.gov/pubs2017/2017101REV.pdf>). The ECP sample includes children birth through age five whereas the NIEER sample was weighted to reflect the sample design and represent adults age 18 and older with a child 3- to 5-years-old in the household. In addition, household incomes in the US rose substantially from 2016 to 2019, decreasing the proportion of the population with annual household incomes below \$20,000 and increasing the proportion with higher household incomes. Other population characteristics may have changed as well. Nevertheless, we expect pre-pandemic program participation and home learning experiences of children ages 3-5 and not yet in kindergarten to be similar in the 2016 ECP sample and in the NIEER sample.

This report introduces our survey data by presenting descriptive statistics for many, but not all, questions in the survey. We caution against drawing causal inferences from associations between responses and children's personal and family characteristics based on the results presented. Simple bivariate correlations may reflect complex relationships among other variables measured and unmeasured by the survey. The results presented here provide a broad overview of young children's activities, especially their learning experiences in and out of the home, since preschools closed in response to the pandemic. The information contained in the survey offers opportunities for more in-depth and specialized analyses.

Selected Findings

Home Learning Experiences

- The survey asked a series of questions to assess the extent parents engaged in home learning activities in the last week with their preschool-age children, focusing on specific activities that have commonly been assessed in other earlier surveys. As shown in Figure 1, approximately 80% of parents reported reading to the child three or more times in the past week; more than 60% reported singing songs and teaching letters, words, or numbers three or more times in the past week; 37% reported working on arts and crafts with the child three or more times in the past week; and 47% reported telling stories three or more times in the past week. Parents rarely reported never engaging in these activities in the past week.
- Comparison with the 2016 National Household Education Survey (NHES) responses to the same questions regarding parent engagement in home learning activities reveals similarities and differences. The 2016 NHES reported frequencies of engaging in reading and in arts and crafts were nearly identical to those in the 2020 NIEER survey. Reported frequencies of teaching activities and singing were lower than before the pandemic. The percentage reporting storytelling three or more times in the past week was higher than in 2016.
- Reported frequency of parent engagement in home learning activities varied with child and family characteristics (Table 3). For example, parents of 3-year-olds taught letters, words, and numbers more frequently than parents of 4-year-olds. White/non-Hispanic/White/non-Hispanic/non-Hispanic parents reported reading to their children more frequently than Black/non-Hispanic or Hispanic parents. Parents in homes where English was the primary language reported that they more frequently read, told stories, and sang songs with their young children. Higher levels of parental education were positively associated with the frequency of reading, storytelling, singing, teaching letters and numbers, and making arts and crafts. Working parents spent more time reading, telling a story, and teaching letters and numbers to their children in the past week than other parents. Parents of children who have an Individualized Education Plan (IEP) engaged in arts and crafts more frequently than other parents.
- NIEER's survey also asked how frequently in the last week children engaged in a range of home activities related to learning and development with a parent, another adult, another child, or on their own (Figure 3). The percentage of children reported to engage in an activity several times per day were: 68% for playing indoors, 45% for playing outdoors, and 42% for watching TV. However, children were less likely to have played every day last week outdoors (66%) than indoors (78%).

- The weekly frequency of some home activities varied by child and family characteristics (Table 4). For example, 3-year-olds engaged more frequently in reading, music, and indoor play than did older children. Five-year-olds played video games more frequently. White/non-Hispanic children had more frequent indoor and outdoor play and less frequently watched videos on a computer or mobile device than did Black/non-Hispanic or Hispanic children. Children of parents with higher levels of education read and played indoors and outdoors more frequently while less frequently watching TV, watching videos on computer or mobile device, and playing video games compared with children of parents with lower levels of education.
- Parents were asked how many minutes a child engaged in various activities the previous day (Table 5). Overall, children spent about one and a half hours per day on each of the following activities: playing indoors (97 minutes), playing outdoors (88 minutes), and watching TV or video (93 minutes). Children read for about 31 minutes and listened to or played music about 28 minutes. Time allocations varied by child and family characteristics. White/non-Hispanic children spent more time playing indoors compared to Black/non-Hispanic and Hispanic children and more time playing outdoors compared to Black/non-Hispanic children. Black/non-Hispanic children spent more time reading e-books and using learning programs or apps than did White/non-Hispanic or Hispanic children. Parent education levels were positively associated with reading print books and indoor play and negatively associated with time watching video or TV on a computer and playing games.

Preschool Program Participation Pre- and Post-Pandemic Including Remote Learning

- Parents reported that prior to the pandemic 61% of children 3- to 5-years-old and not yet in kindergarten attended a preschool classroom (though 2% of these were reported to be in homes). For comparison the 2016 NHES ECPP reported 60%. Parents were asked whether these were Head Start or other public or private programs but ambiguity about these labels makes responses difficult to interpret. Most Head Start programs and many state-funded pre-K programs are operated by private providers. An indication of this problem is that parents reported 28% of children attended preschool in a public school but reported only 16% of children in a public center and less than 5% in Head Start. We suggest parent reporting of location is likely to be more accurate than their reporting of auspice.
- Participation in a preschool classroom prior to the pandemic (Table 6) varied by child and family characteristics. Preschool participation rates increased with child's age, parental education, parental employment, and if the child had an IEP.
- Nearly three-quarters (74%) of children attending preschool programs had their programs closed as a result of the pandemic (Table 6). Closure varied by type of arrangement. More than 90% of public program classrooms closed compared to two-thirds of private programs. Seventy-two percent of home-based programs remained open.

- Program closure was less likely for 3-year-old children (possibly because they were less likely to be in public programs) and varied with some family characteristics and region. However, closure rates were high for all children. More than 90% of the reported preschool classroom closures occurred in March 2020 (Figure 4).
- At the time of the survey 48% of the children whose programs had closed were receiving some remote support for learning and development (Table 6). This appears to reflect a decline from earlier levels. When asked whether supports had ever been provided since closure (Figure 5), more than 70% reported being provided with contact information and that the teacher communicated with the child. More than half reported the child was provided worksheets, paper-based supports, or digital support. Less common were pre-recorded videos (35%). Just about a quarter (23%) reported the child received meals.
- Nine percent of the children 3- to 5-years-old and not yet in kindergarten were reported to have an IEP designating services for special needs. They were more likely to have enrolled in a preschool program than children without an IEP but did not differ in the likelihood that their programs closed classrooms due to the pandemic (Table 6). Children with IEPs were more likely to be receiving some type of remote support for learning at the time of the survey. Parents reported 37% of children with an IEP received full support, 39% received partial support, and 23% received no support after their preschool classrooms closed (Figure 6).
- Preschool programs that closed classrooms continued to provide meals to 23% of children. This varied by program auspice from 61% of children reported to attended Head Start, about 35% reported to attend another public program, and 10% of children reported to be in private programs.
- For children whose preschool programs were closed, parents reported the frequency of the child's participation in a variety of remote supports for learning (Figure 7). Most children (61%-72%) participated less than once a week in each of 10 learning activities. The activities with the highest rates of daily participation were reading alone or with an adult (17%), physical exercise (16%), singing or listening to music (14%), and listening to a story (11%).
- Frequency of children's engagement in activities to support learning after classrooms closed varied somewhat by program auspice and child and family characteristics. None of the subgroups reported high rates of daily or several times per week participation in remote learning activities (Tables 7a-8b). Children in public programs were more likely than those in private programs to participate in learning apps or games, worksheets, math or sciences activities, arts and crafts, and singing and listening to music.

- Children with an IEP more frequently engaged in learning activities provided by preschool programs after classrooms had closed. They had higher rates of daily engagement than others in listening to stories, learning apps or games, visiting with a teacher by video-chat, activities with classmates by video chat, and arts and crafts (Tables 8a and 8b).
- Parents reported 28% of children whose preschool classrooms closed had received mandatory assignments (Table 9). The average time children spent on these assignments was about one hour per day, and 83% of those with mandatory assignments received teacher feedback.
- Of the 26% of children whose programs remained open, 45% stopped attending, 14% attended on a different schedule, and 3% attended a different program (Table 10). By combining children who stopped attending programs that remained open and children whose programs were closed into a single group, it reveals that 86% of children who had been attending preschool programs were no longer served in classrooms after the pandemic struck. Just 10% continued to attend the same program on the same schedule.

Kindergarten

- The small number of kindergarten children in our sample (n=56) provides a very limited basis for conclusions. Results suggest kindergarten children may have received stronger supports for remote learning after their classrooms closed (54 of 56, 96%) than did preschool children (Figure 8, Table 11). For example, 94% of kindergarten children's parents reported receiving instructions on how to contact the teacher and that teachers communicated with the child, 91% received worksheets, and 85% of children received digital support. About 44% of children received meals from a program.
- Parents reported daily participation rates of kindergarten children whose classrooms had closed as: 56% for learning apps or games, 47% for worksheets, 39% for listening to a story, and 34% for math or science activities (Figure 9).
- Among kindergarteners, 67% of those whose programs closed had received mandatory remote assignments and 95% of those with mandatory assignments received teacher feedback (Table 11). The time children spent on these assignments was about one and a half hours during a typical day.

Table 1. Descriptive statistics for total NIEER survey sample (N = 1,001)

		N	Percent
Child Age	3 years old	283	28.3
	4 years old	393	39.2
	5 years old	315	31.5
	Unknown	10	1.0
Preschool Arrangement	Head Start	43	4.3
	Center Private	367	36.6
	Center Public	149	14.9
	Kindergarten	56	5.6
	Home Based	17	1.7
	None	368	36.8
Location	Public School	218	33.9
	Other	425	66.1
Child Race/Ethnicity	Refused	7	0.7
	White/non-Hispanic	494	49.3
	Black/non-Hispanic	101	10.1
	Other/non-Hispanic	71	7.1
	Hispanic	253	25.3
	2+ Races/non-Hispanic	75	7.5
IEP	Yes	90	9.1
	No	904	90.9
Home Language	English	903	90.2
	Spanish	98	9.8
Parent Education	Less than high school	128	12.8
	High school	259	25.9
	Some college	252	25.1
	Bachelor's degree or higher	362	36.1
Work Status	Working	751	75.0
	Not working	250	25.0
Marital Status	Married/Partner	840	83.9
	Single	161	16.1
Region	Northeast	161	16.1
	Midwest	204	20.4
	South	387	38.7
	West	249	24.8
Household income	Less than \$20,000	75	7.5
	\$20,000-\$49,999	205	20.5
	\$50,000-\$74,999	172	17.2
	\$75,000-\$99,999	149	14.9
	\$100,000 and more	400	40.0

Table 2. Descriptive statistics for sample children ages 3-5 and not yet in kindergarten (N = 945)

		N	Percent
Child Age	3 years old	283	30.0
	4 years old	393	41.6
	5 years old	260	27.5
	Unknown	9	0.9
Preschool Arrangement	Head Start	43	4.6
	Center Private	367	38.8
	Center Public	149	15.8
	Home Based	17	1.8
	None	369	39.0
Location	Public School	169	28.8
	Other	417	71.2
Child Race/Ethnicity	Refused	7	0.7
	White/non-Hispanic	475	50.3
	Black/non-Hispanic	92	9.7
	Other/non-Hispanic	59	6.3
	Hispanic	238	25.2
	2+ Races/non-Hispanic	74	7.8
IEP	Yes	87	9.2
	No	854	90.8
Home Language	English	847	89.6
	Spanish	98	10.4
Parent Education	Less than high school	114	12.1
	High school	254	26.8
	Some college	240	25.3
	Bachelor's degree or higher	338	35.7
Work Status	Working	706	74.7
	Not working	239	25.3
Marital Status	Married/Partner	793	83.9
	Single	152	16.1
Region	Northeast	142	15.0
	Midwest	199	21.0
	South	367	38.8
	West	237	25.1
Household Income	Less than \$20,000	66	7.0
	\$20,000-\$49,999	199	21.1
	\$50,000-\$74,999	161	17.1
	\$75,000-\$99,999	143	15.1
	\$100,000 and more	375	39.7

Figure 1. Frequency of home learning activities: Percentage of children ages 3-5 and not yet in kindergarten whose parents reported none, 1-2 times per week, and 3 or more times (N = 945)

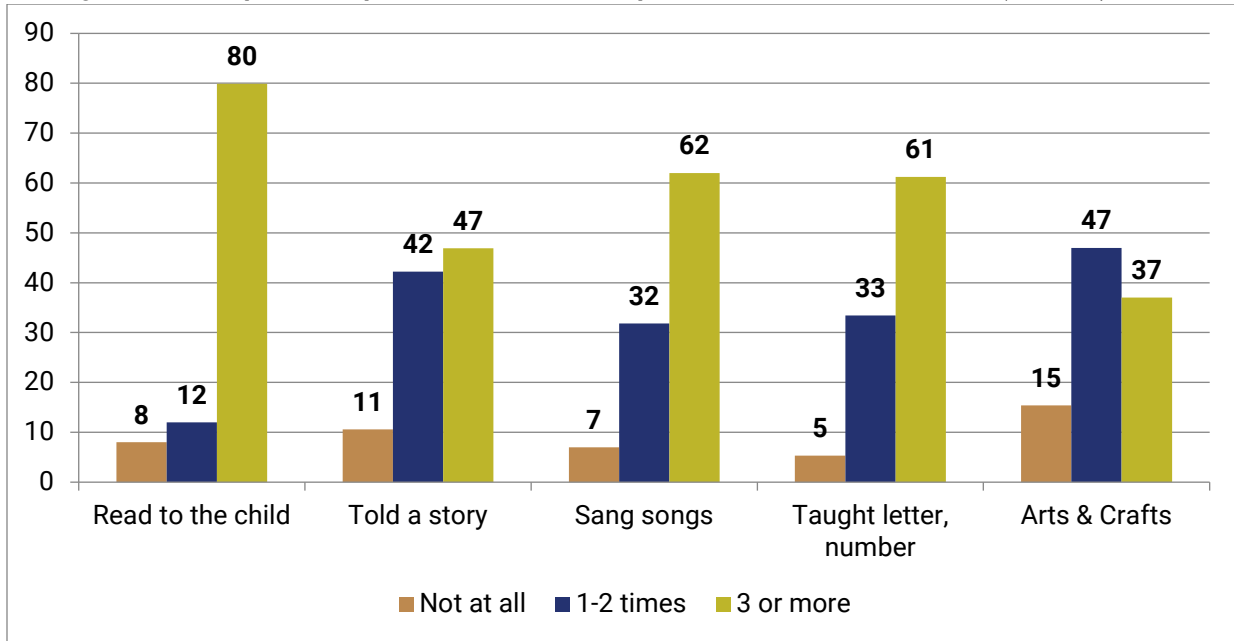


Table 3. Percentage of children ages 3-5 and not yet in kindergarten whose parents reported participating in home activities with child three or more times in the past week, by type of involvement and child and family characteristics (N = 945)

Characteristic	N	Read to the child	Told a story	Sang songs	Taught letter, number	Arts and Crafts
Total	945	80	47	62	61	37
Child Age						
3 years old	283	84	54	68	67	35
4 years old	393	80	47	61	56	40
5 years old	260	78	42	54	64	36
Unknown	9	50	15	78	4	5
Race/Ethnicity						
Refused	7	100	93	100	100	79
White/non-Hispanic	475	87	54	65	61	38
Black/non-Hispanic	92	69	44	56	63	32
Other/non-Hispanic	59	80	58	62	56	45
Hispanic	238	67	34	55	60	35
2+ Races/non-Hispanic	74	95	37	64	66	38
IEP						
Yes	87	78	45	57	60	48
No	854	81	47	62	61	36
Home Language						
English	847	82	49	63	61	38
Spanish	98	65	30	51	62	30
Parent Education						
Less than high school	114	61	28	65	54	37
High school	254	74	37	52	52	28
Some college	240	83	49	63	66	37
Bachelor's degree or higher	338	90	60	66	67	44
Work Status						
Working	706	82	49	61	63	37
Not working	239	75	41	62	56	37
Marital Status						
Married/Partner	793	82	48	62	62	36
Single	152	71	41	61	57	44
Region						
Northeast	142	81	55	61	61	35
Midwest	199	83	49	63	61	40
South	367	76	41	59	60	34
West	237	84	50	65	63	40
Household Income						
Less than \$20,000	66	64	27	57	48	37
\$20,000-\$49,999	199	73	42	62	57	31
\$50,000-\$74,999	161	74	36	57	61	34
\$75,000-\$99,999	143	86	49	62	67	36
\$100,000 and more	375	87	57	64	64	42

Figure 2. Percentage of children ages 3-5 and not yet in kindergarten whose parents reported participating in home activities with child three or more times in the past week: comparison of NIEER 2020 survey and NHES 2016

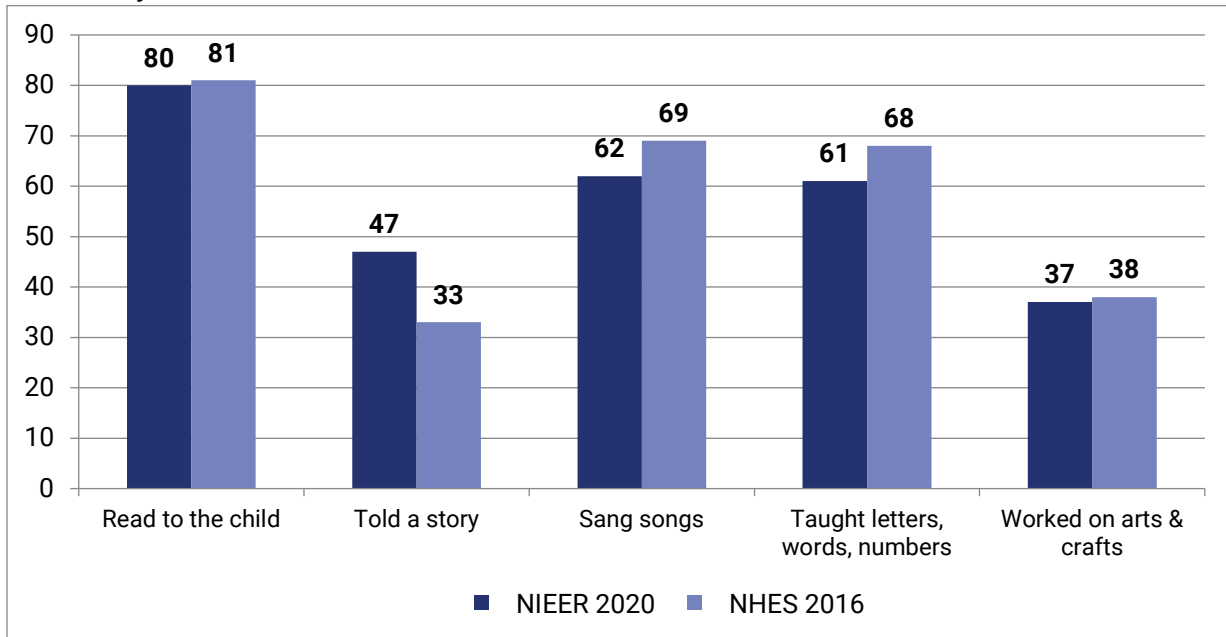


Figure 3. Frequency of home learning activities in the past week: percentage of children ages 3-5 and not yet in kindergarten whose parents reported engaging in an activity several times a day, once a day, several times per week, 1-2 times per week, or never (N=945)

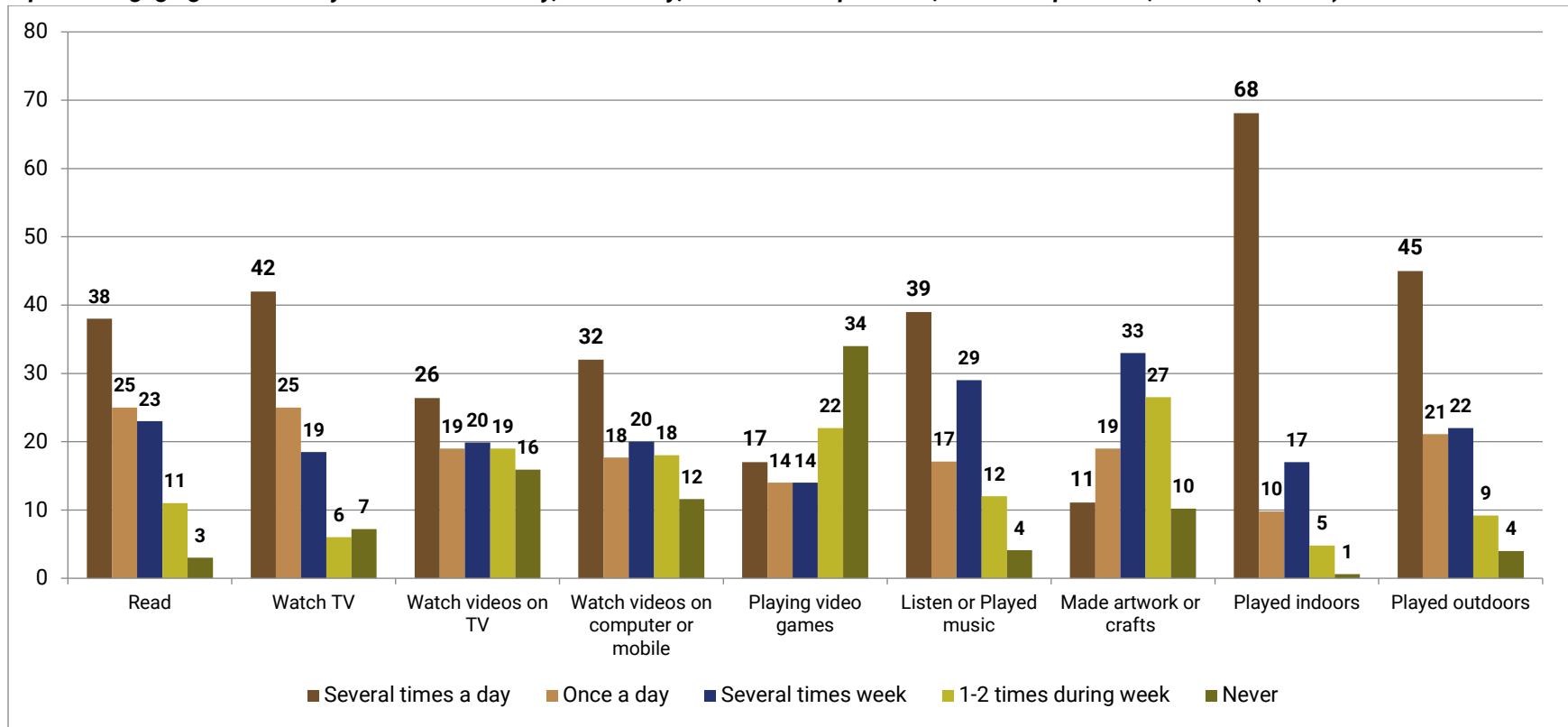


Table 4. Percentage of children ages 3-5 and not yet in kindergarten who engaged in a home learning activity several times each day in the past week, by child and family characteristics (N=945)

		N	Read	Watch TV	Watch videos on TV	Watch videos on computer or mobile	Playing video games	Listen or played music	Made artwork or crafts	Played indoors	Played outdoors
Total		945	38	42	26	32	17	39	11	68	45
Child Age	3 years old	283	44	44	24	30	15	46	8	76	43
	4 years old	393	40	41	28	33	15	35	12	67	47
	5 years old	260	30	42	27	35	22	35	13	61	42
	Unknown	9	26	33	26	50	26	90	0	78	72
Race/Ethnicity	Refused	7	26	0	20	46	46	20	5	72	26
	White/non-Hispanic	475	47	39	22	24	14	37	11	76	58
	Black/non-Hispanic	92	39	50	30	42	25	42	8	58	26
	Other/non-Hispanic	59	26	54	36	49	15	47	1	56	27
	Hispanic	238	28	43	31	40	19	39	16	56	32
	2+ Races/non-Hispanic	74	31	47	28	37	15	33	7	77	43
IEP	Yes	87	45	39	24	41	18	48	16	73	51
	No	854	38	42	27	32	17	38	10	68	44
Home Language	English	847	40	42	25	32	17	38	11	70	47
	Spanish	98	22	41	39	35	20	41	12	52	22
Parent Education	Less than high school	114	18	30	26	35	23	39	13	50	30
	High school	254	32	52	30	40	25	40	8	67	43
	Some college	240	40	41	25	28	18	32	12	64	52
	Bachelor's degree or higher	338	49	40	25	29	9	42	12	78	46
Work Status	Working	706	41	43	27	32	15	38	12	69	46
	Not working	239	32	41	23	33	22	39	9	65	42
Marital Status	Married/Partner	793	41	41	27	31	14	37	11	69	45
	Single	152	24	48	22	40	32	45	10	63	46

Table 4. Percentage of children ages 3-5 and not yet in kindergarten who engaged in a home activity several times each day in the past week, by child and family characteristics (N=945) - Continued

		N	Read	Watch TV	Watch videos on TV	Watch videos on computer or mobile	Playing video games	Listen or played music	Made artwork or crafts	Played indoors	Played outdoors
Region	Northeast	142	42	38	23	32	12	39	5	70	45
	Midwest	199	46	42	23	30	15	40	9	68	51
	South	367	35	45	31	35	19	38	13	71	44
	West	237	35	41	23	31	19	37	13	64	40
Household Income	Less than \$20,000	66	37	51	45	56	27	49	17	70	34
	\$20,000-\$49,999	199	32	48	34	40	25	35	11	65	37
	\$50,000-\$74,999	161	29	38	20	29	15	45	11	59	51
	\$75,000-\$99,999	143	41	40	19	27	15	34	14	79	46
	\$100,000 and more	375	45	41	25	28	13	38	8	70	48

Table 5. Minutes per day spent in each activity (reported for the prior day) for children ages 3-5 and not yet in kindergarten by child and family characteristics (N=945)

		N	Read print book	Read e-reader	Played indoor	Made arts and crafts	Played outdoor	Listen to or play music	Watch TV on TV set	Watched videos on computer	Played games	Used learning apps	Video chat	Anything else on a smartphone or tablet
Total		945	21.9	8.9	97	22.8	88.3	28.2	57	36.2	20.4	19.3	7.7	11.5
Child Age	3 years old	283	23.5	6.1	101	21.5	83.3	31.5	57.4	36.4	16.1	17.5	6.3	7.6
	4 years old	393	22.3	8.5	103.1	23.1	83.6	28.2	58.1	34.4	18.5	19.1	7.5	13.3
	5 years old	260	19	12.4	82.2	23.4	100.1	24	55.3	39.2	28.8	20.6	9.6	13.2
	Unknown	9	34	13.9	109.8	35.2	131.5	38.8	40.3	24.4	0.4	53.7	0.4	7
Race/Ethnicity	Refused	7	17.6	7.1	78.7	44.2	32.4	39.5	36.5	20.5	22.8	26.3	8.3	7
	White/non-Hispanic	475	24.1	6.3	109.9	22	100.8	29	55.7	33.2	18.9	14.9	5.4	8
	Black/non-Hispanic	92	24.5	20.7	70.4	17.3	49.8	24.2	66.7	48.5	25.6	34.7	7.3	18.8
	Other/non-Hispanic	59	17.5	12.5	80.5	20.1	50.8	25.1	56.7	45.1	22	24.2	16.2	17.8
	Hispanic	238	17	9.1	85.1	25.8	83.9	27.9	56.1	35.6	20.7	19.9	9.9	12.5
	2+ Races/non-Hispanic	74	24.4	9.6	93.2	24.7	99.6	29	60	38.7	21.9	23.5	8.8	18.9
IEP	Yes	87	21.9	10.6	89.5	20.3	75.5	34.5	49.4	32.3	16.5	21.4	6.7	13
	No	854	21.8	8.6	97.1	22.9	89.7	27.6	57.2	36.6	20.6	19	7.6	11.3
Home Lang.	English	847	22.4	8.7	99.9	22.7	91.6	28.6	57.8	35.8	20.6	18.9	7.4	11.1
	Spanish	98	17.3	10.2	70.4	23.3	60.2	24.2	50.2	39.6	18.3	22.4	10.3	15.4
Parent Education	Less than high school	114	15.4	9.9	77.9	23.8	89.4	27.6	51.6	33.9	17.6	24.5	8.7	9.6
	High school	254	19.3	11.5	91.9	18.8	84	27.9	63.4	43.7	26.4	22.6	6.1	13.8
	Some college	240	22	9.1	97.7	22.5	90.5	33.3	58.6	38	21.4	17.1	7.2	12.3
	Bachelor's degree or higher	338	25.8	6.5	106.1	25.5	89.5	24.9	53.1	30.3	16.1	16.8	8.8	10
Work Status	Working	706	22.7	9	97.5	22.9	88.1	27.4	57	36.9	19.1	19.2	8	11.7
	Not working	239	19.7	8.4	95.4	22.4	88.9	30.3	57	34.3	24.2	19.5	6.6	11.1
Marital Status	Married/Partner	793	23	8.5	102.9	23.6	89.9	28.4	56.4	33.7	19.6	18.3	8	10.9
	Single	152	16	10.7	66	18.4	80.1	26.6	60.5	49.7	24.7	25.1	5.9	15.1

Table 5. Minutes per day spent in each activity (reported for the prior day) for children ages 3-5 and not yet in kindergarten by child and family characteristics (N=945) - Continued

		N	Read print book	Read e-reader	Played indoor	Made arts and crafts	Played outdoor	Listen to or play music	Watch TV on TV set	Watched videos on computer	Played games	Used learning apps	Video chat	Anything else on a smartphone or tablet
Region	Northeast	142	20.3	6.5	100.1	19.1	114.5	24.8	51.9	28.4	13.8	16.8	8.3	7.2
	Midwest	199	23.1	7.7	104.5	24.5	91.9	30.6	55.9	39.8	22	18.9	4.5	8.2
	South	367	23.2	10.7	98.4	23.9	81.7	29.7	62.2	37.9	22.7	20.4	7.8	13
	West	237	20	8.6	86.5	22	79.8	25.8	53.6	35.3	19.6	19.4	9.7	14.8
Household Income	Less than \$20,000	66	17.4	10.5	68.9	26.5	72.5	34	66.5	49.3	28	16.4	7.2	12.2
	\$20,000-\$49,999	199	22.8	11	111.1	22.5	79.1	32.7	59.1	42.7	27.6	24.4	7.5	12.5
	\$50,000-\$74,999	161	20.7	10.6	81.5	20.4	93.7	25.8	51.3	35.8	19.3	22	6.9	11.7
	\$75,000-\$99,999	143	20.8	8.4	98.6	20.9	98.3	27.1	55.3	35.9	18.9	16.8	4.5	11.7
	\$100,000 & more	375	23.1	7	100.2	24.1	89.3	26.4	57.5	31.1	16.5	17.1	9.4	10.9

Table 6. Percentage in each type of preschool arrangement, percentage whose programs closed, and percentage provided with distance learning support after closure for children ages 3-5 and not yet in kindergarten by child and family characteristics

		Type of Preschool Arrangement (N = 945)										Program Closed (N = 576)		Distance Learning (N = 427)	
		Head Start		Center Private		Center Public		Home Based		All Programs		Yes		Yes	
		N	Percent	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent
Total		43	5	367	39	149	16	17	2	576	61	427	74	202	47
Child Age	3 years old	8	3	108	38	24	8	7	2	146	51	88	60	42	48
	4 years old	16	4	168	43	58	15	10	3	252	64	195	77	88	45
	5 years old	20	8	91	35	67	26	0	0	178	68	144	81	72	50
	Unknown	0	0	0	4	0	0	0	0	0	4	0	0	0	0
Race/Ethnicity	Refused	0	7	1	21	0	0	0	0	2	28	2	100	1	75
	White/non-Hispanic	18	4	197	42	52	11	14	3	282	59	194	69	78	40
	Black/non-Hispanic	10	11	39	43	14	15	0	0	63	69	41	64	17	42
	Other/non-Hispanic	1	1	25	42	21	35	0	0	46	78	40	87	26	65
	Hispanic	12	5	64	27	51	21	3	1	130	55	114	88	56	49
	2+ Races/non-Hispanic	1	2	40	54	12	16	0	1	53	72	37	69	23	62
IEP	Yes	4	5	30	35	29	34	0	0	64	74	46	73	28	60
	No	39	5	335	39	118	14	17	2	509	60	379	74	172	45
Home Lang.	English	43	5	351	41	122	14	17	2	534	63	387	73	178	46
	Spanish	0	0	16	16	27	27	0	0	43	44	40	94	24	60
Parent Education	Less than high school	11	10	7	6	17	15	0	0	36	31	35	97	21	60
	High school	14	6	56	22	35	14	4	1	108	43	77	71	42	55
	Some college	14	6	92	38	51	21	2	1	159	66	116	73	34	29
	Bachelor's degree or higher	4	1	212	63	46	14	11	3	273	81	200	73	105	53
Work Status	Working	26	4	324	46	100	14	16	2	467	66	336	72	151	45
	Not working	17	7	43	18	49	20	1	0	109	46	91	83	51	56
Marital Status	Married/Partner	26	3	320	40	130	16	14	2	491	62	363	74	173	48
	Single	17	11	47	31	19	12	3	2	86	56	64	75	29	45

Table 6. Percentage in each type of preschool arrangement, percentage whose programs closed, and percentage provided with distance learning support after closure for children ages 3-5 and not yet in kindergarten by child and family characteristics - Continued

		Type of Preschool Arrangement (N = 945)										Program Closed (N = 576)		Distance Learning (N = 427)	
		Head Start		Center Private		Center Public		Home Based		All Programs		Yes		Yes	
		N	Percent	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent
Region	Northeast	2	1	62	44	29	21	5	3	98	69	80	81	32	40
	Midwest	11	5	71	36	37	19	8	4	126	63	87	69	48	55
	South	12	3	158	43	31	8	3	1	204	55	141	69	64	45
	West	19	8	76	32	52	22	1	1	148	62	119	80	58	49
Household Income	Less than \$20,000	3	5	17	26	11	16	0	0	31	47	21	68	9	43
	\$20,000-\$49,999	18	9	38	19	33	17	3	1	91	46	73	80	33	46
	\$50,000-\$74,999	17	10	41	25	19	12	1	1	77	48	64	83	32	51
	\$75,000-\$99,999	3	2	44	31	19	13	7	5	72	51	43	59	21	49
	\$100,000 and more	3	1	227	60	68	18	7	2	304	81	227	75	107	47

Figure 4. Percentage program closures by month for children ages 3-5 and not yet in kindergarten whose preschool programs closed for in-person operations (N = 427)

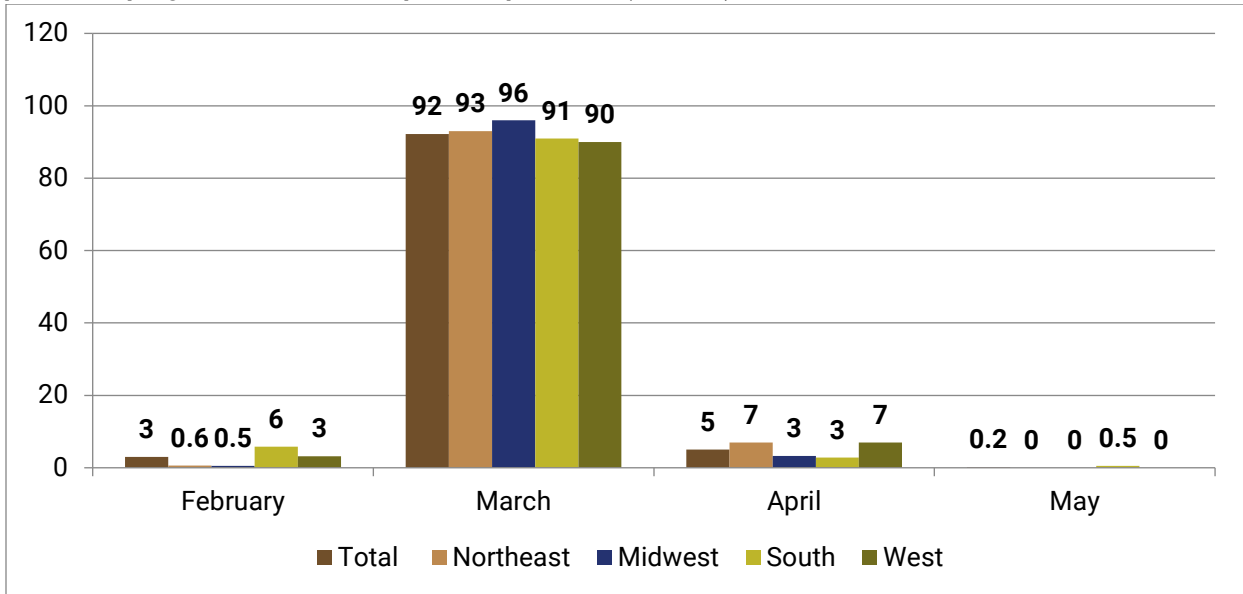


Figure 5. Percentage reporting a support was provided by a child's program at any time after closure for children ages 3-5 and not yet in kindergarten whose programs had closed (N = 427)

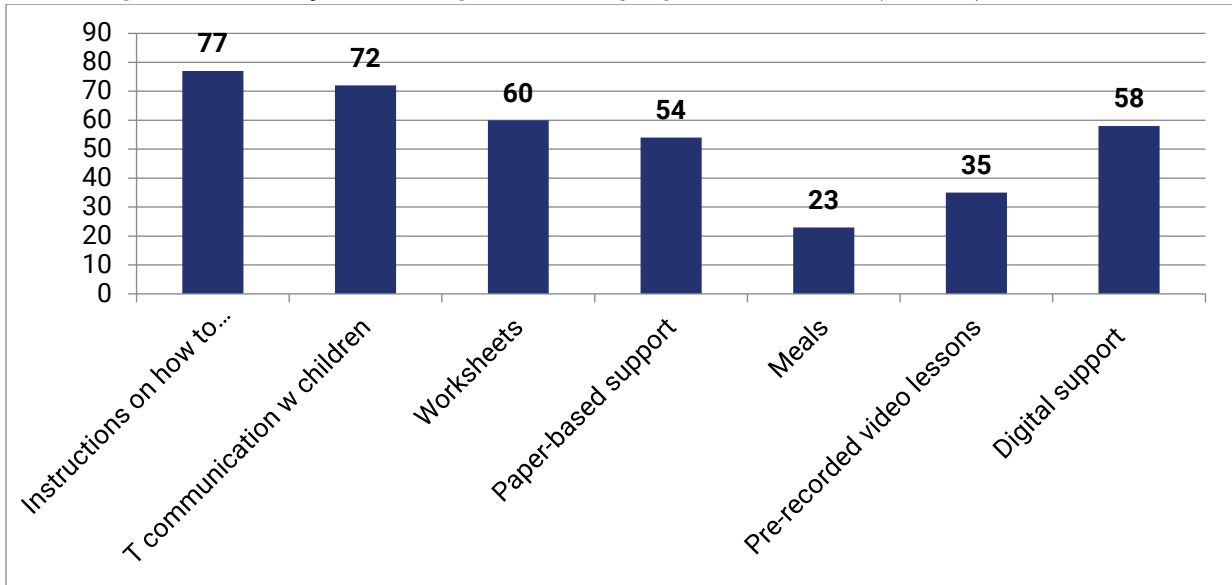


Figure 6. Percentage reporting full, partial, or no support after program closure for children ages 3-5 and not year in kindergarten with an Individualized Education Program (IEP) (N = 87)

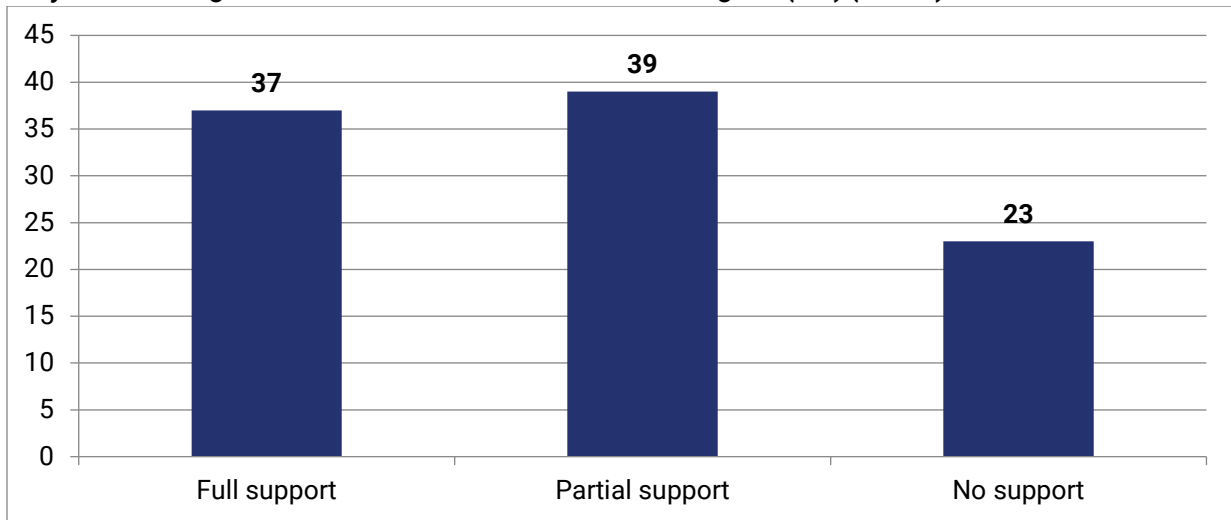


Figure 7. Percentage reporting each frequency of remote learning activities (everyday, several times per week, 1-2 times per week, less than once per week) for children ages 3-5 not yet kindergarten whose programs had closed their in-person operations (N = 427)

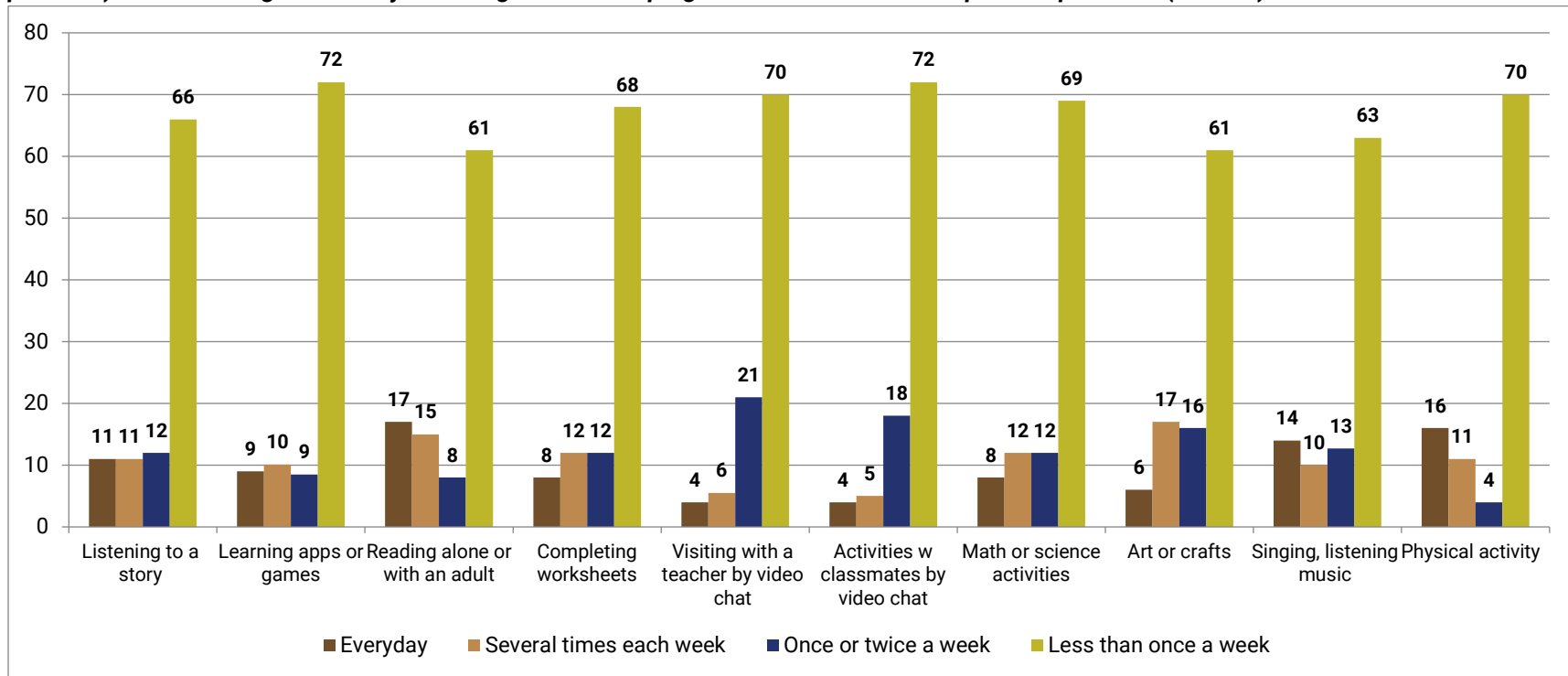


Table 7a. Percentage of children ages 3-5 and not yet in kindergarten who participated in selected remote learning activities at least several times a week by child and family characteristics (N = 427)

		N	Listening to a story	Reading alone or with an adult	Math or science activities	Arts and crafts	Singing, listening to music
Total		427	22	31	20	23	24
Child Age	3 years old	88	24	34	21	22	25
	4 years old	195	21	30	17	24	24
	5 years old	144	23	31	22	22	23
Preschool Arrangement	Head Start	42	16	39	16	20	29
	Center Private	242	23	27	15	17	23
	Center Public	139	24	37	30	36	26
	Home Based	5	0	13	0	13	0
Location	Public	156	23	37	29	34	27
	Other	271	22	28	14	17	23
Child Race/Eth.	Refused	2	75	75	0	0	75
	White/non-Hispanic	194	19	28	15	21	22
	Black/non-Hispanic	41	27	33	19	12	30
	Other/non-Hispanic	40	41	39	23	23	39
	Hispanic	114	23	34	27	32	23
	2+ Races/non-Hispanic	37	11	28	18	19	11
IEP	Yes	46	37	37	37	34	37
	No	379	21	30	17	21	22
Home Lang.	English	387	21	31	18	22	24
	Spanish	40	31	37	30	34	22
Parent Education	Less than high school	35	29	35	33	39	37
	High school	77	31	35	29	25	32
	Some college	116	11	20	14	17	11
	Bachelor's degree or higher	200	24	35	17	23	26
Work Status	Working	336	21	27	18	20	22
	Not working	91	26	45	27	36	32
Marital Status	Married/Partner	363	22	30	19	23	25
	Single	64	23	36	20	22	20
Region	Northeast	80	12	20	9	15	15
	Midwest	87	24	33	25	31	37
	South	141	25	31	18	21	22
	West	119	24	38	24	26	23
Household Income	Less than \$20,000	21	35	19	22	14	26
	\$20,000-\$49,999	73	26	36	22	30	27
	\$50,000-\$74,999	64	23	29	20	19	27
	\$75,000-\$99,999	43	18	24	30	36	40
	\$100,000 and more	227	20	33	16	20	19

Table 7b. Percentage of children ages 3-5 and not yet in kindergarten who participated in selected remote learning activities at least several times a week by child and family characteristics (N = 427)

		N	Work-sheets	Learning apps/game	Teacher video chat	Classmate video chat	Physical activity
Total		427	21	19	10	10	26
Child Age	3 years old	88	17	18	9	12	30
	4 years old	195	24	17	11	12	26
	5 years old	144	19	23	9	5	25
Preschool Arrangement	Head Start	42	19	24	6	6	28
	Center Private	242	15	11	12	10	22
	Center Public	139	30	31	8	11	35
	Home Based	5	22	0	0	0	13
Location	Public	156	29	31	8	11	35
	Other	271	16	12	11	9	22
Child Race/Eth.	Refused	2	75	0	75	75	75
	White/non-Hispanic	194	18	14	7	5	21
	Black/non-Hispanic	41	27	28	13	8	24
	Other/non-Hispanic	40	8	17	12	17	38
	Hispanic	114	26	26	13	15	35
	2+ Races/non-Hispanic	37	19	16	4	4	18
IEP	Yes	46	29	36	20	26	26
	No	379	20	16	8	7	27
Home Lang.	English	387	20	17	9	9	26
	Spanish	40	25	37	17	12	35
Parent Education	Less than high school	35	26	48	21	18	39
	High school	77	32	29	13	9	25
	Some college	116	19	13	8	8	19
	Bachelor's degree or higher	200	16	13	8	9	29
Work Status	Working	336	18	16	10	10	24
	Not working	91	30	30	11	8	34
Marital Status	Married/Partner	363	20	17	8	9	28
	Single	64	23	29	20	13	18
Region	Northeast	80	11	13	8	12	18
	Midwest	87	28	21	5	6	35
	South	141	22	18	12	10	21
	West	119	20	22	12	11	33
Household Income	Less than \$20,000	21	9	30	16	15	19
	\$20,000-\$49,999	73	29	30	11	12	25
	\$50,000-\$74,999	64	13	16	11	2	28
	\$75,000-\$99,999	43	31	15	8	8	20
	\$100,000 and more	227	19	16	9	11	28

Table 8a. Percentage of children ages 3-5 and not yet in kindergarten who participated in selected remote learning activities every day, by child and family characteristics (N = 427)

		N	Listening to a story	Reading alone or with an adult	Math or science activities	Art and crafts	Singing, listening to music
Total		427	11	16	8	6	14
Child Age	3 years old	88	13	21	14	10	15
	4 years old	195	11	14	4	4	14
	5 years old	144	10	17	9	7	13
Preschool Arrangement	Head Start	42	0	15	2	0	9
	Center Private	242	12	16	7	6	16
	Center Public	139	14	18	12	10	12
	Home Based	5	0	13	0	0	0
Location	Public	156	11	17	11	8	12
	Other	271	11	16	6	5	14
Child Race/Eth.	Refused	2	0	0	0	0	75
	White/non-Hispanic	194	8	17	5	6	9
	Black/non-Hispanic	41	16	23	11	6	16
	Other/non-Hispanic	40	28	18	12	3	30
	Hispanic	114	12	12	11	8	16
	2+ Races/non-Hispanic	37	0	19	6	7	6
IEP	Yes	46	25	24	14	17	22
	No	379	9	16	7	5	13
Home Lang.	English	387	11	17	8	6	14
	Spanish	40	8	7	6	5	12
Parent Education	Less than high school	35	11	8	6	3	19
	High school	77	18	20	15	9	18
	Some college	116	5	8	6	7	8
	Bachelor's degree or higher	200	11	22	6	5	14
Work Status	Working	336	11	14	7	5	13
	Not working	91	12	25	13	13	16
Marital Status	Married/Partner	363	10	17	8	5	13
	Single	64	14	12	8	11	16
Region	Northeast	80	9	13	3	6	8
	Midwest	87	12	22	7	4	13
	South	141	10	15	6	5	14
	West	119	13	17	14	10	18
Household Income	Less than \$20,000	21	15	1	1	1	15
	\$20,000-\$49,999	73	14	21	11	13	17
	\$50,000-\$74,999	64	7	11	10	6	10
	\$75,000-\$99,999	43	10	17	4	7	16
	\$100,000 and more	227	11	18	8	5	13

Table 8b. Percentage of children ages 3-5 and not yet in kindergarten who participated in selected remote learning activities every day, by child and family characteristics (N = 427)

		N	Worksheets	Learning apps or games	Teacher video chat	Classmates video chat	Physical activity
Total		427	8	9	4	4	16
Child Age	3 years old	88	8	9	2	4	19
	4 years old	195	9	8	5	5	15
	5 years old	144	7	11	5	4	15
Preschool Arrangement	Head Start	42	4	6	0	2	23
	Center Private	242	6	7	5	5	14
	Center Public	139	14	14	4	4	18
	Home Based	5	0	0	0	0	13
Location	Public	156	13	13	3	4	18
	Other	271	6	7	5	5	14
Child Race/Eth.	Refused	2	0	0	0	0	0
	White/non-Hispanic	194	5	6	2	2	17
	Black/non-Hispanic	41	16	19	7	4	18
	Other/non-Hispanic	40	7	12	8	8	20
	Hispanic	114	11	9	7	8	15
	2+ Races/non-Hispanic	37	11	12	2	2	8
IEP	Yes	46	14	28	18	20	19
	No	379	8	7	3	3	16
Home Lang.	English	387	8	9	4	4	16
	Spanish	40	10	14	6	7	11
Parent Education	Less than high school	35	6	14	14	11	20
	High school	77	15	19	7	7	18
	Some college	116	9	7	2	2	9
	Bachelor's degree or higher	200	6	6	3	3	18
Work Status	Working	336	7	8	4	4	14
	Not working	91	14	14	6	7	22
Marital Status	Married/Partner	363	8	8	3	4	17
	Single	64	10	15	12	7	11
Region	Northeast	80	4	3	1	1	10
	Midwest	87	9	10	1	2	23
	South	141	8	10	6	6	13
	West	119	11	12	7	7	18
HH Income	Less than \$20,000	21	1	24	15	15	4
	\$20,000-\$49,999	73	16	15	8	8	21
	\$50,000-\$74,999	64	6	6	1	2	17
	\$75,000-\$99,999	43	6	5	5	3	15
	\$100,000 and more	227	8	8	3	3	15

Table 9. Percentage of children ages 3-5 and not yet in kindergarten whose programs had closed for in-person classes with remote support continued at time of survey by type of program and support (N = 427)

	Head Start		Center Private		Center Public		Home Based		Total	
	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent
Total	42	10	242	57	139	32	5	1	427	100
Remote Learning	19	46	101	42	80	58	2	35	202	47
Mandatory Assignments	5	25	23	23	28	35	1	63	56	28
Electronic Send/Upload of Assignments	4	83	15	66	22	78	1	100	42	74
Feedback on Mandatory Assignments	3	68	21	91	23	81	0	--	47	83

Table 10. Percentage of children ages 3-5 not yet in kindergarten who continued to attend preschool, changed programs, or stopped attending for those in programs that remained open in the pandemic (N=147)

Attendance Schedule Post-Pandemic		
	N	Percentage
Yes, on the same schedule as before the outbreak	57	39
Yes, but on a different schedule than before the outbreak	21	14
No, but they are attending a different program in person	4	3
No, they are not attending any program in person	66	45
Total	147	100

Table 11. Percentage of kindergarten children receiving various supports from programs closed for in-person classes at time of survey (N = 54)

	N	Percentage
Remote Learning	43	80
Mandatory Assignment	29	67
Electronic Send/Upload for Assignments	21	72
Feedback on Remote Assignments	28	95

Figure 8. Percentage of kindergarten children receiving various types of supports from child's kindergarten program at any time after closure by type of support (N = 54)

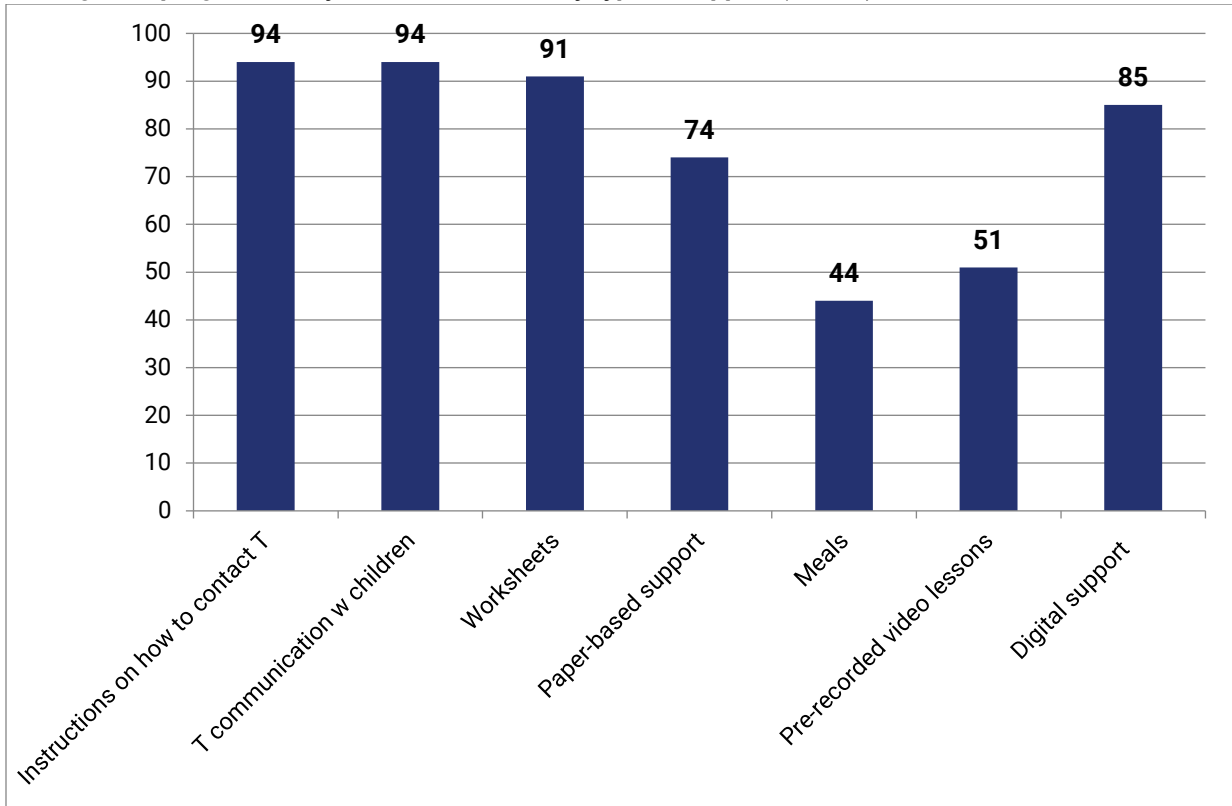


Figure 9. Percentage reporting each frequency of remote support for learning from kindergarten programs after closure (N = 54)

