

Understanding and responding to the pandemic's impacts on preschool education: What can we learn from last spring?

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The COVID-19 pandemic presents tremendous challenges for preschool education. Most of the nation's 3- to 5-year-olds attending preschool programs had their 2019-20 school year cut short as stay at home orders were issued and in-person classroom attendance was shut down. What were the consequences for young children?

The National Institute for Early Education Research (NIEER) conducted a nationwide survey of parents of children ages three to five to find out. The survey provides information that can be used to develop policies and plans for the remainder of this summer and for the 2020-21 school year. Key issues include how much preschool classroom time was lost and how well programs provided remote education to replace lost in-person experiences.

Background

About 60% of preschool children 3-5-years-old and not yet in kindergarten regularly receive a classroom experience (Corcoran & Steinley, 2017). This is provided by a variety of public and private programs. Most public preschool programs are designed decrease educational inequity by improving the access for children in low-income families to preschool programs of higher educational quality (Friedman-Krauss et al., 2019). As public preschool programs are designed to offset advantages that peers from higher-income families enjoy, and public preschool programs have been found to have larger positive effects on disadvantaged children, preschool classroom closures seem likely to increase inequality in early learning and development (Barnett & Lamy, 2013; Agostinelli, Shaharkhiz, & Wiswall, 2019).

Remote education activities provided after classrooms closed, might restore some of the benefits of in-person preschool education. However, providing remote learning for preschool-age children is a daunting proposition, not just because some children may have limited access to technology, but because young children learn best through hands-on activities and responsive interactions one-on-one and in small groups with adults and other children. As the American Academy of Pediatrics (2016) has concluded:

...the higher order thinking skills and executive functions essential for school success, such as task persistence, impulse control, emotion regulation, and creative, flexible thinking, are best taught through unstructured and social (not digital) play.

For young children with special needs, the challenges of remote education are even more severe, as for these children services are more individualized and essentially require that parents become teacher and therapist with coaching from the children's special education service providers.

Anecdotal reports have suggested remote education for preschoolers this past spring was at best highly variable as was support for K-12 education. A Forbes report provided an even more somber assessment concluding:

...the K12, early learning transition from classroom to chatroom is a train wreck" (Newton, 2020).

A Classtag (2020) survey found 57% of teachers reporting they were not prepared for online teaching, with 43% saying they were on their own in selecting tools. Two-thirds reported their approach was basically “sharing documents.”

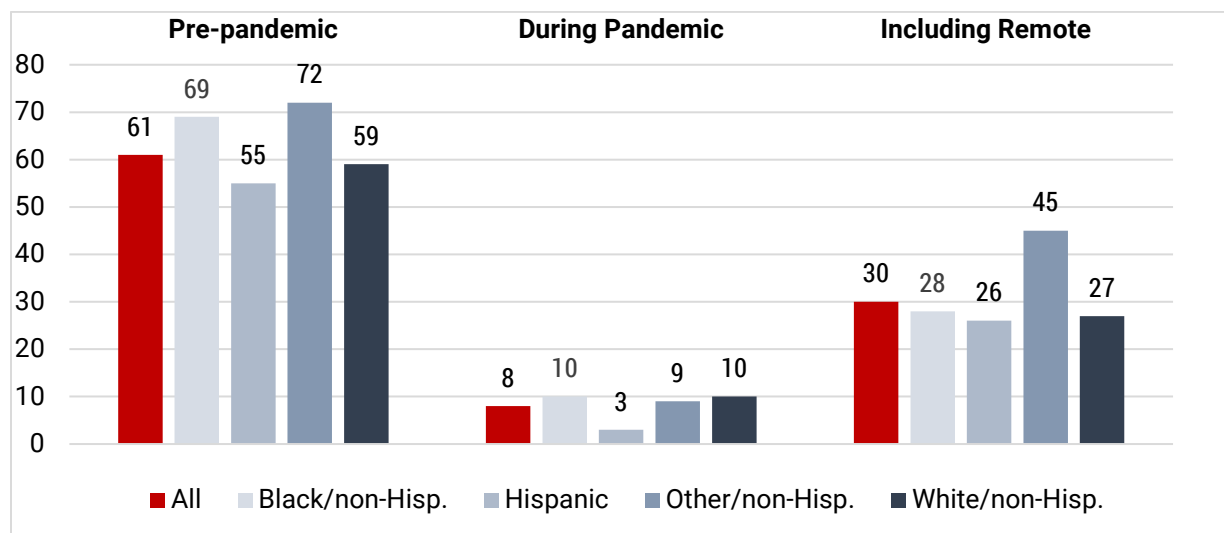
NIEER 2020 Preschool Learning Activities (PLA) Survey

The NIEER 2020 Preschool Learning Activities (PLA) survey provides information on a national sample of 945 households with children ages 3 to 5 and not yet in kindergarten. The survey was conducted between May 22 and June 5, 2020 in English and Spanish and asked about preschool program participation, program-provided supports for learning when classrooms closed due to the pandemic, and home learning activities. As some children had completed the school year by the time of the survey, parents were asked to report on supports for learning when classrooms were closed for the time prior to the end of the school year. The margin of error for responses from the full sample is about 4%. A technical report (Barnett, Jung, & Nores, 2020) provides complete information regarding the survey and its administration as well as detailed findings.

Findings

Prior to the pandemic, about 60% of children ages 3 to 5 and not yet in kindergarten attended a preschool classroom (Figure 1). This is virtually identical to what other national surveys have found in recent years (e.g., Corcoran & Steinley, 2017). Within this group, participation rates were higher for older children and increased with higher levels of parental education (Figure 2). Although differences in participation pre-pandemic between White/non-Hispanic, Black/non-Hispanic, and Hispanic children are not statistically significant, the estimates are consistent with findings from other studies indicating higher participation rates for Black/non-Hispanic children and lower rates for Hispanic children (Barnett & Li, 2020; Nores & Barnett, 2014).

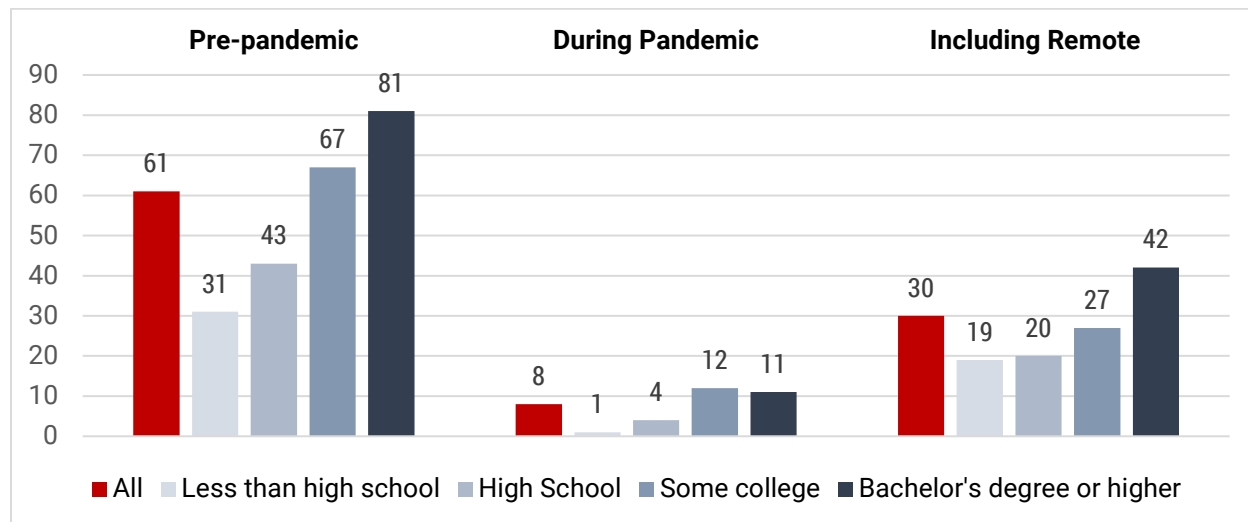
Figure 1. Percentage of children ages 3 to 5 and not yet in kindergarten participating in preschool programs by race/ethnicity



By the time of our survey, preschool participation had fallen from 61% to just 8%. This change occurred because (1) programs closed classrooms for 74% of the children enrolled and (2) 45% of children whose classrooms remained open stopped attending. Nearly all the closings occurred before the end of March—from 2 to 4 months prior to the end of the school year. Some children who continued to attend classrooms did so on a modified schedule or switched programs. This massive reduction in preschool

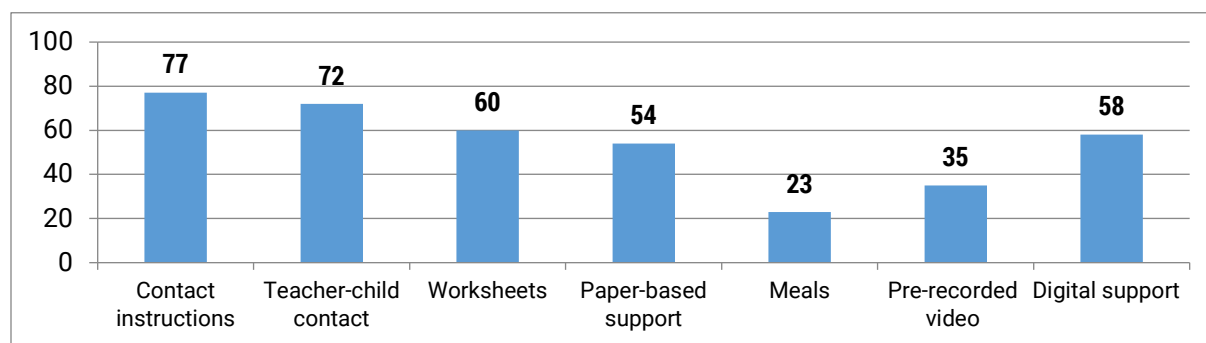
attendance affected every subgroup of society regardless of child and family background characteristics including race/ethnicity, parental education, and income.

Figure 2. Percentage of children ages 3 to 5 and not yet in kindergarten participating in preschool programs by parent education



Most preschool programs that closed classrooms provided some support for learning and development (Figure 3). According to parents, 77% received instruction on how to contact the child’s teacher, and 72% of children were contacted by the teacher. Next most frequently received were worksheets (60%), digital/online support (58%), and other paper-based materials (54%). Twenty-three percent received meals. As might be expected, meals were more likely to be provided to children in lower income families and with parents having lower levels of education ($p < .01$, tested with logistic regression). However, by the time of the survey (or last weeks of the program if the school year had ended), just 47% reported that the child continued to receive support for learning when their classrooms were closed.

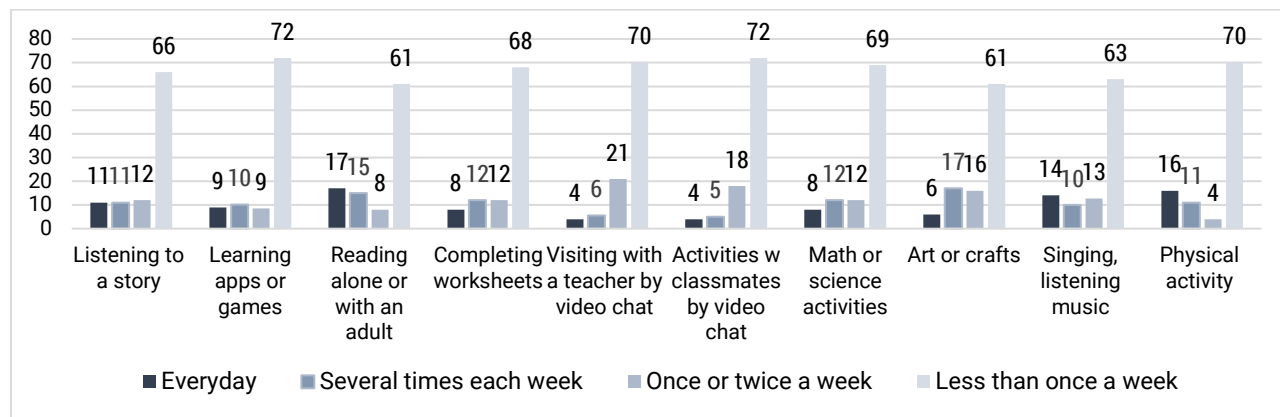
Figure 3. Percentage ever receiving a support for children ages 3 to 5 and not yet in kindergarten whose programs had closed (N = 427)



We constructed an indicator of continued preschool program support for learning and development during the pandemic by combining continued classroom participation with continued “remote” support, which is shown in Figures 1 and 2. By this measure continued preschool program support for learning and development was cut in half by the pandemic. Children of parents with the least education received the lowest levels of support, as they did prior to the pandemic but support was meager for almost all children. Even in the most advantaged group by parent education, more than half were not receiving support from a program.

A deeper look into the nature and extent of services provided after classrooms closed indicates these services were far from a substitute—or even a second-best solution—for children. The NIEER PLA survey asked parents about program provision of 10 activities to support children’s learning and development. As can be seen in Figure 4, for each of the 10 activities 61 to 72% reported the child participated less than once per week. Only about 10% of the children whose classrooms had closed listened to a story or engaged in a math or science activity daily, while interactions with teachers and classmates were even rarer: barely 10% experienced those more than once or twice a week.

Figure 4. Percentage reporting remote learning activities every day, several times per week, 1-2 times per week, or less than once per week, children ages 3 to 5 and not yet in kindergarten with closed classrooms (N = 427)



As with the overall participation levels, we investigated variations in remote supports for learning when classrooms were closed. No subgroups within the population escaped unscathed. Although confidence intervals can be quite large for some subgroups, the estimates across subgroups are remarkably similar. Figures 5 and 6 describe the percentages of children who received each service at least several times per week by race/ethnicity and parental education levels. There are no indications that continued supports were less frequent for Black/non-Hispanic children or Hispanic children than White/non-Hispanic children or for children of parents with the lowest levels of education. Supports were weak for everyone.

Figure 5. Percentage reporting remote learning activities at least several times per week, children ages 3 to 5 and not yet in kindergarten with closed classrooms by race/ethnicity (N = 427)

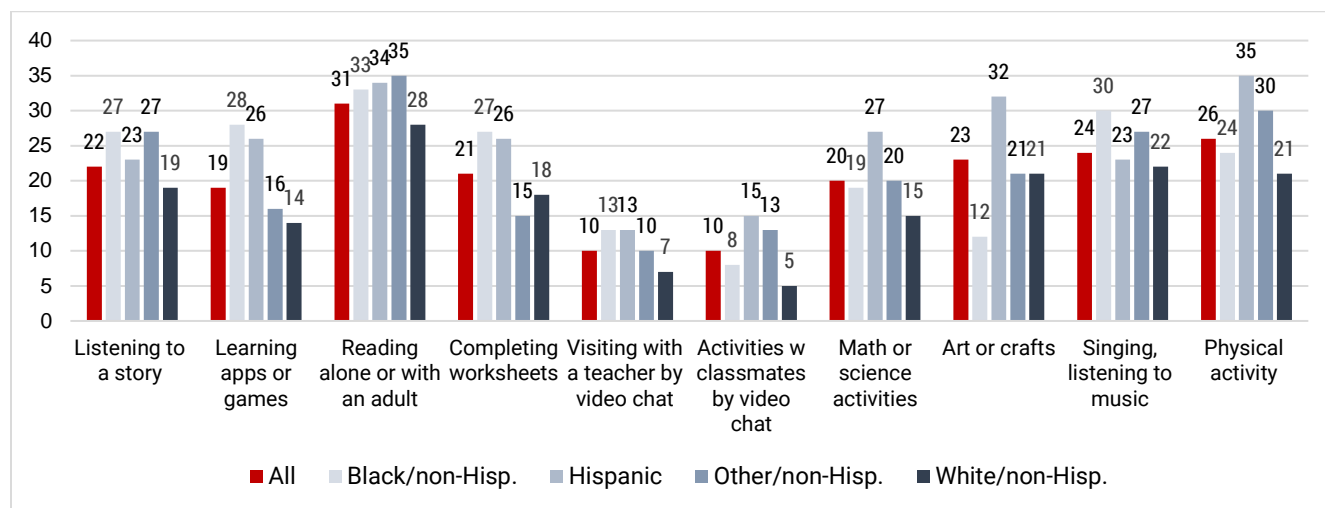
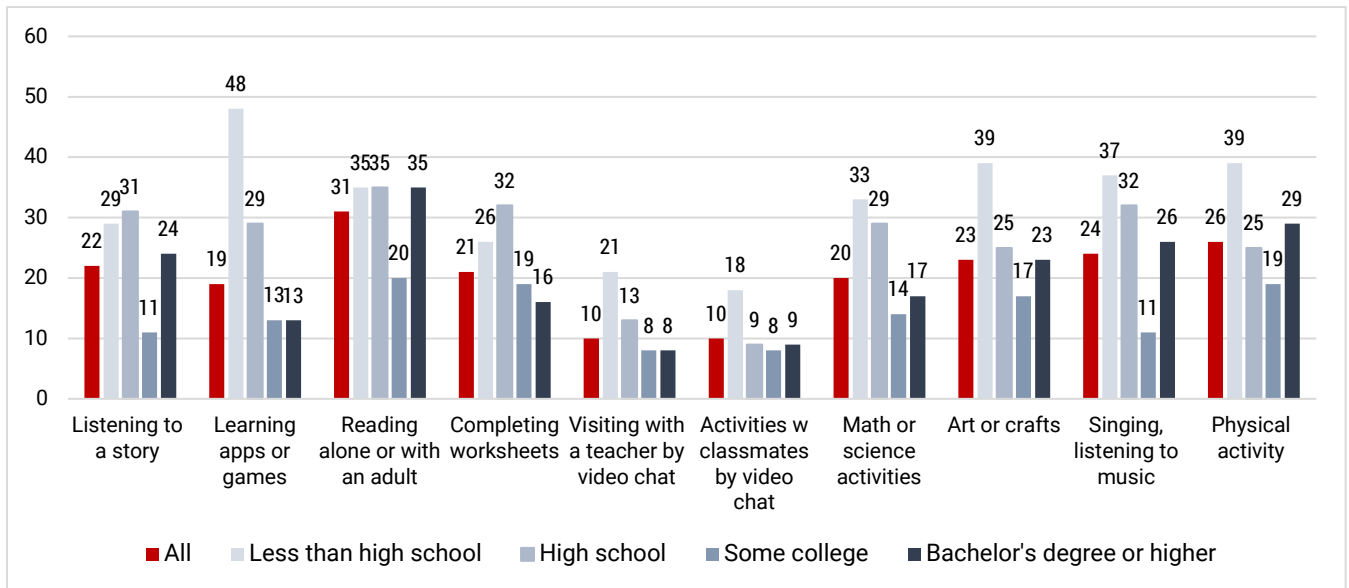
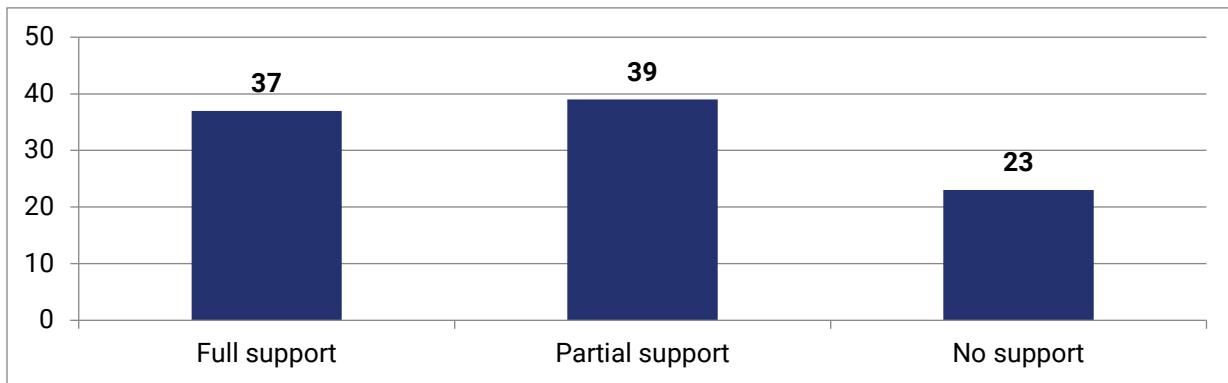


Figure 6. Percentage reporting remote learning activities at least several times per week, children ages 3 to 5 and not yet in kindergarten with closed classrooms by parent education (N = 427)



Federal law requires that children with an Individualized Education Program (IEP) receive specific services. This should have resulted in stronger continuing support for their education after classrooms closed. As shown in Figure 7, 76% of children with an IEP continued to receive services but only 37% of the total continued to receive full support. Nearly a quarter were receiving no services despite the legal requirement to provide services.

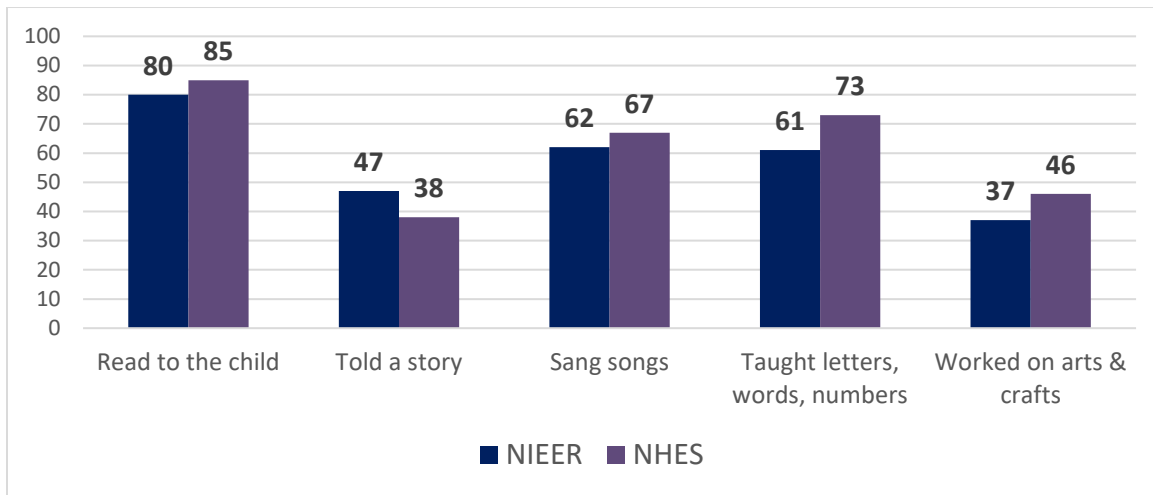
Figure 7. Percentage reporting full, partial, or no support after classroom closure for children ages 3-5 and not yet in kindergarten with an Individualized Education Program (IEP) (N = 87)



NIEER’s PLA survey asked five questions about parent engagement in home learning activities taken direct from the National Household Education Survey (NHES) (Cui & Natzke, 2020). Figure 8 presents a comparison between the NIEER survey results and the 2019 NHES results for the percentage of parents reporting they engaged in an activity three or more times per week. We conducted chi-squared tests (adjusting for design effects) to test for significant differences.

Parents told a story significantly more frequently ($p < .01$) in the NIEER survey. However, parents engaged in reading, sang songs and taught letters, words, and numbers, and working on arts and crafts significantly less frequently ($p < .01$) in the NIEER survey suggesting these activities decreased during the pandemic.

Figure 8. Percentage whose parents reported engaging in home activities with child three or more times in the past week: comparison of NIEER survey and NHES 2019 results



In sum, meaningful preschool program support for early learning during the pandemic was much closer to what is indicated in the middle “During Pandemic” panels of Figures 1 and 2 that count only classroom participation. This represents a devastating loss of learning time, perhaps three months on average or a doubling of the typical “summer learning loss.” Parents do not seem to have made up for this by increasing their own activities, perhaps because of added stresses of working from home, job loss, and other disruptive effects of the pandemic. Some parental supports for early learning were lower during the pandemic than before.

Policy Implications

The consequences of the pandemic’s effects on preschool program supports for learning and development combined with either stable or reduced home learning supports are likely to be substantial. The vast majority of 3- to 5-year-old children who had attended preschool lost two to four months of classroom learning that remote supports did little to replace. Weaker home supports for learning may have contributed to additional learning losses for young children including those not enrolled in preschool. If continued, weaker home supports may increase summer learning loss. As children’s capabilities at kindergarten entry are strong predictors of later school success (Reardon & Portilla, 2015), this strongly suggests negative long-term consequences for children who enter kindergarten this fall.

The pervasiveness of the impacts on early learning activities implies that consequences—though felt by all—will be borne most heavily by those already disadvantaged. Historically, children of color and children in low-income families have been less well prepared for school success at kindergarten entry than their more advantaged peers (Agostinelli, Shaharkhiz, & Wiswall, 2019; Duncan et al., 2007; Friedman-Krauss et al., 2016). The public preschool programs designed to equalize early learning opportunities, and that benefit disadvantaged groups most, have been utterly disrupted by the pandemic. Unless preschools and schools provide compensatory services with a strong focus on the most disadvantaged, inequality in educational success will rise even as the overall average declines.

As serious as the pandemic’s documented consequences have been, the pandemic’s future consequences are of even greater concern. Considerable uncertainty surrounds whether and when preschools and schools will “reopen.” If preschools do not reopen classrooms many of the problems we found will recur. Much of what is valuable in preschool education cannot be replicated through remote

supports for learning and development. That should weigh heavily in the decisions of both parents and public officials. Public preschool programs will require additional funding to reopen as safely as possible and to provide compensatory services.

Nevertheless, if the decision is made not to reopen, it must be accompanied by major changes in the provision of remote supports for early learning and development. Providing remote preschool education that is even a reasonable second best, may be more difficult and require more additional funding than reopening. At a minimum, public programs should ensure all children whose classrooms are closed due to the pandemic receive supports for daily activities including training and resources for parents to expand their role as teacher in hands-on activities, screening and identification for developmental delays and disabilities, and full services for children with special needs. This also will require additional funding if public programs are to prepare the necessary materials and provide ongoing services whether these are entirely remote or a mix of remote and in-person services, particularly as some parents may choose for children to remain home even if classrooms remain open.

References

- Agostinelli, F., Saharkhiz, M., & Wiswall, M. J. (2019). *Home and School in the Development of Children* (No. w26037). National Bureau of Economic Research.
- American Academy of Pediatrics Council on Communications and Media (2016). Media and young minds. *Pediatrics*, 138(5):e20162591
- Barnett, W. S., & Lamy, C. E. (2013). Achievement gaps start early: Preschool can help. In P. L. Carter & K. G. Welner (Eds.), *Closing the opportunity gap: What America must do to give every child an even chance* (pp. 98-101). Oxford: Oxford University Press.
- Barnett, W.S. & Li, Z. (2020). Preschool Children's Preschool Participation, Home Learning Environments, and Cognitive Development: Change and Continuity from 1999 to 2016. New Brunswick, NJ: National Institute for Early Education Research.
- Classtag (2020). Special report: How teachers are turning to technology amid COVID-19 school closings.
- Cui, J., and Natzke, L. (2020). Early Childhood Program Participation: 2019 (NCES 2020-075), National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC. Retrieved August 20, 2020 from <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2020075>.
- Duncan, G. J., Dowsett, C. J., Claessens, A., Magnuson, K., Huston, A. C., Klebanov, P., ... & Sexton, H. (2007). School readiness and later achievement. *Developmental Psychology*, 43(6), 1428.
- Friedman-Krauss, A.H., Barnett, W.S., Garver, K.A., Hodges, K.S., Weisenfeld, G.G., & Gardiner, B.A. (2020). *The state of preschool 2019: State preschool yearbook*. New Brunswick, NJ: National Institute for Early Education Research.
- Newton, D. (2020) Most teachers say they are not prepared to teach online. *Forbes*, March 26. <https://www.forbes.com/sites/dereknewton/2020/03/26/most-teachers-say-they-are-not-prepared-to-teach-online/#7d0018b7f2cf>
- Reardon, S. F., & Portilla, X. A. (2015). Recent trends in socioeconomic and racial school readiness gaps at kindergarten entry. *Center for Education Policy Analysis Working Papers*, (15-02).

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